CCG Outcomes Indicator Set: Emergency Admissions
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Executive Summary

Clinical Commissioning Group (CCG) indicators form part of the CCG Outcomes Indicator Set. The indicators aim to provide clear, comparative information for CCGs and Health and Wellbeing boards about the quality of health services commissioned by CCGs and, as far as possible, the associated health outcomes. They therefore help CCGs and Health and Wellbeing boards to understand where they may need to focus their efforts to improve services and outcomes.

The indicator set comprises 16 indicators and draws on a variety of data sources to provide users with the ability to compare at CCG level, including:

- Mortality (Primary Care Mortality Database)
- Hospital Episodes Statistics
- GP Patient Survey
- GP registered population, extracted directly from GP systems

This release sees one indicator published as part of the CCG indicator set for the first time:

- 1.7 - Under 75 mortality rate from liver disease

It also includes two indicators that are being published with a revised calculation methodology:

- 2.6 - Unplanned hospitalisation for chronic ambulatory care sensitive conditions
- 3.1 - Emergency admissions for acute conditions that should not usually require hospital admission

Each of the remaining indicators has been updated to reflect the latest available CCG structures. For this release values for each indicator are presented across 211 CCGs.

Data, along with indicator specifications providing details of indicator construction, data quality, statistical methods and interpretation considerations, can be accessed by visiting the HSCIC's Indicator Portal (https://indicators.ic.nhs.uk). A complete list of the indicators published in this release, as well as the time period covered, can be found in annex A, annex B and annex C at the end of this document.
Summary of Indicators

The indicators here relate to four of the five quality domains as presented in the NHS Outcomes Framework, which are, preventing people from dying prematurely; enhancing the quality of life for people with long-term conditions; helping people to recover from episodes of ill health or following injury and ensuring that people have a positive experience of care.

A description of the indicators relevant to the domains, with an indication of key findings where these are of particular note, are the following:

- Potential Years of Life Lost due to amenable causes are given for each CCG. Conditions considered amenable to healthcare should not result in premature deaths where timely and effective healthcare is available. The concept of ‘amenable’ mortality generally relates to deaths under the age of 75 and figures are reported for males and females separately.

- Mortality rates in the under 75s from cancer, respiratory disease, cardiovascular disease and liver disease form part of the set of indicators aimed at reducing premature mortality from the major causes of death. Some variation can be observed, for example in 2011 the lowest rate of mortality due to cardiovascular disease was 31 per 100,000 while the highest rate was 127.

- Five indicators are intended to measure the effective management of a range of conditions within primary care settings.

  Two indicators focus upon emergency admissions for people of all ages due to:
  - Chronic ambulatory care sensitive conditions
  - Acute conditions that should not usually require hospitalisation

  Two similar indicators are included for children and young people under the age of 19:
  - Emergency admissions for asthma, diabetes and epilepsy
  - Lower respiratory tract infections (LRTIs)

  The remaining indicator looks at emergency admissions for adults aged 19 and over due to:
  - Alcoholic liver disease

  These emergency admission rates also show variation across the CCGs. For example, in 2011/12 the ambulatory care admission rates per 100,000 registered patients varied from 215 for one CCG to 1,742 for another CCG while the comparable indicator for children has minimum and maximum values of 74 and 753 respectively.
• In recognition of the importance of seeking patient feedback on the quality and effectiveness of their experience, treatment and care, this release includes Patient Reported Outcome Measures (PROMs) for four elective procedures:
  o Hip replacement
  o Knee replacement
  o Groin hernia treatment
  o Varicose veins surgery

• Patient feedback of Primary Care is collected in the GP Patient Survey; patient experience of GP Out-of-Hours services is reported in this release with more indicators expected in subsequent publications.
Topic of Interest – Emergency admissions

Background

Rates of emergency admissions, particularly for chronic and acute conditions, are often seen as an indicator of co-ordination between different elements of the healthcare system. Emergency admissions have been estimated to cost the NHS £12.2bn\(^1\) a year, and wide variation of emergency admission rates across CCGs suggests that they could be reduced.

