

Understanding Emergency Care in NHSScotland

Who attends Emergency Departments

Data for year ending June 2015

Publication date – 29 September 2015

Introduction

This publication from the Information Services Division reports on attendances at Emergency Departments in Scotland. These are the larger A&E services that typically provide a 24-hour consultant led service.

Annually there are 1.6 million attendances to all A&E services in Scotland. Emergency Departments are responsible for more than 8 out of every 10 attendances, and 19 out of 20 admissions to hospital from A&E.

This report looks at the demographic of individuals attending Emergency Departments and how this affects rates of attendance in NHS Scotland.

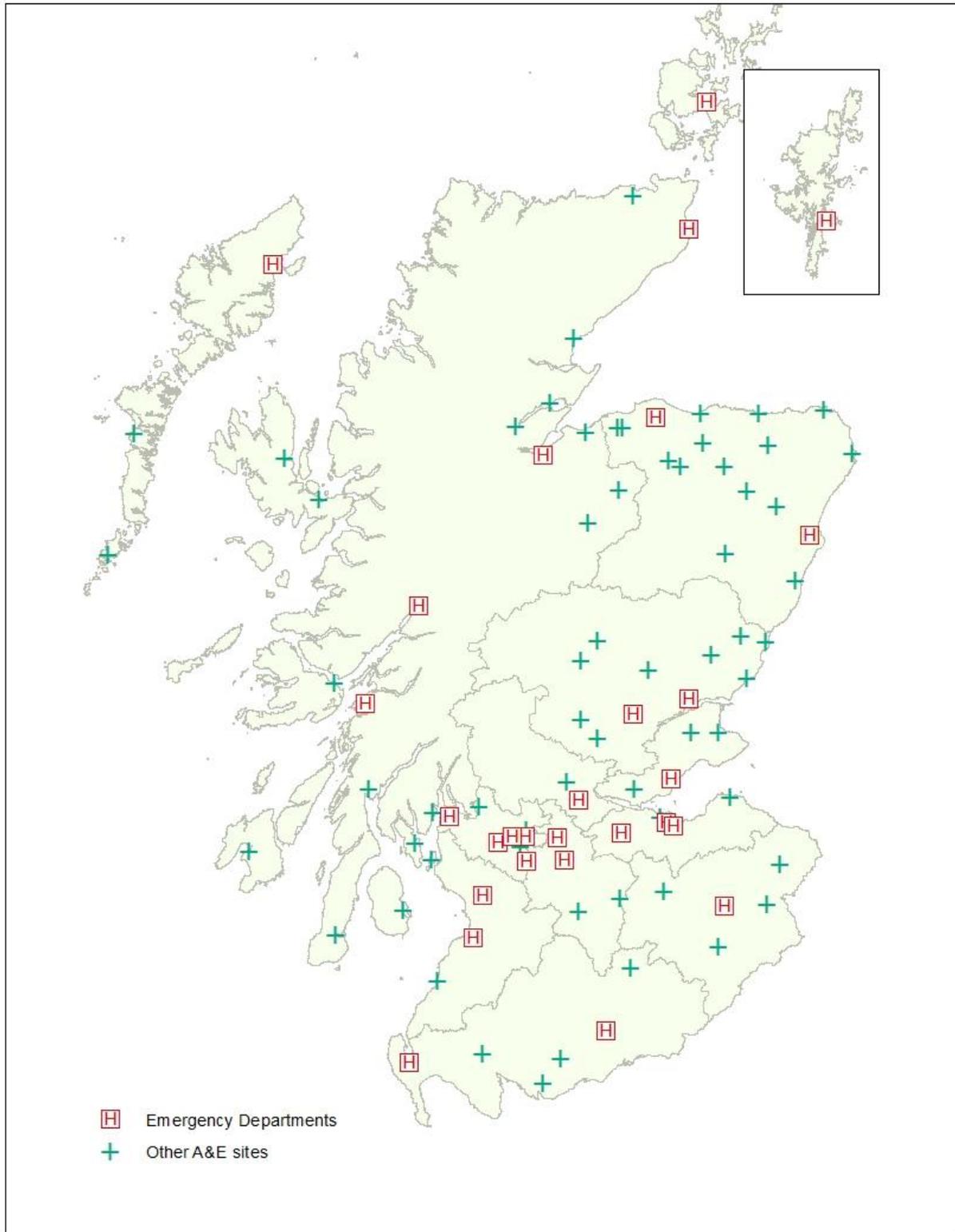
Background

This edition is the first in a series of quarterly publications focussing on different aspects of emergency care. It includes some analyses previously published by the Information Services Division as well as some new statistics. The report and its content has been developed following consultation with our users which identified interest in a more in-depth understanding of Emergency Care services in Scotland.

