

# Annual Acute Hospital Activity and NHS Beds Information in Scotland



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## Introduction

The NHS in Scotland delivers a wide range of specialist care and treatment to the people of Scotland. Services provided in NHS hospitals are diverse ranging across specialist diagnostic procedures to complex and life saving surgery to meet both planned and emergency needs.

This publication provides a general overview of the use of hospital services in 2015/16 using routinely collected data. This overview is primarily based on the range of acute medical and surgical hospital services that are provided in Scotland and covers most of the [inpatient](#), [day case](#) and [outpatient](#) services used by [patients](#). The overall expenditure associated with acute services is around £4.3bn, which represents over 41% of total NHS spend<sup>1</sup>. Admissions into maternity wards or mental health hospitals are not part of this report. As well as reporting on activity within 2015/16, some trend information highlighting changes in service provision over the past twenty years is also presented.

As well as this narrative detailed information is given in a set of data tables which accompany this report and can be accessed [here](#). These tables include statistical information on the medical diagnoses of patients, the number and type of surgical procedures that are carried out, the level of emergency hospital admissions and the use of hospital service by children.

A recent change in the way health and social care is being delivered in Scotland is in the introduction of 31 Health and Social Care Partnerships (HSCP), bringing together NHS and local council care services under the oversight of an Integration Joint Board for the commissioning and management of many services. Information on the use of hospital services by the population of these HSCPs is provided in the data tables accompanying this publication.

## Background

There are two broad ways in which patients access and make use of acute hospital services. The first is part of a planned or elective pathway of care and which is normally initiated following a visit to the GP or another healthcare professional and may result in a referral to see a consultant as an outpatient for specialist advice or diagnosis. This outpatient appointment may then result in an onward referral for further tests or admission into hospital for treatment.

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<sup>1</sup> <http://www.isdscotland.org/Health-Topics/Finance/Costs/> The overall expenditure figure of £4.3bn refers to acute expenditure from the Cost Books for inpatient, day cases, outpatient, accident and emergency, and day patient.

The second way in which patients make use of hospital services is as a result of an emergency referral either by a healthcare professional or directly by the patient themselves. This may be via an Accident and Emergency department, directly to Ambulatory Emergency Care or to an Acute Assessment Unit where it will be decided if the patient needs to be admitted to an inpatient ward; different models of emergency care are evolving to meet the challenge of increased complex cases and improved outcomes for patients.

Further information on emergency admissions and unscheduled care can be found [here](#).

Within this report, the overview of outpatient activity and services is presented first, followed by information on the number and type of hospital admissions. The final section presents a snapshot of some of the ways in which hospital care has changed over the 20 years.

Note -This report uses the terminology “admissions” to describe hospital activity in the reported periods. Strictly speaking the activity actually refers to the number of patients who are *discharged* from hospital in the reported time period rather than those *admitted* within that period. The difference between admissions and discharges is of small importance at the level of detail shown.

**Table 1: Summary of key statistics 2015/16**

<p><b>Outpatient Services</b> (excludes maternity and mental health clinics)</p>	<p>1.12 million Scottish residents (one in five of the population) visited an outpatient department in 2015/16, of whom</p> <ul style="list-style-type: none"> <li>- 853,000 people (76%) had one new outpatient attendance within the year</li> <li>- 200,000 people (18%) had two new attendances</li> <li>- 70,000 people (6%) had three or more new attendances</li> </ul> <p>Resulting in a total of 1.49 million new outpatient attendances.</p> <p>Overall there were 4.50 million total outpatient attendances.</p> <p>One in ten patients failed to keep their new outpatient appointment without prior notification.</p>
<p><b>Admissions into hospitals</b> (excludes admissions to maternity wards and mental health hospitals)</p>	<p>712,000 Scottish residents (one in seven of the population) were admitted to hospital in 2015/16.</p> <ul style="list-style-type: none"> <li>- 495,000 people (70% of those admitted to hospital) had one admission to hospital</li> <li>- 127,000 (18%) had two hospital admissions</li> <li>- 90,000 (13%) had three or more admissions</li> </ul> <p>There were a total of 1,218,001 admissions into hospital of which</p> <ul style="list-style-type: none"> <li>- 469,082 (39%) were treated in a day case setting</li> <li>- 171,142 (14%) were elective inpatient admissions</li> <li>- 571,221 (47%) were emergency admissions</li> </ul> <p>The trend to provide more hospital based treatment in an outpatient or day case setting continues. In 2015/16, around 735,000 (73%) procedures were carried as an outpatient or day case.</p>
<p><b>Length of stay</b></p>	<p>The average length of stay in hospital for elective inpatients is 3.9 days and for an emergency inpatient 6.9 days.</p>
<p><b>Beds</b></p>	<p>Some 15,782 inpatient beds were available for use within Scotland for acute specialties</p> <ul style="list-style-type: none"> <li>- 11,414 (72%) were for medical specialties</li> <li>- 4,368 (28%) were for surgical specialties</li> </ul>

Source: Outpatient data are based on ISD(S)1 and SMR00, Inpatient data come from SMR01 data.

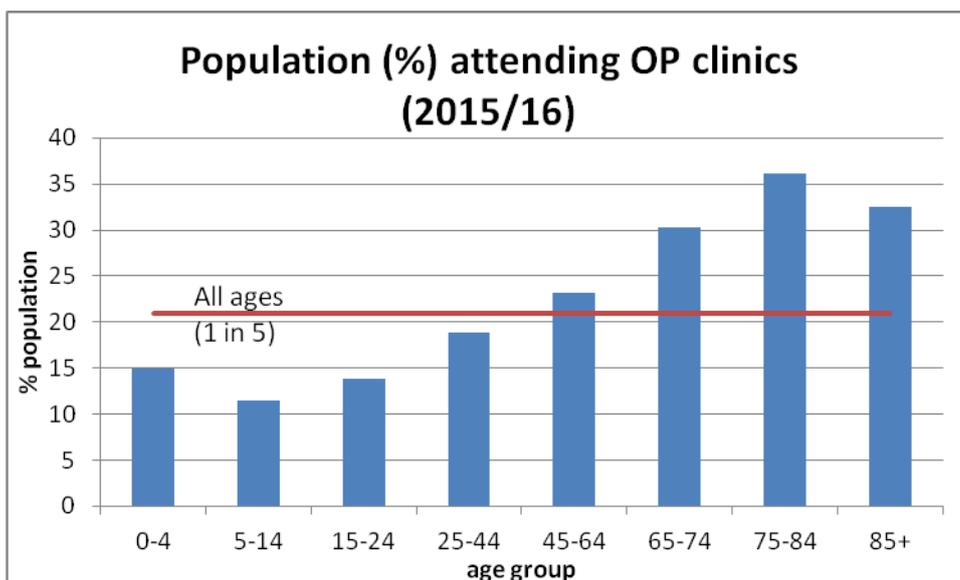
Trend information on acute activity and beds information can be found in the [publication's tables](#).

