NHS Improvement

NRLS national patient safety incident reports: commentary

March 2018

We support providers to give patients safe, high quality, compassionate care, within local health systems that are financially sustainable.

Contents

1. Summary

Reporting to the National Reporting and Learning System (NRLS) is largely voluntary, to encourage openness and continual increases in reporting.

Increases in the number of incidents reported reflects improved reporting culture, and should not be interpreted as a decrease in the safety of the NHS. Equally, a decrease cannot be interpreted as an increase in the safety of the NHS.

The number of incidents reported to the NRLS for England continues to increase. The number of incidents reported in October to December 2017 (508,409) represents a five-fold increase on the number reported in October to December 2005 (135,356).

Nationally there are still peaks every six months in the number of incidents reported. This is when users submit large batches of data at the cut-off for the six-monthly official statistics publications.

Nationally the overall profile of incident characteristics (incident type, degree of harm, care setting where the incident occurs) reported as occurring remains consistent in October 2016 to September 2017 compared to October 2015 to September 2016.

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2. Introduction

This commentary interprets the data published in the national patient safety incident reports (NaPSIR) for England. NaPSIR provides data on patient safety incidents at a national level. We analyse data for the current 12- or three-month period being published, rather than by month or calendar or financial year. We make comparisons over time using the same 12- or three-month period but in a previous year. This is because of known seasonality in reporting patterns and when incidents occur. For example, there are peaks in the number of incidents **reported** every May and November around the cut-offs for two of our data publications. So comparing consecutive periods may be misleading: for example, if the previous period included a known reporting peak.

The data and this commentary are part of a range of official statistics on patient safety incidents reported to the National Reporting and Learning System (NRLS). Our other official statistic outputs are:

- organisation patient safety incident reports (OPSIR)
- monthly summary data on patient safety incident reports.[1]

The document should be read alongside the NaPSIR data tables. The data contained in NaPSIR and OPSIR differs for reasons listed in Table 1. Therefore the statistics are not comparable and numbers should not be expected to match.

Detailed information on how we manage data quality and revisions and corrections to the data is available on the NaPSIR webpage.

[1] The monthly summary data will shortly be classified as experimental statistics and we are working to the code of practice for these statistics. Further information will become available on our webpages.

Table 1: Main features of NaPSIR, OPSIR and monthly workbooks

Feature	NaPSIR	OPSIR	Monthly summaries
Purpose	To provide a national picture of the reporting of patient safety incidents and of the characteristics of incidents (type, care setting, degree of harm). This dataset forms the basis of the indicator 'Improving the culture of safety reporting' in Domain 5 of the NHS outcomes framework (*Treating and caring for people in a safe environment and protecting them from avoidable harm*).	To provide data on individual organisations' reporting and patient safety characteristics. Different NHS organisations provide different services and serve different populations. Therefore, to make comparisons as meaningful as possible, the NRLS groups NHS organisations into 'clusters' of similar organisations.*	To provide timely data on reporting to the NRLS to encourage more consistent reporting and support organisations to monitor potential under-reporting of incidents. Data is provided by organisation, degree of harm and month of report to the NRLS. Organisations are not grouped into 'clusters'.
Dataset type	Dynamic†	Fixed/static	Dynamic
Dataset used	Reported and occurring datasets‡	Reported and occurring datasets‡	Reported dataset‡
Period covered	Reported dataset: rolling quarters from October to December 2003 to the most recent quarter available. Occurring dataset: rolling quarters covering the last four available quarters.	The most recent six months only	A rolling 12-month period covering the preceding 12 complete months of available data.
Updated	Every six months	Every six months	Every month
Geography/ breakdown	All geographical locations, by care setting	England, by individual NHS organisation (organised by cluster)	England, by individual organisation

Feature	NaPSIR	OPSIR	Monthly summaries
Inclusions	The following care settings: acute/general • mental health service • community nursing, medical and therapy service • learning disabilities service • ambulance service • general practice • community pharmacy • community and general dental service • community optometry/ optician service	The following organisation types: • acute/general hospital • mental health service • community trusts • ambulance service	The following organisation types: • acute/general hospital • mental health service • community trusts • ambulance service • integrated care organisation

*Information on clusters is available in or accompanies the relevant publication.

