301,368 incidents were reported in England between 1 April 2009 and 30 June 2009; representing an increase of 44,626 incidents compared to the previous quarter (256,742 incidents in January to March 2009). This is the largest number of reports received since the inception of the Reporting and Learning System (RLS) in October 2003 and reflects an overall upward trend in reporting.

73 per cent of reported incidents occurred in acute/general hospitals.

14 per cent of reported incidents occurred in mental health services.

Reporting from general practice is increasing with 803 incident reports received.

The three top incident types were patient accidents (32 per cent of all incident reports), treatment/procedure (10 per cent) and medication (nine per cent).

Patient accidents are consistently the most commonly reported incident type among care settings that take inpatients.

66 per cent of incidents were reported as causing ‘no harm’, while 27 per cent were reported as ‘low harm’ and six per cent were reported as ‘moderate harm’.

One per cent of all incidents were reported as ‘severe harm’, and the proportion of incidents reported to have resulted in death was small.

381 NHS organisations (98 per cent) in England reported at least once in the past quarter. This is the highest proportion of reporting recorded over a quarter since the inception of the RLS.

Eight NHS organisations (two per cent) in England did not report at all.

3,598,900 incidents in total have now been reported in England to the RLS since its inception.

The overall trend in reporting is upwards. This suggests much greater awareness of patient safety and openness among staff. Healthcare organisations with a high rate of reporting are much more likely to have a strong commitment to patient safety and high safety standards.

Trends and patterns in the RLS data show that no healthcare organisation can be complacent about patient safety – errors can and do happen everywhere.
About the Reporting and Learning System

Ensuring patients are treated safely is the top priority for NHS staff. When incidents do happen, it is important they are reported so lessons are learned across the NHS to prevent the same incidents occurring elsewhere.

The RLS aims to help the NHS improve the safety of patient care by making risks visible and driving national learning. Reports made to the RLS are analysed with expert clinical input to identify hazards, risks and opportunities to improve safety. In short, information from reported incidents helps the NHS understand why things go wrong and how to prevent them happening again.

A patient safety incident is any unintended or unexpected incident that could have or did lead to harm for a patient receiving NHS healthcare.

The RLS is the first national-level patient safety incident reporting system of its kind in the world. It provides comprehensive coverage of healthcare settings (acute, ambulance, combined, learning disability, mental health and primary care organisations) and supports direct reporting from patients. For information on how the RLS works, go to: www.npsa.nhs.uk/nrls/reporting

The first reports were submitted to the RLS in November 2003. By January 2005 all NHS organisations were linked to the national system and the flow of data to the RLS continues to increase.

All healthcare staff in England and Wales providing NHS-funded care can report patient safety incidents to the RLS.

Incident reporting typically involves staff recording information about events that led to unintended or potential harm to patients. Ninety-nine per cent of the incidents reported to the RLS come through the Local Risk Management Systems (LRMS) of NHS organisations. Electronic transfer of the incident reports means that incidents reported once serve both local and national needs.

Staff, patients and the public can also report directly to the National Patient Safety Agency (NPSA) through the website: www.npsa.nhs.uk/nrls/reporting

High reporting organisations

A commitment to reporting demonstrates a commitment to patients and their safety.

Consistently high reporting levels tend to be a mark of high reliability organisations. Research shows that organisations with high and consistent levels of incident reporting are more likely to demonstrate other features of a stronger safety culture, such as high NHS Litigation Authority ratings.

For case examples of how NHS organisations are developing a culture of high reporting, see the joint NPSA and NHS Confederation briefing, June 2008: www.npsa.nhs.uk/nrls/reporting/five-actions-to-improve-reporting/

Publication of Summary Organisation Patient Safety Incident Reports

In March 2009, the NPSA began publishing summary Organisation Patient Safety Incident Reports from each NHS trust or local health board in England and Wales.

The publication of these reports aims to encourage greater awareness of patient safety and to improve the quality of local and national reporting from all healthcare staff, as part of embedding strong patient safety standards in all NHS organisations.

The next set of Patient Safety Incident Reports will be available in the Autumn. For more information visit www.npsa.nhs.uk/nrls/patient-safety-incident-data/organisation-reports
About this report

This Quarterly Data Summary (QDS) summarises data reported to the RLS†, with the most recent quarter covered being 1 April 2009 to 30 June 2009. It offers an overview of the incident reports received by the RLS, in order to provide an overview of risks to patient safety in NHS services in England.

The data summarised in this report include all patient safety incidents reported from NHS organisations in England. For further information on the RLS, see the appendix on page 36.

Two sets of data and analysis are presented in this report:

- **Section 1** describes the level of reporting to the RLS by quarter and uses data based on the date that the report was received by the NPSA‡. The data covers the period from when the RLS was first set up in October 2003 until the end of June 2009.

- **Section 2** contains an overview of patterns and trends in patient safety incident reports. It uses data based on the date that the patient safety incidents were reported as having occurred. The data covers the four quarters between April 2008 and March 2009.

Data presented in Section 1 should not be compared with data in Section 2 of this report, as they are not based on the same time period. Care should also be taken when comparing data with previous issues of the QDS reports, since the RLS is a dynamic reporting system and the number of incidents reported as having occurred in each quarter may vary to some extent in the different issues of the data summaries.

This quarter we also provide specific and actionable information (Learning from reporting from page 9) on:

- What lessons have been learnt on chest drains?; and
- How do staffing issues impact on patient safety?

This report shows data for England only, with the exception of the data used in the ‘Learning from reporting’ section. A separate report for Wales is available at: www.npsa.nhs.uk/datareports

How to use this report

The data presented in this report can be used to:

- compare data reported within local organisations against national trends;
- provide data for research;
- enable triangulation with other data sources.

A data workbook to accompany this QDS report is available on the NPSA website: www.npsa.nhs.uk/datareports. As well as containing all the data underpinning the analysis in the QDS report (frequencies and per cent), the workbook provides charts showing trends in the data on a quarterly basis. The workbook shows the data for both England and Wales separately, as well as the combined figures. Notes to aid the accurate interpretation of RLS data are provided in the appendix on page 36 of this report.

NHS boards play a key role in ensuring the care given is safe and risks are reduced. Board members can identify gaps in their safety culture, and work to improve it, by answering seven key questions set out in the joint NPSA, NHS Confederation and Appointments Commission factsheet Questions are the answer? Seven questions every board member should ask about patient safety. Download the factsheet from: www.npsa.nhs.uk/nrls/reporting/seven-questions-every-board-member-should-ask-about-patient-safety/

† The Reporting and Learning System was previously called the National Reporting and Learning System.

‡ The date the report was received by NPSA is also referred to as ‘date of submission’.

---

This quarterly data summary (QDS) summarizes data reported to the RLS†, with the most recent quarter covered being 1 April 2009 to 30 June 2009. It offers an overview of the incident reports received by the RLS, in order to provide an overview of risks to patient safety in NHS services in England.

The data summarised in this report include all patient safety incidents reported from NHS organisations in England. For further information on the RLS, see the appendix on page 36.

Two sets of data and analysis are presented in this report:

- **Section 1** describes the level of reporting to the RLS by quarter and uses data based on the date that the report was received by the NPSA‡. The data covers the period from when the RLS was first set up in October 2003 until the end of June 2009.

- **Section 2** contains an overview of patterns and trends in patient safety incident reports. It uses data based on the date that the patient safety incidents were reported as having occurred. The data covers the four quarters between April 2008 and March 2009.

Data presented in Section 1 should not be compared with data in Section 2 of this report, as they are not based on the same time period. Care should also be taken when comparing data with previous issues of the QDS reports, since the RLS is a dynamic reporting system and the number of incidents reported as having occurred in each quarter may vary to some extent in the different issues of the data summaries.

This quarter we also provide specific and actionable information (Learning from reporting from page 9) on:

- What lessons have been learnt on chest drains?; and
- How do staffing issues impact on patient safety?

This report shows data for England only, with the exception of the data used in the ‘Learning from reporting’ section. A separate report for Wales is available at: www.npsa.nhs.uk/datareports

How to use this report

The data presented in this report can be used to:

- compare data reported within local organisations against national trends;
- provide data for research;
- enable triangulation with other data sources.

A data workbook to accompany this QDS report is available on the NPSA website: www.npsa.nhs.uk/datareports. As well as containing all the data underpinning the analysis in the QDS report (frequencies and per cent), the workbook provides charts showing trends in the data on a quarterly basis. The workbook shows the data for both England and Wales separately, as well as the combined figures. Notes to aid the accurate interpretation of RLS data are provided in the appendix on page 36 of this report.

