Indicator 8.7 – Age standardised hospital emergency admission rate for asthma and diabetes, all ages

Rationale
The Department of Health Public Service Agreement\(^1\) targets included the following target on long term conditions: to improve health outcomes for people with long term conditions by offering a personalised care plan for vulnerable people most at risk; and reduce emergency bed days by 5% by 2008, through improved care in primary care and community settings for people with long term conditions\(^1\).

Approximately one in three people in the UK has a long-term medical condition\(^2\). Amongst people over the age of 75, two thirds have a long term medical condition\(^3\), and 34% have more than one medical condition\(^3\). This indicator reflects the level of potentially avoidable hospitalisation for asthma and diabetes, which should, in most instances, be largely managed in primary care. These conditions are representative of all chronic care management.

Existing indicator sets
This indicator was a PCT performance indicator in 2002/03, but has not been included subsequently.

Definition
The directly standardised rate of emergency admission to hospital for asthma and diabetes per 100,000 GP relevant population (age and sex standardised).

Numerator definition
The number of emergency admissions for asthma and diabetes.

Source of numerator
Hospital Episode Statistics (HES). HES is an annual snapshot of a subset of the data submitted by NHS Trusts to the Nationwide Clearing Service. It provides information on admitted patient care delivered by NHS hospitals. For this indicator emergency admissions were included if the primary diagnosis in Hospital Episode Statistics (HES) according to the International Statistical Classification of Diseases (ICD 10) codes were equal to J45 - J46, E10 - E14.
Selection Criteria: EPIORDER\(^1\) = 1 and ICD-10 J45 - J46, E10 - E14 inclusive in primary diagnosis and ADMIMETH\(^2\) between 21 and 28.

Details of HES are available from the HES website.

**Denominator definition**

ONS mid-year population estimates of local authority populations. For example, indicator data for 2008/09 uses ONS 2008 mid-year population estimates. Table 2 is based on revised ONS population estimates as of May 2010.

**Source of denominator**

Population data was taken from the ONS website.

**Geographic coverage**

This indicator is collected and published at Local Authority level. Values for England are also provided.

**Other dimensions of inequality**

Data on gender, ethnicity, age and ward of residence are also included in the HES database.

**Timeliness**

Data is updated annually.

**Accuracy and completeness**

95% confidence intervals are presented to give an indication of the level of uncertainty of the calculation of the quantity being measured, in this case the rate of emergency admissions for asthma and diabetes. Uncertainties usually arise because these quantities are based on a random sample of finite size from a population of interest. Confidence intervals are used to assess what would happen if we were to repeat the same study, over and over, using different samples each time. The precise statistical definition of the 95% confidence interval

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\(^1\) Epiorder = 1 determines that the reason for admission was an emergency and that only the emergency admission is counted. This means that transfers from another hospital or other hospital episodes as part of the same spell are not counted.

\(^2\) ADMIMETH between 21 and 28 = admission method is emergency.
states that on repeated sampling, 95 times out of 100 the true population value would be within the calculated confidence interval range and 5 times the true value would be either higher or lower than the range.

However, the information presented here is not based on a sample and is therefore not subject to sampling error. They are however subject to random fluctuations over time or between local authorities. In this case the 95% confidence interval is a way of conveying the stability of the rates. The smaller the confidence interval, the more stable the rate. More events lead to a smaller interval, so as the number of emergency admissions for asthma and diabetes is small the intervals are quite wide and the rates fairly unstable.

With regard to the use of HES data, the Department of Health warns that variations between areas may exist in terms of the completeness of hospital electronic records, the accuracy of diagnoses, the application and criteria used for certain diagnostic categories, and the quality of the coding of this data.

**Disclosure**

Guidance from the Department of Health states that where the observed number of hospital episodes is less than 6, the number is suppressed. Where the number is less than 20, rates and confidence intervals have not been calculated.

**Further information**

Further information on performance ratings is available on the former CHI website.

Information on the 'annual health check' and ratings are available on the Care Quality Commission website.

**References**


Health and Social Care Information Centre

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