†Figures for previous quarters may change slightly (figures for four consecutive quarters are given in each workbook for incidents 'occurring', from Tab 5 onwards) as the NRLS is a dynamic system (and incidents can be reported, or updated, at any time after the event).

‡ The reported dataset refers to incidents reported by, or within, a certain period. The occurring dataset refers to incidents occurring by, or within, a certain period. See above for more information.

Overview of NRLS data collection and interpretation

The NRLS collects data on patient safety incidents in England and Wales. This commentary covers data reported by English organisations; data relating to Wales is available online.

Most data is submitted to the NRLS from an NHS organisation's local risk management system. A small number of reports are also submitted using online 'eForms' by individuals and organisations that do not have local risk management systems. More information is available in our accompanying guidance notes.

Many factors affect how NRLS data and statistics are interpreted. Detailed information is available in our accompanying guidance notes and data quality statement; this is a summary of factors influencing interpretation:

- Data reflects incidents reported to the NRLS, not the number of incidents actually occurring in the NHS.
- There can be a delay between an incident occurring and when it is reported to the NRLS, so we publish data based on the occurring dataset (the date when an incident is reported to have occurred) and the reported data (the date when the incident was reported to the NRLS). For any given period, the number of incidents occurring and incidents reported is unlikely to match.
- Reporting error and bias affect trends in the number of incidents reported to the NRLS; known sources include: the type of organisations that report to us; the type of incidents reported; changes in policy; seasonality in when incidents are reported and when incidents occur (as detailed above); delays in reporting incidents to us.

It is important to consider these factors in interpreting or comparing any NRLS data over time.

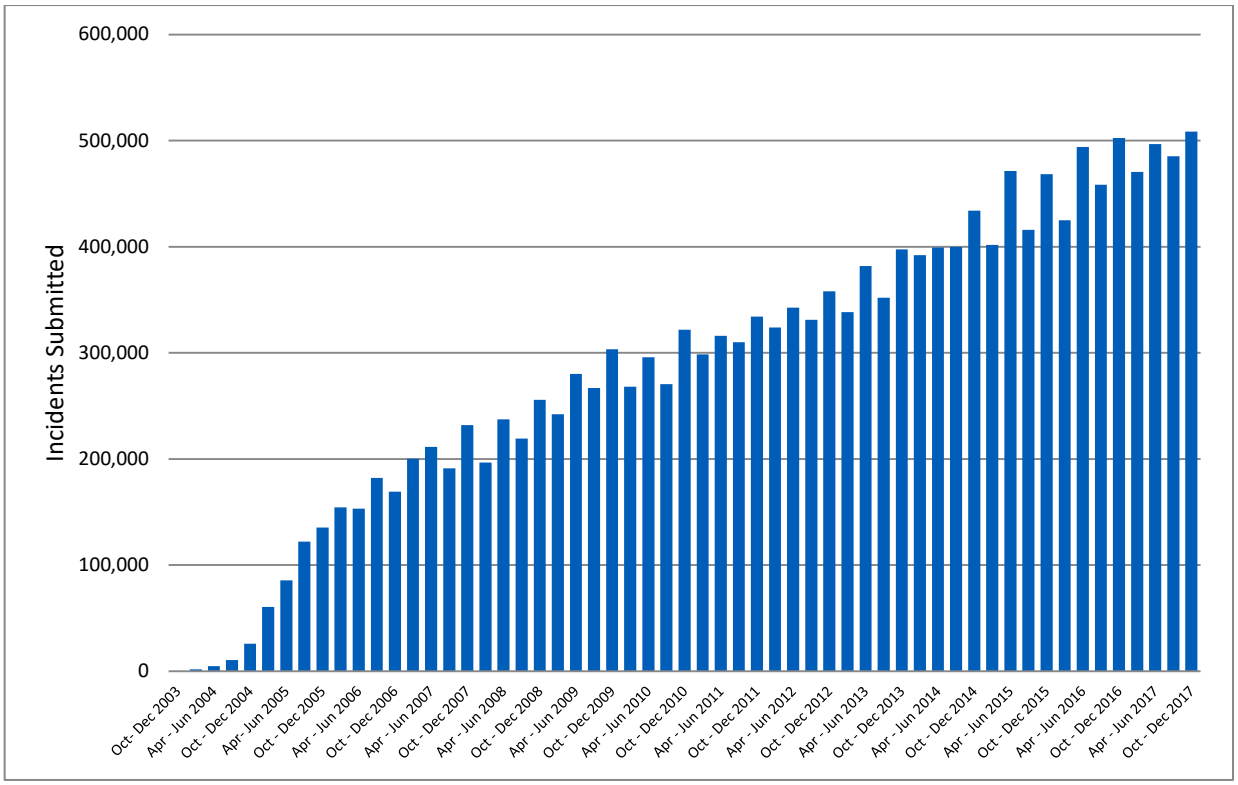
3. Incidents reported up to December 2017

