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## Health care

## MONITORING THE NATIONAL HEALTH SERVICE

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This chapter starts by outlining briefly how the collection of data about health care developed in the wake of the services themselves. It then describes the data collected at the end of the 1990s about staff involved in providing health care, the activities of the services and the finance of health care. This is followed by a discussion of the gaps and deficiencies in the data and of the plans for change which are being published and set in train as this book goes to press.

#### Development of data collection

The current systems for collecting data about the National Health Service (NHS) have developed as a by-product of the need to monitor how public funds have been spent on health care, public health and health promotion. This process started in the 1890s with notifications of communicable diseases. As publicly funded health services developed in the 1920s and 1930s, the local authorities and voluntary organisations which received central government funds to provide them were required to fill in forms or 'returns' about the services and the numbers of people who had used them.

The establishment of the NHS in 1948 greatly expanded both the range of services funded by the state and the impetus to collect data about how they

were used. Aggregated 'returns' were designed to collect information about a range of services, activities and resources. One of the largest and best known was the SH3 hospital return for NHS hospitals in England and Wales. This was used to collect data about the numbers of in-patient stays and the average numbers of beds available and occupied beds in each specialty in each hospital.

More detailed data were collected through systems which recorded individual encounters with the NHS. The Hospital In-patient Enquiry (HIPE) collected data such as age, sex, region of residence, diagnosis and operations performed for a 10 per cent sample of in-patient stays in NHS hospitals in England and Wales. As the data were collected when the person was either discharged or died in hospital, they were counted in terms of 'discharges and deaths'. In Scotland, the SMR1 Scottish Morbidity Record system was set up in 1961 to collect data about all stays in Scottish hospitals. These systems were developed to derive data about the use of hospital services by people of different ages and about operations performed and length of hospital stays.

In 1969, Wales and each English region started to collect and analyse data about all discharges and deaths. As well as being used at regional level, this system, Hospital Activity Analysis (HAA) was used to derive a 10 per cent sample of discharges and deaths to be analysed at national level in the Hospital In-patient Enquiry. Stays in maternity departments were analysed separately as the Maternity Hospital In-patient Enquiry, but because of lack of consensus among the professions concerned, only about a third of districts ever implemented Maternity Hospital Analysis. A system of Hospital Activity Analysis was also implemented in Northern Ireland.

For long-stay hospitals in England and Wales, there was a separate system, the Mental Health Enquiry, which collected data about hospital facilities and basic demographic information about residents and their length of stay and legal status.

In the mid-1950s, the first of four surveys of *Morbidity statistics from general practice* collected data about consultations in a 1-year period from a small set of volunteer practices in England and Wales.<sup>1</sup>

The reorganisation of the NHS and local government in 1974 moved community health services from local authorities, which were also responsible for social services, and placed them under district and area health authorities, which also had responsibility for hospital services. The exception was in Northern Ireland, where all the services were placed together under four health and social services boards. In England, the fourteen pre-existing regional hospital boards were changed into regional health authorities, whose responsibilities included co-ordinating data collection and collating and analysing data for their regions before both passing them on to the Department of Health and Social Security.

As with other aspects of government statistics, the statistics collected by the central government health departments in each of the four countries of the UK were affected by the 25 per cent cut in spending which followed Sir Derek Rayner's review in 1980.<sup>2</sup> In particular, it meant that, for a number of years in the early 1980s, the annual volumes of *Health and personal social services statistics for England* were not published.

### The 'Körner' committee

Over the same period, the Steering Group on Health Services Information, which was set up in February 1980, reviewed NHS data collection in England.<sup>3,4</sup> Its recommendations influenced the ways in which data are collected in Wales and Northern Ireland, but had little influence in Scotland, which continued to develop its own system. The Steering Group was chaired by Edith Körner, and her name is usually associated with the system it recommended.

The Steering Group decided that its 'main concern is with information for health service management. Thus we have not tackled specifically the information needed by health professionals to evaluate the results of their care'.<sup>3</sup> It therefore concentrated on data about the use of NHS resources and made recommendations for collecting data about the activities of the NHS, its 'manpower', or 'workforce', as it is now known, and its finances. The activities of the NHS were subdivided into:

#### Services provided on hospital premises

- hospital wards
- operating theatres
- accident and emergency departments
- radiotherapy departments
- diagnostic services

#### Services provided on and off hospital premises

- consultant out-patient clinics
- day care facilities
- paramedical services
- family planning services
- maternity services

#### Services provided in or for the community

- preventive services
- community nursing

The system was based on 'episodes of care'. In particular, a 'finished consultant episode' was an episode of day case or in-patient care under one consultant in a NHS hospital. This means that one in-patient stay or 'hospital spell' could actually consist of more than one episode. For each episode of care, the Steering Group defined a 'minimum dataset' of items to be recorded. Details of these are given later in this chapter.

When implementing the Steering Group's recommendations, the government decided that data should relate to financial years, instead of using calendar years, as had been the practice previously. Most of the recommendations came into operation on 1 April 1987. Some were delayed until April 1988 and those concerning maternity statistics were implemented in September 1988. 'Körner aggregate returns' were also introduced in Northern Ireland on 1 April 1988. Many are also used in Wales.

The majority of statistics published about the NHS in England since the late 1980s are based on the Steering Group's recommendations. Increasingly, the data have been derived from computer systems, rather than from manual form filling. Nevertheless, in some areas, such as maternity and child health surveillance, stand-alone systems had already been developed without linkage to other hospital and community systems, making it difficult to transfer data directly.

### Changes in the 1990s

The introduction of the internal market in April 1991 had implications for data collection. Systems had to be adapted because of the split between health authorities, which purchased care, and trusts, which provided it. Minimum datasets were amended to become 'contract minimum datasets', with increasing emphasis on information needed for contracting and decreasing emphasis on the smaller numbers of clinical data items. Systems were set up to collect 'fast track' information to monitor NHS activity and some of these used different definitions from pre-existing activity returns.

In England, the fourteen regional health authorities were reduced to eight in 1994 and abolished in 1996. This meant that their role in data collection disappeared. In addition, most had databases which had been built up over many years, but these were abandoned and the staff who had maintained them left the NHS. Instead of submitting data to be collated by regions before being passed on to the Department of Health, districts and trusts started to submit data directly to the Department of Health. The NHS Clearing Service was set up, so that data could be sent directly via the NHS network, ClearNet, instead of having to be written to magnetic tapes or discs and sent by post.

The change in government in May 1997 led to changes in the NHS which are affecting data collection both directly and indirectly. The establishment in April 1999 of primary care groups to commission services for people in areas smaller than health authorities means that they need data to inform their decisions. At the time of writing, it is not yet clear what these are. At the same time, the four countries of the UK are developing and implementing ambitious information strategies. *Information for health*,<sup>5</sup> the strategy for England, and *A strategic programme for modernising information management and technology in the NHS in Scotland*<sup>6</sup> were published in the second half of 1998. A strategy for Wales, *Better information, better health*, was published early in 1999.<sup>7</sup>

Each strategy is based on setting up an electronic health record for everyone registered with a general practitioner for NHS care. This record will be held on their general practitioner's computer system. It will contain data about the care given by hospitals and other organisations providing care, as well as care given within the practice. Each organisation providing care will have an electronic patient record containing information about the care it gives to each person who uses its services. This information will also be transmitted to their general practice electronically through the NHS network. In the long run, it is envisaged that much of the information needed for

statistical returns will be derived from these records. Adequate resources and a number of years' work will be needed to implement these changes.

This chapter describes the data which are currently collected in the four countries of the UK about NHS staff, activities and finance. In doing so, it tries to indicate where readers can find up-to-date information about the changes in data collection as they occur. The chapter concludes by discussing the problems with the data currently collected and whether the proposed changes are likely to solve them.

### How data are collected and published

As has already been mentioned, each of the four countries of the UK collects NHS data in a different way. With devolution, these disparities are likely to increase rather than decrease. This section describes the organisations responsible, together with their general statistical publications. Their addresses and other details are given at the end of the chapter. More specialised publications on particular subjects are also described later in this chapter.

In England, the Department of Health's NHS Executive is responsible for collection of data at a national level. Each April, it sends a health service circular, *Central data collection from the NHS*, to health authorities, trusts and regional offices. This sets out details of the central statistical returns that it asks the NHS to provide and describes its process for reviewing its requirements. This circular is available on paper from the Department of Health and also on the internet at <http://www.doh.gov.uk/coin.htm>. With the introduction of primary care groups in April 1999, the returns are under review, so a detailed list is not given in this chapter.

Data are published annually in *Health and personal social services statistics for England*. The 1998 volume was the first to be made available on the internet. In the late 1990s, the content of the publication was reviewed. As a result, fewer data were published, but each section includes the names and telephone numbers of the statisticians who are responsible for the data and can provide fuller data to people who need them. These include data published in the department's statistical bulletins and booklets, most of which are listed in the back of the publication and on the department's web site. Statistical bulletins are formally published and press released, while booklets are released informally. There is an increasing tendency to convert booklets into bulletins.

National data are also published in the *Annual report of the Department of Health*, which includes the government's spending plans, and in *On the state of the public health: the annual report of the Chief Medical Officer*. Each year, the back bench House of Commons Health Committee sends a detailed questionnaire to the Department of Health asking for financial and other data. The committee publishes the department's replies in its annual reports on *Public expenditure on health and personal social services*.

In Wales, most data are available from the Health Statistics Analysis Unit of the National Assembly for Wales, known as the Welsh Office before July 1999.

As well as collecting data directly itself, it publishes data for Wales obtained from the Office for National Statistics and other agencies. It also publishes some NHS data processed by Health Solutions Wales, formerly known as the Welsh Health Common Services Agency. Up to 1994, data were published in *Health and personal social services statistics for Wales*. In 1995, the publication was split. Since 1995, NHS data have been published in *Health statistics Wales*, with more detailed data on an accompanying diskette. In 1997, the publication became bilingual. Summary data are published in the bulletin *NHS Wales: quarterly statistics*. Data are also published in the *Digest of Welsh statistics* and the *Digest of Welsh local authority statistics*. The Chief Medical Officer's annual report, *Welsh health*, contains some statistical information.

The organisation responsible for data collection in Scotland is the Information and Statistics Division (ISD) of the Common Services Agency for the National Health Service in Scotland. Data are published in *Scottish health statistics*. From 1997 onwards, this has been available on the internet. Health briefings and bulletins on specific subjects and other publications are listed at the back of *Scottish health statistics* and on its web site. Fuller information about data collection and availability is given in the *ISD guide*, which is available free of charge. NHS data are also published in the Chief Medical Officer's annual report *Health in Scotland*, as well as in the *National Health Service in Scotland annual report* and the *Scottish abstract of statistics*. These are published by the Scottish Executive, known as the Scottish Office before July 1999.

In Northern Ireland, many data are collated separately by each of the four health and social services boards before being sent to the Regional Information Branch of the Department of Health, Social Services and Public Safety of the Northern Ireland Executive. Up to 1993/4, data were published in *Health and personal social services statistics for Northern Ireland*. The way NHS data were published was reviewed after the internal market started in Northern Ireland in April 1993. Publications of data about NHS and social services were restructured on the basis of nine programmes of care. These are:

1. Acute services
2. Maternity and child health
3. Family and child care
4. Elderly care
5. Mental health
6. Learning disability
7. Physical and sensory disability
8. Health promotion and disease prevention
9. Primary health and adult community.

The two main annual publications, *Hospital statistics* and *Community statistics*, are available on paper or on disc, with the tables as Excel spreadsheets. Some data are also available on the Regional Information Branch's web site. *Hospital statistics* contains data about programmes of care 1, 2 and 4-6, while *Community statistics* contains data about programmes of care 3-9.

### Key official publications

Department of Health. *Health and personal social services statistics for England*. London: TSO, published annually.

Welsh Office. *Health statistics Wales*. Cardiff: Welsh Office, published annually. Since July 1999, the Welsh Office has been known as the National Assembly for Wales.

Information and Statistics Division. *Scottish health statistics*. Edinburgh: ISD, published annually.

Department of Health and Social Services. *Hospital statistics*. Belfast: DHSSPS, published annually.