NHS boards play a key role in ensuring the care given is safe and risks are reduced. Board members can identify gaps in their safety culture, and work to improve it, by answering seven key questions set out in the joint NPSA, NHS Confederation and Appointments Commission factsheet Questions are the answer? Seven questions every board member should ask about patient safety. Download the factsheet from: www.npsa.nhs.uk/nrls/reporting/seven-questions-every-board-member-should-ask-about-patient-safety/

† The Reporting and Learning System was previously called the National Reporting and Learning System.

‡ The date the report was received by NPSA is also referred to as ‘date of submission’.
How are we learning from serious incident reports?

Every year, around 10,000 patient safety incidents coded as death or severe harm to patients are reported by NHS organisations. Each of these incident reports are reviewed by expert clinical reviewers at the NPSA to identify opportunities for national learning. Free text within the incident report is used to better understand the patient story and its clinical significance. This helps identify the contributing factors leading to the incident and wider system failures. If further information about the incident or underlying safety issues is required, the NPSA contacts the reporting organisation.

Key reports are prioritised according to their importance for national learning and action, using robust criteria and decision-making processes. This happens at a weekly multi-disciplinary meeting at the NPSA with a range of clinical inputs. Other potential safety issues are also considered from sources such as:

- coroners’ data; and
- serious untoward incidents (SUIs).

Where needed, safety recommendations are developed with input from the NHS and experts, and disseminated to providers of NHS-funded care to raise awareness of risks and inform local priorities and action. These are issued as Rapid Response Reports (RRRs), i.e. one-page guidance with timelines for action. They are issued through the Central Alerting System (CAS) in England and directly to organisations in Wales.

Some of the topics currently being scoped include:

- problems with total intravenous anaesthesia (TIVA);
- oxygen safety in hospitals (including empty cylinders and air/oxygen confusion);
- high-risk omitted medicines (e.g. antibiotics for patients with sepsis);
- non-invasive ventilation (problems with continuous positive airway pressure (CPAP) or bi-level positive airway pressure (BIPAP)).

A full list of published RRRs can be found at [www.npsa.nhs.uk/alerts-and-directives/rrr](http://www.npsa.nhs.uk/alerts-and-directives/rrr)

Below is an example of a patient safety topic currently being explored by the NPSA:

**Access to blood products in emergencies**

A risk has been identified where there is delay in accessing blood products when patients are suffering from major haemorrhages. A review of a sample of two years’ worth of RLS data has revealed that there have been approximately 200 incidents where a delay has occurred. Of these incidents, nine patients died and 19 patients came close to death (e.g. requiring admission to the intensive care unit).

Although it is difficult to estimate the impact of the delay on the patient outcome, because patients were critically ill at time of the request, it is fair to presume that early access to blood and blood products is critical to the survival of patients suffering from major haemorrhages. Furthermore, it is clear that these delays should be preventable.

**Example of incident description:**

*Patient became acutely unwell on the ward and at 10.15hrs we became aware that Hb=3.8. The medical team requested c 10 unit Xmeh at 10.20hrs and I called the porters at 10.20hrs to ask them to urgently collect 4 units and bring to ward 11. Despite 3 follow up calls the blood wasn’t signed out of the lab until 10.47hrs and didn’t reach the ward until 11.05hrs, some 50 minutes after the request call. Only 1 unit was brought not the 4 needed for rapid transfusion. I did stress on the phone the urgency and so did my Reg on a second call.*

The key issues emerging from this data analysis include communication breakdowns between clinical and laboratory/haematology staff; differing laboratory protocols that do not always allow a ‘fast-track’ service; and portering issues, including failure to prioritise the transport of blood in an emergency. Further work is being undertaken with experts to build on the British Committee for Standards in Haematology guidelines on massive haemorrhage, and on data from the Serious Hazards of Transfusion (SHOT).

All incident reports received are important and those that do not lead to an RRR inform regular and thematic reviews. For example, the NPSA has recently carried out detailed analyses of incident data on chemotherapy incidents and risks to children. Further work is exploring some of the broader themes emerging from a review of serious incidents.
Focus on serious events – this quarter

- 1,403 incidents were reported to the RLS as resulting in death and 2,890 incidents were reported as resulting in severe harm during the period 1 April to 30 June 2009 in England and Wales. These 4,293 serious incidents were reviewed individually by clinical experts to identify safety issues with the potential for national learning.

- Between April and June 2009, the NPSA scoped 155 new incidents that had potential for national learning, together with issues from other sources including Serious Untoward Incidents, coroners’ data and other.

- All 155 incidents were explored further, either through contact with the reporting trust, advice from topic experts, or searches of the RLS and, where appropriate, the findings were shared with other organisations who could act on them.

- Three RRRs were issued during this period; ‘Preventing harm to children from parents with mental health needs’; ‘Preventing delay to follow up for patients with glaucoma’ (see summary in text box); and ‘Minimising risks of suprapubic catheter insertion (adults only)’. RRRs are available to download from: www.npsa.nhs.uk/nrls/alerts-and-directives/rapidrr

Preventing delay to follow up for patients with glaucoma: RRR summary

This RRR reminds all NHS trusts and healthcare providers about the importance of glaucoma patients receiving timely and regular follow up. The alert, released as part of National Glaucoma Awareness Week, urged trusts and healthcare providers to review their patient appointment systems and ensure all patients with glaucoma are treated appropriately and on time.

The RRR highlighted delay to follow up as a serious problem for glaucoma patients, revealing that out of 135 patients who experienced cancellations or delays to their follow up appointments, 44 resulted in partial loss of eyesight, including 13 patients who went completely blind in one or both eyes.

The alert emphasised that the risk of sight loss from glaucoma is greatly reduced by early detection, and medical or surgical treatment to reduce intraocular pressure, and concluded that stability of the condition can never be assumed, therefore lifelong follow up at regular intervals is essential.

Download the RRR at: www.npsa.nhs.uk/nrls/alerts-and-directives/rapidrr/glaucoma

For further, detailed information on how we review serious incidents and identify key areas for action, download Acting on serious risks to patient safety from www.npsa.nhs.uk/rrr

If you would like to share your expertise or additional information on any of the issues currently being developed, please email rrr@npsa.nhs.uk.
What lessons have been learnt on chest drains?

In May 2008, the NPSA published a Rapid Response Report (RRR) on the risks surrounding the insertion of chest drains, after a spike in the number of related patient safety incidents being reported. A review of this RRR in June 2009 showed that whilst it had raised awareness amongst clinicians, just over a third of eligible trusts had still not completed the actions outlined, seven months after the required deadline.

This article reinforces the serious nature of the problem, provides an update on the work the NPSA is undertaking with clinical partners, and encourages NHS trusts and health professionals to ensure that they are undertaking the necessary steps to reduce harm to patients in this area.

What is the problem?
The insertion of chest drains, either to drain fluids or for a pneumothorax, is a routine procedure, but often the level of risk involved is not fully recognised. For example, issues can include:

- poor positioning without use of ultrasound (recommended in national guidelines);
- lack of supervision for trainee doctors; and
- issues with the equipment, e.g. the length of dilators.

Furthermore, incidents can occur in a range of settings, including general wards, accident and emergency, medical admission units and intensive care.

Example of incident report:
Right-sided chest drain inserted into patient. Couldn’t find complete chest drain kit on ward. Tip of drain seen within right lobe of liver. No record of ultrasound performed. Liver injury incurred and patient sent to ITU.

What should NHS trusts and health professionals be doing?
In February 2008, the NPSA undertook a review of a patient safety incident where a patient had died from a perforated liver after the insertion of a chest drain. The investigation highlighted this procedure as a problem area, and triggered a wider review of the issue.

A scan of the RLS database from January 2005 to March 2008 revealed 12 patient deaths and 15 cases of severe harm. Nine more incidents were also reported by the Medicines and Healthcare products Regulatory Authority (MHRA) as occurring since 2003. Further information was then obtained, through local investigations, from the trusts where serious harm had been reported, revealing a picture of underlying systemic problems across the country. As a result, the NPSA worked closely with the British Thoracic Society (BTS) to create the RRR, with action points for both trusts and clinicians.

Following the RRR, all trusts should now be ensuring that the following have been implemented:

- Chest drains are only inserted by staff with relevant competencies and adequate supervision.
- Ultrasound guidance is strongly advised when inserting a drain for fluid.
- Clinical guidelines are followed and staff made aware of the risks, reflecting the questions above.
- A lead for training of all staff involved in chest drain insertion has been identified.
- Written evidence of consent is obtained from patients before the procedure, wherever possible.
- Local incident data relating to chest drains is reviewed and staff encouraged to report further incidents.