This section analyses incidents reported to the NRLS using the **'reported dataset'.** This dataset is used to look at patterns in reporting, such as frequency and timeliness. It contains incidents **reported** to the NRLS within a specified period. It will include incidents that were reported up to December 2017. This dataset will reflect seasonality in when incidents are reported to the NRLS.

Reported number of incidents

Patient safety incidents have been reported to the NRLS since October 2003 (Figure 1), with all NHS organisations being able to access the system from 2005. From October to December 2017, 508,409 incidents were reported to the NRLS. This compares with 153 incidents reported from October to December 2003 and 135,356 in October to December 2005. The peaks observed in the number of incidents reported (Figure 1) reflects when nationally large batches of incidents are submitted to the NRLS close to the cut-offs for the NaPSIR and OPSIR publications.

Figure 1: Number of incidents reported to the NRLS, October to December 2003 to October to December 2017



4. Incidents reported as occurring from October 2016 to September 2017

This section analyses incidents using the **'occurring dataset'.** This dataset is used to look at patient safety incident characteristics. It contains incidents reported as actually happening (occurring) in a specific period. The dataset reflects seasonality in when incidents occur. Analysis based on it may be biased by fluctuation in numbers over time due to reporting delays. In this report, analysis includes incidents reported to have occurred between October 2016 and September 2017 and reported to the NRLS by 30 November 2017. This cut-off is to allow time for quality assurance and analysis.

The number of incidents reported as occurring for any period will differ from the number of incidents reported in the same period because they capture different data. For example, incidents reported between October 2016 and September 2017 will include incidents that occurred in this period **and** incidents occurring before October 2016 because of known delays in reporting.

The number of incidents reported as occurring to the NRLS continues to increase. Between October 2016 and September 2017, 1,895,834 incidents were reported as occurring from England. This is 4.7% more than during October 2015 to September 2016 (1,811,175).

Incident characteristics

When incidents are submitted to the NRLS, users also enter information describing the incident in more detail. For example, we collect information on the type of incident and where it occurred. This helps us learn more about the types of incidents occurring in the NHS and focus our efforts to reduce harm to patients. Key incident characteristics, by cluster, are described below.

Incident category

Incident category is important because it helps us understand if certain types of incident are more common than others, so we can target our learning. Many factors can affect the types of incident reported by different organisations, and this can cause variation within and between different care settings.

Nationally the top four incident categories reported were (Table 2): 'Patient accident' (15.9%; 302,125/1,895,834); 'Implementation of care and ongoing monitoring/review' (13.8%; n=262,141); 'Access, admission, transfer, discharge (including missing patient)' (11.1%; n=210,325); 'Medication' (10.6%; n=201,142). These have remained consistent compared to October 2015 to September 2016.