Department of Health and Social Services. *Community statistics*. Belfast: DHSSPS, published annually.

### NHS staff

#### Sources of data

In each of the four countries of the UK, there are separate systems for collecting data for staff employed by the NHS: staff in training, staff employed in the private sector, and independent practitioners and contractors providing NHS services.

#### STAFF EMPLOYED BY THE NHS

The Department of Health's annual census of the medical, dental and non-medical workforce, PD(STAT), is the main source of data about all staff directly employed by the NHS in England. It counts staff in post on 30 September each year. This census includes staff working in health authorities and NHS trusts, including ambulance services, and staff directly employed by other NHS bodies such as postgraduate special health authorities, the Dental Practice Board, the Prescription Pricing Authority, the Health Development Agency, formerly known as the Health Education Authority, and the Public Health Laboratory Service.

Up to 1994, non-medical staff were classified according to their pay scale. With the introduction of local pay bargaining under the internal market, this became impossible and in 1995 a system of occupational codes was introduced. This caused a discontinuity, as staff who had been paid on managerial pay scales were reclassified according to their professional background, making trends over time difficult to monitor. Changes in higher training of doctors in the late 1990s affected the ways in which they were classified in statistics. The changes were introduced by specialty at different times, making it difficult to monitor trends in numbers of doctors in training.

In Wales, similar data about staff employed by health authorities and trusts, Health Solutions Wales and the Welsh Health Promotion Trust from 1996 onwards are collected through NHS personnel systems. Data for previous years were collected from the NHS payroll system. As in England, this change involved a move from pay scale to occupational codes.

The Information and Statistics Division, Scotland collects data about staff in post on 30 September through its Medical and Dental Census and by deriving national 'manpower' statistics from payroll. It still attempts to classify non-medical staff by pay scale, but points out that local pay bargaining makes this difficult and that the regrading of whole groups of staff through pay negotiations makes it difficult to interpret time trends.

NHS and personal social services staff employed in Northern Ireland are counted through the Personnel Information Management System.

Because many NHS staff work part time, staff are counted not only as numbers but also as 'whole-time equivalents'. This is the number of hours each person is contracted to work, expressed as a proportion of the full-time contract hours. This gives a better measure of the staff resources available, but is sensitive to changes in contract hours. When the contract hours of full-time nurses, midwives and health visitors were reduced from 40 to 37½ in the early 1980s, this artificially inflated the numbers of whole-time equivalents. The reduction of the contract hours of doctors in training during the 1990s means a reduction, in terms of the hours worked at least, in the capacity of a whole-time equivalent doctor.

None of the data collection systems includes information about staff of private contractors who provide catering, cleaning, laundry or other services to NHS hospitals and trusts. This makes it difficult to interpret trends. For example, there has been an extensive decline in numbers of whole-time equivalent ancillary staff employed by the NHS since compulsory competitive tendering started from the mid-1980s onwards, but no data are collected about staff employed by private contractors who replaced them.

#### NURSES, MIDWIVES AND HEALTH VISITORS IN TRAINING

In the past, student nurses, midwives and health visitors were employed by the NHS and put in considerable numbers of hours' work. From 1989 onwards, training was progressively transferred to higher education institutions under 'Project 2000' and trainees became students and funded by bursaries. Statistics about these students are collected by the English National Board for Nursing, Midwifery and Health Visiting and its counterparts in Wales, Scotland and Northern Ireland.

#### INDEPENDENT CONTRACTORS PROVIDING SERVICES TO THE NHS

The General Medical Services database is a computerised register of all doctors who have a contract with a health authority in England and Wales to provide general medical services. It contains details of all general practitioners, with their age, sex and qualifications, details of the partnership, list size and whether certain allowances such as deprivation allowance are payable. Each year, health authorities use this census to update their records about numbers of practice staff, services offered by practices and achievement of targets for immunisations. Health authorities also collate information about numbers of community pharmacists and opticians who are contracted to supply services

for their population. Information about dentists in general practice, as opposed to those employed by hospital or community trusts, is collated at a national level by the Dental Practice Board.

In Scotland, the Information and Statistics Division collects data about general practitioners in its General Medical Practitioner Database. The Dental Practice Division of the Common Services Agency collects similar data about general dental practitioners in Scotland. In Northern Ireland, the Central Services Agency compiles statistics about general medical practitioners and general dental practitioners, but they are not routinely published.

#### STAFF IN THE PRIVATE SECTOR

As part of the process of registering private hospitals and nursing homes, health authorities in England and Wales collect data on returns K036 and K037. These include the numbers of qualified and unqualified nursing staff and resident doctors employed. Data are collated centrally by the Department of Health and the National Assembly for Wales, but responsibility for doing so in England will pass to the new Care Standards Commission. In Scotland, the Information and Statistics Division collects data about qualified nurses employed in private nursing homes and hospitals subject to the Nursing Homes Registration (Scotland) Act of 1938. Apparently, no data are collected about staff working in the private sector in Northern Ireland.

These data do not cover the activities of doctors who work in these hospitals but are not employed by them, or the activities of the private sector outside these registered premises. Data are not collected about the work of dental practitioners practising outside the NHS or about care given privately by self-employed practitioners in a range of professions including home nursing, chiropody, physiotherapy and osteopathy.

#### Publications

Data for England are published in *Health and personal social services statistics for England*. Up to 1993, more detailed information about NHS staff was published every year in *NHS workforce in England*, otherwise known as the 'Blue book'. This is no longer published, but the information it contained is still collated and is available on request from the NHS Executive.

Four separate statistical bulletins, published annually, contain data about NHS staff and general practitioners. *Hospital, public health medicine and community health service medical and dental staff in England* contains tabulations of medical and dental staff by grade, sex and geographical distribution. Data about other directly employed staff are published in another statistical bulletin, *NHS hospital and community health services non-medical staff in England*. As well as data about NHS staff, there are some data about nurses in private hospitals and homes. Statistics about staff employed in private hospitals and nursing homes can be found in *Private hospitals, homes and clinics registered under section 23 of the Registered Homes Act 1984*, and national and regional summaries are published in the statistical bulletin of the same name.

*Statistics for general medical practitioners in England and Wales* contains data about the age, sex and status of general practitioners and the numbers of support staff, such as practice nurses or receptionists, that they employ, and fuller data are published in *General medical services statistics, England and Wales*. Finally, less detailed statistics about the number of pharmacies and opticians in contract with health authorities are published in bulletins on *General pharmaceutical services in England* and *Ophthalmic services statistics, England*.

There is no statistical bulletin relating to general dental services. Information about numbers of dentists in general practice in England and Wales and their geographical distribution is published in the *Annual report of the Dental Practice Board* and in its quarterly bulletins.

Data about staff employed by the NHS in Wales are published annually in *Health statistics, Wales* and summary data are published in *Health statistics Wales, quarterly statistics*.

The Information and Statistics Division, Scotland publishes a range of workforce statistics in *Scottish health statistics*. More detailed data can be found in its specialised publications, *Agency nursing staff, Ethnic group of staff directly employed by the NHS in Scotland, Medical manpower, General ophthalmic services and General practitioner and practice profile statistics*.

Hospital-based staff employed in Northern Ireland are tabulated by category and trust in *Hospital statistics*, while a similar tabulation of community-based health and personal social services staff appears in *Community statistics*.

### Clinical activities in hospitals and the community

#### NHS hospitals

Statistics about activities and beds in NHS hospitals are derived both from aggregated 'returns', which are counts of numbers of events or activities, and from person-based datasets, based on data about in-patient and day case care given to individual people. These are collected using the minimum datasets shown in Table 8.1. Apart from data about admissions for in-patient or day case care, which are described later, only aggregated data are collected at a national level, but the person-based data are used increasingly at local level and are passed from trusts to health authorities. Publications based on aggregated returns are listed in Table 8.2.

The Performance Analysis Branch of the NHS Executive collects data about the average numbers of beds available daily in NHS hospitals in England on form KH03 and publishes them each year by trust and sector in the booklet *Bed availability and occupancy in England*. The form was revised in 1996-7 and extended to residential care wards and homes managed by the NHS. Counts of occupied bed days were added and ward categorisations were changed. The booklet includes time trends by trust and regional office area. Changes from directly managed units to trust status in the early 1990s and trust mergers in the late 1990s mean that those series are relatively short.

Table 8.1 Minimum datasets used for aggregated returns in England

<p><b>Admitted patient care</b> Patient's GP, GP practice and referring GP Consultant Intended management Health authority of residence</p> <p><b>Out-patient care</b> Patient's GP, GP practice and referring GP Attendance date and whether attended Clinic purpose Consultant Source of referral Data request for referral received First attendance Outcome of attendance Operative procedure Priority type</p> <p><b>Accident and emergency</b> Patient's GP, GP practice and referring GP Consultant Mode of arrival Disposal Investigation, diagnosis and treatment code Staff member Time of arrival, initial assessment, treatment, departure</p>	<p><b>Waiting list</b> Patient's GP, GP practice and referring GP Consultant Decided to admit date Priority Offered admission date Intended management Intended procedure Admission offer outcome Duration of elective wait List removal date List removal reason</p> <p><b>GP referral letter</b> Patient's GP, GP practice and referring GP Consultant Specialty Overseas visitor status Date referral request received</p> <p><b>Ward attenders</b> Patient's GP and GP practice Attendance data Patient group Intended clinical care intensity</p>
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Activity data are published in two further booklets. *Ordinary admissions and day cases* contains counts of finished consultant episodes by trust derived from form KP70. *Outpatients and ward attenders* summarises data from form KH09, which counts attendances at out-patient clinics and accident and emergency departments, and form KH05, which counts people who attend wards for care without being admitted. Each of these contains data by trust and specialty, as well as 10-yearly trends for regional office areas.

Summaries of these aggregated activity data for England are published annually in the statistical bulletin *NHS hospital activity statistics, England* and in *Health and personal social services statistics for England*.

These publications also include data about use of hospital facilities for people with mental illness or learning disabilities. Use of NHS day care by mentally ill and elderly people is shown in the publication *NHS day care facilities*. A statistical bulletin, *In-patients formally detained in hospital under the Mental Health Act 1983 and other legislation*, based on KP90, contains 5-year trends for England, while a longer publication with the same name contains more detailed regional statistics.

Data about the activities of diagnostic departments, including pathology, radiology, nuclear medicine and medical physics, collected on form KH12 are published in *Imaging and radiodiagnostics*. The blood transfusion service is now a separate authority, the National Blood Service. Statistics about its activities are published in its annual report.

Table 8.2 Publications containing data from aggregate returns about facilities and activities undertaken in hospitals in England

Title	Data source	Coverage	Contents
<i>NHS hospital activity statistics, Statistical bulletin</i>	Körner returns, KH03, KH05, KH09 and KP70. Summary of finished consultant episodes from Hospital Episode Statistics. Prior to 1987: SH3, HIPE, HAA	Historical summaries England	Admissions, day cases, available beds, throughput, out-patient and ward attendances, accident and emergency attendances, average length of stay selected operations, percentage discharged dead by sector: acute surgical, acute non-surgical, general and acute, maternity, mental illness, mental handicap and well babies
<i>Ordinary admissions and day case admissions</i>	Based on KP70	Historical summaries: England/regions/provider units	Finished consultant episodes, ordinary and day case admissions by sector and speciality code
<i>Out-patients and ward attenders</i>	Based on KH09, outpatient and accident and emergency activity, KH05, ward attenders Before 1987: based on SH3	Historical summaries: England/regions/provider units	Consultant out-patient clinic activity by sector and speciality code. A&E activity. Summary of ward attenders
<i>Bed availability and occupancy, England</i>	Based on KH03 which replaced SH3	Historical summaries: England/regions/provider units	Beds by sector; separate tables for 24-hour wards, day wards and neonatal intensive care
<i>Imaging and radiodiagnostics</i>	KH12	1995/6 onwards England/regions	New examinations and tests in pathology, radiology, nuclear medicine and medical physics; includes microbiology from Public Health Laboratory Service; electrocardiogram and electroencephalogram data no longer collected centrally
<i>NHS day care facilities England</i>	KH13	Time trends England/regions/districts	Use of NHS day care facilities; total attendances, first attendances, re-attendances by patient group such as elderly, mentally ill

Health Solutions Wales collects similar data. Form QS1 is used to collect data about bed availability and use by people admitted as in-patients and day cases, together with numbers of attendances at out-patient and accident and emergency departments. Data are published by the National Assembly for Wales in the two volumes of *Hospital activity statistics*. The first volume covers bed use by in-patients and day cases and the second contains data about out-patients. Data are also published in *Health statistics Wales*, the *NHS Wales performance tables* and in *NHS Wales, quarterly statistics*. In addition, form KH14 is used to collect data about NHS day care. Activity data are also collected by district of residence.

