

## National Reporting and Learning System data principles

December 2016

### Background and purpose

The purpose of the National Reporting and Learning System (NRLS) is to enable learning from patient safety incidents. Our ability to protect future patients from harm depends on promoting a culture that welcomes and encourages the reporting of incidents. It is essential to abide by these principles to ensure that we continue to successfully learn from patient safety incident reports and reduce harm.

This document sets out the circumstances in which NRLS data are the appropriate data source to be used and describes their appropriate use.

These principles emphasise the purpose and characteristics of the NRLS data, and promote consistency across data users. It is essential that users of NRLS data understand and represent it appropriately, as inappropriate presentations of NRLS data could discourage reporting.

**They apply to all stakeholders, including NHS Improvement staff using NRLS data.**

### The principles

#### What do NRLS data tell us?

1. They reflect the safety reporting culture in an organisation.
2. They show the most frequent types of reported patient safety incidents at national, regional and local levels.
3. They show which types of patient safety incidents are reported as most harmful, at national, regional and local levels.
4. They help us to understand how patient safety incidents happen.
5. They show how incident reporting patterns change over time by degree of harm, by topic and by care setting or organisation.

## What NRLS data don't tell us?

1. They do not provide the actual number of patient safety incidents occurring in the NHS or in a particular organisation.
2. They do not provide information on the full history and characteristics of patients involved in patient safety incidents.
3. They do not tell us if an organisation is safe or unsafe.
4. They do not show an organisation's level of compliance with safety guidelines.
5. They do not measure the efficacy of specific safety initiatives.

## Data notes

Further data notes to consider when using NRLS data:

### Total numbers

The NRLS is a largely voluntary scheme for reporting patient safety incidents, so it does not provide the actual number of patient safety incidents occurring in the NHS. The maturity of an individual's or organisation's safety processes and culture will affect what is recognised as an incident. So too will new treatments and procedures; changing standards of accepted clinical practice; publications or campaigns raising awareness of under-recognised risks; and the effectiveness of local systems for seeking out harm that would otherwise have gone undetected through case record review and audit.

The data uploaded by organisations to the NRLS may also not reflect all locally reported patient safety incidents. Some incidents may not be uploaded at all, or may be uploaded at uneven frequencies or delayed.

Consequently, patient safety incidents reported to the NRLS are just that – an accurate source of incidents reported to the NRLS, rather than an imperfect source of actual incidents. NRLS data users can help to ensure that this is understood by always referring to **'reported'** patient safety incidents in reports, tables and figures.

### Incidents not errors

'Patient safety incident' is not a synonym for error. The NRLS will include harm unrelated to errors (for example, adverse reactions to medication that could not have been anticipated or prevented) and situations with potential for causing harm that staff recognise and report before they can result in error. NRLS data users can help to ensure this is understood by referring to quantitative NRLS data as 'reported

patient safety incidents', or just 'reported incidents' in contexts where patient safety is implicit (eg reported medication incidents).

### Dynamic database

The NRLS is a dynamic reporting system and the number of incidents reported as occurring at any point in time may increase as more incidents are reported. Incident classification, particularly reported degree of harm, can also change as local investigations progress and incidents are updated. Therefore, the date of the data extraction should always be included on tables and chart references.

### Trends over time

Another limitation to the data can be that changes to reporting requirements often result in changes to data series over time. When looking at the data, data users need to bear in mind the dates of changes in national mandatory reporting requirements, or national guidance on reporting to the NRLS, as these may have a 'one-off' impact. Organisational change should also be borne in mind, as newly created and newly merged organisations take time to mature and set up their systems and processes.

When comparing NRLS data across time periods, it is important to compare data with the same time period in the previous year(s) to take into account known 'seasonality' in the data. There are at least two causes of seasonality in the reporting of patient safety incidents to the NRLS: 'administrative seasonality' and 'incident seasonality':

- **Administrative seasonality:** There are large spikes in the reporting of patient safety incidents to the NRLS every six months (at the end of May and the end of November), as organisations upload batches of data to meet the cut-off dates for submission to the NRLS for inclusion in the UK Official Statistics dataset.
- **Incident seasonality:** Research suggests healthcare activity and the types of conditions requiring treatment relate to the time of year and these changes may affect incident reporting.

Therefore, when reviewing changes over time, we recommend that:

- proportions or percentages are used rather than actual numbers (to allow for the differences in the underlying numbers of incidents and the underlying activity of the NHS)
- either the same time period in the previous year, or a full year's worth of data are used (to take seasonality into account)
- it is checked that any 'change/difference' is not caused by new or amended

national mandatory reporting requirements or organisational restructuring.

### **Timely reporting**

We encourage organisations to report patient safety incidents to the NRLS at least once a month. The Care Quality Commission (CQC) guidance for reporting death and severe harm incidents ([www.cqc.org.uk/content/notifications](http://www.cqc.org.uk/content/notifications)) recommends reporting 'without delay'.

However, in practice there is usually a delay between an incident occurring and being reported to the NRLS. As this delay is well known, we always allow a minimum of two months lag in analysing data based on the date of the incident (occurring date). This also gives organisations a chance to update incidents, if appropriate.

### **Interpreting NRLS reports with a degree of harm = death**

Although the NRLS definition of death in this context is 'where death is directly attributable to a patient safety incident', mortality research has identified this is rarely clear cut, and incident reporters often have to make a judgement call. NRLS data users can help ensure this is understood by not summarising reported degree of harm with terms such as 'causing' death except where this is justified by the text of incident reports after local or independent investigation.

## **5. Further support**

There is further information on handling NRLS data at:  
<http://nrls.nhs.uk/resources/?entryid45=135546>

If you are not sure about one or more of these principles, you wish to discuss an analytical method or explore new ways of using NRLS data, contact us at [NHSI.NRLSDataRequest@nhs.net](mailto:NHSI.NRLSDataRequest@nhs.net)

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