NHS
Commissioning Board
A special health authority

# Organisation Patient Safety Incident reports data

## Data handling notes and exceptions

## September 2012 (Eighth release)

**General Notes**

## NRLS data

The incidents summarised in these statistics have been drawn from the National Reporting and Learning System (NRLS), a confidential reporting system. The incidents are reported through a variety of routes, by individual NHS staff, including local organisation risk management systems and web based e-forms (including open access e-forms). The individual reports are not investigated or verified, although all severe harm and death incidents are reviewed.

Organisational Patient Safety Incident Statistics use NRLS data from two datasets:

1. Reported dataset contains incidents that were reported within the period 01 October 2011 to 31 March 2012. This dataset is used to measure data quality and levels of reporting from NHS organisations.
2. Occurring dataset contains incidents that occurred within the period 01 October 2011 to 31 March 2012 and were reported by 31 May 2012. This dataset is used to compare patterns of incidents and to calculate rates to benchmark organisations against similar organisations.

**Interpretation of data from the NRLS**

The NRLS comprises data collected by over 400 different organisations and many of these use different systems to collect, collate and store their patient safety incidents. For this reason the quality of data in the NRLS does vary. The following are some of the issues we have identified that may affect your interpretation of the data.

- Counts of incidents are simply incidents reported to the NRLS – they must not be presented as the number of incidents which actually occurred.
- A higher number of reported incidents from an organisation, specialty or location, does not necessarily mean that the organisation has a higher number of incidents; it may instead reflect a better reporting culture.
- Reports made to local risk management systems may not capture all incidents that actually occur. Reporting of no, low and moderate harm incidents to the NRLS is voluntary and incidents are self-reported.
- No reports from the public or patients are included in analysis, although since April 2006 patients and the public have been able to report incidents via a dedicated reporting form.
- Some incidents recorded in local risk management systems and subsequently forwarded to the NRLS may not technically be patient safety incidents. For example, deaths from natural causes which occurred in hospital, and also deaths where patients died unexpectedly, are sometimes reported to local risk management systems, for local audit purposes, and hence are reported to the NRLS.
- The data are likely to include incidents where the impact on the patient could not have been prevented by health services, for example, suicides.

**Degree of harm to patient**

The reporting of degree of harm in the NRLS is intended to record the actual degree of harm suffered by the patient. However due to large number of organisations/people reporting to the NRLS this is not always the case:

- Sometimes reporters confuse the potential degree of harm of an incident with actual degree of harm that occurred, for example coding near misses (where no harm resulted as impact was prevented) as 'severe' harm. The NRLS requires the degree of harm to reflect the actual and not the potential degree of harm caused by the patient safety incident.

- Reporters may code the degree of harm as 'severe' when the patient is expected to suffer severe but transient harm (for example severe bruising) instead of the required significant permanent harm (for example amputation, brain damage).

- An analysis of incidents from the NRLS reported as resulting in death between 01 October 2011 and 31 March 2012 has shown that 69 per cent of these incidents are events in which the death of the patient was, or might have been, directly related to patient safety. Some incidents may be coded based on the potential harm to the patient, rather than the actual harm. In other cases, the patient may have died, but not as a result of a patient safety incident: even following investigation, the relationship between any incident which occurred and the outcome for the patient is often unclear, as many incidents happen during the care of patients with life-threatening illness.

**Reporting rates**

Reporting levels and rates from organisations vary greatly. Some organisations report daily, others quarterly. In many cases incidents are batched and sent in large loads. It should never be assumed that the total numbers of patient safety incidents are representative of totals across the NHS. The reporting culture varies between organisation types. Reporting in secondary care is far greater than that in primary care. **Ambulance and mental health organisations have the most varied reporting patterns.**

**Making time-based comparisons**

Please be aware that comparisons of levels of incidents in the NRLS over time, such as year-to-year comparisons may not be valid. Due to the nature of the NRLS, it is very difficult to make before and after comparisons; reporting is voluntary **(other than serious incidents from April 2010, now mandatory to report to CQC via the NRLS)** and reporting rates are constantly increasing.

The NRLS was established in late 2003 and all organisations had the ability to report from 2005. Since then we have been working with organisations to increase their reporting and to promote a more open culture in healthcare services. Experience in other industries has shown that as an organisation's reporting culture matures staff become more likely to report incidents. However, even in high reporting organisations, many incidents do not get reported.

An increase in incidents should not be taken as an indication of a worsening of patient safety but rather of an increasing level of awareness of safety issues amongst healthcare professionals.

**Clusters**

**Transforming Community Services (TCS)**

Transforming Community Services (TCS) is a DH programme of work set up to implement changes in Primary Care Trusts (PCTs) to support Commissioning by removing all clinical service provision from PCTs. The NHS Operating Framework 2010/11 mandates that all PCTs divest themselves of this provision by April 2011.