Similar data collected in Scotland are published in *Scottish health statistics*. A more detailed publication, *Scottish hospital in-patient and day case statistics*, is under review at the time of writing. Data for Northern Ireland are published by trust and specialty in *Hospital statistics*.

### Waiting lists

Waiting lists have had a high political profile under both Conservative and Labour governments, so considerable effort is invested in collecting data about them. This is despite the fact that only about half the admissions to NHS hospitals are from waiting lists. The numbers of publications on the subject and the frequency with which they are published increased considerably during the 1990s. After the Conservative government found it impossible to reduce the numbers on the lists, it concentrated on shortening waiting times. The Labour government, on the other hand, has pledged itself to reducing the numbers on the lists by 100 000 by the end of its first term of office.

In England, waiting list information is collected from health authorities about their residents who are waiting for treatment and from trusts about people who are waiting for the treatment that they provide. The data from the two sources differ by 2-3 per cent, as resident-based figures exclude people living outside England and privately funded patients waiting for NHS treatment. Resident-based data include residents waiting for treatment in other countries of the UK or abroad, as well as people waiting for NHS-funded treatment in private hospitals.

People's waiting time is counted from the time when the clinician decided to admit them to hospital. If they are offered a date but are unable to attend, their waiting time is reduced to zero and then counted from the time when they were offered treatment. This is known as self-deferral.<sup>8</sup>

At the time of writing, waiting list and time statistics are published in monthly press releases and quarterly bulletins, *Elective admissions and patients waiting*. Each bulletin is accompanied by a detailed booklet, which gives data for individual trusts. There were concerns that consultants may have kept waiting times short by delaying people's first out-patient appointment after being referred by a general practitioner. The Conservative government therefore introduced a further statistical return to monitor the time people waited for this first appointment. Data from this are published quarterly in a statistical bulletin, *Waiting times for first outpatient appointments in England*.

Waiting list data for Wales are also collected on both a provider and a resi-

dent basis. They are published in *Health statistics Wales*, the *NHS Wales performance tables* and *NHS Wales, quarterly statistics*.

In Scotland, waiting list data are compiled from a variety of sources, by both provider and health board of residence, but a different approach is used. If a person 'self-defers', they are removed from the 'true waiting list', which is used for monitoring waiting times, and placed on a 'deferred waiting list'. Data are collected in *Scottish health statistics*. A more detailed publication, *NHSiS patient treatment and waiting times statistics*, is currently under review.

In-patient, day case and out-patient waiting list data for Northern Ireland are published in *Hospital statistics*.

### STATISTICS ABOUT PATIENTS ADMITTED TO HOSPITAL AND THEIR TREATMENT

As mentioned earlier, the limited data in the aggregated returns are complemented by fuller, person-based data.

Hospital Episode Statistics (HES) is a database of all episodes of care in NHS hospitals, including mental illness hospitals, in England. The Patient Episode Database Wales (PEDW) and the Hospital In-patients System in Northern Ireland work on similar principles. In Scotland, the 'core patient profile in Scottish hospitals' (COPPISH) system brings together the SMR1 records for in-patient admission, SMR2 records for maternity admission and the SMR11 records for newborn babies. Record linkage is much more developed in Scotland than in the other three countries.

The data items in the Hospital Episode Statistics are those in the admitted patient care minimum dataset shown in Table 8.3. Each Hospital Episode Statistics record contains personal details such as date of birth, administrative details, including the dates of admission and discharge, and clinical details, including the diagnosis and operative procedure. The patient's postcode is used to derive the region, county, health authority, local authority and electoral ward of residence. Up to 1994/5, diagnoses were coded according to the ninth revision of the *International classification of diseases*, and from 1995/6 onwards they have been coded using the tenth revision. Operative procedures are coded using the OPCS-4 operation code. This information has been used to derive a Healthcare Resource Group for each episode. Approximately 11 million records are added each year. The data items and the system are described much more fully in publications from the Department of Health<sup>9,10</sup> and elsewhere.<sup>11</sup>

Hospital Episode Statistics was designed to count episodes of care, known as finished consultant episodes, rather than numbers of admissions or numbers of individuals treated. Nevertheless, attempts have been made to overcome this restriction. Firstly, it is possible to ascertain whether a given episode began with admission or ended with discharge and to count the numbers of 'hospital spells'. From 1998 onwards, this has been increasingly used in preference to counting episodes. Secondly, from 1997/8 onwards, NHS numbers were included in Hospital Episode Statistics records, offering the potential to link successive episodes of care for the same person.

Additional items of data are collected on several specific categories of patients. One is women having babies. The additional data items in the 'maternity tail' are shown in Table 8.3 and Maternity Hospital Episode Statistics is discussed more fully in Chapter 3. Another category is long-term or detained patients in psychiatric units or hospitals. This applies to patients

Table 8.3 Hospital Episode Statistics dataset for in-patients 1997-8

<b>Data about the contract</b>	<b>Pregnancy and delivery</b>
Organisation code of provider	Birth date of mother
Site code of provider	First antenatal assessment date
Organisation code of purchaser or primary care group	Total previous pregnancies
General practitioner	Length of gestation
Referrer	Delivery place type (intended)
<b>Patient</b>	Delivery place type (actual)
Date of birth	Delivery place type (reason for change)
Postcode of usual address	Labour/delivery onset method
NHS number	Delivery method
Sex, marital status	Status of person conducting delivery
Ethnic origin	Anaesthetic given in labour/delivery
Record type	Anaesthetic given post-labour/delivery
Carer support indicator	Number of babies
Intended management	Birth date of baby or babies
Local patient identifier	Sex of baby or babies
Spell number	Birth order
<b>Provider spell</b>	Live or stillbirth
Admission method	Birthweight
Decided to admit date	Method of resuscitation
Start date	<b>Psychiatric census - detained or long term</b>
Duration of elective waiting time	Date detained
Source of admission	Status of patient
Category of patient	Age at census
<b>Consultant episode</b>	Duration of care to census date
Age at start of episode	Legal status
Episode number	Mental category
Start of episode date	Ward type
End of episode date	Diagnosis on census date
Duration of episode	<b>Augmented care</b>
General Medical Council code of consultant	Start date
Specialty function code	Where patient came from
Specialty function code for shared care	Location of care
Patient diagnosis/diagnostic code	Whether planned
Patient operative procedure	Specialty of management
Operative procedure date	Duration of high dependency care
Neonatal level of care	Duration of intensive care
<b>Data about discharge of patient</b>	Number of augmented care periods in episode
Discharge date	Number of organs supported
Discharge method	Care period number
Discharge destination	Outcome
Patient classification	Disposal
	End date

occupying NHS beds on 31 March and who are either formally detained under the Mental Health Act or had been in hospital for a year or more. The data items recorded are shown in Table 8.3. From October 1997 onwards, a third category, augmented care, was added. Thirteen additional items of data are collected for episodes including either high dependency or intensive care.

The quality and timeliness of the Hospital Episode Statistics data were poor at the start, but improved as the system got under way. In 1987-8, the first year of operation, coverage was only 88 per cent, with only 75 per cent of records coded for diagnosis. Coding of operative procedures was the most incomplete. By 1993-4, coverage was 98 per cent, with 96 per cent of records coded. The maternity, psychiatric census and augmented care records are much less complete, with a third of maternity data records being missing in the mid-1990s.<sup>12</sup>

In the late 1990s, considerable advances were made in the timeliness of the Hospital Episode Statistics. By 1998, annual data files were becoming available within a year, instead of taking nearly 2 years to compile, as had been the case previously. From the financial year 1998-9 onwards, Hospital Episode Statistics data have been produced on a quarterly basis.

During the early years of operation, access to the complete database was difficult. It was mainly used within the Department of Health to examine public expenditure on NHS, and to monitor activity levels, trends in specific conditions, and health care initiatives. In the mid-1990s, the Department of Health developed policies to enable it to be used more widely. The Hospital Episode Statistics system now has a more 'user friendly' front end and can be accessed by people in regional offices. In addition, the Department of Health has developed a protocol for its use, analysis and dissemination and a charging policy. Standard outputs include aggregated annual summary tables in paper 'reference volumes' containing data for England and regional office area of treatment and on a CD-ROM containing data for England, regional office area of treatment and health authority of residence. The paper publication is in three volumes and the CD-ROM has a similar structure:

- Volume 1 Finished consultant episode statistics by diagnosis and operative procedure; injury/poisoning by external causes.
- Volume 2 Finished consultant episodes: administrative tables.
- Volume 3 Finished consultant episodes: waiting times.

Summary data are also published in *Health and personal social services statistics for England* and in the statistical bulletin *NHS hospital activity statistics, England*.

The Department of Health also provides advice about the dataset and tabulations for people working in the NHS or funded by grants from the Department of Health. If the Department of Health authorises access, then IBM Global Services, which is contracted to manage the database for the department, can process the data on a fee-paying basis. Most of the data are generally made available at the level of individual NHS trusts. In some more sensitive areas, such as sexually transmitted diseases, it may be possible to



identify both individual patients and individual consultants. In these cases, data will be made available at trust level only by special request and subject to approval from the Security and Confidentiality Advisory Group.

A similar national system has been proposed for out-patient attendances, as this is becoming an increasingly important part of care. As this would involve some 35 million records each year, the size of the task is daunting and there are no definite plans as yet. As mentioned earlier, there are some locally collected datasets on out-patients, waiting lists, general practitioners' referral letters, accidents and emergency, and ward attenders, based on the datasets shown in Table 8.1.

In Wales, the Patient Episode Database Wales works on similar lines to the Hospital Episode Statistics, except that the augmented care recorded was not implemented in Wales. The 'maternity tail' is even more incomplete than in England and data from it are not published routinely.<sup>13</sup> The Patient Episode Database Wales data are collected by Health Solutions Wales on behalf of the National Assembly for Wales and data are published in *Health statistics Wales*. Further analyses are available from the Health Solutions Wales' information request service, details of which are given below.

The Regional Information Branch of the Department of Health, Social Services and Public Safety in Northern Ireland runs the Hospital Inpatients System, which is also similar to the Hospital Episode Statistics. As in the other countries, the maternity data are very incomplete and are not published. The augmented care record has not been implemented. Unlike the other countries, data from psychiatric hospitals and units are processed separately in the Mental Health Inpatients System. Data are published in *Hospital statistics by programme of care* and in a less formal publication, *Hospital statistics by specialty*. Data from the Mental Health Inpatients System are published separately in *Mental health standard analyses*. At the time of writing, these are about 4 years behind the other hospital data, but work is underway to clear this backlog.

Scotland has a different system of hospital statistics. The Scottish Hospital In-Patient Statistics developed from the 1960s onwards and is now run by the Information and Statistics Division of the Common Services Agency. An SMR1 record is generated for every in-patient stay in hospital other than in a maternity unit. A separate record, SMR2, is completed for every hospital admission to a maternity unit, while a SMR11 neonatal record is used for all hospital treatment given to the baby during its stay, including transfers from department to department. It can be linked to the SMR2 delivery record and these can also be linked with SMR1 records about any previous in-patient stays by the mother.<sup>14</sup>

The whole system was revised in the mid-1990s in preparation for the introduction of the tenth revision of the *International classification of diseases* in 1996, and is now known as Core Patient Profile Information in Scottish Hospitals (COPPISH). Data are published in *Scottish health statistics*. The changes made in April 1996, mean that 1996/7 was a transitional year. In many cases, data for 1997/8 are not compatible with those for previous years.