## Section A: The use of outpatient services

The majority of interactions with hospital-based services were carried out in an outpatient setting with more than 4.5 million outpatient attendances per annum. A further 1.6m attendances at A&E departments took place. An outpatient appointment will often be the patient’s first contact with hospital services. In 2015/16, 1.12 million people i.e. around one in five of the general population attended a consultant-led outpatient clinic at least once during the year.

The likelihood of being referred to an outpatient clinic increases significantly with age. One third of the population (33%) aged 65 and over were seen at an outpatient clinics, while fewer than one in five (19%) of those aged 25-44 did so. The chart below shows the proportion of the population attending consultant outpatient services.

**Chart 1: Proportion of population attending consultant outpatient clinics**



Source: Outpatient data are based on ISD(S)1, Population data come from NRS.

The vast majority of people attending usually have only one new outpatient attendance per year, although a small proportion of people do have multiple attendances. In 2015/16,

- Three out of four of the people (853,000) attending an outpatient clinic had one attendance
- 18% (200,000) had two attendances
- 4.5% (51,000) experienced three attendances
- Nearly two percent of people (19,000) had four or more attendances.

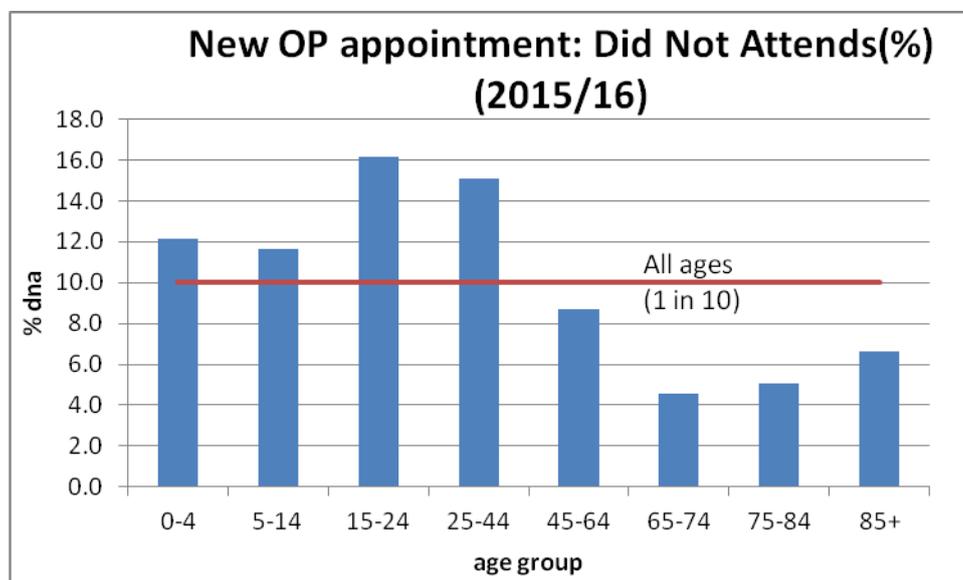
Overall, there was a total of 4,500,280 outpatient attendances (new and follow-up) in Scotland. The total number of new outpatient attendances in 2015/16 was 1,486,552 (excluding A&E attendances). For each new referral to outpatient, there is then, on average, a further two follow-up attendances at the clinic, although the actual number of return appointments for any individual patient will vary depending on the reason for referral and treatment required. Detailed information on Outpatient attendances for each NHS board and specialty can be found [here](#).

### ‘Did Not Attends’ at outpatient clinics

People do not always attend their booked outpatient clinic. Whilst some patients will inform the hospital that they cannot attend, one in ten of new outpatient appointments are missed without prior notification. This equates to 149,000 patients not turning up for their first outpatient appointment.

The likelihood of someone not turning up for their appointment was linked to their age and gender. Males were more likely than females not to keep their appointments (11.1% vs 9.2%); those aged 25–44 were three times more likely not to turn up for their appointment than patients aged over 65 (15% vs 5%). Chart 2 shows, for different age groupings, the percentage of new appointments that were not kept.

**Chart 2: Level of non-attendance at new outpatient clinics**



Source: SMR00 data.

There was significant variation between NHS boards and specialties in the number of patients who did not attend their appointments.

Detailed information on the level of Did Not Attends for each NHS board and specialty can be found [here](#).

## Section B: Acute hospital admissions

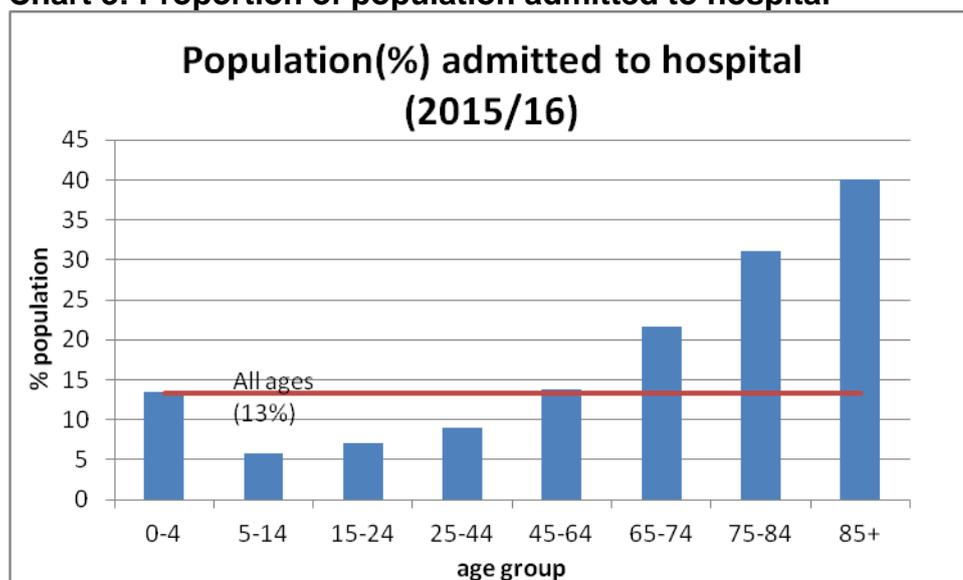
Although much hospital-based care is carried out on an outpatient basis, a significant number of people have to be admitted to hospital for diagnosis or treatment. This can be part of a planned pathway of care, such as the requirement for an operation following a consultation at an outpatient clinic or a requirement for further diagnosis. In 2015/16, it is estimated that around one in four (26%) of patients who were seen at an outpatient clinic were further referred on for admission to hospital as part of their pathway of care.

Alternatively the admission could be as a result of an emergency, for example, due to an accident or perhaps an acute exacerbation of a condition.

When admitted to hospital, the patient is either treated on a same day basis, often referred to as a day case, or as an inpatient, when the patient will normally spend at least one night in hospital. Some inpatients may be discharged from hospital on the same day as their admission.

Around one in seven (712,000) of the Scottish population had at least one admission into hospital in 2015/16. Almost 396,000 people were admitted at least once as a planned admission into hospital and a similar number of the population (395,000) were admitted as an emergency. A small number of people had both planned and emergency admissions within the year.

**Chart 3: Proportion of population admitted to hospital**



Source: SMR01 data.