In order to accommodate these changes we have amended our clusters:

- **All PCTs will now be allocated to the PCO - no inpatient provision cluster**

We understand that some organisations may not have completed the transition during the period that these reports cover and could still be reporting incidents from inpatient services, however, for consistency these will remain in the no inpatient cluster.

- **NHS organisations where the main provision is community services have been allocated to the PCO - inpatient provision cluster**

We understand that the naming of this cluster does not wholly reflect the nature of community NHS trusts but for simplicity and while organisational structures are still in transition we will retain this cluster name and may take a decision to rename clusters in the future.

- Where community services have been transferred to an existing Mental Health NHS organisation, these organisations will remain in the mental health cluster.

- Where community services have been transferred to an existing Acute NHS organisation, these organisations will remain in their original cluster

- Ambulance and Welsh LHB clusters remain unchanged

Please see the section on incident rates and denominator data for further information on how these changes will impact the calculation of reporting rates.

**Specific organisation issues**

All organisations with issues are listed in **Table 1- Summary of organisations** with specific issues. In all cases, the NRLS has contacted the NHS organisations involved to discuss the issues encountered.

**Incident rates and denominator data**

Incident rates are calculated to compare similar organisations with each other. Acute organisations' incident rates are generated using admissions as a denominator. Mental health and primary care organisations (PCOs) with inpatient provision use bed days, Welsh local health boards (LHBs) use population. Currently there is no measure suitable to benchmark ambulance organisations so raw incident levels are used.

Due to the reconfiguration of some NHS organisations and the subsequent inclusion of all primary care commissioner only organisations in the PCO – no inpatient cluster, incident rates used for

comparisons within the cluster are not valid. Therefore, incident rates have not been calculated for PCO - no inpatient providers and are not included in the reports.

For organisations providing inpatient services, either admissions or bed days data, published by Hospital Episode Statistics (HES)[1] and Health Solutions Wales (HSW)[2], are used to calculate incident rates. The most recent published data is for financial year 2010/11 and is divided by two to give figures for six months.

LHBs in Wales will have population data as their denominator which are supplied by the NHS Information Centre[3].

**Dealing with significant issues with denominator data**

In order to avoid outlying rates from distorting graphs and preventing the majority of organisations from comparing themselves with their peers, where organisations have missing or possibly incorrect published data, methods to estimate or substitute the denominator have been used in order to calculate the most accurate rate as possible.

An alternative to the published data was used if:

- an organisation was missing or known to have a shortfall in HES;
- organisation changes had not been reflected in the published HES data;
- the reporting rate for an organisation was greater than six times the median for that cluster (outlier).

Where there have been structural changes within an organisation, for example, mergers or where services have been transferred to a new or existing NHS organisation, an estimate using published HES data has been used.

Organisations have had either bed days or admissions included in their denominator from the organisation/s that have transferred services, if published data were available.

In all cases organisations have had the opportunity to discuss the methods to estimate or substitute the denominator.

No denominators were estimated or substituted for Wales.

**NOTE: Data for the 2010/11 financial year has been used as the denominator as this is the latest published information. However, trusts with estimates or substitutions may not be directly comparable with others in their clusters and should be interpreted with care. To view the denominator used for your organisation, please refer to the denominator sheet in the organisation data workbook on the NRLS website.**

The process for employing alternative denominator is as follows:

- bed days/admissions estimated from previous or merged organisations HES Data, otherwise;
- bed days estimated from Department of Health data on overnight beds (2011/12), using regression model to predict the expected bed days from recent data, otherwise;
- no suitable data available at all, so rate set as zero.

The regression model used to provide estimated bed days was based on the total number of overnight beds reported by each organisation to the Department of Health for 2011/12[4].

The equation used to estimate the bed day denominator for organisations in England is:

**Estimated bed days = 11197.77 + (332.2526*total-beds)**

**Table 1 - Summary of organisations with specific issues**

| NHS Organisation | Cluster | Issue Type |
|---|---|---|
| Barts and the London NHS Trust | Acute teaching | Organisation Change - HES data (2010/11) for merged organisations included |
| Birmingham and Solihull Mental Health NHS Foundation Trust | Mental Health | HES data quality issue |
| Blackburn With Darwen Teaching Care Trust Plus | PCO – Inpatient provision | No suitable denominator data available, rate set as zero |
| Bolton NHS Foundation Trust | Medium acute | Organisation Change – HES Data Issue |
| Bradford Teaching Hospitals NHS Foundation Trust | Acute teaching | Organisation Change – HES Data Issue |
| Bridgewater Community Healthcare NHS Trust | PCO – Inpatient provision | Organisation Change - HES data (2010/11) for merged organisations included |
| Burton Hospitals NHS Foundation Trust | Small acute | Organisation Change - HES data (2010/11) for merged organisations included |
| Cambridgeshire & Peterborough NHS Foundation Trust | Mental Health | Bed days estimated from DH data on overnight beds (2011/12) |
| Central and North West London NHS Foundation Trust | Mental Health | Organisation Change - HES data (2010/11) for merged organisations included |
| Central London Community Healthcare NHS Trust | PCO – Inpatient provision | Bed days estimated from DH data on overnight beds (2011/12) |
| Cheshire and Wirral Partnership NHS Foundation Trust | Mental health | Organisation Change - HES data (2010/11) for merged organisations included |
| County Durham and Darlington NHS Foundation Trust | Large acute | Organisation Change – HES Data Issue |
| Coventry and Warwickshire Partnership NHS Trust | Mental health | Bed days estimated from DH data on overnight beds (2011/12) |
| Cumbria Partnership NHS Foundation Trust | Mental health | Organisation Change - HES data (2010/11) for merged organisations included |
| Derbyshire Community Health Services NHS Trust | PCO – Inpatient provision | Organisation Change - HES data (2010/11) for merged organisations included |
| Dorset Healthcare University NHS Foundation Trust | Mental health | Organisation Change - HES data (2010/11) for merged organisations included |
| Ealing Hospital NHS Trust | Small acute | Organisation Change – HES Data Issue |
| East Cheshire NHS Trust | Small acute | Organisation Change – HES Data Issue |
| East Lancashire Hospitals NHS Trust | Large acute | Organisation Change – HES Data Issue |
| East Sussex Healthcare NHS Trust | Large acute | Organisation Change - HES data (2010/11) for merged organisations included |
| Great Western Hospitals NHS Foundation Trust | Medium acute | Organisation Change - HES data (2010/11) for merged organisations included |
| Guy's and St Thomas' NHS Foundation Trust | Acute teaching | Organisation Change - Data Issue |
| Hampshire Hospitals NHS Foundation Trust | Medium acute | Organisation Change - HES data (2010/11) for merged organisations included |

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|---|---|---|
| Harrogate and District NHS Foundation Trust | Small acute | Organisation Change – HES Data Issue |
| Heart of England NHS Foundation Trust | Large Acute | Organisation Change – HES Data Issue |
| Hertfordshire Partnership NHS Foundation Trust | Mental Health | Bed days estimated from DH data on overnight beds (2011/12) |
| Homerton University Hospital NHS Foundation Trust | Small acute | Organisation Change – HES Data Issue |
| Hounslow & Richmond Community Healthcare NHS Trust | PCO – Inpatient provision | Organisation Change – HES Data Issue |
| Humber NHS Foundation Trust | Mental health | Organisation Change - HES data (2010/11) for merged organisations included |
| Kent Community Health NHS Trust | PCO – Inpatient provision | Bed days estimated from DH data on overnight beds (2011/12) |
| Lancashire Care NHS Foundation Trust | Mental health | Bed days estimated from DH data on overnight beds (2011/12) |
| Leeds Community Healthcare NHS Trust | PCO – Inpatient provision | Bed days estimated from DH data on overnight beds (2011/12) |
| Lincolnshire Community Health Services NHS Trust | PCO – Inpatient provision | Organisation Change - HES data (2010/11) for merged organisations included |
| Liverpool Community Health NHS Trust | PCO – Inpatient provision | Organisation Change - HES data (2010/11) for merged organisations included |
| Norfolk and Waveney Mental Health NHS Foundation Trust | Mental Health | Organisation Change - HES data (2010/11) for merged organisations included |
| North Bristol NHS Trust | Large acute | Organisation Change – HES Data Issue |
| North Tees and Hartlepool NHS Foundation Trust | Medium acute | Organisation Change – HES Data Issue |
| Northamptonshire Healthcare NHS Foundation Trust | Mental Health | Bed days estimated from DH data on overnight beds (2011/12) |
| Northumbria Healthcare NHS Foundation Trust | Large Acute | Organisation Change – HES Data Issue |
| Nottinghamshire Healthcare NHS Trust | Mental Health | Bed days estimated from DH data on overnight beds (2011/12) |
| Oxford Health NHS Foundation Trust | Mental Health | Organisation Change - HES data (2010/11) for merged s organisations included |
| Oxford University Hospitals NHS Trust | Acute teaching | Organisation Change - HES data (2010/11) for merged organisations included |
| Oxfordshire Learning Disability NHS Trust | Mental Health | Outlier - No suitable denominator data available, rate set as zero |
| Pennine Care NHS Foundation Trust | Mental Health | Bed days estimated from DH data on overnight beds (2011/12) |
| Royal Berkshire NHS Foundation Trust | Large acute | HES data quality issue |
| Sandwell and West Birmingham Hospitals NHS Trust | Large acute | Organisation Change – HES Data Issue |
| Shropshire Community Health NHS Trust | PCO – Inpatient provision | Organisation Change - HES data (2010/11) for merged organisations included |