Every time a procedure is required, the clinical team should also be asking themselves:

- Do I need to do this?
- Does it need to be done as an emergency – can it wait?
- Have I had enough training to feel confident to do this? Are senior staff to hand?
- Am I familiar with this equipment?
- Is ultrasound available, with trained staff, to position it safely?

1 Waydhas C and Sauerland S. Pre-hospital pleural decompression and chest tube placement after blunt trauma: A systematic review. Resuscitation 2006, 72: 11–25
An in-depth evaluation of safer practices for the insertion of chest drains will be undertaken later this year by the BTS. Among other tasks, the audit will be assessing whether the above steps have been taken to minimise risks to patients. Clinicians are encouraged to participate and, as part of the audit, will be asked to take part in a survey to help the BTS gather valuable information, such as the number of procedures undertaken in a given month, both with and without ultrasound.

**Example of good practice:**
At the North Bristol NHS Trust all chest drains and other pleural procedures are carried out by members of the respiratory team in a dedicated procedure room with its own ultrasound machine.

Drain placement out of hours is strongly discouraged in the absence of an urgent indication. A trust lead for training has been identified and junior doctors attend a formal training session including didactic teaching and simulated practice. This training is repeated throughout the year to allow all junior doctors to attend.

There is also a thoracic ultrasound course and SpRs who have attended this course receive their practical training with inpatients and during their attachment to the pleural clinic. Respiratory SpRs who wish to train are able to achieve level 1 competency following a 12-month placement in the respiratory department.

**Widening the review**
Since issuing the RRR, the NPSA has also looked into the associated issue of problems post-insertion of chest drains. In this case, the patient safety incident that triggered a review related to the deterioration of a patient where the chest drain had become disconnected and then clamped for an extended period of time. A wider review of the incident database showed that there had been 71 incidents between May 2008 to April 2009.

**Example of incident report:**
*Night duty nurse handed over the patient with bilateral pleural drain in situ. Left pleural drain documented and handed over that it was not draining overnight. While doing my assessment I noticed that the three-way top of the left drain was closed.*

Although most of these incidents were low or no harm, the review has clearly highlighted that there are ongoing occurrences of suboptimal care and practice in the management of chest drains, such as inappropriate clamping of drainage tubes, insufficient water in drainage bottle, poor connections, incorrect suction pressure and poor aseptic technique when handling the patient.

This information has recently been passed to the BTS, to inform their work in updating the guidelines on the management (as well as insertion) of chest drains.
How do staffing issues impact on patient safety?

The recent Health Committee report† on patient safety (July 2009) stated that inadequate staffing levels play a major role in undermining patient safety.

This article explores patient safety issues in relation to staffing levels, based on current reports to the RLS from healthcare professionals. It also includes commentary from other organisations involved in monitoring the quality of healthcare in the NHS.

Staffing issues: facts and figures

The following is an analysis of incidents reported to the RLS which relate to issues such as ‘lack of suitably trained/skilled staff’. The incidents included in the analysis were reported as occurring between April 2008 and March 2009, and were reported to the RLS by the end of June 2009.

Of all the incidents reported to the RLS during this period, 3.4 per cent (33,335) were reported as relating to staffing issues. The majority of these incidents (79 per cent) caused no harm, with 14 per cent causing low harm and six per cent moderate harm. There were 20 incidents reported as causing severe harm to the patient, and six incidents coded as causing the death of a patient (see table 1).

Incidents reported primarily occurred in acute care settings (90 per cent), with a small proportion reported in mental health settings (four per cent) and community services (five per cent) (see figure 1 on page 12).

<table>
<thead>
<tr>
<th>Clinical speciality</th>
<th>Lack of suitably trained/skilled staff</th>
<th>All incidents</th>
<th>Percentage of staffing incidents of all incidents (by speciality)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obstetrics and gynaecology</td>
<td>6,485</td>
<td>98,891</td>
<td>6.6</td>
</tr>
<tr>
<td>Accident and Emergency (A&amp;E)</td>
<td>1,878</td>
<td>34,391</td>
<td>5.5</td>
</tr>
<tr>
<td>Dentistry – general and community</td>
<td>52</td>
<td>1,068</td>
<td>4.9</td>
</tr>
<tr>
<td>Anaesthetics</td>
<td>386</td>
<td>7,979</td>
<td>4.8</td>
</tr>
<tr>
<td>Surgical specialties</td>
<td>6,203</td>
<td>151,354</td>
<td>4.1</td>
</tr>
<tr>
<td>Medical specialties</td>
<td>12,036</td>
<td>326,317</td>
<td>3.7</td>
</tr>
<tr>
<td>Other</td>
<td>2,279</td>
<td>64,183</td>
<td>3.6</td>
</tr>
<tr>
<td>Other specialties</td>
<td>594</td>
<td>19,614</td>
<td>3.0</td>
</tr>
<tr>
<td>Not applicable</td>
<td>144</td>
<td>6,032</td>
<td>2.4</td>
</tr>
<tr>
<td>Diagnostic services</td>
<td>617</td>
<td>32,063</td>
<td>1.9</td>
</tr>
<tr>
<td>Unknown</td>
<td>209</td>
<td>12,180</td>
<td>1.7</td>
</tr>
<tr>
<td>Primary care/community</td>
<td>842</td>
<td>51,825</td>
<td>1.6</td>
</tr>
<tr>
<td>Mental health</td>
<td>1,368</td>
<td>129,316</td>
<td>1.1</td>
</tr>
<tr>
<td>PTS (Patient Transport Service)</td>
<td>23</td>
<td>2,744</td>
<td>0.8</td>
</tr>
<tr>
<td>Learning disabilities</td>
<td>204</td>
<td>32,522</td>
<td>0.6</td>
</tr>
<tr>
<td>Missing/not provided</td>
<td>15</td>
<td>3,456</td>
<td>0.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>33,335</strong></td>
<td><strong>973,935</strong></td>
<td><strong>3.4</strong></td>
</tr>
</tbody>
</table>

Figure 1:
Staffing incidents as a proportion of all incident types by specialty

Source: Incidents reported to the RLS that occurred between April 2008 to March 2009
The lack of suitably trained/skilled staff is a patient safety issue in all clinical settings that report to the RLS. However, the lack of suitably trained/skilled staff is more frequently reported in obstetrics and gynaecology. Other areas, such as mental health and learning disabilities, report a much lower rate of incidence.

Overall, the reporting category ‘lack of suitably trained/skilled staff’ appears to have been used in cases where no specific incident occurred, but where staff have had concerns about staffing levels. It is important to remember that staffing issues can also be a contributory factor in patient safety incidents reported in other categories.

**Examples of staffing-related incidents**

**Acute/general care:** Due to (A ward) staying open, a staff nurse from (B ward) had to work on (A ward) leaving two qualified nurses and two auxiliary nurses on (B ward). Seven patients requiring close observations, two post-op patients requiring close observations, five needing regular observations, one out-lying orthopaedic patient in a lot of pain, 13 patients on IV medication. Patients noticed staff were busy and were commenting on lack of staff. Ward very busy, insufficiently staffed, nurse practitioners aware that staff couldn’t take a break, little help offered, no support. Last 3 nights have been very busy. Ward left unattended for 10 mins on 02/05/08 as had to push lady on bed to CDS.

**Maternity:** Tried to close one empty room. 3 TCI and no movement as wards full. 8 inductions of labour, (*** unable to take. Both said maybe but wanted consultant to consultant referral. (*** told to transfer to (*** as closed to new transfers. Two inductions delayed and referred to day assessment. High priority inductions – 2 later but others unable to continue with induction as only 6 midwives instead of 8 on late shift.

**Mental health:** Only five staff on duty. A high degree of clinical need. At current time high level of risk on unit unable to fully maintain safety of unit, unable to attended to updating care plans due to need to prioritise patient care.

The majority of incidents reported related to nurse/midwifery staffing (as above) but there are also reports that relate to other staff groups. For example:  

**Surgical:** 4 patients awaiting surgical review – one on 8 hours awaiting plan in resus, 2 on 6 hours awaiting registrar review, and one patient on 3 hrs 45 now being seen by house officer. Have been attempting to contact surgical team for over an hour – apparently in theatre. Consultant contacted, but off site. Surgical patients waiting for long time without review.

---

**Case study: impact of staffing on the care of seriously ill patients**

The need to improve the care of seriously ill patients was identified shortly after the inception of the RLS, and is now a key objective of the patient safety campaigns in both England and Wales.

A review of 61 incidents in which patients died revealed three emerging themes:

- routine observations not taken (14 cases);
- observations taken but deterioration in the patient’s condition not recognised (30 cases);
- delay in medical attention reaching the patient (17 cases).