The likelihood of being admitted to hospital is, as expected, highly correlated with age reflecting the health status of the population. One person in three of the Scottish population aged over 75 was admitted at least once to hospital in 2015/16. By way of contrast, just over one in twelve of people aged 25-44 were admitted. The chart above shows, by age grouping, the proportion of the population who were admitted to hospital in 2015/16.

### **Effect of population change in the future**

The population aged over 65 is expected to increase by more than 20% over the next 10 years. Based on the above use of hospital healthcare services, this demographic shift in the population will have significant implications for the future demand on hospital services. This is a highly complex area. For further information please see [here](#).

### **People living outwith Scotland**

There was a small proportion of hospital admissions that were for people who were resident from outwith Scotland. In 2015/16, there were approximately 7,500 such admissions, equating to 0.6% of all admissions.

### **Multiple admissions to hospital - Revised**

Most people admitted to hospital had only one admission per year. However three out of ten people who were admitted to hospital had at least two admissions. In 2015/16,

- 70% (495,000) of those people admitted to hospital had one admission
- 18% (127,000) had two hospital admissions
- 13% (90,000) were admitted three or more times within the year.

Of the 395,000 people who had at least one emergency admission, 297,000<sup>R</sup> (75%) had one emergency admission into hospital, around 62,000<sup>R</sup> (16%) had two emergency admissions and around 36,000<sup>R</sup> (9%) had three or more.

Overall, there were 1,218,001 admissions to hospital in 2015/16. Of these,

- 469,082 were treated in a day case setting
- 171,142 were planned inpatient admissions
- 571,221 were admitted an emergency.

Detailed information on inpatient and day cases by NHS Board of Treatment can be found [here](#). More information is available by [Health Board of Residence](#) and [Health and Social Care Partnerships](#).

### Episodes of care

Sometimes when a patient has been admitted to hospital, their care will be transferred between consultants as part of their pathway of care. For example, it is not uncommon for patients who are being treated in the specialty of geriatric medicine to have initially been under the care of a general physician as part of their hospital stay. Similarly orthopaedic patients can sometimes be transferred to geriatric medicine as part of their ongoing treatment. These separate elements are known as 'episodes' of care within each hospital stay.

The majority of hospital admissions (72%) consist of one discrete episode of care. In total, there were 1,622,547 episodes (including patient transfers between wards) associated with the 1,218,001 admissions to hospital in 2015/16.

Detailed information on Episodes of care by Health Board of Treatment can be found [here](#).

### How long do people stay in hospital?

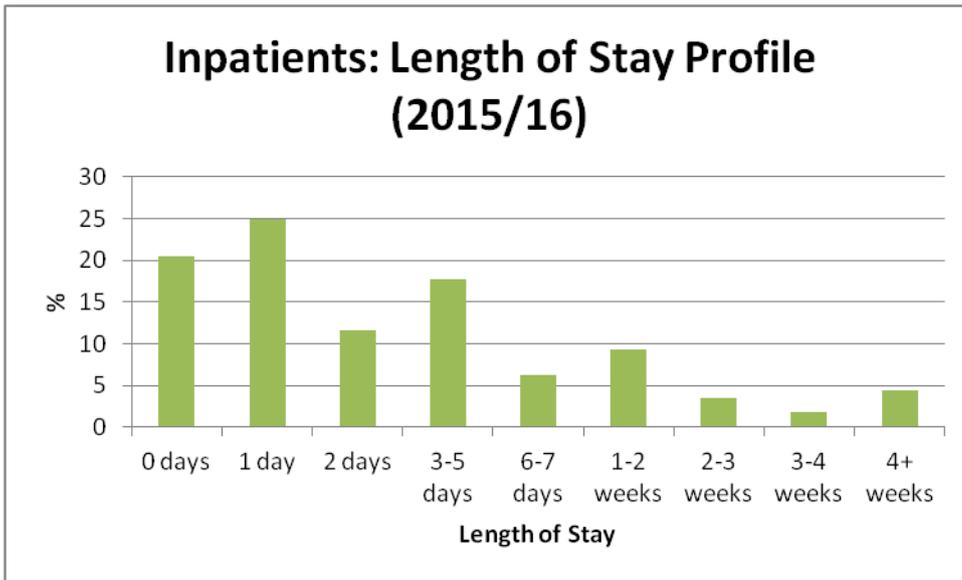
How long a patient stays in hospital will be strongly related to the complexity of any operation carried out as well the underlying health condition of the person. Patients admitted as emergencies generally stay longer than elective hospital admissions.

In 2015/16, the average length for an inpatient stay was 6.3 days. In 2015/16,

- Planned admissions: the average length of stay was 3.9 days
- Emergency admissions: the average length of stay was 6.9 days.

The charts below show the length of stay profile for patients admitted to hospital. The first chart shows the distribution for all admissions; the subsequent chart highlights the different length of stay profiles experienced by planned and emergency admissions.

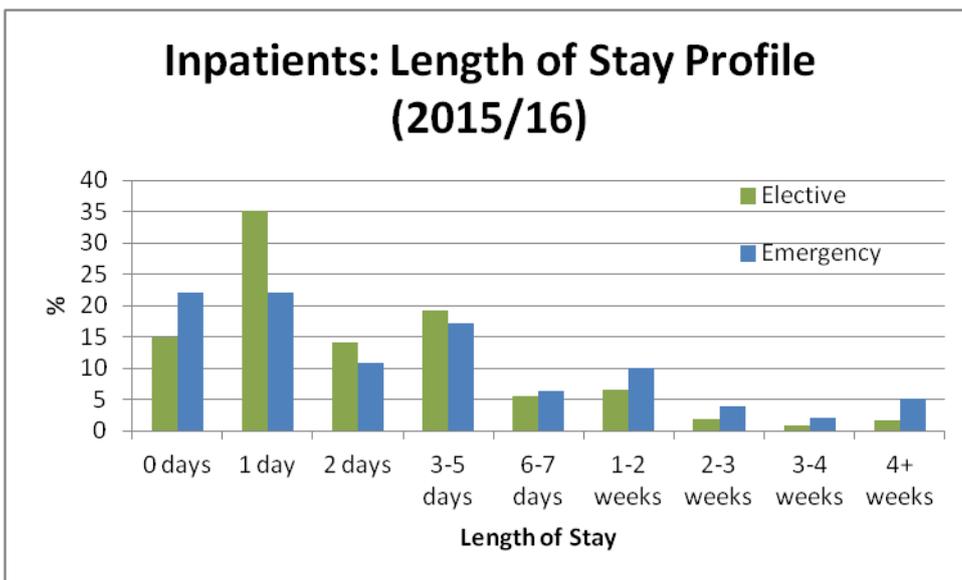
**Chart 4: Length of stay profile for inpatients (all admissions)**



Source: SMR01 data.

- One in five inpatient admissions were admitted and discharged on the same day
- The most common stay in hospital involves one overnight stay which was experienced by a quarter of all inpatient admissions
- Overall 45% of all inpatient admissions stayed one night or less in hospital
- 5% of admissions remained in hospital for more than four weeks.

**Chart 5: Length of stay profile for Inpatients (Elective vs. Emergency)**



Source: SMR01 data.