## Private hospital care

### USE OF NHS PAY BEDS

Data are collected in Hospital Episode Statistics about episodes of care in NHS pay beds and a table summarising these can be found in Volume 1 of the annual Hospital Episode Statistics publication. Analyses of trends in these data and comparisons with data from other sources found that some pay bed units appeared to have submitted no data to the Hospital Episode Statistics and that overall pay bed activity is under-represented in the system.<sup>15,16</sup> A brief summary of pay bed utilisation is published in *Health statistics Wales* and in *Hospital statistics* for Northern Ireland.

### PRIVATE HOSPITALS, CLINICS AND HOMES

Data about private facilities are collected as part of the process of registration by health authorities under Section 23 of the Registered Homes Act 1984. Legislation before parliament in 2000 will transfer responsibility for registration to a new Care Standards Commission for England and to the National Assembly for Wales. These include both residential homes, which provide long-term nursing care primarily for elderly people, as well as private acute hospitals. Data about residential homes are described in detail in Chapter 9. Before 1993/4, only a crude distinction was made between nursing homes with operating theatres, which were assumed to be acute hospitals, and those without. These were assumed to be purely long-stay homes for elderly and disabled people. Information is collected on return KO36 about numbers of beds available and occupied, about nursing staff in post and whether there is a resident doctor. Data for England are published in a statistical bulletin, *Private hospitals, homes and clinics*, and further data are made available in electronic format.

Data for Wales are published in *Health statistics Wales*. In Scotland, data are collected on form ISD(S)34 from private nursing homes registered under the Nursing Homes Registration (Scotland) Act 1938 or the Mental Health Act 1960/1984. The data published in *Scottish health statistics* exclude those from private hospitals. From 1996/7, residents have been classified by care group. In 1997/8, about a third were classified as having dementia.

Much more detailed data, including financial data, are collected privately and published annually in *Laing's review of private healthcare*.<sup>17</sup> These publications are very expensive and can be found only in a few specialised libraries.

With two exceptions, no data are collected routinely about episodes of care given to individual private patients, nor are aggregated data collected routinely about the activities undertaken in these facilities, for example about the number of operations performed. The two exceptions to this are induced abortions, which must be notified to the Chief Medical Officers of England, Scotland and Wales, as described in Chapter 3, and in-patients formally detained in hospital under the Mental Health Act 1983 and other legislation, which must be notified using return KP90. These are published in the statistical bulletin mentioned earlier. It shows that very few people are formally detained in private hospitals.

The issues and problems connected with the lack of routine data about the private sector are discussed more fully below and in Chapter 9. Because of the lack of routine data, Sheffield University has done periodic surveys of the clinical activity in private hospitals. The results of three of these have been published to date and results of a fourth in 1997-98 are about to be published at the time of writing.<sup>18-20</sup> The General Household Survey collects data about whether people have private health insurance, whether they or their employers pay for it, and whether other family members are covered. In addition, data about spending on private health insurance and private health care are collected in the Family Expenditure Survey.

### Diagnostic and therapeutic facilities and activities in hospitals and the community

Aggregated returns are used to collect data about areas of hospital activity not covered by Hospital Episode Statistics and about other services provided in hospital and the community. They include diagnostic and therapeutic facilities and activities and patient transport.

### Paramedical staff and services based in either hospitals or the community

A number of returns are used to collect data about the activities of paramedical staff based primarily but not exclusively in hospitals. These include form KT23, used to collect data about chiropodists, KT24 for clinical psychologists, KT26 for occupational therapists, KT27 for physiotherapists and KT29 for speech therapists. The statistics about their activities are limited to the total number of 'face-to-face contacts' and the number of 'initial face-to-face contacts', with some breakdown by age and source of referral. The data are published informally in booklets, details of which are shown in Table 8.4.

Return KA34 collects data from the thirty-seven ambulance services in England, including numbers of patient journeys by priority of journey and population, response times for emergency calls and arrival times for urgent journeys. Data from this return are published in a statistical bulletin, *Ambulance services, England*. It includes time trends as well as details about performance against standards in the Patients' Charter.

Summary data are published in *Health and personal social services statistics for England*. Similar data for Wales, Scotland and Northern Ireland are published in *Health statistics Wales*, *Scottish health statistics*, and *Hospital statistics for Northern Ireland*.

### Community nurses and midwives

This section discusses data available about NHS services provided in the community by nurses and midwives employed by hospital and community trusts.

Table 8.4 Statistical returns used to collect data about paramedical staff and services in England

Title	Data source	Coverage	Contents
Chiropody services: summary information from form KC23	KT23	Annual with summaries from 1988-9 onwards England/regions/provider units	Total face-to-face and initial face-to-face contacts; initial contacts by age
Clinical psychology services: summary information from form KC24	KT24	Annual with summaries from 1988-9 onwards England/regions/provider units	Total face-to-face and initial face-to-face contacts; initial contacts by age and source of referral
Occupational therapy services: summary information from form KT26	KT26	Annual with summaries from 1988-9 onwards England/regions/provider units	Total face-to-face and initial face-to-face contacts; initial contacts by age, sex, location and source of referral
Physiotherapy services: summary information from form KT27	KT27	Annual with summaries from 1988-9 onwards England/regions/provider units	Total face-to-face and initial face-to-face contacts; initial contacts by age, sex, and source of referral
Speech therapy services: summary information from form KT29	KT29	Annual with summaries from 1988-9 onwards England/regions/provider units	Total face-to-face and initial face-to-face contacts; initial contacts by age, sex, location and source of referral
Ambulance services, England: <i>Statistical Bulletin</i>	KA34	Annual with summaries from 1988-9 onwards England, Ambulance service areas	Covers 37 ambulance services in England; number of patient journeys by priority of journey and population; response times of emergency call and arrival times for urgent journeys

Data on local authority services are described in Chapter 9. Very few data are collected about the community care activities of general practitioners or the nurses or other staff they employ. Private sector activity is monitored only where services are contracted to the local authorities or the NHS.

All the data are collected through aggregated returns. Return KC54 collects data about maternity services and clinics provided by midwives and health visitors. Data are collected in terms of 'face-to-face contacts' and subdivided by whether they are antenatal or postnatal, domiciliary or at a clinic, and whether they involve midwives or health visitors. Other contacts by health visitors are monitored in return KC55, while data about district nurses are collected through return KC56. These are subdivided by age of client and location of contact, for example at home, in a general practitioner's surgery or in some other place. Similar data are collected about community psychiatric nurses on return KC57 and about community mental handicap nurses on return KC58. Return KC59 collects data about specialist nurses such as Macmillan nurses and stomatherapists.

The categories identified have changed as new specialties have developed in community nursing. The data in these returns are all very limited and are restricted largely to the numbers of initial and total face-to-face contacts for each group by age of clients, location of contact and the source of referral. The returns which they replaced contained much more detail. For example, up to the mid-1980s, data were collected about births attended by community midwives at home and in hospital.

For England, data from each return are published in the booklets described in Table 8.5. Summary data are published in *Health and personal social services statistics for England*. Similar data for Wales and Scotland are published in *Health statistics Wales*, *Scottish health statistics*, and some data are published in *Community statistics for Northern Ireland*. In Northern Ireland, community maternity services were specifically mentioned in the 1997-8 volume of *Community statistics* as an area for which no data are published as they are of poor quality and are being reviewed.

### General medical, dental, optical and pharmaceutical services

Sources of statistics about the numbers of general practitioners, dentists, pharmacists and opticians who have a contract with a particular health authority to provide primary care services are discussed above. This section describes the statistics collected about the work done by these practitioners. The introduction of primary care groups in April 1999 is likely to change both the information collected about general practitioners and the information they require. In addition, primary care groups will themselves have information needs, but these are not yet defined at the time of writing. In the longer term, the information strategies envisage general practices holding an electronic health record for each patient with summaries of care received from other providers.<sup>5-7</sup> If successfully implemented, these would make general practice

Table 8.5 Statistical returns used to collect data about community nurses and midwives in England

Title	Data source	Coverage	Contents
Community maternity services: summary information	KC54	Annual with summaries from 1988-9 onwards England/regions/provider units	Maternity advice and support programmes carried out by midwives and health visitors either as domiciliary visits or in clinics run by midwives; total face-to-face and initial face-to-face contacts by programme, staff groups and location; antenatal and postnatal contacts by location and staff group
Profession advice and support programmes in the community: summary information	KC55	Annual with summaries from 1988-9 onwards England/regions/provider units	Face-to-face contacts with health visitors and other staff; first contacts by age
Patient care in the community, district nursing: summary information	KC56	Annual with summaries from 1988-9 onwards England/regions/provider units	District nurses, SCNs, enrolled nurses and unqualified nurses; face-to-face contacts by location; first contacts by age and sex
Patient care in the community, community psychiatric nursing: summary information	KC57	Annual with summaries from 1988-9 onwards England/regions/provider units	Face-to-face contacts by location; first contacts by age and sex
Patient care in the community, community mental handicap nursing: summary information	KC58	Annual with summaries from 1988-9 onwards England/regions/provider units	Face-to-face contacts by location; first contacts by age and sex
Patient care in the community, specialist care nursing: summary information	KC59	Annual England/regions/provider units	Macmillan nurses, hospice nurses, Marie Curie nurses, stomatherapists, continence nurses, premature baby nurses, diabetes nurses and other nurses; face-to-face contacts by staff group providing care

systems a major source of person-based data. At the time of writing, it is unclear to what extent resources will be available to bring this about.

### General practice

The main centralised source of information about general practice in England and Wales is the General Medical Services database, which was described earlier. This provides a limited amount of information about activities for which a reimbursement or 'item of service' fee is due. Therefore, data are collected about activities such as achievement of targets for immunisation and cervical cytology, and providing contraceptive advice and doing minor surgery. In addition, there are details of the numbers of support staff, such as nurses and receptionists, that practices employ. As mentioned earlier, few data are collected routinely about the clinical activities of these staff or the people who consult them. Activity information from the General Medical Services database, as well as demographic and professional information about general practitioners, is published in the statistical bulletin *Statistics for general medical practitioners in England and Wales*. More detailed data are published in *General medical service statistics*.

As general practitioners are the gatekeepers for other forms of care, their systems should, in theory, be a source of data about all the care an individual obtained from the NHS. This is the rationale behind the proposals for electronic health records. Two approaches have been used for deriving data from general practice records.

In the first of these, data about consultations with general practitioners were collected in a series of studies of *Morbidity statistics from general practice*. In the first three surveys, covering 1-year periods in 1955-6, 1970-1, and 1980-1, the general practitioners taking part undertook to keep an age/sex register of their patients and to supply certain details about each consultation.<sup>1,21-4</sup> In the fourth survey in 1991-2, the general practitioners included had to have certain types of computer systems, whose manufacturers wrote additional software for the survey.<sup>25</sup> Sixty practices in England and Wales with a total of about 500 000 patients took part.

Data were recorded about each episode of illness leading to one or more consultations within the survey year and about each consultation, irrespective of whether or not a prescription was issued. Items recorded included the date and place of consultation, the diagnosis, whether this was the first consultation in the current illness and whether the patient was referred elsewhere. In addition, every person registered with the practices was interviewed. This was to record socio-demographic data, including marital and cohabiting status, housing tenure, ethnic group, household composition and occupation and employment status.

Since participation involves a considerable amount of work, volunteer general practitioners had to be used instead of a random sample. This is thought to have led to certain biases, because of the nature of the volunteers, who were more likely to be research oriented and less likely to practise in inner cities than general practitioners as a whole. Nevertheless, the characteristics of the

patients were found to be similar to those recorded in the 1991 census. Manual checks found that over 95 per cent of contacts with doctors and 93 per cent of diagnoses were recorded in the study, although referrals to out-patient departments were under-reported and some practices did not record consultations with practice nurses.

Many analyses of the data were published in *Morbidity statistics from general practice, Series MB5 no.3*<sup>25</sup> and on a CD-ROM. They have been used extensively for comparisons with local data and, in conjunction with data from the earlier surveys, to look at trends over time.

The second approach is to extract data directly from general practice systems. A number of projects were set up to extract data for epidemiological studies, as general practices became computerised during the 1980s. Some of the earliest projects were funded by pharmaceutical companies and were therefore biased towards data about prescriptions issued and linked to particular computer systems.