Further research by the NPSA in November 2007 found that staffing and workload issues were important underlying causes of incidents where the deterioration of the patient was not recognised or acted upon.

Staffing factors meant healthcare professionals did not have enough time to carry out observations, follow up patients showing signs of deterioration, or generally spend time with patients. Staff reported that this made it more difficult for them to carry out visual observation or to be certain of the significance of observations in the context of the patient’s previous history.

The significance and value of carrying out observations was sometimes not well understood, but even where it was recognised, tasks that were important to patient comfort (including mealtimes, morning washes etc) competed for staff time. Staffing availability could be very different out of hours, especially at night and at weekends, and might be affected by levels of agency or bank staff and the mix of junior and senior staff.

---

Staffing levels and safety: external views

The Health Committee report was clear that it is unacceptable for patient safety to be compromised by inadequate staffing levels. The report, Patient Safety: Sixth report of session 2008–09, states:

‘…inadequate staffing levels have been major factors in undermining patient safety in a number of notorious cases… NHS organisations must ensure services have sufficient staff with the right clinical and other skills...’

The findings of a recent review of Mid-Staffordshire NHS Trust† (undertaken by the Healthcare Commission) reinforce this view. The report highlights that the relationship between staffing levels and patient care was a contributory factor to the trust's failings. For example, some of the key findings were:

- ‘There were not enough doctors on duty out of hours, and the most senior surgical doctor after 9pm could be quite inexperienced’
- ‘There were too few doctors and nurses, alongside poor training and supervision’
- ‘Other incidents that were reported by staff consistently highlighted problems relating to the levels of staff’
- ‘The medical wards on floor two were seriously understaffed and there were grave concerns about the standards of nursing care’.

The NPSA, the NHS Appointments Commission and the NHS Confederation have published a fact sheet to help board members identify gaps in their safety culture, and work to improve it by answering seven key questions. The fact sheet specifically highlights staffing levels as an important consideration, suggesting that boards should always be kept informed of serious and ongoing issues, and that they need to recognise the links between staffing, quality outcomes and patient safety#.

Conclusion

The NPSA is reliant on NHS staff to report patient safety incidents to the RLS. Whilst the statistics show higher levels of staffing-related incidents in some areas, e.g. obstetrics, in a voluntary reporting system it is not possible to be certain whether there are particular problems in this specialty or whether the staff in the specialty are more aware of the risks.

However, it is clear from figures that, from the perspective of staff, patient safety and staffing issues are often interlinked. These concerns are supported by a number of other organisations involved in monitoring the quality of healthcare in the NHS.

All staff in the NHS are encouraged to report patient safety incidents to the RLS, including those incidents related to staffing, whether or not they result in actual harm. The NPSA will continue to monitor the RLS and other related information in order to ensure continuing improvement in patient safety.

#  National Patient Safety Agency, NHS Appointments Commission, NHS Confederation. Questions are the answer? Seven questions every board member should ask about patient safety. 2009. Available at: www.npsa.nhs.uk/nrls/reporting/seven-questions-every-board-member-should-ask-about-patient-safety/
How many incidents are reported?

This is an overview of the volume and frequency of patient safety incidents reported to the RLS.

How many reports and organisations reporting?

From October 2003, when the RLS was first set up, to June 2009, 3,598,900 incidents reports were received from organisations in England based on the date of submission (see figure 2).

In the past quarter, 1 April 2009 to 30 June 2009, 301,368 incident reports were submitted. This is an increase of 44,626 incidents compared to the previous quarter (256,742 incidents in January to March 2009), and is the largest number of reports received since the inception of the RLS in October 2003.

This increase is in keeping with previous six-month periods which include a deadline for the Organisational Feedback Reports – organisations tend to submit large volumes of data immediately prior to the reporting cut-off date (in this quarter, 30 June 2009). However, this is the largest number of reports received since the inception of the RLS in October 2003 and reflects an overall upward trend in reporting.

Of the 389 NHS organisations in England†, 381 organisations (98 per cent) reported at least once between 1 April 2009 and 30 June 2009. Of the 389:

- 262 organisations (67 per cent) reported at least once every month;
- 119 organisations (31 per cent) reported at least once in the quarter but less often than every month;
- Eight organisations (two per cent) did not report at all during the quarter.

(See figure 3 on page 16)

The overall trend in reporting is upwards. This suggests much greater awareness of patient safety and openness among staff. Healthcare organisations with a high rate of reporting are much more likely to have a strong commitment to patient safety and high safety standards.

† Since the start of the quarter April to June 2009, five organisations in England merged into two, resulting in a total of 389 NHS organisations in England as of 1 April 2009. This excludes NHS Direct.

---

**Figure 2:**

Number of incidents reported in England, October 2003 to June 2009
How are reports received by the RLS?

Most reports received by the RLS come from staff working in NHS organisations and are reported via the local risk management system (LRMS) of the NHS trust (which collate staff reports at the local level).

The source of reports to the RLS in England from 1 April 2009 to 30 June 2009 shows that the LRMS accounted for 99.6 per cent of incident reports received. The proportion of reports submitted via the LRMS has not dropped below 98 per cent since the quarter January to March 2004.

The NPSA encourages staff to report via the LRMS, to avoid duplicate data entry and to facilitate learning within NHS organisations.

The remaining incidents are submitted using direct reports by NHS staff to the RLS using a specially designed electronic form (the e-Form) that allows anonymous reporting. Staff reporting on e-Forms can choose to share their reports with their organisation and the majority do choose to do this.
What gets reported?

This section gives an overview of the patterns and trends in patient safety incidents, focusing on incident types, care settings and degree of harm.

The data presented in this section covers the four consecutive quarters from 1 April 2008 to 31 March 2009, based on the date the incidents were reported as having occurred.

How many patient safety incidents were reported as occurring between April 2008 and March 2009?

Between 1 April 2008 and 31 March 2009, a total of 914,150 patient safety incidents in England were reported to the RLS. This figure is based on the date incidents were reported as having occurred. The incidents reported in England during this period accounted for 94 per cent of all incidents reported to the RLS, while six per cent were reported to have occurred in Wales. A small proportion of incidents were reported anonymously and can therefore not be allocated to a country.

The number of reported incidents was similar in all four quarters from April 2008 to March 2009. Of the reported incidents:

• 226,515 incidents (25 per cent) were reported as having occurred between April and June 2008;
• 227,408 incidents (25 per cent) between July and September 2008;
• 235,847 (26 per cent) between October and December 2008;
• 224,380 incidents (25 per cent) between January and March 2009.

(See figure 4)

In contrast to previous reports, reporting levels have been broadly similar across all four quarters; normally a slight decrease is noted for the most recent quarter. This correlates with the large increase in the number of reports received between April and June 2009 as described in Section 1.

About these data

The three-month time lag in publishing these data allows time for the majority of incidents to be reported, uploaded to the RLS and processed.

The data were extracted as of 30 June 2009. Further incidents which occurred during the period January to March 2009 that have been sent to the RLS since this date will be included in subsequent QDS reports. Accordingly, the figures presented in this report for the three quarters between April 2008 and December 2008 may also vary to a small extent compared to previous issues of the report, since additional incidents have been submitted since then.

Data in this section have been through data quality measures to eliminate duplicate data and blank reports. The data in this section are presented on a 12-month basis, which is followed, where relevant, by a description of trends and changes in the patterns seen across the four individual quarters. The primary focus in the text in this section is the data expressed in term of per cent. Figures and charts display the number of incidents while aiming to provide a visual overview of relevant patterns.

The full tables for this section as well as additional charts showing trends in the data on a quarterly basis are provided in the data workbook which accompanies this report (see: www.npsa.nhs.uk/datareports).
What are the main incident types?
Between April 2008 and March 2009, patient accident was the most commonly reported type of incident, which accounted for 32 per cent of all incidents.

Following patient accidents, the next most commonly reported incident types were:
- treatment/procedure (10 per cent);
- medication (nine per cent);
- access/admission/transfer/discharge (eight per cent);
- infrastructure (including staffing, facilities and environment) and documentation (including records and identification) (both six per cent);
- clinical assessment (including diagnosis, scans, tests and assessments), disruptive/aggressive behaviour, implementation of care and ongoing monitoring/review and consent/communication/confidentiality (four per cent each);
- self-harming behaviour and medical device/equipment (three per cent each).

(See figure 5)

The least commonly reported incident types were infection control and abuse of patient (by staff/third party), two per cent and one per cent respectively. Four per cent of all incidents were categorised as ‘other’. This pattern was very similar in all four quarters.

