

Standardised admission ratio (SAR)

Description

This measure shows the rate of people admitted to hospital as an emergency.

These figures take into account the age, sex and deprivation within the local primary care trust (PCT). However, it is important to note that a number of other factors can also affect the rates of emergency admissions for an area, for example, the number of primary care services available and whether people have other existing medical conditions in addition to the condition they were admitted for.

Definition

These figures show the rate of people admitted to hospital, as an emergency, for treatment. The figure presented compares the number of emergency admissions for the PCT to the national average, working out how many emergency admissions would be expected. This figure has been compared to the national rate to determine, using statistical tests, if it is higher or lower than would be expected for the PCT based on local population characteristics.

<i>Statistic</i>	<i>Sex</i>	<i>Age</i>	<i>Organisation</i>	<i>Period</i>
<i>Observed no. of admissions (multiplied by 100) / expected no. of admissions</i>	<i>M, F</i>	<i>All ages</i>	<i>All primary care trusts in England</i>	<i>September 2008 extract</i> <i>Start date: April 1 2007</i> <i>End date: March 31 2008</i>

Numerator

Numerator data - The total number of emergency admissions resulting from every finished inpatient spell at an acute trust within a given PCT for the given condition (see ICD10 codes in Appendix 1). Spells due to private patient admissions are included.

Spells which are invalid are excluded from the tally. A spell will be deemed invalid for the following reasons

Unfinished episode - EPISTAT=1

Duplicate - Duplicate of another valid episode (duplicated on NHS number, age, sex and date of birth)

Admission date - ADMIDATE is missing or invalid

DISDATE earlier than ADMIDATE

DEPRIVATION - invalid or null

AGE – invalid or null

Missing last episode - The spell is missing an episode with a valid DISDATE or an

episode with SPELEND=Y and valid EPIEND

Admission (spell) - Missing or invalid admission method, defined as Admission Method = 98 (not applicable/non-elective), 99 (not known) or null on all episodes in this spell.

Source of numerator data – Dr Foster database (a subset of the HES database) intersecting the respective extract period for England containing a year of activity, rolling forward on a month-by-month basis. Upon receipt data is cleaned and episode linkage is performed to identify spells by the Dr Foster Unit at Imperial College.

Denominator

Denominator data - A count of the number of the finished spells occurring at a trust (NHS) or a site (IS) during the current extract period aggregated by PCT. Below is the exact methodology used:

PCT residential populations are aggregated from Census Output Area populations which have an associated Carstairs quintile of deprivation (quintile 1 denotes least deprived and 5 most deprived). GP practice populations are apportioned to deprivation quintiles by the following method:

1. Get the number of unique patients by census output area (OA) and GP practice (GPP) with an admission or outpatient appointment in the last three years for which we have fixed data.
2. Work out the proportion of patients from each GPP over all patients for the OA.
3. Multiply that proportion by the total resident population in the OA (latest year for which we have data) to give an estimate of the population registered to each GPP.
4. For each GPP sum these estimated populations by the OA deprivation quintile.
5. Divide the estimated population in each quintile by the total estimated population for the GPP, to give a % deprivation split for each GPP.
6. Apply this % deprivation split to the registered populations (already split by age, sex and financial year) for each GPP.

Expected values are adjusted by:-

- Diagnosis, procedure, health resource group or outpatient specialty
- Financial year
- Age (five-year bands for residential, ten-year bands for registered)
- Sex
- Deprivation (IMD 2004)
- Admission or appointment type

Statistical methods

The indicator uses a linear regression model in order to compute the expected number of admissions. The model is developed by the Dr Foster Unit at Imperial College using the statistical package SAS.

Interpretation of indicator

Type of indicator - This is a diagnosis-specific, cross-sectional annual comparative indicator, updated on a monthly basis. In the absence of an absolute standard, comparative data are useful for monitoring in relation to rates achieved in comparable organisations.

Updated:

Monthly