Future editions of this publication will include analysis of the pathways patients take into and out of Emergency Departments; seasonal, daily and weekly patterns of attendance at Emergency Departments and subsequent admission to hospital; and analysis of longer term trends in attendance.

If there is any other analysis that you would like to see in future release of this series, we'd like to hear from you. Please send your suggestions to: nss.isdunscheduledcare@nhs.net

Figure 1.1 NHSScotland – Accident & Emergency Locations



Accident and Emergency Services in Scotland

There are a total of 93 locations providing A&E services across Scotland. As well as the 30 Emergency Departments, there are minor injuries units, community hospitals and health centres which carry out Accident and Emergency related activity, typically GP or nurse led.

A list of sites and their classification can be found on the [List of Sites](#) webpage.

Figure 1.1 shows the locations of all A&E services in Scotland including the 30 Emergency Departments featured in this report.

Attendances at Emergency Departments

In the year ending June 2015 there were 1.34 million attendances to Emergency Departments in Scotland. 1.29 million of these had demographic information available.

The 1.29 million attendances represent 96% of the total Emergency Department attendances. The 4% of attendances where demographic information was not available have been excluded from this report. These are typically temporary residents such as; overseas visitors, residents of the rest of the UK or any individual not registered with a Scottish GP. These attendances have been excluded from this release.

For Scotland overall, there were 241 Emergency Department attendances per 1,000 population with 29% of these going on to be admitted to hospital.

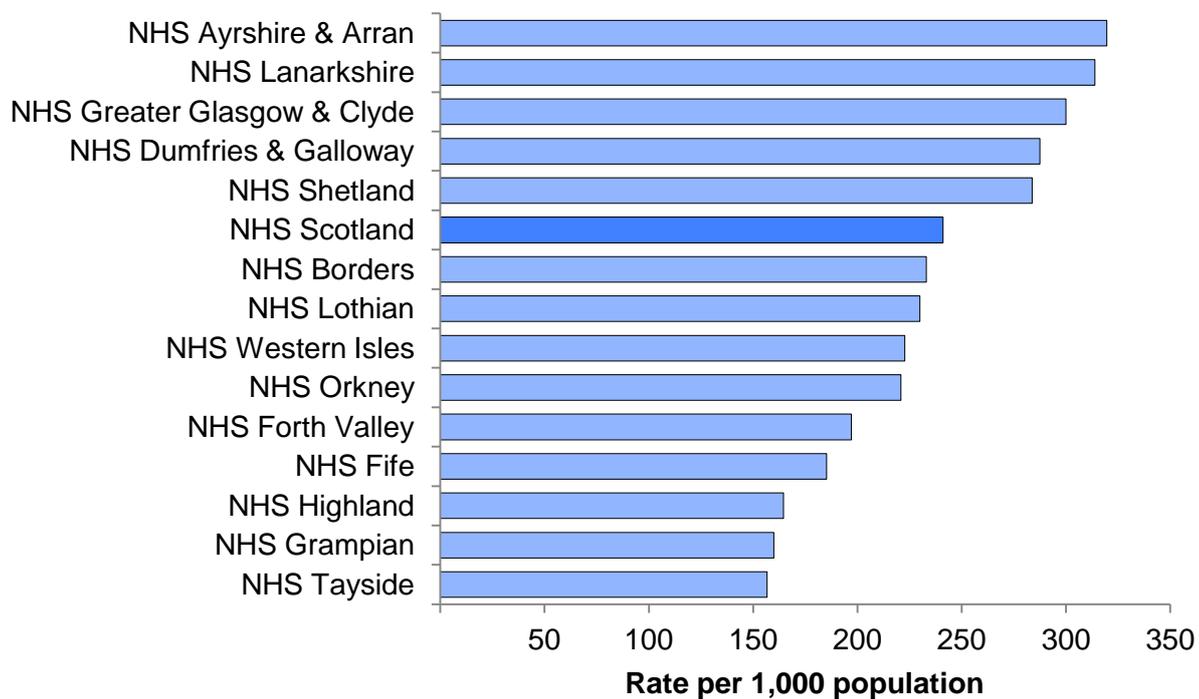
Attendance rates by NHS Board of residence

Rates of Emergency Department attendance vary across Scotland. This reflects differences in service configuration, proximity to population centres, accessibility and the availability of alternative services such as minor injury units or GP out of hours (see figure 1.1). Other factors such as higher levels of deprivation and the age of residents within that NHS Board will have an effect on attendance rates.