The length of stay profile for elective admissions differed from those admitted as emergencies. Patients admitted as an inpatient following a planned referral tend to be in hospital for shorter periods with 50% (85,343) staying no more than one night compared to 11% (18,693) staying

for a week or more. By contrast for patients admitted as an emergency those staying no more than one night was 44% (255,783) and those staying for a week or more was 21% (123,528); this often reflects the underlying health condition and multiple morbidities of these patients.

Detailed information on Length of stay can be found [here](#).

### **Beds numbers**

The number of hospital beds has been reducing for many years. This is a result of both medical advances which have led to shorter stays in hospital for patients including planned day case procedures (see Chart 6) alongside a shift to treatment and care in a more ambulatory setting or in the community.

The number of available hospital beds for acute specialties in Scotland in 2015/16 was 15,782. This compares with 17,536 in 2005/06 and 18,029 in 2001/02.

Detailed information on Bed numbers can be found [here](#).

## Reasons for admission

There are many reasons why a person might have to be admitted to hospital. It could, for example, be due to an underlying health condition which requires treatment, monitoring or further diagnosis; it could be as a result of a sudden deterioration in health status; or it could be following a trauma incident.

The five most common diagnosis groupings, accounting for 57% of all admissions are shown in the table below.

**Table 2: Five diagnosis groupings accounting for the greatest number of hospital stays, Scotland, 2015/16**

Diagnosis grouping	Specific conditions	No of admissions	Percentage
Neoplasms	<i>For example:-</i> Non-Hodgkin lymphoma, benign tumour, breast cancer	177,989	14.7%
Symptoms, signs and ill defined conditions, not elsewhere classified	<i>For example:-</i> Pain in throat and chest, abdominal and pelvic pain	162,198	13.4%
Diseases of the digestive system	<i>For example:-</i> Appendicitis, pancreatitis	155,705	12.9%
Diseases of the respiratory system	<i>For example:-</i> Pneumonia, asthma, chronic obstructive pulmonary disease (COPD)	95,851	7.9%
Injury, poisoning and certain other consequences of external causes	<i>For example:-</i> Fracture of forearm, burns and corrosions, poisonings and toxic effects of substances.	95,560	7.9%

Source: SMR01 data.

The medical diagnosis of patients who were admitted to hospital differs markedly as to whether the admission was on a planned elective basis or as an emergency. For elective admissions, four out of ten admissions were either for neoplasms (cancer-related / suspicion of cancer) or were linked to the digestive system; for emergency admissions more than one-third of were for general 'signs or symptoms' or following an injury or poisoning.

**Table 3: Five diagnosis groupings accounting for the greatest number of hospital stays, Elective and Emergency Admissions, Scotland, 2015/16**

Elective Admissions			Emergency Admissions		
Diagnosis Grouping	No. of admissions	% of total	Diagnosis Grouping	No. of admissions	% of total
Neoplasms	157,888	25.1	Symptoms, signs and ill defined conditions, not elsewhere classified	127,263	21.6
Diseases of the digestive system	98,468	15.6	Injury, poisoning and certain other consequences of external causes	84,973	14.4
Diseases of the musculoskeletal system and connective tissue	60,847	9.7	Diseases of the respiratory system	82,674	14.1
Factors influencing health status and contact with health services	53,068	8.4	Diseases of the digestive system	57,775	9.8
Diseases of the eye and adnexa	46,129	7.3	Diseases of the circulatory system	55,726	9.5

Source: SMR01 data.

See the [Diagnosis by Health Board of Residence](#) table for further detailed data on the above. Information on Diagnosis is also available by [Health and Social Care Partnership](#)

### What procedures are carried out?

In 2015/16 there were a total of 1,218,455 procedures performed within the acute hospital care setting (excluding diagnostic imaging and testing procedures). Almost 35% (426,123) of all procedures were carried out in an outpatient setting and 25% of procedures (305,021) were associated with at least one overnight stay in hospital.

86% of all procedures were carried out as either a planned admission or in an outpatient setting.

Some of the more common procedures that were carried out include,

- Eye related operations (such as cataracts) - there were 85,000 of these and they were primarily carried out on older people
- 'Operations on the mouth' which include tooth extractions or fitting of orthodontic appliance - these procedures were mainly carried out on children and there were around 93,500 of them
- Various types of endoscopies which were used to assist with diagnosing conditions - in total there were 209,000 endoscopies performed
- 37,500 procedures were for the removal of skin lesions
- 17,000 total Hip and Knee replacements were carried out.

A full listing of procedures is provided in the accompanying [table](#).

## Children

The health service plays an important role in the promoting of health and well being of children. NHS Scotland provides a universal health promotion programme for all children and families called the '[Child Health Programme](#)'.

In addition the health service also provides care to children who require to be admitted to hospital. Reasons for admissions to hospital for children and young people vary from specialist diagnostic procedures, emergency treatment following an accident and routine to complex and life saving surgery.

In 2015/16 there were 126,360 admissions for children (0-18 years old), 59% (74,677) of which were emergencies and 40% (50,166) elective.

The main reason for a child or young person to be admitted to hospital on a planned basis was for disorders of the digestive system. For those admitted as an emergency it was diseases of the respiratory system.

The most common procedure carried out of children and young people related to operations on the mouth, mainly removal of teeth (7,944), which accounted for 13% of all operations.

The table below presents the top three diagnosis groupings for elective and emergency admissions for children.

**Table 4: Three diagnosis groupings accounting for the greatest number of hospital stays, Elective and Emergency Childhood Admissions, Scotland, 2015/16**

Elective Admissions			Emergency Admissions		
Diagnosis Grouping	No. of admissions	% of total	Diagnosis Grouping	No. of admissions	% of total
Diseases of the digestive system (often oral related)	11,423	23%	Diseases of the respiratory system (e.g. respiratory infections)	17,212	23%
Factors influencing health status (e.g. admissions for examination, observation, immunisation.	5,871	12%	Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	13,880	19%
Neoplasms e.g. leukaemias	5,235	10%	Injury, poisoning and certain other consequences of external causes	11,967	16%

Source: SMR01 data.

Detailed information on Children and Young People can be found in the following tables

- [Childhood Admissions Summary](#)
- [Childhood Diagnosis](#)
- [Childhood Procedures](#)

## Where are patients treated?

The majority of patients are treated in a hospital located in their own local NHS Board area. However, around 1 in 8 admissions (12%) are to hospitals within other NHS board areas. The reasons for patients not being treated in their own NHS board area will include the provision of specialist national and regional services, where an emergency may have occurred or it may simply reflect the natural 'catchment' area of a particular hospital, being the closest to the patient.

The flow of patients between NHS boards varies depending on whether the admission is an emergency or not.

Overall about one in four elective inpatient admissions were referred for treatment within another NHS board area. A much smaller proportion of emergency admissions (7%) were to hospitals outwith the patients' own NHS board area. Some of these patients may have been subsequently transferred to another hospital.

In addition, all NHS boards refer some patients to the Golden Jubilee National Hospital (GJNH) in Clydebank. The GJNH provides a range of national and regional services as well as being a national resource providing additional capacity to help meet the demand for planned procedures from across Scotland. The GJNH treated 3.1% of all planned hospital admissions in 2015/16.