Table 2: Reported incident categories by quarter, England: incidents reported as occurring in October 2015 to September 2016 and October 2016 to September 2017

Incident category	October 2015 to September 2016		October 2016 to September 2017		% change
	N	%	N	%	
Patient accident	307,830	17.0	302,125	15.9	-1.9
Implementation of care and ongoing monitoring/review	241,046	13.3	262,141	13.8	8.8
Access, admission, transfer, discharge (including missing patient)	187,653	10.4	210,325	11.1	12.1
Medication	192,435	10.6	201,142	10.6	4.5
All other incident categories	882,211	48.7	920,101	48.5	4.3
Total	**1,811,175**	**100**	**1,895,834**	**100**	**4.7**

Care setting

Information on the reported care setting of occurrence helps us understand where reported incidents have taken place, as they can be reported by any organisation even if they did not happen in the reporting organisation.

Nationally the top four reported care settings of occurrence (Table 3) were: 'acute/general hospital' (74.1%; 1,405,052/1,895,834); 'mental health service' (12.9%; n=243,974); 'community nursing, medical and therapy service' (10.7%; n=203,707); 'learning disabilities service' (0.9%; n=17,366). These have remained consistent compared to October 2015 to September 2016.

Table 3: Reported incidents by care setting by quarter, England: incidents reported as occurring in October 2015 to September 2016 and October 2016 to September 2017

Care setting	October 2015 to September 2016		October 2016 to September 2017		% change
	N	%	N	%	
Acute/general hospital	1,338,819	73.9	1,405,052	74.1	4.9
Mental health service	233,694	12.9	243,974	12.9	4.4
Community nursing, medical and therapy service (inc community hospital)	194,174	10.7	203,707	10.7	4.9
Learning disabilities service	19,959	1.1	17,366	0.9	-13.0
All other care settings	24,529	1.4	25,735	1.4	4.9
Total	**1,811,175**	**100**	**1,895,834**	**100**	**4.7**

Incident type by care setting

Due to the differences in the care provided and patients seen, the type of incident reported varies by care setting. For example, in the acute and general care setting the top four reported incident types are the same as those for the whole dataset (as most incidents are reported in this care setting): 'Patient accident' (16.2%; 227,242/1,405,052); 'Implementation of care and ongoing monitoring/review' (13.1%; n=183,510); 'Access, admission, transfer, discharge (including missing patient') (12.0%; n=167,916); 'Treatment, procedure' (12.0%; n=167,884). By contrast, the top four incident types in the mental health services care setting were: 'Self-harming behaviour' (27.1%; 66,087/243,974); 'Disruptive, aggressive behaviour (includes patient-to-patient)' (16.1%; n=39,219); 'Patient accident' (15.3%; n=37,383); 'Access, admission, transfer, discharge (including missing

patient)' (9.8%; n=23,998). The general patterns in the incident types reported by each care setting are consistent over time.

Full breakdowns of the data are available in the accompanying NaPSIR data workbooks.

Degree of harm

The degree of harm should describe the actual degree of harm suffered by the patient as a direct result of the patient safety incident. There are five NRLS categories for the degree of harm:

- no-harm – a situation where no-harm occurred: either a prevented patient safety incident or a no-harm incident
- low harm – any unexpected or unintended incident that required extra observation or minor treatment and caused minimal harm to one or more persons
- moderate harm – any unexpected or unintended incident that resulted in further treatment, possible surgical intervention, cancelling of treatment, or transfer to another area, and which caused short-term harm to one or more persons
- severe harm – any unexpected or unintended incident that caused permanent or long-term harm to one or more persons
- death – any unexpected or unintended event that caused the death of one or more persons.