The majority of patients attend an Emergency Department in their NHS Board of residence, however a small proportion of the attendances shown in figure 1.2 are to an Emergency Department in a different NHS Board.

Variation in how sites receive emergency admissions affects these figures. NHS Boards admitting a high proportion of these individuals directly to an acute assessment unit or inpatient receiving ward, without the patient first attending the A&E department, are likely to have lower Emergency Department attendance.

Figure 1.2 Emergency Department attendance rates (per 1,000 population) by NHS Board of residence for the year ending June 2015



Age

The very young and very elderly are more likely to attend an Emergency Department and more likely to be admitted to hospital following their attendance. Figure 2.1 shows the rate of Emergency Department attendance by age and gender.

Children

Children aged 0 to 4 made more attendances to Emergency Departments than any other age group. This age group accounted for 9.1% of all attendances and had the third highest rates of attendance in the population. Children age 0 – 4 had a higher rate of admission to hospital (20.7%) than older children.

Almost 1 in every 10 attendances were patients aged
0 - 4 years of age

Children aged 10 - 14 years are the least likely to be admitted following an Emergency Department attendance with less than 1 in every 10 attendances (9.4%) leading to an admission. This is perhaps an indication of the type of attendance attributed to this age group, with higher numbers presenting with non-critical injuries.

Adults

Patients in older age groups are far more likely to be admitted to hospital after an Emergency Department attendance. There were 343 attendances per 1,000 population for patients aged 70 or over of which 207 (60.2%) resulted in an admission to hospital.

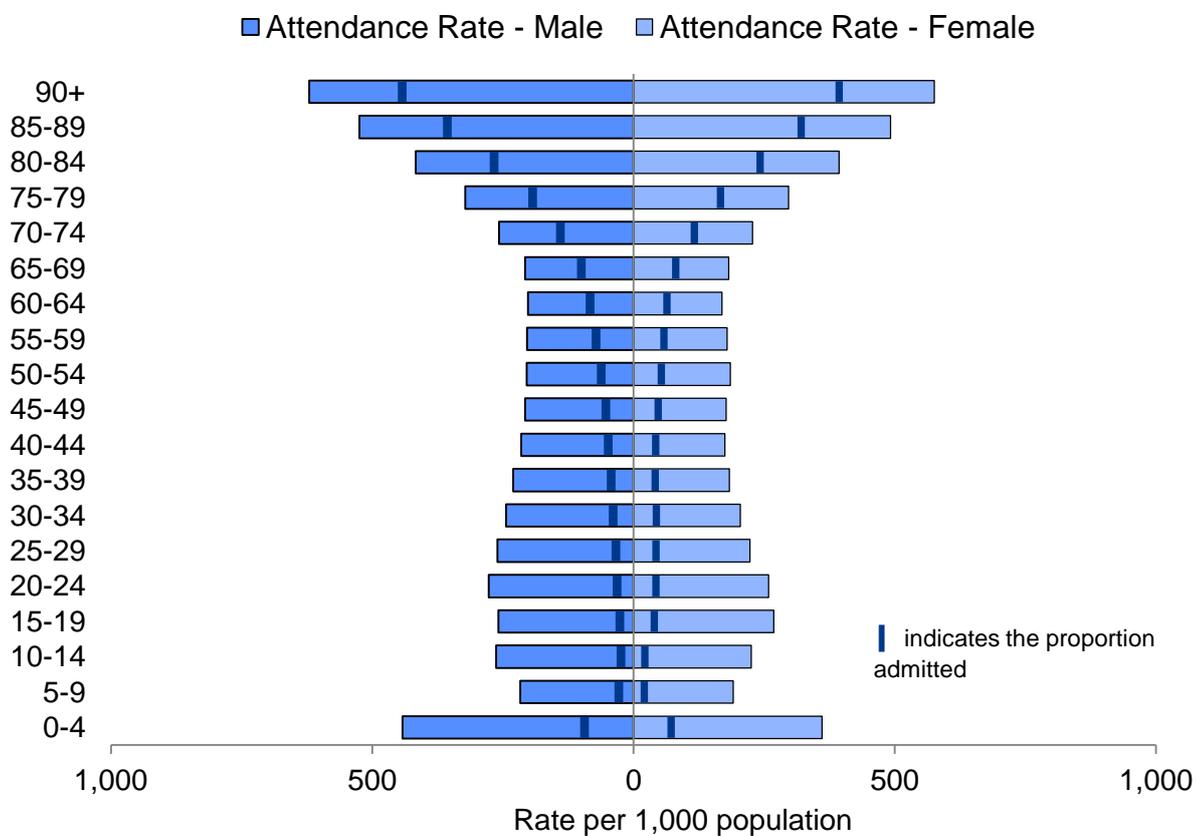
Two out of three patients aged 90 and over were
admitted to hospital after attending the Emergency
Department