**Table 5: Flow of patients admitted to hospital between NHS boards, Scotland, 2015/16**

Admission Type	% treated in own Board area	% treated in another Board area
Outpatients	91%	9%
All Admissions	88%	12%
- Day case Admissions	86%	14%
- Inpatients (Planned)	77%	23%
- Inpatients (Emergency)	93%	7%

Source: SMR01 data.

The number of patients being treated in another NHS Board varies depending on which NHS Board the patient resides in. As would be expected, there is less 'flow out' of patients from the four *teaching* boards that provide most of the specialist or regional services NHS Greater Glasgow Clyde, NHS Lothian, NHS Grampian, NHS Tayside, compared with other NHS boards. Around 4%-6% of patients from these four NHS boards were treated elsewhere, which contrasts with 13% - 30% for other NHS boards.

Information on Cross Boundary Flow is available [here](#).

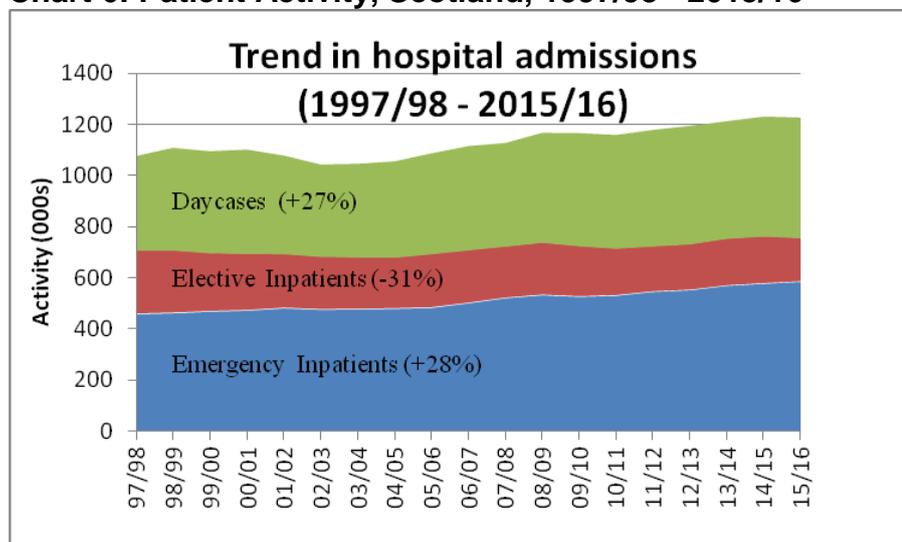
## Now and then – a brief look over the past two decades

The way NHS care has been delivered over the past two decades has changed significantly. This is often driven by advances in medical techniques and medication allowing patients either to stay significantly less in hospital once they have been admitted or indeed avoiding the need to be admitted at all. For example, the increased use of keyhole surgery has had a significant impact on patients' treatment and rehabilitation. This section describes some of the changes that have taken place in the past twenty years or so.

An increasing amount of healthcare is now being delivered either as an outpatient or day case, rather than in an inpatient ward. The chart below shows the number of admissions to hospital over the past twenty years categorised as whether they were treated as an inpatient or day case. Since 1997/98 the number of planned admissions into inpatient wards has fallen by around 80,000 (-31%); whilst at the same time the number of patients treated as day cases has increased by around 100,000 (+27%). In 2015/16, around 426,000 procedures were carried out in an outpatient clinic. Data on the number of procedures carried out in outpatient clinics was not comprehensively recorded in the earlier years but it is known that there has been a shift to patients being treated in an ambulatory care setting wherever possible.

The number of emergency admissions has grown gradually over the 20 year period with, in 2015/16 around 126,000 more emergency admission compared with 1997/98. (+28%). This increase in emergency admissions is strongly associated with the ageing population; for example there has been a 25% increase in the number of people aged 65+ over the same period. This changing profile of treatment presented below shows a reduction in planned elective inpatient admissions and the increase in the level of treatment delivered as a day case.

**Chart 6: Patient Activity, Scotland, 1997/98 - 2015/16**



Source: SMR01 data

Some of the more specific changes that have taken place are illustrated in the table below.

**Table 6: Changes over time in NHS Care Delivery**

Change	Illustration
<p>Greater use of outpatient services</p>	<p>Dermatology is now predominantly an outpatient based service.</p> <ul style="list-style-type: none"> <li>- In 1997/98, there were around 12,000 admissions to hospital for dermatology and this has fallen to 1,600 in 2015/16. At the same time, the number of new patients seen in outpatients has increased from 84,000 to 126,000</li> <li>- Patients now require fewer follow-up appointments. In 1997/98, patients had an average of 2.8 outpatient return appointments whereas in 2015/16, patients were seen a further 1.3 times, on average</li> </ul>
<p>More patients being treated on a day case basis</p>	<p>In Ophthalmology, the majority of patients admitted to hospital for eye-related conditions are now treated on a same day basis.</p> <ul style="list-style-type: none"> <li>- In 1997/98, 50% of admissions were to an inpatient ward, whereas in 2015/16, it is 12% of admissions</li> </ul>
<p>Increased use of keyhole surgery</p>	<p>Cholecystectomy (removal of gallbladder):</p> <ul style="list-style-type: none"> <li>- Nine out of ten patients now have this operation carried out using keyhole surgery. More than 8,000 of these procedures were carried out in 2015/16</li> <li>- This allows patients to be sent home much more quickly. A patient who undergoes this keyhole surgery stays in hospital 5 days less than someone who has more invasive surgery</li> <li>- Over the past 20 years, the average length of stay for patients undergoing a cholecystectomy has reduced from 6.8 days to 3.4 days.</li> </ul>
<p>Shorter lengths of stay</p>	<p>The average time patients stay in hospital for total hip or knee replacements has more than halved over the past 20 years</p> <ul style="list-style-type: none"> <li>- Hip replacements: The average length of stay has fallen from 16.9 days to 6.9 days</li> <li>- Knee replacements: The average length of stay has fallen from 14.4 days to 5.3 days</li> </ul>

Source: Outpatient data are based on ISD(S)1 and SMR00, Inpatient data come from SMR01 data.

## Glossary

Acute Hospital Care/Activity	Includes services such as: consultation with specialist clinicians; emergency treatment; routine, complex and life saving surgery; specialist diagnostic procedures; close observation and short-term care of patients. 'Acute' hospital care includes activity occurring in major teaching hospitals, district general hospitals and community hospitals but excludes obstetric, psychiatric and long stay care services.
Average available staffed beds	The average daily number of beds, which are staffed and are available for the reception of inpatients (borrowed and temporary beds are included).
Average length of stay	Mean stay per episode (in days) experienced by inpatients within a specialty/significant facility etc over any period of time.
Continuous inpatient stay	A continuous inpatient stay is an unbroken period of time that a patient spends as an inpatient.
Day case	This is when a patient makes a planned attendance to a specialty for clinical care, and requires the use of a bed or trolley in lieu of a bed.
Discharge	A discharge marks the end of an episode of care. Discharges include deaths and transfers to other specialties/significant facilities and hospitals as well as routine discharges home.
Elective Admission	This is when the patient has already been given a date to come to hospital for a planned procedure or treatment.
Emergency Admission	Occurs when, for clinical reasons, a patient is admitted at the earliest possible time after seeing a doctor.
Episode	An SMR01 episode is generated when a patient is discharged from hospital but also when a patient is transferred between hospitals, significant facilities, specialties or to the care of a different consultant.
Incidence	This looks for the first occurrence of a diagnosis within a given time period. The time period used for published data is a 5 year incidence look back. For example, a patient is admitted in 2004 and again in 2005 for the same diagnosis. For the purpose of counting incidence, only the hospital episode in 2004 is counted. The 2005 episode would not be counted because the previous episode occurred within 5 years.