Within the CCG Indicator set, there are five indicators which focus on emergency hospital admissions, which are primarily based on indicators seen in the NHS Outcomes Framework (NHS OF). These are:

- CCG 2.6 Unplanned hospitalisation for chronic ambulatory care sensitive conditions (NHS OF Indicator 2.3.i)
- CCG 2.7 Unplanned hospitalisation for asthma, diabetes and epilepsy in under 19s (NHS OF Indicator 2.3.ii)
- CCG 3.1 Emergency admissions for acute conditions that should not usually require hospital admission (NHS OF Indicator 3a)
- CCG 3.4 Emergency admissions for children with lower respiratory tract infections (NHS OF Indicator 3.2)
- CCG 1.8 Emergency admissions for alcohol related liver disease

Following Department of Health advice, and approval from the HSCIC’s indicator assurance service, the methodology for two of these indicators has changed from this publication onwards. Therefore the aim of this analysis is twofold:

- To highlight the impact of the methodological change,
- To provide top level analysis of emergency admissions that form these indicators individually, highlighting key findings by age, gender, conditions, CCG and deprivation, which may give important insight to newly formed CCGs.

The two changing indicators, CCG 2.6 and CCG 3.1 (described in more detail below) were previously published for adults only. They now include children meaning that these indicators look at all ages.

2.6 Unplanned hospitalisation for chronic ambulatory care sensitive conditions\(^2\) (ACSCs) concerns admissions for long term conditions such as asthma, diabetes, epilepsy, hypertensive disease, dementia and heart failure. These are conditions where effective community care and case-management can help prevent the need for hospital admission. Even if the ACSC episode itself is managed well, an emergency admission for an ACSC is a sign of the poor overall quality of care\(^3\).

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\(^1\) Department of Health 2011, NHS reference costs 2009/10

\(^2\) A List of primary diagnosis codes for ACSCs within the indicator can be found within the indicator specification document, available from the HSCIC Indicator Portal.

\(^3\) The King’s Fund 2012, Emergency hospital admissions for ambulatory care-sensitive conditions: identifying the potential for reductions
3.1 Emergency admissions for acute conditions\(^4\) that should not usually require hospital admission looks at diseases such as influenza, pneumonia, urinary tract infections and cellulitis. These are conditions that should usually be managed without the patient having to be admitted to hospital.

**Year-on-year trend**

There were over one million emergency admissions for chronic ambulatory care sensitive and acute conditions for the GP registered population in England in 2011/12.

**Figure 1**

**Indicator 2.6 Number of emergency admissions for chronic ambulatory care sensitive conditions by financial year**

![Graph showing trend in emergency admissions for chronic ambulatory care sensitive conditions](source)

Source: Hospital Episode Statistics (HES), The Health and Social Care Information Centre

**Figure 2**

**Indicator 3.1 Number of emergency admissions for acute conditions that should not normally require hospital admission by financial year**

![Graph showing trend in emergency admissions for acute conditions](source)

Source: Hospital Episode Statistics (HES), The Health and Social Care Information Centre

\(^4\) A List of primary diagnosis codes for ACSCs within the indicator can be found within the indicator specification document, available from the HSCIC Indicator Portal
The number of adult emergency admissions for chronic ambulatory care sensitive conditions shows a slight decreasing trend from 2003/04 to 2011/12 as can be seen in figure 1. The trend remains the same when children are included.

Emergency admissions for acute conditions on the other hand are showing an increasing trend for adults and for all ages (figure 2). Emergency admissions for adults have increased from 250,000 per year in 2003/04 (400,000 for all ages) to over 400,000 per year in 2011/12 (over 600,000 for all ages).

The inclusion of children in indicator 2.6 accounted for an additional 40,000 admissions in 2011/12 while it accounted for over 170,000 additional admissions for indicator 3.1 for the same time period.