While elderly patients have a high rate of attendance they represent a smaller proportion of the total population.

Gender

Males were more likely to attend an Emergency Department than females with an attendance rate of 254 per 1,000 population, compared to 228 per 1,000 for females. Overall males were less likely to be admitted following their attendance, particularly those aged 15 – 35. This group is perhaps at a higher risk of work or sports related injuries not requiring admission.

Figure 2.1 Emergency Department attendance and admission rates by age and gender for the year ending June 2015



Deprivation

Individuals living in the most deprived areas accounted for twice as many attendances to Emergency Departments compared to those in the least deprived. The likelihood of being admitted following an Emergency Department attendance also increased as deprivation increased. The difference in attendances could be for a number of reasons including poorer health, more complex social needs and service provision in areas of higher deprivation.

384,949 attendances to Emergency Department were made by individuals living in Scotland’s most deprived areas compared to 174,605 in the least deprived.

Figures 3.1 and 3.2 show Emergency Department attendances and subsequent admission to hospital by Scottish Index of Multiple Deprivation quintile. Each quintile contains a fifth of the Scottish population and ranks it from the most deprived (1) to the least deprived (5).

Figure 3.1 Emergency Department Attendances by SIMD quintile in the year ending June 2015

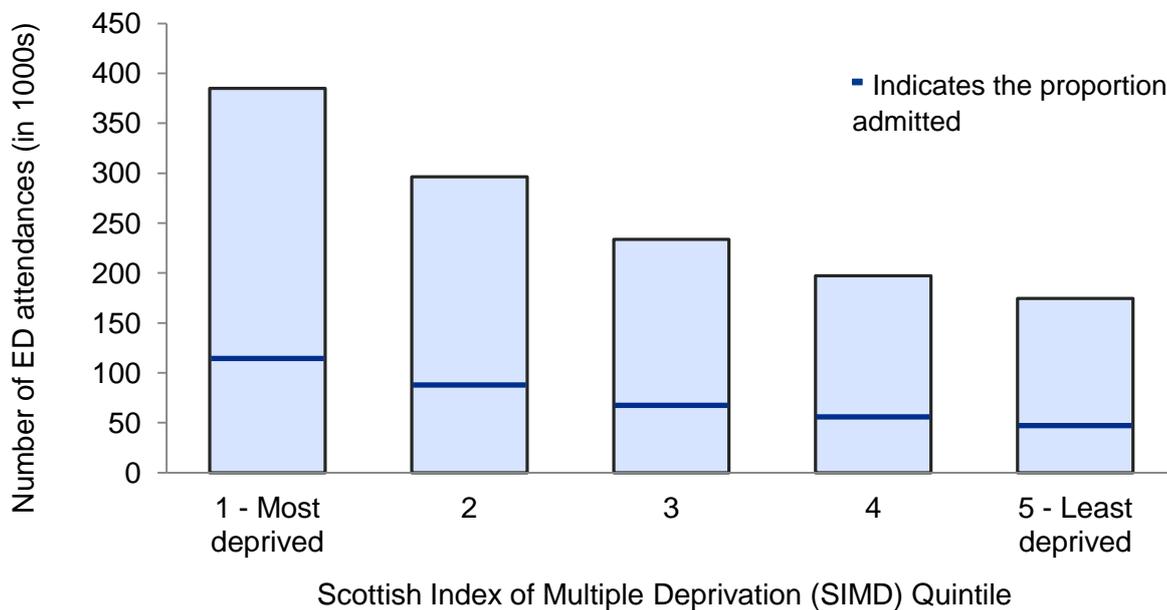


Figure 3.1 Emergency Department Attendances in NHS Scotland by SIMD quintile in the year ending June 2015

Scottish Index of Multiple Deprivation Quintile	1 - Most Deprived	2	3	4	5 - least deprived
Number of attendances	384,949	296,372	233,636	197,355	174,605
Number of admissions	114,248	87,707	67,304	55,723	47,024
% of ED attendances resulting in admission to the same hospital	29.7%	29.6%	28.8%	28.2%	26.9%

For more information on SIMD and how the quintiles have been calculated please see the [Accident and Emergency Data](#) section.

