Global Trigger Tool aims to keep patients safe

Rotorua Hospital clinicians are using the Global Trigger Tool to track down where patient harm has occurred and to make changes to prevent future harm.

By Sheila Stopher

Errors continue to occur in health-care systems around the world, but most can be avoided by revising existing systems or developing new ones.

The ultimate goal of health services is to provide a smooth continuum of safe, effective, holistic care to patients. The Global Trigger Tool (GTT) was designed to achieve this by tracking down where patient harm was occurring and intervening with quality improvement projects. The tool was developed in 2003 by the Institute for Healthcare Improvement (IHI) in the United States, a non-profit organisation focused on improving health care around the world.

The GTT provides accurate information about the level of harm in an organisation, focusing on systems, rather than individuals. The tool is intended to complement reporting systems already in place, providing a broader perspective.

The IHI clinicians who developed the tool said detecting adverse events had traditionally relied on voluntary reporting and tracking of errors. But research had found only 10-20 per cent of errors were ever reported and 90-95 per cent of those caused no harm. Therefore, hospitals needed a better way to identify errors that did cause harm.1

In November 2012, the New Zealand Health Quality & Safety Commission published its version of the IHI white paper, adapted to suit the New Zealand setting.2 This was based on the experiences of the Northern Region district health boards (DHBs), which had already been using the tool for two to three years. Most DHBs in New Zealand are now using the tool, which is designed to focus on acute adult care in hospitals.

In March 2012, we started the GTT programme at Rotorua Hospital, Lakes DHB. The specialty areas we concentrate on are general surgery, orthopaedics, medical, rehabilitation, intensive care, emergency department (ED), theatre, post-operative anaesthesia care unit (PACU) and obstetrics. (Paediatrics, mental health and primary care have a different set of tools.)

The GTT process involves reviewing a random sample of 10 sets of patient records every fortnight, looking for triggers (or clues). Reviews are conducted by a team of trained reviewers with a clinical background (usually nurses and pharmacists), and a physician who validates the findings.

Our current team of reviewers comprises acute pain specialist nurse Celia Ronayne; clinical nurse coordinator for otorhinolaryngology, and the PACU Sheila Stopher; clinical nurse educator for the intensive care and critical care units Erin Williams; surgical staff nurse Cindy Carpenter; clinical pharmacist Manisha Unka; and lead clinician, anaesthetist Ulrike Buehner.

Some examples of triggers are:
- Transfer to a higher level of care.
- Readmission to ED within 48 hours.
- Naloxone (Narcan) use.
- Admission to intensive care, post-operation.
- Intubation or re-intubation.
- Blood transfusion.

If a trigger is found, we investigate further to establish whether an adverse event (injury/harm) has occurred. If patient harm has occurred, it is given a category from the following table:

<table>
<thead>
<tr>
<th>Categories of harm</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>Temporary harm to patient, required intervention</td>
</tr>
<tr>
<td>F</td>
<td>Temporary harm to patient, required initial or prolonged hospitalisation</td>
</tr>
<tr>
<td>G</td>
<td>Permanent patient harm</td>
</tr>
<tr>
<td>H</td>
<td>Intervention required to sustain life</td>
</tr>
<tr>
<td>I</td>
<td>Patient death</td>
</tr>
</tbody>
</table>

At June 2014, the team had completed 44 cycles of reviewing, and reviewed 440 patients’ notes. The reviews identified a total of 578 triggers and 175 adverse events – 31 of these adverse events were present when the patient was admitted (ie they occurred before admission, eg in another hospital, a rest home, ambulance or general practice).

The severity of the adverse events, and their type, were as follows:

<table>
<thead>
<tr>
<th>Severity of events</th>
<th>Category</th>
<th>Description</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>Requires intervention</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Requires admission, prolongs length of stay</td>
<td>82</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>Permanent damage</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>Requires life-saving therapy</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>Death (caused by anastomotic leak)</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Breaking down the figures further, the adverse events in each harm sub-category related to the following issues: of the 51 events related to medication and IV fluids, 13 concerned constipation due to opioid use, nine were related to hypotension, four related to medication errors, and four to over-sedation.

Of the 61 adverse events related to patient care, 18 saw the patient readmitted within 30 days, and nine were cases of phlebitis.

Hospital-acquired infections
Under events related to hospital-acquired infection, three were non-ventilator respiratory events, two were catheter-associated urinary tract infections, and two were surgical infections.

Of the events related to surgery or other procedures, there were 13 cases of abnormal bleeding and nine of post-operative ileus. As only a small number of records are
reviewed each month, the IHI recommends collecting data for at least 12 months to gather enough for meaningful analysis before investing time and energy in specific quality improvement projects.

Quality improvement projects
A medication safety project started recently at Rotorua Hospital to reduce medication errors. It is focused on increasing safe medication management throughout the hospital, using medication reconciliation, electronic record sharing, electronic decision support tools, effective communication with patients, and developing systems for reliable prescribing and monitoring. Clinical and community pharmacists and GPs are included in the project.

Clinical audits are underway to investigate the causes of post-operative ileus and surgical site infections – the latter are also being monitored by the National Surgical Site Infection Surveillance (SSIS) programme. A Global Trigger Tool (GTT) was introduced to improve the safety of our patients. The programme helps DHBs develop organisational plans for patient safety improvements and to build teams to drive improvement. The Global Trigger Tool is focused on increasing safe medication management throughout the hospital, using medication reconciliation, electronic record sharing, electronic decision support tools, effective communication with patients, and developing systems for reliable prescribing and monitoring. Clinical and community pharmacists and GPs are included in the project.

The IHI recommends collecting data for at least 12 months before investing time and energy in specific quality improvement projects.

We are already following the Ministry of Health safety initiative to reduce surgical site infections. This involves:

- A hand hygiene project.
- Use of prophylactic antibiotics.
- Chlorhexidine and alcohol antibacterial agents for skin preparation.
- Clipping hair as close as possible to the time of surgery, if required.
- GTT findings are shared nationally between DHBs. Using information from Waitemata DHB, we have made other improvements:
  - Laxatives are now routinely prescribed with opioids to prevent constipation.
  - Providing surgery on initial admission to reduce possible omission of care, where there are repeated admissions before surgery.
  - Reducing harm from post-operative ileus through embedding Enhanced Recovery After Surgery (ERAS) pathway.

The next step is to raise awareness among staff. The reviewers have given in-service training to staff in their specialist areas, and education sessions are given regularly to improve and update our practices through new improvement projects.

Buehner says the GTT programme is designed to identify areas of health care where patient harm events commonly occur, without placing blame on individuals. The organisation then addresses these areas with targeted quality improvement projects. “We hope to build a culture of helping each other in our daily practice to improve standards of care and reduce incidents occurring,” she said.

Buehner says being part of the review group has made the reviewers aware of how easy it is to contribute to a patient harm event and make a mistake, due to time pressures or information/paper overload.

While reviewing patient notes, the review team has noted the importance of concise, legible documentation of care, with date, time, staff designation and signature recorded.

“If we adopt a culture of working as a team, reminding each other when something has been overlooked, and developing a working relationship where we can learn from mistakes, we will keep our patients safe from harm,” Buehner said.

The programme helps DHBs develop organisational plans for patient safety improvements and to build teams to drive improvement.

Sheila Stopher, RN, BSc(Hons), is clinical nurse coordinator for otorhinolaryngology, acute and post-operative anaesthesia care unit, Rotorua theatres, Lakes District Health Board.

References