The best known of these is the General Practice Research Database, originally set up by VAMP Health Ltd and subsequently operated by the Office for National Statistics (ONS) and owned by the Department of Health. In April 1999, ownership was transferred to the Medicines Control Agency, with the ONS continuing to operate the database. In the mid-1990s, it covered over 2 million people registered with 288 practices in England, Scotland, Wales and Northern Ireland. By the end of the decade, it covered over 400 practices. It is used for special projects, many, but by no means all, related to prescribing. It also contains information about diagnoses, chronic conditions and whether a referral is made. Data from it are published by the ONS in *Key health statistics from general practice, Series MB6*.

The NHS Executive Information Management Group set up the 'MIQUEST' pilot project in 1997 to develop methods for extracting data from a variety of general practice computer systems. The health authorities taking part have used the techniques for a variety of purposes, including collecting health promotion data and supporting clinical audit.<sup>26</sup> The general practices involved used it to inform decisions on clinical priorities and commissioning. Although the results of the pilot have an important potential for meeting the information needs of primary care groups, the data it produced initially were mainly for local use. In addition, some regions and districts have projects collecting morbidity and other information about use of services from individual practices.

The approaches used in *Morbidity statistics from general practice* and in downloads from practice systems each has its strengths and limitations. Continuous downloading generates a live database, enabling individuals' diagnoses and outcomes to be monitored over time. On the other hand, the survey included socio-economic data about the patients, recorded all consultations and made comparisons with previous surveys. It also collected complete data about activity in each participating practice, including all consultations in each spell of illness. As data were collected with special software as part of a special study, they are likely to be more consistent with each other than data downloaded from operational systems in the absence of specific agreements about coding and recording.

The other source of data about general practice is the weekly returns service operated by the Royal College of General Practitioners Research Unit at the University of Birmingham. Volunteer practices submit information about their assessment and diagnoses of patients they have seen in the previous week. As described in Chapter 3, these contribute to the surveillance of communicable diseases by the Communicable Disease Surveillance Centre. The research unit also produces annual summaries and trends in disease, diagnosis and demand for health care services in *The weekly returns service: annual report*.

Between 1 April 1991 and 31 March 1999, when the general practice fundholding scheme was in operation, statistics were collected about the numbers of fundholders and the population covered by fundholding practices. These were published in *Health and personal social service statistics for England* and in the statistical bulletin, *Statistics for general medical practitioners in England and Wales*. Similar data were published in *Health statistics Wales* and *Scottish health statistics*.

### Dentists

The Dental Practice Board is the main source of statistics about the activities of dentists in general practice in England and Wales. Its role is to process claims for payment by dentists who have contracts with health authorities. Data from these claims for payment are published in the *Annual report of the Dental Practice Board*, the *Digest of statistics* and quarterly bulletins. These reports contain information about the expenditure on dental care, the number of dentists, the number of adults and children registered with a dentist and the treatment undertaken. Some data items are analysed by region. There are no statistical bulletins on general dental practitioner services, but information from the Dental Practice Board is included in *Health and personal social services statistics for England* and *Health statistics Wales*. In Scotland, data are collected by the Common Services Agency's Dental Practice Division and published in *Scottish health statistics*. Data about dental practice in Northern Ireland are collected by the Central Services Agency, but are not routinely published.

Data about dentists employed in NHS hospitals or community dental services are collected through the census of NHS workforce. Numbers of staff are published in the statistical bulletin *Hospital, public health medicine and community health service medical and dental staff in England*. Data about the staff and activities of the hospital and community dental services are also published in *Health and personal social services statistics for England* and *Health statistics Wales*. Data about hospital dental services in Northern Ireland are published in *Hospital statistics*. In Scotland, data about dentists employed in the hospital and community health services are collected through the Information and Statistics Division's medical and dental manpower census. They are brought together with data from the Dental Practice Division in *Scottish health statistics*.

These data relate to the activities of dentists. To complement them, surveys are done to collect information about the dental health of the population and dental care received. The Office of Population Censuses and Surveys (OPCS)

undertook separate surveys of adults' and children's dental health at 10-yearly intervals and these are now done by the ONS. The most recent survey of adult dental health was undertaken in 1998, and is described in Chapter 2. A dental survey accompanies the National Diet and Nutrition Survey. The General Household Survey asks people whether or not they have their natural teeth and whether they have recently made a visit to a dentist. These surveys are described more fully in Chapter 2. The British Association for the Study of Community Dentistry also conducts regular surveys and the results are published in the journal *Community dental health*. In Scotland, an Adult Dental Health Survey was done in 1993 and questions on dental health were included in the 1995 Scottish Health Survey, described in Chapter 2.

A growing proportion of dentistry is being carried out privately, although it is difficult to estimate how much. No data are available on the proportion of time a general dental practitioner spends on private work or on the activities undertaken. This makes it impossible to draw together a complete picture of dental care in any particular area. Data about the proportion of income families spend on private dental care and NHS dental charges are included in the Family Expenditure Survey, which is described in Chapter 2.

### Prescriptions and pharmacies

All prescriptions dispensed in England by community pharmacists, appliance contractors, and dispensing doctors and prescriptions submitted by doctors for items they administer themselves are sent to the Prescription Pricing Authority, a special health authority. The information derived from these is made available to individual general practitioners, health authorities and the Department of Health in the form of prescription analysis and costs tables (PACT). These contain information about numbers and costs of items prescribed, subdivided by therapeutic group. Data are available electronically to health authorities and the Department of Health via a computer system known as EPACT. As the data are confidential, they are not made available more widely. Limited information is published in the Prescription Pricing Authority's annual report. Similar data for Wales are available from Prescription Pricing Services at the Welsh Health Service Common Services Agency, now known as Health Solutions Wales.

Information about prescriptions dispensed in England is also made available to the Department of Health through the prescription cost analysis (PCA) system. Unlike prescription analysis and cost tables, this also includes prescriptions written by dentists and those written outside England and dispensed in England. The prescription cost analysis system was introduced in January 1991. Prior to this, data were based on a one in twenty sample of prescriptions dispensed by community pharmacists and appliance contractors only, and was based on fees rather than items. This means that data from this system are not directly comparable with those currently collected.

Summary information about prescriptions dispensed over a 10-year period and more detailed information are available in the statistical bulletin *Statistics*

on prescriptions dispensed in the community, England. As well as data about numbers and costs of prescriptions, the bulletin also includes data about prescriptions for groups of people exempt from charges. More detailed data about numbers and costs of prescriptions for individual preparations are published in *Prescription cost analysis*. For each item, the number of prescription items, the net ingredient cost and the class of preparation are given. For confidentiality reasons, preparations where less than fifty items were dispensed are excluded, but these are included in totals, unless the total itself relates to less than fifty items, in which case it is excluded.

Prescription data are potentially a very powerful tool for assessing clinical practice. On the other hand, the prescriptions are not linked to the characteristics of the people for whom they were prescribed or to other prescriptions they may have been given at the same time or on other occasions. Information about the number of pharmacies opening and closing and the special payments they receive is collected by health authorities and published in a 6-monthly statistical bulletin, *Community pharmacies in England and Wales*, and in an annual statistical bulletin, *General pharmaceutical services in England*. The annual publication contains further information from the Prescription Pricing Authority about prescriptions dispensed. Summary data are also published in *Health and personal social services statistics for England* and *Health statistics Wales*.

In Scotland, all prescriptions are sent to the Pharmacy Practice Division of the Common Services Agency. It produces statistics about the numbers of pharmacies, prescriptions dispensed and their cost. These are published in *Scottish health statistics* and include tables by health board and therapeutic classification. In Northern Ireland, prescriptions are sent to the Central Services Agency, which compiles statistics, but does not publish them routinely.

### Ophthalmic services

Limited information about the range of ophthalmic services available and types of community opticians, based on data from health authorities is published in the statistical bulletin *Ophthalmic services statistics, England*. Summary data are also published in *Health and personal social services statistics for England* and *Health statistics Wales*. A survey is also undertaken of vouchers redeemed in Great Britain to ascertain the proportion which were for spectacles within the voucher value.

In Scotland, data about the numbers of ophthalmic opticians, ophthalmic medical practitioners, the sight tests given, the spectacles supplied and the costs to the exchequer of vouchers and free sight tests are published in *Scottish health statistics* and in a special briefing, *General ophthalmic services, Scotland*. In Northern Ireland, data are compiled by the Central Services Agency, but are not routinely published.

## Health promotion and contraception

The NHS collects information about health promotion in terms of the performance of screening programmes, immunisation and vaccination rates, the activities of family planning and genitourinary medicine clinics and statistics about drug misuse. Some information about the involvement of general practitioners in health promotion activities is available from the National Survey of Morbidity in General Practice, the General Practice Research Database and the other projects which extract data from general practice systems. These contain information about consultation rates for health promotion purposes. Information on health-related behaviours is available from surveys. The General Household Survey and the Health Survey for England collect some information about these topics. Since 1995, the Health Education Authority has commissioned a series of annual Health Education Monitoring Surveys. These ask questions about attitudes to smoking, drinking, exercise, nutrition and sexual behaviour.

### Immunisation programmes

Data about the uptake of immunisation in childhood are collected for the whole of the UK through the Coverage of Vaccination Evaluated Rapidly (COVER) system operated by the Communicable Disease Surveillance Centre. In addition, each of the countries has its own returns. In England, Wales and Northern Ireland, data are collected using return KC50. Wales collects additional data through Health Solutions Wales' child health system. Northern Ireland still uses return KC51, which was dropped in the other countries. In Scotland, a revised data collection form, ISD(S)13 Part 2, was introduced in April 1995. One reason for the change was to make the data more compatible with those collected through the Coverage of Vaccination Evaluated Rapidly system.

Data are published in *Health and personal social services statistics for England*, *Health statistics Wales*, *Scottish health statistics* and *Community statistics* for Northern Ireland. In England, more detailed information was published informally in booklets until 1997-8, when they were superseded by a statistical bulletin, *NHS immunisation statistics, England*. This contains time trends for England and gives the uptake by region and district for measles mumps rubella (MMR), tetanus, diphtheria, polio, pertussis and *Haemophilus influenzae* immunisation. Data about tuberculosis skin tests and BCG vaccinations are also included. In addition, data on performance of general practitioners in relation to targets for childhood immunisation are included in the statistical bulletin *Statistics for general medical practitioners in England and Wales*.

## Screening programmes

### CERVICAL CANCER SCREENING

Data about the uptake, coverage and test results from the computerised call and recall system for cervical cancer screening are collected through return KC53, while pathology laboratories complete return KC61. The latter summarises the results of all smears, whether they were taken as part of the screening programme or for some other reason, together with information about laboratory backlogs. From 1996-7 onwards, data from these two returns have been brought together in a statistical bulletin, *Cervical screening programme, England*. The Welsh Health Statistics and Analysis Unit has issued a similar publication, *Cancer screening programme, Wales*. These contain data by age and district. In Scotland, data are collected by ISD and are included in the *Annual report of the cervical screening programme*.

Data are also published in *Health and personal social services statistics for England*, *Health statistics Wales*, *Scottish health statistics* and *Community statistics for Northern Ireland*. Data on performance of general practitioners in relation to targets for cervical smears are included in the statistical bulletin *Statistics for general medical practitioners in England and Wales*.

### BREAST CANCER SCREENING

Return KC62 is used to collect information from screening units about the operation and outcomes of their call and recall systems. Health authorities complete return KC63 about the population coverage of the programme. In England, the data are collected by the Department of Health and published in a statistical bulletin, *Breast cancer screening programme, England*. The number of cancers detected and the interval between detection and treatment are reported. This publication also contains information about women who were not screened as part of the programme but either referred themselves or were referred by their general practitioner. The publication also discusses the performance of the programme in relation to preset standards or targets. In Wales, the data are collated by 'Breast test Wales'. In Scotland, the Scottish Breast Screening Programme collects data on many aspects of each screening programme, including the number of films taken, radiation doses, and about cytology, pathology, surgery and radiotherapy. Data are also published in *Health and personal social services statistics for England*, *Health statistics Wales*, *Scottish health statistics* and *Community statistics for Northern Ireland*.