Figure 5:
Reported incident types in England, April 2008 to March 2009

The total figures in England are marginally lower than those shown in other tables, as there were two incidents with missing incident type. These incidents are currently being investigated.
Examples of incident types

- **Patient accident:** ‘Patient was on bed and trying to get something from the floor accidentally fall and landed to the floor and hit the forehead.’

- **Treatment/procedure:** ‘Apparently patient had two cannulas in situ. Unfortunately, only one was removed from R foot prior to discharge. Understandably patient son not at all happy this happened. ECP – Emergency Care Practitioners will remove.’

- **Medication:** ‘At approx 05.30hrs, I went to obtain Potassium Chloride 7.5% solution (not KCL, as patient did not tolerate). Found two bottles received from pharmacy yesterday – both out of date. Bottles marked expired and put in pharmacy box. No other stock in hospital – unable to give Potassium Chloride – Kt >4mmol in bloods, so medical staff OK to wait.’

- **Access/admission/transfer/discharge:** ‘Patient transferred from C30 on bed, patient is independently mobile, has not had any analgesia for 2 and a quarter hours, appears patient not asked to walk from ward.’

- **Infrastructure:** ‘Shortage of staff only 3 midwives on duty – one bank midwife – only one midwife on postnatal ward – escalated.’

- **Documentation:** ‘Pt phoned c/o of another pt blood results in her notes. Apologies given. Other pts results removed and filed correctly.’

- **Clinical assessment:** ‘Vancomycin level sent with morning bloods was awaiting vancomycin result on apex, result not on apex, chased and apparently not received (microbiology contacted).’

Examples of incidents classified as ‘other’:

“Patient being booked into ward was in Fast AF HR 155bpm No monitoring during transfer from Emergency Department. Also noted no name band or allergy wrist band, no cannula – no bloods taken, only 1 set of observations recorded in Emergency department and when recording observations EWS 5 on admission. Arrived in Emergency Department at 14.47hrs and warded on Fountains at 16.35hrs.”

“Patient complained that her left foot was painful and she was unable to weight bear on it. When asked if she had hurt her foot, patient said she had twisted her foot early in the evening while transferred from toilet to wheelchair.”
Between April 2008 and March 2009, the majority of reported patient safety incidents occurred in acute trusts or general hospitals (73 per cent).

The second most common care setting for reported incidents was mental health services (14 per cent), followed by community services† (including community hospitals) which, combined with community pharmacy, community and general dental services and community optometry/optician services, accounted for nine per cent. Among the community services, community hospitals accounted for the majority of incidents.

Learning disabilities services accounted for three per cent of all reported incidents. Ambulance services and general practice both accounted for a small proportion of all incidents (rounded down to 0 per cent) (see figure 6).

This pattern was similar across all four quarters.

The patterns of reported incident types within each care setting during the period show that there was substantial variation across the different care settings. Patient accident was consistently the most commonly reported incident type in care settings taking inpatients, ranging from 31 per cent in acute/general hospitals to 48 per cent in community services (including community hospitals).

Note: The care setting in which incidents were reported as taking place should not be confused with organisation cluster types which are used in the QDS public workbook (5.1 Regularity of reporting) and some of the NSPA’s other publications. Organisation cluster types are directly related to the organisation which has provided an incident report (for example, large acute organisations or mental health organisations). Depending on the vendor system used by an organisation, care setting may be based on where the reporter thought the incident occurred and can include settings outside of that normally provided by an organisation. For example, an ambulance trust may report an incident which occurred in the acute/general care setting, and vice versa.

† Community services include community nursing, medical and therapy services.

---

**Figure 6:**
Care setting of incident reports in England, April 2008 to March 2009

- Acute/general hospital: 670,131
- Community pharmacy: 596
- Community and general dental service: 329
- Community optometry/optician service: 9
- Learning disabilities service: 27,374
- Community nursing, medical and therapy service (including community hospital): 84,227
- General practice: 2,803
- Ambulance service: 2,068
- Mental health service: 126,613

Total: 914,150
What type of incidents occur?

Acute/general hospitals

Between April 2008 and March 2009, the most commonly reported type of incident in acute/general hospitals was patient accident (31 per cent).

Following patient accidents, the next most commonly reported incident types were:

- treatment/procedure, the second most commonly reported incident type (13 per cent);
- medication (10 per cent);
- infrastructure (including staffing, facilities, environment) (eight per cent);
- access/admission/transfer/discharge (including missing patient) and documentation (including records, identification) (seven per cent each);
- clinical assessment (including diagnosis, scans, tests, assessments), implementation of care and ongoing monitoring review, consent/communication/confidentiality, medical device/equipment and incidents coded as ‘other’ (between six per cent and three per cent);
- incidents categorised as infection control (two per cent).

The remaining incident types disruptive/aggressive behaviour, patient abuse (by staff/third party) and self-harming behaviour each accounted for a negligible proportion (each rounded down to 0 per cent). Three per cent of incidents were classified as ‘other’ (see figure 7).

A similar pattern was seen in all four quarters.

Figure 7:
Reported incident types in acute/general hospitals in England, April 2008 to March 2009

Two reports received did not state incident type

<table>
<thead>
<tr>
<th>Incident Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient accident</td>
<td>205,645</td>
</tr>
<tr>
<td>Treatment/procedure</td>
<td>87,138</td>
</tr>
<tr>
<td>Medication</td>
<td>66,998</td>
</tr>
<tr>
<td>Clinical assessment (including diagnosis, scans, tests, assessments)</td>
<td>37,324</td>
</tr>
<tr>
<td>Implementation of care and ongoing monitoring/review</td>
<td>29,437</td>
</tr>
<tr>
<td>Documentation (including records, identification)</td>
<td>47,579</td>
</tr>
<tr>
<td>Access, admission, transfer, discharge (including missing patient)</td>
<td>49,540</td>
</tr>
<tr>
<td>Infrastructure (including staffing, facilities, environment)</td>
<td>50,728</td>
</tr>
<tr>
<td>Medical device/equipment</td>
<td>24,546</td>
</tr>
<tr>
<td>Consent, communication, confidentiality</td>
<td>29,372</td>
</tr>
<tr>
<td>All other incident types</td>
<td>41,822</td>
</tr>
</tbody>
</table>

Total: 670,129
Examples of incidents occurring in acute/general hospitals

Care setting: Acute/general hospital
Incident type: Treatment/procedure – inappropriate/wrong
Reported degree of harm: No harm
Incident description: Patient arrived in theatre from A&E for I&D abscess. Patient was not starved and care pathway had not been filled in by A&E staff. This patient was being operated on before inpatient bed available at the request of the surgical bed manager/matron with possible discharge from recovery. When the patient returned to theatre at 13.20hrs (starved and with completed care pathway) the operation site had not been marked.

Care setting: Acute/general hospital
Incident type: Clinical assessment – delay/failure to diagnose
Reported degree of harm: Severe harm
Incident description: Patient developed a pressure sore during admission. The trust has received notification that a “Safeguarding Adults” referral has been made following the patients discharge to a care home.

Care setting: Acute/general hospital
Incident type: Medical device/equipment – failure of device/equipment
Reported degree of harm: Death
Incident description: Patient became very bradycardia rate of 30 approx. We, the medical staff, switched the pacing box back on, which the patient was attached to already. We failed to get any activity from the pacing box. At the same time other members of staff were attending to the airway of the patient by giving him 100 per cent by a re-breath bag. We got another pacing box and changed the cables (leads) but still no capture. Another box was tried no effect. Atropine was administered during this bradycardia event.

Care setting: Acute/general hospital
Incident type: Medical device/equipment – lack/unavailability of device/equipment
Reported degree of harm: Moderate harm
Incident description: Patient admitted to recovery following TURP on following bed with no ward bed to go to. Coughing +++ and LMA removed but no bed end available so we could sit patient up (on old bed). Porter has gone to hunt around wards for spare bed end (can’t find one). Patient propped up as best as possible with extra pillows. Potentially detrimental to patients airway and a manual handling risk to staff.

Care setting: Acute/general hospital
Incident type: Patient accident – slips, trips, falls
Reported degree of harm: Low harm
Incident description: Found the pt on the floor, helped the pt back in to bed. Neuro OBS done, stable. Informed the night practitioner, reviewed by night practitioner, no injuries.
Mental health and learning disabilities services

The pattern of incident types in mental health services was different compared to other care settings, although patient accidents still accounted for the largest proportion of incidents (32 per cent) in England between April 2008 and March 2009.