Multiple attendances

1 in 6 (16.6%) of the Scottish population attended an Emergency Department in Scotland at least once in the year to 30 June 2015. The majority (74.0%) of patients were individuals who attended just once in the year, this group accounting for over half (50.9%) of all Emergency Department activity.

17,242 people (0.3% of the Scottish population)
made 5 or more attendances to an Emergency
Department in the year, accounting for 9.7% of all
attendances

Figure 4.1 shows the percentage of the patient population who have attended an Emergency Department in Scotland once, between two and four, and five or more times in the observation year. The second bar illustrates the proportion of Emergency Department activity attributed to each cohort, where activity was measured as a percentage of the total number of attendances.

Figure 4.1 Proportion (%) of patients attending an Emergency Department in Scotland *n* times in the year ending June 2015 and the % of total Emergency Department activity for each cohort

Patients making *n* attendance(s) to an Emergency Department:

■ 1 attendance ■ 2 - 4 attendances □ 5 or more attendances

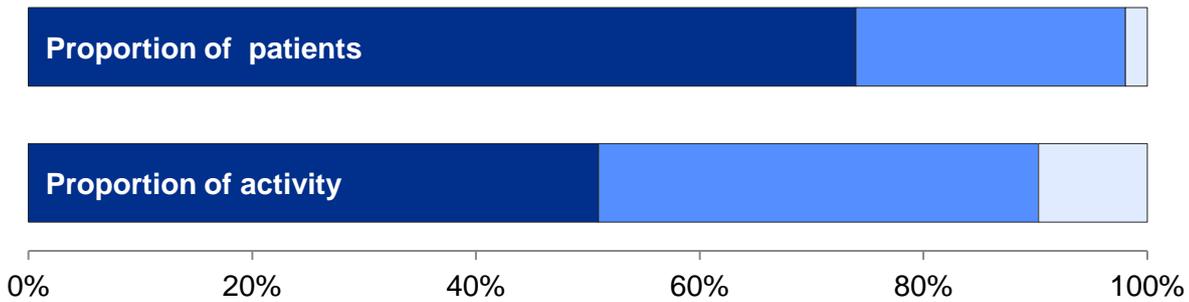


Figure 4.2 Emergency Department activity in NHS Scotland in the year ending June 2015 by the number of times a patient accessed the service

Number of attendances in the year ending June 2015	1	2	3	4	5+	All Patients
Number of patients	656,739	151,368	45,665	16,921	17,242	887,935
% of all patients	74.0%	17.0%	5.1%	1.9%	1.9%	
Number of attendances in cohort	656,739	302,736	136,995	67,684	125,038	1,289,192
% of Emergency Department activity ¹	50.9%	23.5%	10.6%	5.3%	9.7%	

¹ - Activity measured as a percentage of the total number of Emergency Department attendances

Ethnicity

The ethnic diversity of a patient population can be used to monitor equality of access to emergency services and help identify groups with higher rates of attendance. As at June 2015, recording of Ethnicity is not considered adequate to publish a national breakdown. Figure 5.1 shows the percentage of attendance records submitted to ISD with a valid ethnic group from April 2015 to end of June 2015

Figure 5.1 Percentage of A&E attendance records with a valid ethnic group by Health Board of Treatment, April 2015 to June 2015

Health Board of Treatment	% Valid Ethnic Group	% Null	% Not known	% Refused / not provided
NHS Ayrshire & Arran	0.0%	100.0%	0.0%	0.0%
NHS Borders	56.9%	0.0%	43.0%	0.1%
NHS Dumfries & Galloway	96.2%	0.1%	3.7%	0.0%
NHS Fife	86.0%	0.0%	13.9%	0.1%
NHS Forth Valley	0.0%	100.0%	0.0%	0.0%
NHS Grampian	81.6%	0.0%	17.0%	1.5%
NHS Greater Glasgow & Clyde	54.3%	34.6%	11.1%	0.0%
NHS Highland	0.0%	100.0%	0.0%	0.0%
NHS Lanarkshire	81.3%	0.0%	18.5%	0.1%
NHS Lothian	88.6%	0.0%	6.1%	5.3%
NHS Orkney	0.0%	0.0%	100.0%	0.0%
NHS Shetland	97.1%	0.0%	1.0%	1.9%
NHS Tayside	0.0%	100.0%	0.0%	0.0%
NHS Western Isles	32.1%	0.0%	60.2%	7.7%
All Scotland	55.1%	34.0%	9.9%	1.1%