### Contraception

Data about contraceptive advice and services provided by NHS family planning clinics are collected through return KT3. The data collected include numbers of clients of family planning clinics by age, sex and method of contraception. Data for England are published in a statistical bulletin, *NHS contraceptive services, England*. It shows increasing use of clinics by young peo-

ple and declining use by people in the older age groups, who are more likely to seek contraceptive advice from general practitioners. The bulletin also discusses the limitations of data about services provided by general practitioners. These are based on item of service payments, and are therefore subdivided only into women registered for fitting of intrauterine devices and women registered for all other forms of contraception combined. Data are also published in *Health and personal social services statistics for England*, *Health statistics Wales* and *Scottish health statistics*. Data are collected in Northern Ireland, but not published because of their poor quality.

Data about the numbers of general practitioners providing contraceptive advice are published in the statistical bulletin *Statistics for general medical practitioners in England and Wales*. Data from general practice systems, including the General Practice Research Database, also contain some limited information about contraceptives prescribed. The prescribing statistics described earlier give an indication of the types of contraceptives prescribed, but not of the numbers of people or couples using them.

Because of the deficiencies in routinely collected data, surveys are essential to monitor trends in contraceptive use in the population. The General Household Survey has asked questions about use of contraception in 1983, 1986, 1989, 1991, 1993, 1995 and 1998 and will include such questions again in the future. Meanwhile, similar questions were asked in 1997 in the ONS' Omnibus Survey.<sup>27</sup> Data about legal abortion are described in Chapter 3.

### Sexually transmitted diseases

The data collected and collated by the Communicable Disease Surveillance Centre and its counterparts in the other countries of the UK are described in Chapter 3.

### Health-related behaviour

Many of the surveys described in Chapter 2 include general questions about health-related behaviour. In particular, these are included in the General Household Survey, the health surveys for England and Scotland and the Health and Lifestyle surveys.

The Health Education Monitoring Surveys were commissioned by the Health Education Authority and undertaken by ONS from 1995 onwards. The series aims to ascertain the health-related knowledge, attitudes and behaviour of adults between the ages of 16 and 74 in England. The survey focuses on health behaviours which are associated with the Health of Nation target areas, which are heart disease, cancer, mental illness, accidents, HIV/AIDS and sexual health. Interviewees are asked about their attempts to give up smoking, attitudes towards physical activity, knowledge about how to reduce the risks of skin cancer, sensible drinking levels and healthy diet. They are also asked about their alcohol consumption, participation in exercise, number of sexual

partners and use of condoms. In 1996, questions were also asked about attitudes to drugs and about drug use. The sample size was around 4700 and attempts were made to make some questions comparable with other relevant surveys such as the Health Survey for England and the Health and Lifestyle Survey. The 1997 survey was a follow-up of the 1996 sample, and a new sample was selected in 1998 when associations between social inequalities and health were also investigated.

In addition, data about specific aspects of health-related behaviours are either collected specifically or collated from a number of different sources. These are summarised in what follows.

### DRUG MISUSE

Information is collected by the drug misuse agencies about people with problem drug use who use their services either for the first time or for the first time after a break of 6 months or more. Selected personal details and information about the type of drugs used and the agency attended are forwarded to the relevant regional drug misuse database. Between 1 October 1992 and 31 March 1996, summaries of these data were forwarded to the Department of Health on form KO71. On 1 April 1996, the form was replaced by a system in which the regional databases forward anonymised individual electronic records. These include fuller information than the earlier form, including details of injecting and sharing equipment. The data are published 6 monthly by the Department of Health in a statistical bulletin, *Statistics from the regional drug misuse databases*. In Scotland, the Information and Statistics Division runs the Scottish Drugs Misuse Database, and data for Wales are collected by the Welsh Drug and Alcohol Unit. In Northern Ireland, the Department of Health and Social Services is considering whether to set up similar systems.

Up to March 1997, the Home Office operated an Addicts' Index. Under the 1973 regulations of the Misuse of Drugs Act 1971, general practitioners notified the Home Office of patients who were addicted to drugs. The Home Office published data derived from this source. The last publication from this system, the Home Office statistical bulletin *Statistics of drug addicts notified to the Home Office, United Kingdom, 1996* was published in October 1997.

In addition, a number of surveys have asked questions about drugs. Questions were asked in 1996 in the British Crime Survey.<sup>28</sup> The Health Education Authority undertook a survey in 1995.<sup>29</sup> As was mentioned above, questions were also asked in the 1996 Health Education Monitoring Survey.

### SMOKING AND DRINKING

Although people using health services are often asked if they smoke or drink alcohol, data are not collected and compiled routinely by the NHS. The exception is the attempt to monitor the proportion of women who give up smoking before and during pregnancy. Few health authorities are able to supply the data at the time of writing, so these are not published.

On the other hand, information on smoking and drinking is collected in many surveys. These surveys (described in Chapter 2) include the health surveys, the General Household Survey, the Family Expenditure Survey, the ONS Omnibus Survey and the Health Education Monitoring Survey. In addition, ONS does special surveys about smoking and drinking among secondary school children, and information about smoking and drinking before and during pregnancy is collected in the 5-yearly infant feeding surveys. In Scotland, data about smoking at the start of pregnancy are collected through the SMR2 system. HM Customs and Excise collects information about numbers of cigarettes released for home consumption in the UK as a whole. This does not include duty free or smuggled cigarettes.

Data from these sources are brought together in an annual Department of Health statistical bulletin, *Statistics on smoking, England*. This includes trends in smoking prevalence by age and sex, cigarette consumption, smoking-related behaviour, tar and nicotine yields and the costs of smoking, together with estimates made by the Health Education Authority of premature deaths attributable to smoking. As well as being reported along with the results of individual surveys, summary data about smoking and drinking are published in *Health and personal social services statistics for England, Health statistics Wales* and *Scottish health statistics*.

### DIET

The National Diet and Nutrition Survey programme (described in Chapter 6) is the major source of information about what adults and children eat. Data about attitudes towards healthy diets can be found in the Health Education Monitoring Survey. The diet of babies is monitored in 5-yearly Infant Feeding Surveys.

### EXERCISE, SPORTS AND LEISURE ACTIVITIES

These have been regular topics in the General Household Survey and are now covered in the Health Education Monitoring Survey. Statistics about how people travel to work are compiled from census data and published in the volume on *Workplace and transport to work*. Data are also collected in the Labour Force Survey. A report, *Cycling in Britain*,<sup>30</sup> compiled by the Department of the Environment includes statistics from many different sources on characteristics of cyclists, cycling to work and accidents.

### ACCIDENTS

Statistics about fires, road accidents, violent deaths and injuries, accidents at home and sports and leisure accidents are collected in a number of ways. Data about accidents at work are described in Chapter 6, and those about transport accidents are described in Chapter 7. Accidents can lead to deaths, data about which are described in Chapter 3, or use of hospitals as in-patients or out-patients, data about which are described earlier in this chapter. The Home Office collects data about accidents recorded by the police.



## Public expenditure on health care

The main publications providing information on the finances of the NHS fall into the following categories:

1. 'Command papers' prepared for the parliamentary authorisation and scrutiny of public expenditure by the Department of Health, known as 'departmental reports', by the House of Commons Health Committee, known as 'public expenditure memoranda', and by HM Treasury, for example the Supply estimates.
2. ONS economic publications, in particular *the National accounts* and *Financial statistics*.
3. The accounts of Health Authorities and NHS trusts, in particular the *NHS England summarised accounts*, and other documents prepared for financial and performance management purposes by the NHS Executive, such as the 'Scottish costs book' and Health Authority revenue cash limits exposition book.

These publications are produced for different purposes and frequently use different conventions in recording and presenting data, leading to inconsistencies between figures given in different publications, which can, on occasion, be irreconcilable. Moreover, recording and presentation are subject to changes in practice, leading to inconsistencies between years. This is particularly true of information prepared for parliament by the Department of Health, and reconciliation of figures produced using different conventions is generally not taken back further than 6 years. Finally, the fundamental reorganisation of the finances of the NHS resulting from the 1990 NHS Community Care Act led to major breaks in time series. The 1990 reforms also led to the creation of flows of funding internal to the health service from NHS trusts to the Department of Health. These are not always adequately distinguished from flows of funding from the health service to the general economy via wages and payments for goods and services.

### NHS expenditure at a national level

#### DEPARTMENTAL REPORTS AND OTHER COMMAND PAPERS

In March of each year, government departments produce annual reports in which they set out their expenditure plans, along with selected statistics about the activities of the department and the activities and services funded from its budget. These are usually referred to as 'departmental reports'.

As mentioned earlier, the Department of Health is responsible for the NHS in England. It also has overall responsibility for personal social services. Before July 1999, the Welsh Office and the Scottish Office had similar responsibilities, but on devolution these passed to the National Assembly for Wales and the Scottish Executive. When the Northern Ireland Assembly came into operation, health and social services became the responsibility of the Depart-

ment of Health, Social Services and Public Safety, a single department within the Northern Ireland Office. On devolution, a new executive agency will take over its responsibilities and those of the four health and social services boards.

Reports prepared for presentation to the Westminster parliament are referred to as 'command papers'. The establishment of devolved government in Scotland, Wales and Northern Ireland will mean that information will in future have to be presented to the representative assemblies for those countries. It is unclear what information will continue to be presented to the Westminster parliament. Except in Scotland, the devolved assemblies have no tax-raising powers, but they will be able to vary health expenditure within the total budget determined by the UK parliament at Westminster. This means that decisions on aggregate NHS expenditure and resource allocation within the countries will no longer be confined to the Westminster parliament. Moreover, the assemblies may develop their own ways of reporting and monitoring expenditure. Westminster 'command papers' may therefore become less useful as a source of NHS financial information for the UK as a whole, although they will remain an important source of information for England.

The financial information presented in departmental reports is geared towards parliamentary scrutiny of expenditure plans, and includes spending for recent years along with projections for the following 3 or 4 years. The Department of Health 'departmental report' *The government's expenditure plans* is supplemented in the late summer by an annual publication of the House of Commons Health Committee, *Public expenditure on health and personal social services*, more commonly known as the 'public expenditure memorandum'. This consists of a memorandum produced by the Department of Health in response to a questionnaire from the Health Committee on various aspects of expenditure and policy. It provides much information which is not included in the 'departmental report'. The exact form of the questions changes from year to year, but broadly similar questions are asked each year about aggregate spending and the application of funds.

Because departmental reports are geared to parliamentary scrutiny of public expenditure, the financial information they present is based on the annual cash plans of departments concerned. The same overall format is used in the presentation of the cash plans of all four countries. Expenditure is presented for two main programmes, hospital and community health services and family health services. Together, these accounted for 96 per cent of health service expenditure in England in 1998/9. Other programmes presented in the cash plans vary from one country to another. The Department of Health's cash plans include the department's own expenditure on personal social services, but not local authority expenditure, and health service expenditure is totalled separately. This is not possible in Northern Ireland, where all expenditure on personal social services is combined with that on hospital and community health services. In Scotland, social work services were not the responsibility of the Scottish Office Department of Health and they are now split between two different departments of the Scottish Executive. It remains to be seen whether the proposed unification of family health services and hospital and community health services budgets in the hands

of primary care groups will demand changes in the way expenditure is voted and reported.

The command papers also include tables setting out the cash plans in a different format according to 'area of expenditure'. Although these tables are derived from the cash plans, they depart from them in the way expenditure is scored to different programmes, leading to the potential for confusion. The Department of Health's report includes a table entitled 'NHS, England - by area of expenditure' and the House of Commons Health Committee's annual report on *Public expenditure on health and personal social services* includes a similar table. One of the most important differences is that, in the expenditure tables, cash-limited family health service budgets, which are held by health authorities, are included in spending on hospital and community health services. Another major difference is in the treatment of capital expenditure: in the cash plans, capital investment by NHS trusts is scored to current expenditure, whereas in the expenditure tables it is scored to capital. The notes to the published cash plan and expenditure tables generally allow figures to be reconciled.