In mental health services, the next most commonly reported incident types were:
- disruptive/aggressive behaviour – this was the second most commonly reported incident type (21 per cent), in contrast to other care settings;
- self-harming behaviour (16 per cent);
- access/admission/transfer/discharge (including missing patient) (10 per cent);
- medication (seven per cent);
- ‘other’ incidents (six per cent).

The remaining incident types accounted for two per cent or less. This pattern was similar in all four quarters.

Similar to mental health services, in learning disabilities services the most commonly reported incident types were:
- patient accidents (32 per cent);
- disruptive/aggressive behaviour (27 per cent);
- self-harming behaviour (20 per cent);
- incidents coded as ‘other’ (seven per cent);
- medication (six per cent).

The remaining incident types (two per cent or less) were:
- patient abuse (by staff/third party);
- access/admission/transfer/discharge (including missing patient);
- infrastructure (including staffing, facilities, environment);
- treatment/procedure;
- implementation of care and ongoing monitoring/ reviewing;
- consent/communication/confidentiality
- medical device/equipment;
- documentation (including records, identification);
- infection control incidents;
- clinical assessment (including diagnosis, scans, tests, assessments).

There was no substantial change in the pattern of incident types seen in learning disabilities services across the four quarters.

(See figure 8)

Figure 8: Reported incident types in mental health services in England, April 2008 to March 2009

- Patient accident: 40,970
- Disruptive, aggressive behaviour: 26,745
- Self-harming behaviour: 20,549
- Access, admission, transfer, discharge (including missing patient): 13,266
- Medication: 8,439
- Patient abuse (by staff/third party): 3,013
- Other: 7,231
- Total: 126,613
Examples of incidents occurring in mental health

**Care setting:** Mental health service

**Incident type:** Self-harming behaviour – suspected suicide (attempted)

**Reported degree of harm:** No harm

**Incident description:** Client was in his bedroom when he got up and closed the door. Staff intervened and found him lying on his bed attempting to cover his face with a pillow.

**Care setting:** Mental health service

**Incident type:** Self-harming behaviour – self-harm

**Reported degree of harm:** No harm

**Incident description:** At about 18.45hrs staff noticed some superficial scratch on patient Aw left hand. The scratch looked red and appeared to be done recently [today] he was asked how got the scratch. He initially said it was nothing but later admitted that he had been scratching himself with plastic he found in the garden.

Figure 9:
Reported incident types in learning disabilities services in England, April 2008 to March 2009

- Patient accident: 8,711
- Medication: 1,648
- Self-harming behaviour: 5,561
- Patient abuse (by staff/third party): 599
- Access, admission, transfer, discharge (including missing patient): 534
- Other: 1,987
- Disruptive, aggressive behaviour: 7,450
- All other incident types: 884

Total: 27,374
Community services (including community hospitals), community pharmacies, community and general dental services, and community optometry and optician services

Overall, between April 2008 and March 2009, the most commonly reported type of incident in community services† (including community hospitals) was patient accident, which alone accounted for 48 per cent of all incidents.

None of the remaining categories accounted for more than 10 per cent of reported incidents, these were:
- access/admission/transfer/discharge (including missing patient) and medication (nine per cent each);
- incidents coded as implementation of care and ongoing monitoring-review (six per cent);
- incidents coded as ‘other’ (five per cent each);
- treatment/procedure and documentation (including records, identification) (four per cent each).

The remaining categories each accounted for between one per cent and three per cent. They were:
- consent/communication/confidentiality;
- infrastructure (including staffing, facilities, environment);
- medical device/equipment;
- clinical assessment (including diagnosis, scans, tests, assessments);
- infection control incidents;
- disruptive/aggressive behaviour;
- patient abuse (by staff/third party) and self-harming behaviour.

† Community services include community nursing, medical and therapy services.

The pattern of incident types in community services (including community hospitals) was similar in all four quarters.

In community pharmacies, the vast majority of reported incidents related to medication (91 per cent). None of the remaining incidents types accounted for more than four per cent of the incidents. It is important to note that it was not possible to attribute a country to a large proportion of incidents classified as occurring in the community pharmacy care setting. Please refer to the QDS workbook on the NPSA website for further information.

In community optometry/optician services:
- two incidents were reported to have occurred in England in the quarter from January to March 2009;
- the overall number of incidents received between April 2008 and March 2009 remained very low (n=9).

Therefore, no conclusions can be drawn with respect to incident patterns in this care setting.

In community dentistry access/admission/transfer/discharge (including missing patient) was the most commonly reported type of incident (21 per cent). The other most commonly reported incident types were:
- treatment/procedure (18 per cent);
- patient accident (15 per cent);
- medical device/equipment (14 per cent);
- incidents coded as ‘other’ and infrastructure (including staffing, facilities, environment) (six per cent each).

The remaining incident types accounted for five per cent or less. They were:
- medication;
- documentation (including records, identification);
- consent/communication/confidentiality;
- infection control;
- clinical assessment (including diagnosis, scans, tests, assessments);
- implementation of care and ongoing monitoring-review.
- disruptive/aggressive behaviour;
- patient abuse (by staff/third party);
- self-harming behaviour.

(See figure 10 on page 26)

There was some fluctuation in the pattern of incident types in community dentistry. However, the number of reported incidents in each quarter remains low, meaning that small changes in the number of reported incidents can produce an inconsistent pattern.
Example of an incident occurring in community services

**Care setting:** Community nursing, medical and therapy service (including community hospital)

**Incident type:** Medication

**Reported degree of harm:** No harm

**Incident description:** Staff nurse from Ward 6 required Lorazepam from emergency stock cupboard. Contact made to request this. Bleep holder stated that the ward was too busy for them to leave and staff nurse on Ward 6 was the only qualified and could not leave the ward. Therefore [Ward name] stock Lorazepam loaned to Ward 6.

---

**Figure 10:**
Reported incident types in community nursing, medical and therapy services in England, April 2008 to March 2009

- Patient accident: 40,282
- Consent, communication, confidentiality: 2,905
- Documentation (including records, identification): 3,181
- Treatment, procedure: 3,788
- Other: 4,227
- Implementation of care and ongoing monitoring/review: 4,834
- Medical device/equipment: 1,892
- All other incident types: 4,670
- Access, admission, transfer, discharge (including missing patient): 7,921
- Medication: 7,895
- Infrastructure (including staffing, facilities, environment): 2,632

**Total:** 84,227
Ambulance services

The most commonly reported incident type in ambulance services was access/admission/transfer/discharge (including missing patient), which accounted for 24 per cent of all incidents between April 2008 and March 2009.

In ambulance services other reported incident types were:

- patient accident (19 per cent);
- medical device/equipment (16 per cent);
- treatment/procedure (12 per cent);
- incidents coded as ‘other’ (eight per cent);
- consent/communication/confidentiality (seven per cent);
- infrastructure (including staffing, facilities, environment) (five per cent).

The remaining incident types accounted for four per cent or less, they were:

- clinical assessment (including diagnosis, scans, tests, assessments);
- medication;
- patient abuse (by staff/third party);
- implementation of care and monitoring/review;
- documentation (including records, identification);
- infection control;
- self-harming behaviour;
- disruptive/aggressive behaviour.

(See figure 11)

The pattern of incident types fluctuated notably during the four quarters between January 2008 and December 2008, which may be explained by the relatively low number of total incident reports received from this care setting.

† Issues 11, 12 and 13 of the QDS show data reported from the ambulance services separately for England and Wales. Issues 1–10 display English and Welsh data combined.
General practice

The incident types reported in general practices showed a markedly different pattern compared to care settings that take inpatients.

Between April 2008 and March 2009 the most commonly reported incident type in general practice was medication (24 per cent), followed by:
- consent/communication/confidentiality and documentation (including records, identification) (both 12 per cent);
- clinical assessment (including diagnosis, scans, tests, assessments) and access/admission/transfer/discharge (including missing patient) (both 10 per cent);
- treatment/procedure (seven per cent);
- patient accident and ‘other’ (six per cent).

The remaining incident types each accounted for four per cent or less, they were:
- infrastructure (including staffing, facilities, environment);
- implementation of care and ongoing monitoring/review;
- medical device/equipment;
- infection control incidents;
- self-harming behaviour;
- disruptive/aggressive behaviour;
- patient abuse (by staff/third party).

(See figure 12)

The number of incidents reported from this care setting has increased over the last four quarters from 580 in April to June 2008 to 803 in January to March 2009.

Some variation was seen across the four quarters in the pattern of incident types, although no consistent trends were evident. The notable fluctuations are likely to be the result of the relatively low number of total incident reports submitted by general practices.

Figure 12:
Reported incident types in general practice in England, April 2008 to March 2009
Improving reporting and learning in primary care

Primary care is the cornerstone of the NHS: each year in England alone there are approximately 300 million consultations in general practice with nearly 800 million prescriptions dispensed in the community.