Inpatient	This is when a patient occupies an available staffed bed in a hospital and either; remains overnight whatever the original intention or is expected to remain overnight but is discharged earlier.
Non-routine admission	Occurs when an inpatient is discharged following an emergency; unplanned admission (includes emergency transfers).
Occupancy (%)	The percentage of available staffed beds that were occupied by inpatients during the period.
Occupied Bed	An occupied bed is an available staffed bed, which is either being used to accommodate an inpatient or reserved for a patient on pass.
OPCS4	Office of Population Censuses and Surveys Classification of Surgical Operations and Procedures (4th revision).
Outpatient	Is a patient who attends (outpatient attendance) a consultant or other medical clinic or has an arranged meeting with a consultant or a senior member of their team outwith a clinic session. Outpatients are categorised as new outpatients or follow-up (return) outpatients.
Patient	This relates to an individual person.
Routine Admission	Occurs when a patient is admitted as planned (includes planned transfers).
Specialty	is defined as a division of medicine or dentistry covering a specific area of clinical activity. A full listing of specialties covered by the data sets used in this publication is available on the NHSScotland Health & Social Care data dictionary <a href="#">Specialty Listing</a> web page.
Transfer	Occurs when a patient needs to be moved to another doctor, clinical specialty, and facility within the hospital or another hospital altogether to receive the specialist care they require after they have been admitted to hospital. The majority of these transfers are planned (elective) transfers.

Further details are available in the [NHS Scotland Health & Social Care data dictionary](#).

**List of Tables - Revised**

Table No.	Name	Time period	File & size
1	<a href="#">Annual Trends in Consultant-led Outpatient Activity</a>	2006/07-2015/16	Excel [1597kb]
2	<a href="#">Inpatient and Day Case Activity By Health Board Of Residence</a>	2006/07-2015/16	Excel [1376kb]
3	<a href="#">Inpatient and Day Case Activity by Health Board of Treatment</a>	2006/07-2015/16	Excel [1200kb]
4	<a href="#">Inpatient and Day Case Activity by Health and Social Care Partnership</a>	2006/07-2015/16	Excel [2635kb]
5	<a href="#">Emergency Admissions and Bed Days by Health Board and Health and Social Care Partnership</a> - Revised	2011/12-2015/16	Excel [6143kb]
6	<a href="#">Multiple Emergency Admissions and Bed Days by Health Board and Health and Social Care Partnership</a> - Revised	2011/12-2015/16	Excel [15606kb]
7	<a href="#">Average Length of Stay by Health Board and Specialty</a>	2011/12-2015/16	Excel [625kb]
8	<a href="#">Annual Trends in Available Beds by Health Board of Treatment and Hospital</a>	2006/07-2015/16	Excel [2429kb]
9	<a href="#">Diagnosis by Health Board of Residence</a>	2011/12-2015/16	Excel [16424kb]
10	<a href="#">Diagnosis by Health and Social Care Partnership</a>	2011/12-2015/16	Excel [33020kb]
11	<a href="#">Number of Hospital Stays, Bed Days and Rates for selected Long Term Conditions</a>	2011/12-2015/16	Excel [5745kb]
12	<a href="#">Number and Types of Procedures carried out by Health Board</a>	2011/12-2015/16	Excel [2356kb]
13	<a href="#">Childhood Admissions Summary by Health Board of Residence and Specialty</a>	2011/12-2015/16	Excel [4023kb]
14	<a href="#">Childhood Diagnosis - Number of Hospital Stays and Rates by Health Board of Residence</a>	2011/12-2015/16	Excel [3489kb]
15	<a href="#">Childhood Procedures - Number of Hospital Stays and Rates by Health Board of Residence</a>	2011/12-2015/16	Excel [3590kb]
16	<a href="#">Cross Boundary Flows for Outpatients, Day cases and Inpatients</a>	2015/16	Excel [36kb]

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## Further Information

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

## NHS Performs

A selection of information from this publication is included in [NHS Performs](#). NHS Performs is a website that brings together a range of information on how hospitals and NHS Boards within NHSScotland are performing.

## Rate this publication

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## Appendices

### A1 – Background Information

#### Data sources

Outpatient, inpatient and day case activity data are collected across NHSScotland and are based on nationally available information routinely drawn from hospital administrative systems across the country. The principal data sources are

- SMR00 (patient-level outpatients records) - source for outpatients DNAs and outpatients when ISD(S)1 not available
- SMR01 (inpatients and day cases discharges from non-obstetric and non-psychiatric specialties) - source for acute inpatients and day cases, and
- ISD(S)1 (aggregate hospital activity) - source for outpatients and bed data returns

The data contained within this publication are predominantly based on ISD(S)1 aggregate data returns. ISD(S)1 contains summarised data by NHS Board of Treatment, hospital and specialty. This data return is in place to allow NHS Boards to report activity more frequently than that recorded on SMRs. ISD(S)1 is also the only source of bed occupancy and availability data.

#### Revisions – Revised

A methodological error was found in two tables, which has now been corrected. The affected tables are:

- Emergency Admissions and Bed Days by Health Board and Health and Social Care Partnership
- Multiple Emergency Admissions and Bed Days by Health Board and Health and Social Care Partnership

Previous versions of these tables excluded patients with a length of stay greater than 365 days. However, this exclusion is historical and should not have been included in the 2015/16 iteration of the report. This change has resulted in a very slight increase to the figures in the data table, ranging from <1% to 1% at Scotland level. This change had no impact on the rounded figures referred to in this report, under 'Multiple Admissions'.

Where possible, missing or incomplete ISD(S)1 data have been estimated for affected NHS Boards. Estimates are based on an average of the last three submissions from the relevant NHS Boards.

The majority of outpatient attendances figures are sourced from ISD(S)1. In some areas where NHS Boards have been unable to submit ISD(S)1 outpatients data, SMR00 has been used as an alternative data source for NHS Lanarkshire and NHS Grampian.

Outpatient DNA rates are obtained from SMR00.

All tables will be revised annually or quarterly. In general these revisions have minimal affect on the statistics. If missing/incomplete data is significant and is due to be submitted and published in subsequent releases this will be highlighted within the notes on the affected table. Please see the [ISD revisions policy](#) for further details.

## Key definitions

**Outpatients** are those patients who attend (outpatient attendance) a consultant or other medical clinic or have an arranged meeting with a consultant or a senior member of their team out with a clinic session. Outpatients are not admitted to a hospital and do not use a hospital bed.