The cash plan tables and their derivatives do not show the sources of the cash to be spent. Historically, there have been only two sources of NHS funding, general taxation and national insurance contributions, and charges made by NHS bodies for services to individuals or private sector organisations. Disposals of capital assets, such as land and buildings, release cash to the service, but are not an additional source of funding. This is not recognised in cash plan tables. The House of Commons Health Committee's report makes some attempt to account for sources of revenue, by including lines for 'charges and receipts' in the expenditure table, but this can lead to confusion: charges are a source of funding, whereas disposals are not.

Internal flows of funding can be identified by reconciling the cash plans with the parliamentary authorisation of expenditure. This takes two forms. Expenditure is either voted as 'supply grants' from the Consolidated Fund, the government's account at the Bank of England, or as 'appropriations in aid'. The latter represent funds which individual departments receive directly. Spending of these has to be authorised explicitly; otherwise, the funds have to be surrendered to the Consolidated Fund. The Department of Health's report includes an annex detailing the 'appropriations in aid' which contribute to expenditure for the current year. Since 1992, these have included flows of funds from NHS trusts to the Department of Health. These flows, described as capital refunds, are clearly not a source of funding for the system as whole, as they are themselves funded out of NHS revenue. To assess the real level of tax-funded expenditure on the health service, it is therefore important to check plans against the *Supply estimates*, published annually by HM Treasury, and the *Appropriation accounts*, published annually by the Comptroller and Auditor General.

## NATIONAL ACCOUNTS

The *National accounts*, generally referred to as 'The Blue Book', is the main annual publication by the ONS giving information on public expenditure. Before 1984 it was called *National income and expenditure*, and before 1996 it was published by the Central Statistical Office. The national accounts present expenditure on health care as part of the economic activity of the government. International comparability is important, as is the construction of relatively extended time series. Neither of these is characteristic of the departmental reports.

ONS compiles the accounts by collecting data directly from departments on a quarterly basis. The data on expenditure do not align precisely with those provided for parliamentary scrutiny in the departmental reports. A Treasury publication, *Public expenditure statistical analysis*, gives a reconciliation between the national accounts and cash plans.

The *National accounts* have included series about NHS expenditure from 1948 onwards. The level of detail increased with changes to the presentation of government expenditure in 1955. From 1955 to 1977, the most complete data were presented in the combined accounts of central and local government. In 1977, this was renamed 'general government expenditure'. Central government expenditure was and continues to be dealt with separately in the central government current account. Expenditure is analysed in terms of 'final consumption expenditure' and 'gross domestic fixed capital formation', in other words, as current and capital. Current expenditure is divided between 'labour costs' and 'other'.

There are two important breaks in the series, both resulting from efforts in the 1970s to bring the UK's national accounts into line with methods proposed by international institutions. In 1977, a new classification of government expenditure by function, the United Nations Classification of Functions of Government (COFOG), was introduced. This led to changes in what was categorised as health expenditure, and it was not possible to reclassify pre-1977 data to take account of this. Data were not published using the United Nations Classification until 1984.<sup>31</sup>

The second break occurred in 1991, but was to some extent a consequence of changes made in 1977. In 1964, a new heading of 'public sector' was introduced. It included the accounts for public corporations such as nationalised industries as well as those of central and local government. In order to bring the accounts into conformity with the Organisation for Economic Co-operation and Development's system of national accounts, the concept of a public sector was dropped in 1977, effectively reverting to the pre-1964 position. The accounts of central and local government were combined and labelled 'general government expenditure' and public corporations were given a separate reading. The change had no effect on health service expenditure data at the time, but from 1991 onwards, NHS trusts were established as public corporations. This means that certain aspects of the economic activity of NHS trusts - in particular, capital expenditure - fall outside the category of 'general government expenditure'. Instead, they are consigned

to the public corporations heading. Data on capital are collected by a survey of NHS trusts, but as one of the conditions of the voluntary agreement between the ONS and the trusts, the data can only be used to produce accounts for the public corporations sector as a whole; even aggregated data on the NHS trust sector cannot be released.

### Financial information from health authorities and NHS trusts

The *NHS summarised accounts* for England, Scotland and Wales have been produced by the Office of the Comptroller and Auditor General since the foundation of the service. They represent the audited accounts of NHS bodies in the respective countries, prepared for the attention of the Public Accounts Committee of the House of Commons. As with other sources of financial information on the health service, they changed dramatically with the 1990 Act, under which NHS bodies were obliged to draw up their accounts on a commercial basis. As of the year 2000, the accounts for the NHS in Scotland and Wales will be produced by the Auditor Generals of those countries for the attention of their own representative assemblies.

Because the accounts are prepared on a commercial basis, they need to be treated with caution. For example, NHS bodies are obliged to account for future medical negligence claims as liabilities on their balance sheets, but are only funded for claims as and when they have to be met; this can lead to deficits on their accounts which have no economic significance. The general point here is that information derived from the financial performance management system, of which the accounts form part, does not necessarily say much about the economic condition of the service as a whole. On the other hand, the 'summarised accounts' give a clearer account of capital investment in the service than other publications.

NHS trusts' financial returns are intended to provide the Executive with data on hospital and community health services' net expenditure by programme and specialty and gross expenditure by staff, commodity and service groupings. Only Scotland produces a publication making extensive use of this material, *Scottish health service costs*, generally referred to as the 'Scottish costs book', produced by the Information and Statistics Division, Scotland.

Information on expenditure by programme is published for England in the House of Commons Health Committee's *Public expenditure on health and personal social services* under the heading 'Programme budget'. Until 1998, this was based on returns from providers, but due to the expansion of NHS purchasing of care in the private sector, purchaser returns are now used. The rationale for this change is given in the 1998 edition.

### Key official publications

- Department of Health. *Departmental report: the government's expenditure plans*. London: TSO, published annually.
- Scottish Office. *Departmental report: the government's expenditure plans*. London: TSO, published annually up to 1999.
- Welsh Office. *Departmental report: the government's expenditure plans*. London: TSO, published annually up to 1999.
- Northern Ireland Office. *Departmental report: the government's expenditure plans*. London: TSO, published annually.
- House of Commons Health Committee. *Public expenditure on health and personal social services*. London: TSO, published annually.
- HM Treasury. *Supply estimates: main estimates*. London: TSO, published annually.
- Office for National Statistics. *National accounts*. London: TSO, published annually.
- Comptroller and Auditor General. *Appropriation accounts*. London: TSO, published annually.
- HM Treasury. *Public expenditure statistical analysis*. London: TSO, published annually.
- Comptroller and Auditor General. *NHS (England) summarised accounts*. London: TSO, published annually.
- Information and Statistics Division. *Scottish health service costs*. Edinburgh: ISD, published annually.

### Other publications containing data about NHS expenditure

In addition to the detailed publications described above, some more general publications contain some data about NHS expenditure. The *Annual abstract of statistics* contains time series of NHS spending in each of the four countries of the UK. *Social trends* contains summarised data about NHS spending. Tables of data about expenditure on the NHS in each country are included in *Health and personal social services statistics for England*, *Health statistics Wales* and *Scottish health statistics*. Although these are not sufficiently detailed for people wanting to scrutinise NHS spending in depth, they give a general idea of how NHS funds are spent.

### Monitoring NHS performance

We have shown in this chapter that a considerable amount of information is recorded about the resources, the activities and the finances of the NHS. To what extent are these used to monitor the performance of the services and is this possible with the data available?

One approach is to monitor complaints. In the 1990s, under the Patients' Charter, all the countries of the UK established systems for collecting and publishing data about patients' complaints about the care they receive. Although this can point to problem areas, it will always be unclear to what extent complaints may relate to relationships between staff and patients and to what

extent they relate to quality of clinical care. In England, data collected on returns KO41(A), relating to the hospital and community health services, and KO41(B), relating to family health services, are published in *Handling complaints: monitoring the NHS complaints procedures*. Similar data are collected in Wales and published in an additional table on the free diskette issued to purchasers of *Health statistics Wales*. Satisfaction with services is monitored in the Welsh Health Survey. In Scotland, data are published in an Information and Statistics Division publication, *NHS complaints in Scotland*, and in *Scottish health statistics*. In Northern Ireland, the Central Services Agency monitors complaints made to the health and social services boards.

Although they have a much longer history, dating back to the nineteenth century, current statistical approaches started in the early 1980s, when the government started to collect 'performance indicators' in many public funded services. In the NHS in England, the first set of 'performance indicators', later known as 'health service indicators', was compiled. In general, they were expressed as rates, derived by dividing activity and resource data by an appropriate population denominator, so that comparisons could be made between districts. The way these and other indicators developed into the current high level performance framework<sup>34</sup> and clinical indicators is described in Chapter 3. Development is inevitably constrained by the extent and quality of the data available to construct them.

As we have seen in this chapter, three of the four countries of the UK rely on a system designed in the 1980s for administrative rather than clinical purposes. The system was designed for a system which was hierarchical and focused on care in hospital under the NHS. It therefore collects very few data from non-NHS providers and relatively few from general practitioners. No person-based data are collected routinely about care in general practice, the community or out-patient departments. With the increasing shift to care outside hospital, this lack of data is becoming an increasingly serious problem.

### Monitoring community care

During the 1990s, a number of policy initiatives attempted to shift the balance of resources from secondary to primary care. In particular, one aim of general practitioner fundholding, introduced under the NHS and Community Care Act 1990, was to empower general practitioners to obtain more cost-effective secondary and community health care services for their patients. This same aim lies behind the creation of primary care groups in April 1999.

The 1990 Act also brought about changes to the way social care was allocated to individuals and to the responsibilities of different sectors. Local authorities replaced the NHS in taking the lead in organising care for elderly people. In the same way that fundholding gave general practitioners responsibility for purchasing secondary and community services, local authority care managers were given the task of purchasing social care. In addition, local authorities were encouraged to purchase services and residential care from the independent sector rather than providing it themselves.

Monitoring and planning community care have always been seen as problematic, with many difficulties involved in collaboration between the agencies involved and in joint planning. The internal market compounded these problems by further fragmenting the services and increasing the numbers of agencies involved. Five different types of organisations – hospital trusts, community trusts, general practitioner fundholders, local authorities and the private sector – were involved in providing care. District health authorities, fundholding general practitioners, and local authorities were all involved in purchasing care for client groups whose needs could not be clearly spilt between these agencies. Although fundholding was abolished in April 1999, two types of commissioning authorities – primary care groups and local authorities – remained.

Despite these major changes in entitlements to and organisation of care, it is very difficult to build up a complete picture of community care using only data available routinely. Little information is available to support the joint planning of services or to ascertain the impact of the changes on clients. Information is lacking in three areas. There is inadequate information about problems relating to interfaces between organisations, about the activities of community and primary care staff, and about the needs of the population.

### INTERFACE PROBLEMS

Local authorities and health authorities do not necessarily have common geographical boundaries or use common definitions. As shown in Chapter 9, this leads to difficulties in comparing information from the two different systems. Moreover, general practices are based only loosely on geographical areas, so primary care groups do not cover geographically defined populations. Because the practice lists are not geographically based, problems will arise in using the census, birth and death statistics and any other data which are based on electoral wards. In addition, the many changes which have taken place make it almost impossible to monitor trends over time for local areas.

The artificial nature of the clear boundaries between health and social care drawn in the NHS and Community Care Act 1990 have been recognised.<sup>5</sup> For elderly and mentally ill people, in particular, the line between the two cannot be drawn precisely, because needs fluctuate. The boundaries between health and social care are locally negotiable, but health services are free at the point of delivery, whereas local authority care is means tested. There is no information about where particular social services departments and health authorities draw that line and therefore no information about geographical inequities. It may be that clients in some parts of the country are paying for services they would be receiving as a free entitlement elsewhere. Although plans for an electronic health record assume that it will contain records of social care as well as health care, it is unclear how the many conceptual and practical problems will be overcome or whether it will be possible to derive statistics from them.

### DATA FOR ASSESSING NEEDS

The limited data from general practice described earlier do not cover all practices and do not measure the need for social care. It is not easy to monitor people's destination on discharge from hospital. Data can still be obtained from the Hospital Episode Statistics, but considerable skill and time are required to produce comparative information. Even then, they would not monitor the needs of people who had not been admitted to hospital. Both the Körner returns described in this chapter and the local authority returns described in Chapter 9 were devised primarily to provide information to enable local management to monitor activity rather than to measure the need for social care.