Studies have identified that incidents occur between five and 80 times per 100,000 consultations, mainly related to the processes involved in diagnosis and treatment. Incidents have been identified to occur in up to 11 per cent of all prescriptions, mainly related to errors in dose.

The NPSA is committed to promoting safe practice in primary care and the NPSA is currently working on a number of initiatives to support this aim.

**Seven steps to patient safety in general practice** has recently been published. This quick reference guide describes the key steps for a general practice to keep safe the patients they care for, including activities that can be taken to develop policies, strategies and action plans. There are also practical hints and techniques that can be used to promote quality care.

We are committed to making reporting easier, more relevant and accessible to frontline healthcare staff. To help this process, we are currently revising the electronic form used to report incidents from general practice; this builds on an earlier feasibility study with a volunteer sample of 14 practices and four out-of-hours services, which found that the service specific e-Form was usable and took less time to complete than the standard NPSA e-Form. We aim to make the e-Form available to all staff later this year.

**Significant Event Audits (SEA)** are also particularly important to primary care as they involve systematically investigating and reviewing incidents of both good and bad practice that have been reported by primary care teams. The process offers the chance to hold regular structured meetings to discuss recent practice, as well as identify individual and organisational learning needs. Last year the NPSA released guidance on how to conduct SEAs, including a template data collection tool to extract learning from SEAs that can then be shared across organisations. We are currently working with PCTs in one SHA to use the template and will continue to promote the guidance throughout the year.

In addition, the NPSA is working with a PCT in the north east to develop and test thematic reporting of patient safety incidents, and will be working closely with two SHAs to undertake patient safety collaboratives designed to support clinical staff in identifying local patient safety risks as well as working to design and test solutions.

**Example from general practice:**
"Two patients with the same name came into the practice as both had blood test due on the same day. The first patient with the name had blood test taken and the notes were written on the other patient’s record. The mistake was discovered when the second patient with the same name came into the practice."

See: [www.npsa.nhs.uk/nrls/improvingpatientsafety/primarycare/](http://www.npsa.nhs.uk/nrls/improvingpatientsafety/primarycare/)
Between April 2008 and March 2009, 66 per cent of incidents in England were coded by local reporters as resulting in no harm to patients. Twenty-seven per cent were reported as causing low harm and six per cent were reported as causing moderate harm. One per cent of all incidents were coded by the reporter as resulting in severe harm or death, with the majority of these incidents being classified as severe harm rather than death. This pattern was similar across the four quarters. (See figure 13)

Definition of degree of harm

**No harm**
Impact prevented: any patient safety incident that had the potential to cause harm but was prevented, resulting in no harm.

**Impact not prevented:** any patient safety incident that ran to completion but no harm occurred.

**Low harm**
Any patient safety incident that required extra observation or minor treatment and caused minimal harm.

**Moderate harm**
Any patient safety incident that resulted in a moderate increase in treatment and which caused significant but not permanent harm.

**Severe harm**
Any patient safety incident that resulted in permanent harm.

**Death**
Any patient safety incident that directly resulted in the death of the patient.

The total number of incidents (914,124) is lower than that quoted elsewhere, as it excludes those incidents where degree of harm was not stated.

Figure 13:
Reported degree of harm to patients in England, April 2008 to March 2009

- **No harm** 603,105
- **Low** 243,223
- **Moderate** 55,951
- **Severe** 7,754
- **Death** 4,091

Total: 914,124
Severe harm or death by care setting

The proportion of incidents associated with severe harm or death in England showed some variation across care settings (see figure 14 on page 32). The proportion of incidents reported as leading to either severe harm or death of patients between April 2008 and March 2009 was highest from general practice (2.6 per cent), followed by:

- ambulance services (2.0 per cent);
- mental health services (1.8 per cent);
- community services (including community hospitals) (1.4 per cent);
- acute/general hospital and community and general dental services (both 1.2 per cent);
- community pharmacy (0.8 per cent);
- learning disabilities service (0.5 per cent);

It is likely that the relatively high proportion of incidents reported as resulting in either severe harm or death in general practice reflects a different reporting culture compared to other care settings: fewer incidents are reported overall but incidents that result in severe harm or death are more likely to be reported.

In almost all care settings, the proportion reported as leading to severe patient harm was higher than the proportion reported as causing death. For example, in general practice the proportion resulting in severe harm was 1.4 per cent, whereas the proportion causing death was 1.2 per cent. In community services (including community hospitals) the equivalent proportions were 1.0 per cent and 0.4 per cent, respectively. The exception to this pattern was mental health services where 1.1 per cent of incidents were reported to have resulted in death, compared to 0.7 per cent of incidents resulting in severe harm. This pattern was largely similar in the four quarters.

The NPSA works closely with NHS organisations to individually review all incidents where the harm to a patient is reported as death or severe harm to identify opportunities for national learning.

Analysis of incidents reported as resulting in death suggests that this is a complex area. Some incidents may be coded based on the potential harm to the patient, rather than the actual harm.

Often it is unclear whether the death of the patient was, or might have been, directly related to a patient safety incident. Organisations often capture events in the LRMS where patients have died, even if there was no patient safety incident, for example, still births, neonatal deaths and outpatient suicides. Even following investigation, the relationship between any incident which occurred and the outcome for the patient is often unclear, as some incidents may happen during the care of patients with life threatening illness.

Improving the coding of degree of harm to patients is an important aspect of data quality which the NPSA is working with NHS organisations to improve.

The fifth report from the Patient Safety Observatory, Safer care for the acutely ill patient: Learning from serious incidents, shares learning about two related patient safety issues in acute care settings which were identified as themes from analysis of death reports; deterioration not recognised or acted on, and resuscitation. For further information on incidents reported as deaths from maternity services, see the Quarterly Data Summary Issue 6.

National Framework for Reporting and Learning from Serious Incidents for investigation

Serious incidents in healthcare are relatively uncommon. When they do occur we should learn from the incident in order to minimise the risk of them happening again and ensure there are systemic measures in place for safeguarding people, property, NHS resources and reputation.

The consultation paper on a National Framework for Reporting and Learning from Serious Incidents Requiring Investigation spells out what the NHS wide perspective on serious incidents will look like. The framework, which has been produced collaboratively with the input of a wide range of NHS stakeholders and audiences, proposes a national approach to the notification, management and learning from serious incidents and supports openness, trust, continuous learning and service improvement.

The consultation paper gives you the opportunity to help develop the definition of a serious incident, input into roles and responsibilities, draw together legal and regulatory requirements and agree tools and resources to support good practice.

The consultation runs until 14 November 2009.

Visit www.npsa.nhs.uk/sirl/ for more information

† Since the proportion of incidents resulting in either severe harm or death is very low, the proportions discussed in this section are referred to using one decimal point.
Figure 14: Reported incidents associated with severe harm or death by care setting in England, April 2008 to March 2009.
Severe harm or death by incident type

The proportion of incidents reported as severe harm or death varies between incident types (see figure 15). The combined proportion of severe harm or death incidents was highest among incidents categorised as infection control (7.4 per cent), followed by ‘other’ incidents (7.1 per cent) and self-harming behaviour (three per cent).

Among incidents categorised as implementation of care and ongoing monitoring/review 2.9 per cent were coded as severe harm or death. Between 2.0 and 1.0 per cent of incidents were coded as severe harm or death among the following incident types:
- treatment/procedure;
- clinical assessment (including diagnosis, scans, tests, assessments);
- patient abuse (by staff/third party);
- access/admission/transfer/discharge (including missing patient).

Less than 1.0 per cent of the remaining incident types were coded as either severe harm or death.

While a larger proportion of incidents tended to be coded as severe harm rather than death among most incident types, the exceptions were incidents categorised as ‘other’ (2.0 per cent severe harm, 5.2 per cent death) and self-harming behaviour (1.3 per cent severe harm, 1.7 per cent death).

The NPSA has been working to reduce the number of infection control incidents through a variety of methods, including the clean your hands campaign. This aims to help the NHS in England and Wales to reduce the spread of healthcare associated infection by supporting NHS trusts to improve the hand hygiene of their staff. The campaign uses a multimodal approach to facilitate, educate, prompt and enable healthcare workers to clean their hands at the right time, every time during patient/service user care. More information on the level of infection control incidents, and measures being taken to reduce them will feature as a ‘Learning from Reporting’ topic in a future issue of QDS.
Patient safety highlights

This section highlights recent, selected published literature on patient safety issues.