**Day cases** are for episodes where a person makes a planned admission to an available staffed bed in a hospital for clinical care, and requires the use of a bed (or trolley in lieu of a bed) but do not spend the night in that bed.

**Inpatients** are people who have been admitted to an available staffed bed in a hospital and who either remain overnight or are expected to remain overnight but are discharged earlier.

**Emergency inpatient** admissions occur when, for clinical reasons, a patient needs to be seen at the earliest possible time after seeing a doctor.

**Elective inpatient** admissions are planned and agreed with the patient in advance.

**Transfers** occur when a patient needs to be moved to another doctor, clinical specialty, or facility within the hospital or another hospital altogether to receive the specialist care they require after they have been admitted to hospital. The majority of these transfers are planned (elective) transfers.

An inpatient's admission can be an emergency, an elective or as a transfer.

**Episodes:** An SMR01 episode is generated when a patient is discharged from hospital. However, an episode is also generated when a patient is transferred between hospitals, significant facilities, specialties or to the care of a different consultant.

**Continuous Inpatient Stay (CIS)** in hospital: Probability matching methods have been used to link together individual SMR01 hospitals episodes for each patient, thereby creating "linked" patient histories. Within these patient histories, SMR01 episodes are grouped according to whether they form part of a continuous spell of treatment (whether or not this involves transfer between hospitals or even Health Boards).

When showing information by CIS the admission type e.g. elective/emergency is determined by the first admitting episode. As a result transfers will generally not appear within the CIS analysis. When a transfer does appear it is often the result of a patient being transferred from another provider unit e.g. outwith Scotland. However there will also be instances where the admission type has been incorrectly coded, unfortunately it is not possible to fully ascertain what the correct admission type should have been. As a result a small proportion of transfers do appear within the various tables.

**Patients** This relates to individual patients. However, the same patient can be counted more than once, if they change subgroup (e.g. specialty, type of admission, NHS Board etc.). In these cases a patient will be counted once within each subtotal, but only once in the overall total.

For example if a patient was admitted three times in a single year, twice as an emergency admission and once as an elective admission, they would be counted once in each sub-total of emergency and elective admissions, and once in the overall total of admission types.

The same patient will also be counted for each of the financial year they were admitted in hospital, for example if a patient was admitted in 2010/11 and 2012/13 they would be counted in each of these years.

## Estimations / provisional data

It should be noted that outpatient, inpatient, day case and beds figures may include an element of estimation for any incomplete or outstanding data submissions. Therefore, data for the latest time period should be treated as provisional as subsequent data submissions could be lower or higher than the estimated values. The data tables which accompany this report identify statistics where estimation has been used. Specific issues are as follows:

## Outpatient

- There are occasions when some NHS Boards are not able to submit ISD(S)1 outpatients data to ISD. Where possible, data gaps have been filled using SMR00. Please note that SMR00 data are provisional and it may be revised in future publications, in particular for most recent years.
- In areas where it has not been possible to use SMR00 as an alternative data source, data have been estimated using the last complete data submission.
- Recently NHS Highland has experienced difficulties in submitting their data, as a result data from Jun-14 onwards have been estimated. Further details on outpatient estimations can be found in the 'outpatients estimates' sheet of the following table [Annual Trends in consultant-led Outpatient Activity](#)
- New, return and total attendances for NHS Lanarkshire and NHS Grampian have been replaced by SMR00 data to be in line with the October 2016 quarterly release.

## Beds

### NHS Grampian

- This publication contains bed statistics submitted by NHS Grampian from their local system. Between March 2011 and June 2014, NHS Grampian was unable to submit beds statistics to ISD due to system implementation problems.
- After exploring several methods trying to tie up ISD(S)1 data with SMR01 data for bed days, we have taken a very simple approach to estimate the numbers of available beds and the percentage occupancy for all specialties for Grampian to cover the period 2010/11 - 2014/15.
- We used a straight line extrapolation between the last and first known data points (2009/10 and 2015/16).
- We appreciate that the actual change in bed numbers may have been more of a step change in service delivery at different points throughout the 5 year period, but feel straight line estimation is the most pragmatic and proportionate solution to filling the gaps.

### NHS Highland

For NHS Highland between 2014/15 and 2015/16, missing data was suppressed due to data quality issues. It is hoped that redevelopment of the underlying systems will go some way to resolving these issues. In the meantime, any data which may be provided for this period should be treated with caution.

## SMR completeness

Information on SMR data completeness can be found on the [Hospital Records Data Monitoring SMR Completeness web page](#), while information on the timeliness of SMR data submissions

can be found on the [SMR Timeliness web page](#). Details on completeness can also be found within the Excel data files.

Inpatient and day case 'acute specialties' figures are sourced from SMR01 records if the levels of completeness of the SMR01 data are deemed to be fit for publication (97.5% of the expected figure). If SMR01 records are not deemed to be fit for publication then ISD(S)1 data are used. ISD(S)1 data may be adjusted to account for shortfalls/ inaccuracies.

ISD are working with NHS Boards to resolve ongoing data submission issues. The majority of these issues have resulted from implementation of the new PMS TrakCare system and other existing system issues. Further details of these issues can be found [here](#) or within the [data issues and completeness document](#) which accompanies this publication.

### Data Quality

The ISD Data Quality Assurance (DQA) team is responsible for evaluating and ensuring SMR datasets are accurate, consistent and comparable across time and between sources.

The DQA team's [assessments](#) web page contains details of past Data Quality Assurance Assessments of inpatient/day case data, including findings on the accuracy of submitted SMR01 data items used in our analysis (specialty, admission type, main condition, main operation etc). A [data quality assurance assessment](#) of SMR01 data items for 2014/15 was released in July 2016.

Currently it is difficult to describe and quantify accurately the level of operations and clinical procedures carried out in an outpatient setting. This is particularly relevant for monitoring how changes in clinical practice have enabled the transfer of certain clinical activities, previously requiring inpatient or day case admission, to outpatient clinics. Whilst outpatient procedure recording has improved in recent years, gaps in the completeness and coverage remain.

It should be noted that there are apparent differences between activity figures published within the Hospital Care, Waiting Times and Finance web pages:

- The figures for elective admissions and new outpatients in the Acute Hospital Activity publication are considerably higher than the equivalent information published on the [Waiting times web pages](#) for inpatients, day cases and outpatients. This is largely due to the use of different definitions for the two sets of figures.
- The figures for inpatient and day case activity in the Acute Hospital Activity publication differ slightly when compared to the equivalent information released in the [Finance web pages](#). This is largely due to the use of different definitions for the two sets of figures. The Finance publication also excludes consultant-only transfers from the inpatient figures.

For further information on the data sources and clinical coding used in this publication please refer to the following [Data Sources and Clinical Coding document](#).