Note: Valid ethnic group does not include; Null; Not known; Refused / not provided

Glossary

Emergency Department	A larger A&E services that typically provide a 24-hour consultant led service.
Accident & Emergency (A&E) Services	Collectively the term Accident and Emergency (A&E) Services includes the following site types: Emergency Departments; Minor Injury Units, community A&Es or community casualty departments that are GP or nurse led.
Attendance	The presence of a patient in an A&E service seeking medical attention.
Admission	Admission to a hospital bed in the same NHS hospital following an attendance at an ED service.
Attendance rate	The number of attendances attributed to a group or region divided by the number of residents in that group (the population). The rate presented here is given as per 1000 population.
Admission rate	The number of admissions attributed to a group or region divided by the number of people in that group (the population). The rate presented here is given as per 1000 population.
Scottish Index of Multiple Deprivation	The Scottish Index of Multiple Deprivation is an area-based measurement of multiple deprivation ranking areas based on 38 indicators spanning 7 dimensions of deprivation; employment, income, health, education, housing, geographic access to services and crime.

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Further Information

The tables and charts included in this report are supplied in an Excel Workbook : [2015-09-29-EmergencyCare.xlsx](#) . Selected analyses are available as interactive tables and charts allowing the user to view information for individual NHS Boards of residence.

Further information on Emergency Department Activity can be found on the [Emergency Department Activity](#) pages of the ISD website. A [metadata document](#) has been produced for this publication.

Further details on ISD publications and available information can be found on the [ISD website](#).

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Emergency Care Data

- Data on A&E service attendances across Scotland are collected and maintained by ISD in the national data warehouse known as the A&E datamart. Data is collected on local systems, then extracted and submitted to the datamart soon after the end of each month. All sites that provide emergency care are required to submit data to the A&E datamart.
- There are two types of data submitted to the A&E datamart: episode and aggregate level data. All hospitals with Emergency Departments submit episode level data containing a detailed record for each patient attendance. Some smaller sites with minor injury units or community hospitals submit only aggregate level data as they do not have the information systems and support to enable collection of detailed patient based information. The proportion of episode level data varies by NHS board: NHS Greater Glasgow & Clyde, NHS Forth Valley, NHS Tayside, NHS Shetland and NHS Orkney submit episode level data for all their sites, while NHS Highland submit episode level data for just over 50% of attendances. The aggregate level data consists of the total monthly attendance figures and the number of these seen within 4 hours. 94% of new and unplanned attendances are to sites which supply episode level data. It is expected that the majority of attendances to sites which provide aggregate information will be minor and unlikely to lead to admission.
- The Community Health Index is a code submitted with each ED attendance record used to identify individuals. Each Community Health Index number uniquely identifies an individual in the Scottish population.
- The demographic information used in this report such as age, sex and NHS Board of residence are derived from the Community Health Index number submitted for each Emergency Department attendance.
- In the year ending June 2015 this information was available for 96.0% of all new & unplanned Emergency Department attendances. Temporary Community Health Index numbers are submitted for approximately 4.0% of all Emergency Department attendances. These individuals are typically temporary residents such as; overseas visitors, residents of the rest of the UK or any individual not registered with a Scottish GP. These attendances have been excluded from this release. The number of records' excluded from this release has been quantified in the workbook.
- This report only includes 'New' and 'Unplanned Return' attendances at Accident & Emergency (A&E), i.e. excludes those who are 'Recall' or 'Planned Return'.
- Where reference is made to admissions, this is defined as any patient attending an Emergency Department in NHSScotland who was admitted to the same NHS hospital as a result of that attendance. This will not include the small number of patients transferred from the Emergency Department to another hospital for admission, or

emergency admissions to hospital where the patients has not first attended the Emergency Department.

- The Scottish Index of Multiple Deprivation is an area based measurement of deprivation ranking areas based on 38 indicators spanning 7 dimensions of deprivation; employment, income, health, education, housing, geographic access to service and crime.
- In this report, each of the five categories (quintiles) represents 20% of the Scottish population. Individuals living in the most deprived areas are grouped into quintile '1' through to the least deprived in quintile '5'.