**Factors influencing incident reporting in surgical care**


The purpose of this study was to evaluate the process of incident reporting in a surgical setting, with specific focus on the influence of event outcome on reporting behaviour and staff perception of surgical complications as reportable events.

An anonymous web-based questionnaire survey was carried out in a General Surgical Department in a UK teaching hospital. Of 203 eligible staff, 55 (76.4 per cent) doctors and 82 (62.6 per cent) nurses participated.

Nurses were significantly more likely to know of the local reporting system and to have recently completed a report than doctors. The level of harm ($F(1.8,246) = 254.2$, $p<0.001$), incident type ($F(1.9,258) = 64.4$, $p<0.001$) and profession ($F(1,135) = 20.7$, $p<0.001$) all significantly affected the likelihood of reporting. Staff were most likely to report an incident when harm occurred. Doctors were significantly less likely to report surgical complications than other types of incident ($15\%$ vs $53\%$, $z = 4.633$, $p<0.0002$). Fear was a significantly less important barrier to reporting than other reasons ($z = -3.49$, $p<0.0002$).

The study showed that an incident is more likely to be reported if harm results. Surgical complications are not generally perceived to be ‘reportable incidents’, but they are addressed in Mortality and Morbidity meetings (M&M). Integrating M&M and incident reporting data will result in more comprehensive healthcare safety systems.

**Measuring and benchmarking safety culture: application of the safety attitudes questionnaire to an acute medical admissions unit**


This is an assessment of the safety culture in an acute medical admissions unit (AMAU) of a teaching hospital in order to benchmark results against international data and guide a unit-based, integrated, risk management strategy.

The safety attitudes questionnaire (SAQ) was applied to an AMAU where all healthcare staff ($n = 92$), including doctors, nurses, healthcare assistants (HCAs) and allied healthcare professionals (AHPs), were surveyed. The safety attitude scores for the overall unit and individual caregiver types were assessed across six domains of safety culture.

When compared against an international benchmark, the AMAU scored significantly higher for four of the six safety domains: $p<0.01$ for ‘teamwork climate’, ‘safety climate’ and ‘stress recognition’ and $p<0.05$ for ‘job satisfaction’. The difference between nurse manager scores and the overall mean for the study group was statistically significant for the domains of ‘teamwork climate’ ($p<0.05$) and ‘safety climate’ ($p<0.01$). HCAs scored significantly lower relative to staff overall with regard to ‘working conditions’ ($p<0.05$) and ‘perceptions of management’ ($p<0.01$).

The SAQ was successfully applied to an AMAU setting giving a valuable insight into staff issues of concern across the safety spectrum: employee and environmental safety, clinical risk management and medication safety.
Medication errors: the impact of prescribing and transcribing errors on preventable harm in hospitalised patients
J.E van Doormaal et al, Quality and Safety in Health Care 2009; 18: 22–7

This study determined the impact of the various types of prescribing (administrative, dosing and therapeutic) and transcribing errors on preventable adverse drug events (pADEs) in hospitalised patients.

During a five-month period, data for patients admitted to a total of five internal medicine wards of one university and one teaching hospital in The Netherlands were prospectively collected by chart review. In each hospital, medication errors (MEs) were detected and classified by the same pharmacist, using the classification scheme for MEs developed by The Netherlands Association of Hospital Pharmacists.

The study included 592 hospital admissions with 7,286 medication orders (MOs), of which 60 per cent contained at least one prescribing or transcribing error. 1.4 per cent of all MOs led to pADEs, concerning 14.8 per cent of all admitted patients. The total number of pADEs was 103, and in 92 of these cases patients experienced temporary harm, in eight cases hospital admission was prolonged, two cases were life-threatening, and one was fatal. Therapeutic errors were most strongly associated with pADEs (OR 1.98; 95 per cent CI 1.53 to 2.56).

In summary, although many prescribing and transcribing errors occur in the process of medication use of hospitalised patients, a minority lead to pADEs. In particular, therapeutic errors are the cause of these pADEs and are therefore clinically relevant. Intervention and prevention programmes should primarily focus on this type of medication error.

Trends in healthcare incident reporting and relationship to safety and quality data in acute hospitals: results from the National Reporting and Learning System
A Hutchinson et al, Quality and Safety in Health Care 2009; 18; 5–10

This study analyses patterns in reporting of patient safety incidents from all acute hospitals in England to the RLS, and explores the link between reporting rates, hospital characteristics, and other safety and quality datasets.

Reporting rates to the RLS were analysed as trends over time, from the point at which each hospital became connected to the system. The relationships between reporting rates and other safety and quality datasets were assessed using correlation and regression analyses.

Reporting rates increased steadily over the 18 months analysed. Higher reporting rates correlated with positive data on safety culture and incident reporting from the NHS Staff Survey, and with better risk management ratings from the NHS Litigation Authority. Hospitals with higher overall reporting rates had a lower proportion of their reports in the “slips, trips and falls” category, suggesting that these hospitals were reporting higher numbers of other types of incident. There was no apparent association between reporting rates and the following data: standardised mortality ratios, data from other safety-related reporting systems, hospital size, average patient age or length of stay.

In conclusion, incident reporting rates from acute hospitals increase with time from connection to the RLS, and are positively correlated with independently defined measures of safety culture, higher reporting rates being associated with a more positive safety culture.
The RLS aims to help the NHS improve the safety of patient care. Reports made to the RLS are analysed with expert clinical input to identify hazards, risks and opportunities to improve safety. Information from reported incidents helps the NHS understand why things go wrong and how to stop them happening again.

A patient safety incident is any unintended or unexpected incident which could have or did lead to harm for one or more patients receiving NHS care.

The NPSA encourages the reporting of all patient safety incidents. This includes:

- incidents you have been involved in;
- incidents you may have witnessed;
- incidents that caused no harm or minimal harm;
- incidents with a more serious outcome;
- prevented patient safety incidents (known as ‘near misses’).

The information from reports feed into the RLS. All this information helps us to identify trends and patterns in patient safety and helps in our work to develop solutions. The aim is to help the NHS to learn from things that go wrong.

The NPSA provides regular feedback reports to NHS organisations on the incidents that have been sent to us.

Interpreting RLS data

The following notations are used when per cent is shown in the report and accompanying workbook:

- ‘0’ is used for percentages that are rounded down to 0;
- ‘–’ is used for a true 0 in a row/column showing per cent, i.e. when there are no cases in a category;
- ‘*’ is used when the base number is deemed too small to provide reliable percentages (n<30). This notation may differ compared to that used in QDS reports and workbooks prior to Issue 6.

Note: Rounded figures are presented in this report. Therefore totals may differ marginally compared to the sum of figures as stated in the text. The exact figures can be found in the workbook.

There are a number of notes of caution in interpreting the data from the RLS:

- A higher number of reported incidents from a trust, speciality or location does not necessarily mean that the trust, speciality or location has a higher number of incidents; it may instead reflect greater levels of reporting.
- NHS organisations have provided data to the RLS for report may not be representative of the rate of incidents across all of England and Wales.
- Reports made to LRMS may not capture all types of incidents that occur.
- The data are confidential. The NPSA does not seek to hold information on the identities of individual staff or patients and this means that the data are not routinely checked with the reporter. Steps are taken to maximise the quality of the data held by, for example, checking for duplicate reports and feeding back to individual trusts if there are problems with their reports.
- Incident reports are often made soon after the incident occurs but before the incident has been investigated locally. Therefore, reports to the RLS may not contain complete information about the incident, especially findings of more detailed investigations such as root cause analysis.
- No reports from the public or patients are included in this analysis, although since April 2006 patients and the public have been able to report incidents via a dedicated reporting form.
- Some incidents recorded in LRMS and subsequently forwarded to the RLS may not 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 LRMS for local audit purposes and then uploaded to the RLS.
• The data are likely to include incidents where the impact on the patient or whether the incident could have been avoided is not clear. For example, suicides are often reported to LRMS in cases where the event could not have been prevented by health services.

• The level of detail collected locally varies. For example, some organisations and local data collection systems do not currently collect contributing factors or the ethnicity of the patients involved. At the present time, there is insufficient information on the age and gender of patients involved in incidents to allow analysis of this information, but the quality of demographic data is improving.

Although incident reports are fundamental to understanding patient safety, on their own they cannot tell us all that we need to know. There are a number of reasons for this. Incident reporting systems are not comprehensive due to under-reporting, biases in what types of incident are reported and the existence of several reporting systems. For example, in the UK, in addition to the RLS there are separate reporting systems for medical device incidents, adverse drug reactions, healthcare associated infections and suicide and homicide of people with mental illness. Also, serious incidents are rare, and information on them is often distributed across the healthcare system.


All websites accessed on 25 August 2009.