This could potentially be derived from the assessment process for individual social care which is undertaken by local authorities, but little information is collected about the process at a national level. There are no national data about the numbers of referrals, the numbers of assessments carried out, referral times, the numbers, content and cost of client care packages, how these packages are funded, or about their clients. No attempt is made to use the system to monitor unmet need and there are no means by which one authority can compare its assessment process with another. Such comparative information would be particularly valuable for local authorities in developing their own plans for community care.

### DEFICIENCIES IN ACTIVITY DATA

NHS data are acknowledged to be inadequate for monitoring community care. In the past, data definitions have relied on who has provided a service and where it has been provided. This may have some relevance to hospital care, but for community services it can mean that indicators give a very incomplete picture. The need for either a functional or client-based approach to indicator definition will become increasingly pressing for all health care services.

At one time, there were plans to implement a new community minimum dataset in England by April 1993, but this did not happen. Subsequent plans were to implement it partially by April 1997. It would have included information about the core objectives of the care in terms of whether it was meant to cure, maintain or rehabilitate, and a description of the care programme. A dependency indicator, which would have been a measure of need, was dropped as it was said to require further development.

After the change of government, the community dataset was reviewed again, as part of the preparations for the information strategy. *Information for health* concluded that the minimum dataset proposed in 1995 was too contract oriented to meet the needs of local commissioning or the national performance framework.<sup>5,32</sup> While acknowledging the value of some of the work which had been done on mental health and maternity datasets, it concluded that 'the case to abandon the development of a single episodic minimum dataset for community services is strong'.<sup>5</sup> It also questioned the advisability of spending staff time on completing Körner returns, given the limited value of the resulting data.

Unfortunately, however, the alternatives proposed were disappointingly

vague. *Information for health* recommended that primary care systems should be improved and that they should be integrated with community care systems. In addition, it restated the principle that information for secondary data flows should be derived from those captured in operational clinical systems, and that the means should be developed to extract data from them automatically. These are all very laudable aims, but they were stated to be 'clearly a medium to long term development agenda'.<sup>5</sup> All that is proposed for the short term is 'simple interim measures for benchmarking the relative value for money of local primary and community services.' In other words, data about community care have yet again dropped to the bottom of the queue.

Meanwhile, the lack of information about activities in and needs for community and social care means that resources cannot be allocated according to need, and gross inequities may occur. This has serious implications as increasing emphasis is placed on primary and community care.

### What hope do the information strategies offer?

In proposing integrated person-based records, the information strategies offer the potential for record linkage and an enhanced ability to measure outcome. A number of key questions need to be asked, however. The first, and most crucial, is whether adequate resources will be made available to implement them, as considerable redevelopment will be needed, especially of primary care systems. The next, given the focus in the documents on assembling data for individual patient care, is whether it will actually be possible to derive statistical information from them. While the principle of deriving data from operational clinical systems is laudable, it also needs to be shown to work in practice.

An equally important question is what data items will actually be derived from these systems and collected locally and nationally? Will our national statistics be limited to a relatively small number of clinical indicators and an even smaller number of high level performance indicators? If so, the picture will be even more limited than it is at present. The Steering Group on Health Services Information focused its attention on the data items to be collected and gave little thought about how they were to be collected or analysed. In contrast to this, the information strategies talk more about how systems will operate, but say very little about what data might be needed for different purposes, how the items will be identified and how they will be derived.

The decision to put the development of data about community and primary care at the bottom of the queue is unfortunate, but perhaps not surprising. Although the documents talk about the needs of general practitioners as commissioners of care, the main thrust of the discussion is about the process of booking individual patients into hospital and obtaining reports about the care provided to individuals. Although the need for good aggregated data about hospital, community and primary care is stressed, this is mainly at a conceptual level, and more information is needed about how this can be translated into reality.

### Contact addresses and web sites

Department of Health Statistical bulletins and most other publications are available from Department of Health PO Box 777 London SE1 6XH Telephone: 0541 555 455 Fax: 01623 724524 Web site: <a href="http://www.doh.gov.uk/">http://www.doh.gov.uk/</a>	National Assembly for Wales, formerly the Welsh Office, Health statistics. Telephone: 029 20 825080 Statistical publications: Publications Unit Statistical Directorate 5 National Assembly for Wales Cathays Park Cardiff CF10 3NQ Email: <a href="mailto:Statswales@gtnet.gov.uk">Statswales@gtnet.gov.uk</a>
Branch SD2, Hospital and community health services statistics Skipton House 80 London Road London SE1 6LW Telephone: Hospital in-patient activity 020 7972 5529 Maternity statistics 020 7972 5533 General dental and community health statistics 020 7972 5392 General pharmacy services 020 7972 5504 General ophthalmic services 020 7972 5507 Prescription analysis 020 7972 5515	Information and Statistics Division, Common Services Agency for the NHS in Scotland Trinity Park House South Trinity Road Edinburgh EH5 3SQ Telephone: 0131 552 6255 Web site: <a href="http://www.show.scot.nhs.uk/isd/index.htm">http://www.show.scot.nhs.uk/isd/index.htm</a>
Quarry House Quarry Hill Leeds LS2 7UE Telephone: NHS medical staff statistics 0113 254 5881 NHS non-medical staff statistics 0113 254 5891 Finance statistics 0113 254 5389 Waiting lists 0113 254 5555 Hospital activity 0113 254 5522 NHS expenditure 0113 254 5356 Finance statistics 0113 254 5389	Department of Health, Social Services and Public Safety Regional Information Branch Annexe 2 Castle Buildings Stormont Belfast BT4 3UD Telephone: 028 90 522800 Web site: <a href="http://www.dhssni.gov.uk/hpss/statistics/index.html">http://www.dhssni.gov.uk/hpss/statistics/index.html</a>
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### References

1. General Register Office. *Morbidity statistics from general practice, 1955-56*. Studies on Medical and Population Subjects No. 14. London: HMSO, 1958.
2. Rayner D. *Review of the government statistical services: report to the Prime Minister*. London: Central Statistical Office, 1980.
3. Steering Group on Health Services Information. *First report to the Secretary of State*. London: HMSO, 1982.
4. Steering Group on Health Services Information. *Supplement to the first and fourth reports to the Secretary of State*. London: HMSO, 1985.
5. Department of Health, NHS Executive. *Information for health*. Leeds: NHS Executive, 1998.
6. National Information Management and Technology Board. *Strategic programme for modernising information management and technology in the NHS in Scotland*. Edinburgh: Scottish Office, 1998.
7. Welsh Office. *Better information, better health: information management and technology for health care and health improvement in Wales. A strategic framework 1998 to 2005*. Cardiff: Welsh Office, 1998.
8. Radical Statistics Health Group. NHS 'indicators of success': what do they tell us? *British Medical Journal* 1995; **305**: 1045-50.
9. Department of Health. *HES: the book*. London: Department of Health, published annually.
10. Department of Health. *How HES data is processed*. London: Department of Health, published annually.
11. Price S. Hospital episode statistics. In: Leadbeter D, Rigby M eds. *Harnessing official statistics*. Abingdon: Radcliffe Medical Press. In press.
12. Department of Health. NHS maternity statistics, England: 1989-90 to 1994-95. *Statistical Bulletin* 1997; **28**: 1-44.
13. Welsh Office. *Maternity aspects of child health in Wales, third report*. Cardiff: WHSCSA, 1998.
14. Kendrick S, Clarke J. The Scottish record linkage system. *Health Bulletin* 1993; **51(2)**: 72-9.
15. Williams B. Utilisation of National Health Service hospitals in England by private patients, 1989-95. *Health Trends* 1997; **29**: 21-5.
16. Williams BT, Pearson J. Private patients in NHS hospitals: comparison of two sources of information. *Journal of Public Health Medicine* 1999; **21(1)**: 70-3.
17. Laing W. *Laing's review of private healthcare*. London: Laing and Buisson, published annually.
18. Williams BT, Nicholl JP, Thomas KJ, Knowelden J. Analysis of the work of independent acute hospitals in England and Wales, 1981. *British Medical Journal* 1984; **289(6442)**: 446-8.
19. Nicholl JP, Beeby NR, Williams BT. Role of the private sector in elective surgery in England and Wales, 1986. *British Medical Journal* 1989; **298(6668)**: 243-7.
20. Williams BT, Nicholl JP. Patient characteristics and clinical caseload of short stay independent hospitals in England and Wales, 1992-3. *British Medical Journal* 1994; **308(6945)**: 1699-701.
21. Royal College of General Practitioners, Office of Population Censuses and Surveys, and Department of Health and Social Security. *Morbidity statistics from general practice, 1971-72: second national study*. Studies on Medical and Population Subjects No. 36. London: HMSO, 1979.

22. Royal College of General Practitioners, Office of Population Censuses and Surveys, and Department of Health and Social Security. *Morbidity statistics from general practice, 1970-1971: socio-economic analyses*. Studies on Medical and Population Subjects No. 46. London: HMSO, 1982.
23. Royal College of General Practitioners, Office of Population Censuses and Surveys, and Department of Health and Social Security. *Morbidity statistics from general practice, 1981-82: third national study*. Series MB5 No. 1. London: HMSO, 1986.
24. Royal College of General Practitioners, Office of Population Censuses and Surveys, and Department of Health. *Morbidity statistics from general practice, 1981-82: third morbidity study: socio-economic analyses*. Series MB5 No. 2. London: HMSO, 1990.
25. Royal College of General Practitioners, Office of Population Censuses and Surveys, and Department of Health. *Morbidity statistics from general practice: fourth national study, 1991-1992*. Series MB5 No. 3. London: HMSO, 1995.
26. Department of Health, NHS Executive. *Collection of data from general practice: overview*. Leeds: NHS Executive, 1996.
27. Dodd T, Freeth S. *Contraception and sexual health, 1997*. Series OS11. London: Office for National Statistics, 1999.
28. *Drug misuse declared in 1996: latest results from the British Crime Survey*. Home Office Research Study 172. London: Home Office Information and Publications Group, 1997.
29. *Drug use in England. Results of the 1995 National Drugs Campaign Survey*. London: Health Education Authority, 1997.
30. Department of the Environment. *Cycling in Britain*. London: TSO, 1996.
31. Doggett EA. *National accounts: concepts, sources and methods*. Office for National Statistics. London: TSO, 1998, Annex 2, 497-501.
32. NHS Executive. *A national framework for assessing performance - consultation document*. Leeds: NHS Executive, 1997.

## Social services

9

### STATISTICS CHASING THE POLICY TAIL

Nick Miller and Robin Darton

#### Introduction

Personal social services statistics

Residential and nursing homes for elderly people

#### Introduction

Social care statistics, like policies for social care provision, were in a continual state of change during the 1980s and 1990s. The changes were driven by two conflicting agendas. The Department of the Environment efficiency scrutiny<sup>1</sup> attempted to reduce the burden of information collection on local authorities, while attempts by central government to increase the oversight of the activities of social services departments required more information from them. There is also a third agenda, the change in the role of social services departments from providers of care to commissioners of services. This has resulted in large-scale, ongoing privatisation of service provision.

The collection and publication of information on social care provision vary from one constituent part of the United Kingdom to another. This chapter concentrates on the collection of data for England. Data collected and published about services in Wales, Scotland and Northern Ireland are described briefly.

The first section of this chapter gives an overview of current social services statistics for all client groups, and then goes on to discuss the problem of using the statistics for monitoring the performance of social services departments. In any area, the local social services department is just one of a number of agencies which commission or provide social care. Comparisons between social services departments are complicated by the inability to measure the contribution of these other agencies, in particular the National Health Service (NHS). The second section reviews the statistics on the provision of residential and nursing home care. In the last two decades, there has been a substantial growth of independent, especially private sector, provision of residential and nursing home care,<sup>2</sup> but it has proved extremely difficult to chart this expansion through the official datasets on residential and nursing homes.<sup>3</sup> The expansion was financed to a large extent from the social security budget, which increased from £10 million in 1979 to £1390 million in 1990, and to an estimated