**Figure 3**

Indicator 3.1 Leading causes for acute conditions that should not normally require hospital admission in 2003/04 and 2011/12

Figure 3 shows the difference in the number of emergency admissions for 3.1 (acute conditions that should not normally require hospital admission) for the main causes between 2003/04 and 2011/12. Significant increases in the number of admissions can be seen for causes such as lobar pneumonia (136 per cent increase), urinary tract infection (100 per cent increase), viral and other specified intestinal infections as well as other noninfective gastroenteritis and colitis (50 per cent increases respectively).

Emergency admissions due to acute upper respiratory infections appears to be the only leading cause where a decrease could be seen over the specified time period although the scale of the reduction (8 per cent) was much lower than the increases seen for the other conditions.
A recent study, published in the BMJ, suggested changes to the healthcare service system could be one possible reason for the overall increase in emergency admissions for acute conditions that should not normally require hospital. The paper also cited a perceived lack of alternatives to inpatient care as potentially be a contributing factor. Furthermore, the introduction of the four-hour A&E target as well as changes to the GP out-of-hours contract are mentioned as potential factors although it was pointed out that evidence to confirm the link was weak.

### Age and gender

#### Figure 4

Indicator 2.6 Number of emergency admissions for chronic ambulatory care sensitive conditions in 2011/12 by age and gender

As can be seen in figure 4 the number of emergency admissions for chronic ambulatory care sensitive conditions was lowest for children and highest for older people (65+). This is due to the inclusion of conditions in indicator 2.6 that children would not normally get (i.e. vascular dementia). Figure 4 also shows that more males are admitted than females for children and adults up to 64. This is the opposite for the age group 65+ where the majority of emergency admissions are female patients.

Figure 5 shows that the number of emergency admissions for acute conditions that would not normally require hospital admission in 2011/12 were at similar levels for children (0-18) and adults (19-64) but higher for older people (65+). More males had an unplanned admission to hospital for an acute condition than females in the children's age group. This was the opposite for the two adult age groups where more females had an emergency admission for an acute condition.

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Figure 5

**Indicator 3.1 Number of emergency admissions for acute conditions that should not normally require hospital admission in 2011/12 by age and gender**

Source: Hospital Episode Statistics (HES), The Health and Social Care Information Centre

**Conditions**

Figure 6 shows the leading causes for emergency admissions for chronic conditions in 2011/12 for children, adults and older people.

**Figure 6**

**Indicator 2.6 Leading causes for emergency admissions for chronic ambulatory care sensitive conditions in 2011/12**

Source: Hospital Episode Statistics (HES), The Health and Social Care Information Centre
The leading causes for emergency admissions for chronic ambulatory care sensitive conditions in 2011/12 for older people were other chronic obstructive pulmonary diseases (over 75,000), heart failure (over 45,000), atrial fibrillation and flutter (over 38,000), angina pectoris (over 34,000), asthma and epilepsy (around 7,000 respectively). These six conditions accounted for over 80% of all emergency admissions of older people for chronic conditions (figure 6). When looking at the leading contributors for emergency admissions for children up to 18 years asthma, epilepsy and insulin dependent diabetes mellitus were the main causes (around 90 per cent of admissions for this age range combined). For adults (19 to 64) the main causes for emergency admissions to hospital were other chronic obstructive pulmonary diseases, asthma, angina pectoris and epilepsy (around 60 per cent of admissions for this age range combined).