The degree of harm helps us learn about the impact of incidents on patients and identify those incidents causing most harm (severe harm and death), to prioritise clinical review of these incidents. Clinical review uses NRLS data to identify new or emerging issues that may need national action, such as a patient safety alert. It is still important that incidents causing all degrees of harm are reported to the NRLS, as this breadth of information is fundamental to improving patient safety.

Sometimes reporters give an incident's **potential** degree of harm instead. For example, the resulting degree of harm is occasionally coded as 'severe' for 'near

miss' where no-harm resulted as the impact was prevented. This should be considered when interpreting the degree of harm.

Nationally approximately three-quarters of incidents were reported as no-harm (73.8%; 1,398,784/1,895,820) and 22.9% (n=434,562) as low harm (Table 4). The remaining incidents were reported as moderate harm (2.8%; n=52,536), severe harm (0.3%; 5,525) and death (0.2%; n=4,449). This pattern is consistent with data for October 2015 to September 2016.

Table 4: Reported incidents by degree of harm, by quarter, England: incidents reported as occurring in October 2015 to September 2016 and October 2016 to September 2017

Degree of harm	October 2015 to September 2016		October 2016 to September 2017		% change
	N	%	N	%	
No-harm	1,319,628	72.9	1,398,748	73.8	6.0
Low	424,095	23.4	434,562	22.9	2.5
Moderate	57,498	3.2	52,536	2.8	-8.6
Severe	5,569	0.3	5,525	0.3	-0.8
Death	4,371	0.2	4,449	0.2	1.8
Total	**1,811,161**	**100**	**1,895,820**	**100**	**4.7**

Table excludes incidents where the degree of harm was not reported.

Degree of harm by care setting

The degree of harm of incidents reported in all care settings follows the same pattern as that observed nationally, with no-harm being the most commonly reported degree of harm and death the least common reported. However, the relative proportion of each degree of harm varies by care setting. For example, the percentage of incidents reported as no-harm ranges from 90.1% (3,408/3,783) in

the community pharmacy care setting to 54.1% (110,154/203,707) in the community nursing, medical and therapy service (including community hospital).

Full breakdowns of the data are available in the accompanying NaPSIR data workbook.

Degree of harm by incident type

When degree of harm is analysed by the incident type the patterns are generally the same as those observed at a national level, with most incidents being reported as no-harm. The exception is the incident type 'Implementation of care and ongoing monitoring/review', where slightly more incidents were reported as 'low harm' (47.4%; 124,133/262,141) rather than 'no-harm' (44.9%; n=117,617). 'Self-harming behaviour' has the highest reported percentage of reported degree of harm as death (1.7%; 1,409/80,609) and the lowest percentage reported as no-harm (51.2%; n=41,233).

Full breakdowns of the data are available in the accompanying NaPSIR data workbook.

5. Final remarks

The NRLS is a system designed to support learning. The incidents collected reflect what is reported to us and reporting culture. The system is not designed to count the actual number of incidents occurring in the NHS. Therefore the continual increase in incidents reported to the NRLS over time indicates a constantly improving reporting culture, providing more opportunity for us to learn and reduce the risk of harm to patients. We encourage organisations to report incidents to the NRLS at least every month rather than submitting data in large batches a few times a year.

We rely on the quality and accuracy of information submitted to be able to focus our learning and interventions to reduce harm. We continue to use this information to identify which incidents are clinically reviewed and how we work to improve patient safety. We also encourage all users to review their own patient safety incidents locally, to understand more about their reporting culture and areas where local improvements in safety culture and patient safety can be made.

We are currently developing a new data collection system to replace the NRLS. The system will affect the exact type of data we collect, which will result in changes being made to our statistics outputs. More information is available online.

We thank all staff, patients and members of the public who have taken the time to report incidents. This information is essential in helping us all improve patient safety and protect our patients from harm.

6. Contact us for help

If you have any questions about the NRLS data collection, the published data or your organisation's data please contact the NRLS team:
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