**A2 – Publication Metadata (including revisions details)**

Metadata Indicator	Description
Publication title	Annual Acute Hospital Activity and NHS Beds Information in Scotland, October 2016
Description	Summary of inpatient, day case and outpatient activity, including details about specialties, diagnoses, procedures; emergency admissions, long term conditions, and bed statistics for NHSScotland
Theme	Health and Social Care
Topic	Hospital Care
Format	Excel, PDF
Data source(s)	ISD(S)1 aggregated data returns, Scottish Morbidity Records SMR01 (inpatient/day case), SMR00 (outpatient)
Date that data are acquired	July 2016 (SMR01 and SMR00) and August 2016 (ISD(S)1)
Release date	04 October 2016 <b>Revised 24/01/2017</b>
Frequency	Annual  October 2016 publication includes the publication of annual Hospital Activity and Bed statistics up to March 2016. Some ongoing data completeness issues remain.  See 'Completeness' section below.
Timeframe of data and timeliness	Detailed Annual Acute Hospital Activity Information up to March 2016 (Annual).
Continuity of data	Reports include a mix of 5 and 10 year trend annual data up to 2015/16.  Due to problems with the implementation of a new patient administration system, no data were successfully extracted for NHS Grampian between March 2011 and June 2014. NHS Highland has had similar problems between quarter ending March 2014 and quarter ending September 2015. Missing data were estimated and are presented in <a href="#">Table 8</a> . More details on this estimating process can be found in the <a href="#">Beds Methodology</a> section found in the Appendix.
Revisions statement	All revisions to data within this publication are planned and are due to incomplete data returns at the time of publication. All tables will be revised annually. In general these revisions have minimal effect on the statistics. If missing/incomplete data is significant and is due to be submitted and published in subsequent releases this will be highlighted within the notes on the affected table. Please see the <a href="#">ISD revisions policy</a> for further details.

Revisions relevant to this publication	Please see the <a href="#">Revision Section</a> of this report.
Concepts and definitions	See Hospital Care: <a href="#">Background Information</a>
Relevance and key uses of the statistics	<p>To allow NHS Board employees to compare activity levels nationally, e.g. NHS clinical consultants interested in their specialty figures by NHS Board, NHS information managers planning capacity, to assist in the development of Service Agreements between NHS boards.</p> <p>To investigate the implications of common systemic diseases in Scotland as a basis for assessing health demands in the future.</p> <p>To provide activity and incidence data for NHS Board Needs Assessments for specific diseases such as Chronic Obstructive Pulmonary Disease (COPD).</p> <p>To allow members of the public to readily access information on the number of hospital admissions for specific diagnoses or procedures that may be of personal interest to them.</p> <p>To assist students and universities conducting medical studies in areas such as asthma and diabetes.</p> <p>Private companies interested in hospital activity levels in Scotland such as pharmaceutical companies, consultancy companies employed by NHS Trusts in England, advertising/media companies on behalf of clients.</p> <p>To provide statistical information for political campaigns, e.g. to halt reductions in acute NHS beds.</p>
Accuracy	Please refer to <a href="#">Appendix A1</a> of this report. Summary data within this publication is also compared to previously published figures.
Completeness	Details of data submission issues are available on the <a href="#">Hospital Records Data Monitoring SMR Completeness web page</a> , while details of the associated backlogs can be found on the <a href="#">SMR Timeliness web page</a> . Additional detail can also be found within the <a href="#">data issues and completeness document</a> which accompanies this publication.
Comparability	See Hospital Care <a href="#">Introduction</a> .
Accessibility	It is the policy of ISD Scotland to make its web sites and products accessible according to <a href="#">published guidelines</a> .
Coherence and clarity	The Acute Hospital Activity and NHS Scotland Beds information released for each publication is listed on the <a href="#">Hospital Care Publication page</a> . Detailed information on how emergency admissions, multiple emergency admissions and bed days are defined and calculated is available in the <a href="#">Multiple and All Emergency Admissions Interpretation document</a> .
Value type and unit of	In general, figures are shown as numbers, percentages or

measurement	rates.
Disclosure	Data has a low/medium risk of disclosure. The ISD protocol on <a href="#">Statistical Disclosure Protocol</a> is followed.
Official Statistics designation	The majority of information in this publication is currently classed as National Statistics. Data on Bed Statistics are classed as Official Statistics. Currently the statistics are produced in line with the Code of Practice for Official Statistics, available on the <a href="#">UK Statistics Authority website</a> .
UK Statistics Authority Assessment	The Hospital Care information was assessed by the UK Statistics Authority in September 2011 and successfully received confirmation of designation as National Statistics.
Last published	22/12/2015 (revised 24/05/2016)
Next published	03/10/2017
Date of first publication	
Help email	<a href="mailto:sophie.david@nhs.net">sophie.david@nhs.net</a> , <a href="mailto:joan.forrest@nhs.net">joan.forrest@nhs.net</a> , <a href="mailto:salomi.barkat@nhs.net">salomi.barkat@nhs.net</a>
Date form completed	15/09/2016 Revised 24/01/2017

### **A3 – Early Access details (including Pre-Release Access)**

#### **Pre-Release Access**

Under terms of the "Pre-Release Access to Official Statistics (Scotland) Order 2008", ISD are obliged to publish information on those receiving Pre-Release Access ("Pre-Release Access" refers to statistics in their final form prior to publication). The standard maximum Pre-Release Access is five working days. Shown below are details of those receiving standard Pre-Release Access.

#### **Standard Pre-Release Access:**

Scottish Government Health Department

NHS Board Chief Executives

NHS Board Communication leads

## A4 – ISD and Official Statistics

### About ISD

Scotland has some of the best health service data in the world combining high quality, consistency, national coverage and the ability to link data to allow patient based analysis and follow up.

Information Services Division (ISD) is a business operating unit of NHS National Services Scotland and has been in existence for over 40 years. We are an essential support service to NHSScotland and the Scottish Government and others, responsive to the needs of NHSScotland as the delivery of health and social care evolves.

**Purpose:** To deliver effective national and specialist intelligence services to improve the health and wellbeing of people in Scotland.

**Mission:** Better Information, Better Decisions, Better Health

**Vision:** To be a valued partner in improving health and wellbeing in Scotland by providing a world class intelligence service.

### Official Statistics

Information Services Division (ISD) is the principal and authoritative source of statistics on health and care services in Scotland. ISD is designated by legislation as a producer of 'Official Statistics'. Our official statistics publications are produced to a high professional standard and comply with the Code of Practice for Official Statistics. The Code of Practice is produced and monitored by the UK Statistics Authority which is independent of Government. Under the Code of Practice, the format, content and timing of statistics publications are the responsibility of professional staff working within ISD.

ISD's statistical publications are currently classified as one of the following:

- National Statistics (ie assessed by the UK Statistics Authority as complying with the Code of Practice)
- National Statistics (ie legacy, still to be assessed by the UK Statistics Authority)
- Official Statistics (ie still to be assessed by the UK Statistics Authority)
- other (not Official Statistics)

Further information on ISD's statistics, including compliance with the Code of Practice for Official Statistics, and on the UK Statistics Authority, is available on the [ISD website](#).

The United Kingdom Statistics Authority has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics. Designation can be broadly interpreted to mean that the statistics:

- meet identified user needs;
- are well explained and readily accessible;
- are produced according to sound methods, and
- are managed impartially and objectively in the public interest.

Once statistics have been designated as National Statistics it is a statutory requirement that the Code of Practice shall continue to be observed.