Figure 7

Indicator 3.1 Leading causes for emergency admissions for acute conditions that should not normally require hospital admission in 2011/12

Figure 7 shows the leading causes for emergency admissions for acute conditions that should not normally require hospital admission in 2011/12 for children, adults and older people. The leading causes for an admission due to an acute condition overall were urinary tract infections, lobar pneumonia, other noninfective gastroenteritis and colitis and cellulitis (around 57 per cent of admissions combined). For children the most common reasons for an admission to hospital for an acute condition were acute upper respiratory infections, viral and other specified intestinal infections and acute tonsillitis (around 50 per cent of admissions for this age range combined).
Socio economic

The emergency admission rates vary across the 211 CCGs. Figures 8 and 9 highlight this for each indicator. Dark and light blue bars indicate whether the CCG is in the most or least deprived deprivation quintile. CCGs in the middle deprivation quintiles are represented by the white bars.

Figure 8 clearly demonstrates the variation in emergency admission rates. In 2011/12, 18 CCGs had a directly standardised rate (DSR) of less than 500 per 100,000 population, whereas 37 CCGs had a rate of over 1,000 per 100,000 population. The minimum DSR for 2011/12, 215 per 100,000 for patients registered to NHS City and Hackney CCG compares to a maximum of 1742 per 100,000 for patients registered to Bradford CCG. There is a clear relationship between CCG deprivation score and admission rate. CCGs with a higher score, meaning that they are more deprived, generally, with some notable exceptions, have higher admission rates.

Figure 8

Indicator 2.6 Unplanned hospitalisation for chronic ambulatory care sensitive conditions, by CCG, 2011/12
Directly age sex standardised rate, per 100,000 population

Source: Hospital Episode Statistics (HES), The Health and Social Care Information Centre.
Figure 9 also demonstrates variation in emergency admission rates across the CCGs. The minimum DSR for 2011/12, 249 per 100,000 for patients registered to NHS City and Hackney CCG compares to a maximum of 2101 per 100,000 for patients registered to NHS North Manchester CCG.

Again this indicator demonstrates a relationship between CCG deprivation score and admission rate. CCGs with a higher score, meaning that they are more deprived, generally, again with some notable exceptions, have higher admission rates.

When looking at causes for admissions for chronic and acute conditions from the most and least deprived areas there were significant differences as shown in figures 10 and 11.
The top cause for emergency admissions in 2011/12 for chronic ambulatory care sensitive conditions for people from the most deprived areas was other chronic obstructive pulmonary disease. The top cause for the least deprived areas was atrial fibrillation and flutter (figure 10).

The biggest cause for emergency admissions for acute conditions that should not normally require hospital admission was urinary tract infections for the most and least deprived areas although the proportion of this cause was higher for people in the least deprived areas. This can be seen in figure 11.
Figure 11

Indicator 3.1 Leading causes for acute conditions that should not normally require hospital admission in 2011/12 by deprivation

![Bar chart showing percentage of all admissions for acute conditions by deprivation level for various causes including urinary tract infection, lobar pneumonia, other noninfective gastroenteritis and colitis, acute upper respiratory infections multiple and unspecified sites, cellulitis, convulsions, viral and other specified intestinal infections, acute tonsillitis, cutaneous abscess, furuncle and carbuncle, and gastro-oesophageal reflux disease.](chart)

Source: Hospital Episode Statistics (HES), The Health and Social Care Information Centre

The variation in emergency admissions rates by CCG is shown in more details in figures 12 to 15. Figures 12 and 14 show variations for the new definition of these indicators which includes all age groups. Figures 13 and 15 use the old definition with only adults included. The maps highlight that the inclusion of children resulted in changing patterns in terms of the directly standardised rates amongst CCGs.
Figure 12
Indicator 2.6 Unplanned hospitalisation for chronic ambulatory care sensitive conditions (all ages)

Figure 13
Indicator 2.6 Unplanned hospitalisation for chronic ambulatory care sensitive conditions (adults only)
Figure 14
Indicator 3.1 Emergency admissions for acute conditions that should not usually require hospital admission (all ages)

Figure 15
Indicator 3.1 Emergency admissions for acute conditions that should not usually require hospital admission (adults only)
### Annex A – Indicator published for the first time

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### Annex C – Existing indicators published over 211 CCGs

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