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|---|---|---|
| Solent NHS Trust | PCO – Inpatient provision | Organisation Change - HES data (2010/11) for merged organisations included |
| Somerset Partnership NHS Foundation Trust | Mental health | Organisation Change - HES data (2010/11) for merged organisations included |
| South Staffordshire and Shropshire Healthcare NHS Foundation Trust | Mental health | Bed days estimated from DH data on overnight beds (2011/12) |
| South Tees Hospitals NHS Foundation Trust | Large acute | Organisation Change - HES data (2010/11) for merged organisations included |
| South Tyneside NHS Foundation Trust | Small acute | Organisation Change – HES Data Issue |
| South Warwickshire General Hospitals NHS Trust | Small acute | Organisation Change - HES data (2010/11) for merged organisations included |
| South West Yorkshire Partnership NHS Foundation Trust | Mental health | Organisation Change - HES data (2010/11) for merged organisations included |
| Southern Health NHS Foundation Trust | Mental Health | Organisation Change - HES data (2010/11) for merged organisations included |
| St George's Healthcare NHS Trust | Acute teaching | Organisation Change - HES data (2010/11) for merged organisations included |
| Staffordshire & Stoke on Trent Partnership NHS Trust | PCO – Inpatient provision | Organisation Change - HES data (2010/11) for merged organisations included |
| Sussex Partnership NHS Foundation Trust | Mental Health | Trust has requested removal of their data from the workbook. |
| Tavistock And Portman NHS Foundation Trust | Mental Health | No suitable denominator data available, rate set as zero |
| The Newcastle upon Tyne Hospitals NHS Foundation Trust | Acute teaching | Organisation Change – HES Data Issue |
| The Rotherham NHS Foundation Trust | Medium acute | Organisation Change - HES data (2010/11) for merged organisations included |
| The Royal Marsden NHS Foundation Trust | Acute specialist | Organisation Change – HES Data Issue |
| Wirral Community NHS Trust | PCO – Inpatient provision | No suitable denominator data available, rate set as zero |
| Worcestershire Health & Care NHS Trust | PCO – inpatient provision | Organisation Change - HES data (2010/11) for merged organisations included |

**Updated incidents**

All organisations were given until 31/05/2012 to update incidents in the NRLS. This is to allow any further information pertaining to the nature of the incident, discovered in investigation, to be included in the reports.

**Organisations with low number of incidents in the occurring dataset**

Some organisations may report very few incidents i.e. 10 or fewer incidents that occurred between 1 October 2011 and 31 March 2012 to the NRLS. There can be legitimate reasons or obstacles to uploading incidents to the NRLS, for example, commissioning-only PCTs or organisations that have had structural changes and were unable to upload incidents for the period these statistics cover.

Statistics are not calculated and comparisons are not made for organisations classed as low reporters as they will be unreliable.

**Organisations that have zero incidents in the reported dataset**

**Some organisations have zero incidents in their reported dataset, yet have incidents featured in their occurring dataset.** This situation arises when an organisation does not report between 01 October 2011 and 31 March 2012 and catches up on reporting between 1 April and 31 May. We encourage organisations to report in a timely and prompt manner.

**Table 2 - organisations with zero incidents in the reported dataset**

| NHS Organisation | Cluster |
|---|---|
| Blackburn With Darwen Teaching Care Trust Plus | PCO - Inpatient provision |

**Median days**

No median days figures have been calculated for organisations who have reported 10 incidents or less between 01 October 2011 and 31 March 2012. Any median calculation based on such low numbers would be unreliable. These organisations may have incidents in their reports if they subsequently caught up on reporting. (See Organisations that have zero incidents in the reported dataset)

**Exceptions**

**Tavistock and Portman NHS Foundation Trust**
This trust only offers outpatient mental health and psychotherapy services; therefore bed day data is unavailable.

**Isle of Wight NHS PCT**
This trust offers ambulance and primary care services alongside acute, mental health and learning disability care, therefore may not be directly comparable with others within their cluster.

## References

[1] Hospital Episode statistics – collects episode data from all organisations in England. For more information visit http://www.hesonline.org.uk

[2] Health Solutions Wales – collects episode data from Welsh organisations. For more information visit http://www.wales.nhs.uk/sites3/home.cfm?orgid=527

[3] NHS Information Centre for Health and Social Care - http://www.ic.nhs.uk/statistics-and-data-collections/population-and-geography/gp-registered-populations

[4] Department of Health performance data and statistics - http://www.dh.gov.uk/en/Publicationsandstatistics/Statistics/Performancedataandstatistics/Beds/index.htm