

# DETECTING PROBLEMS AFTER GASTROSTOMY

An NPSA Rapid Response Report outlines how to ensure that complications occurring after gastrostomy are detected and responded to without delay

Gastrostomies are used to provide long term feeding for children and adults who require nutritional support or whose swallowing ability is compromised. The small stomas are created between the stomach and skin of the abdomen, and allow for radiological, surgical or endoscopic insertion of a feeding tube.

Post insertion complications most likely to result in severe harm or death include

chemical peritonitis, infection, bowel perforation, haemorrhage and aspiration pneumonia. Symptoms can include pain on feeding or external leakage of gastric contents – when such symptoms present in patients, prompt action is essential if the risk of severe harm or death is to be minimised.

Between October 2003 and January 2010, the National Patient Safety Agency (NPSA)

received 22 reports (including five incidents in children) detailing harm as a result of delayed response to serious complications after gastrostomy insertion.

The severity and clinical significance of “red flag” symptoms such as pain on feeding were not always recognised but instead treated with pain relief or a change of feeding speed. External leakage of gastric contents was

sometimes perceived as a minor skin care problem, rather than a sign that the gastrostomy tube was not properly fixed, with the potential for harmful leakage into the peritoneum. Opportunities to detect general deterioration through making regular checks of temperature, pulse, blood pressure and respirations also appeared to be missed.

Of these reports, 11 patients died and 11 became seriously ill, requiring emergency surgery or admission to high dependency or intensive treatment units (ITUs). In March 2010, the NPSA issued a Rapid Response

Report on the importance of early detection of complications after gastrostomy.

#### Examples of text from incident reports:

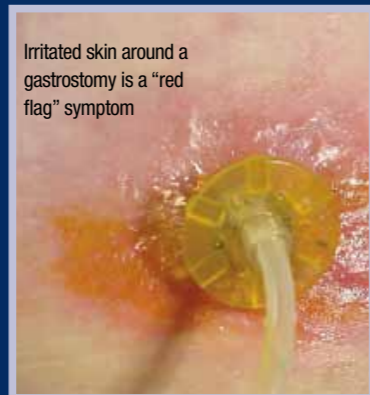
- *Emergency surgery and intensive care admission in an adult after radiologically inserted gastrostomy (RIG) insertion. The RIG had been internally displaced, but this was not recognised until the patient became critically ill. The patient had been complaining of abdominal pain on feeding for several days.*
- *A parent made a series of phone calls due to concerns about their child's gastrostomy,*

*inserted as a day case the day before. Day unit staff referred the calls on to a nurse specialist who found the message on their answerphone around the time the child died at home.*

- *The death of an adult after percutaneous endoscopic gastrostomy insertion; an inpatient for two days post insertion, they were discharged despite abdominal pain and leakage of gastric contents from the gastrostomy site. They were readmitted four days later and internal leakage was confirmed. Despite corrective surgery and ITU care they died three weeks later.*
- Frances Wood, clinical reviewer, NPSA**

#### FIVE WAYS TO MAKE PRACTICE SAFER IN YOUR HOSPITAL

- 1 Consider who needs to see the Rapid Response Report**  
It should be made available to all staff in primary and acute care who are looking after patients with a gastrostomy tube.
- 2 Be alert to “red flag” symptoms**  
Vigilant patient observation is vital, particularly in the first three days after insertion. Check temperature, pulse, blood pressure and respiration as well as gastrostomy site and pain. Be aware of non-verbal signs of pain and distress such as irritability and restlessness.
- 3 Act on your observations**  
If the patient complains of pain on feeding or leakage around the site, feeding should STOP and senior advice should be sought immediately.
- 4 Plan for discharge**  
Patients should have a senior review before discharge so the discharge decision is appropriate.
- 5 Communicate with your patient and their family**  
Patients must know how to recognise and respond to the signs of complications and who to contact. An emergency advice point is vital. Applying NPSA warning labels to all discharge documentation can help (available at [tinyurl.com/warning-labels](http://tinyurl.com/warning-labels)); these detail symptoms to be aware of, advice to stop feed and a number to contact.



Irritated skin around a gastrostomy is a “red flag” symptom

#### WHAT SHOULD MY TRUST BE DOING?

The NPSA Rapid Response Report identified key actions to make practice safer.

The NPSA has asked your organisation to:

- Distribute the Rapid Response Report to relevant clinical staff.
- Ensure local protocols specify the frequency, duration and type of observations to be taken in the immediate recovery period.
- Mark the patient's medical and nursing notes with a visible warning that if there is pain on feeding, prolonged or severe pain post procedure, fresh bleeding or external leakage of gastric contents, feed/medication delivery must stop immediately. Obtain advice urgently.
- Add the same warning to the discharge information sent to the patient's GP and community nurses.
- Patients have an emergency contact number, which is answered by staff who understand the signs and symptoms that need an urgent response, and have local protocols to guide them on the actions to take.

#### HOW TO USE THE RAPID RESPONSE REPORT TO CHANGE PRACTICE

**Debbie Bainbridge, patient safety coordinator at Velindre Cancer Centre (part of Velindre Trust) in Cardiff, Wales, reviewed the trust's nursing protocols regarding enteral feeding after a serious incident in which a poorly sutured gastrostomy tube resulted in peritonitis and near fatality.**

“This adverse incident occurred in June 2009. A patient had had a gastrostomy tube fitted two days before being sent to us for chemotherapy.

“When we saw him he was complaining of pain at the site where the tube had been placed. After three days it was noticed that the tube was leaking, mucky and a suture had come loose. The patient was told there was nothing to worry about but we transferred him back to the district general hospital for surgical assessment two days later. With hindsight, when he complained of pain we should have stopped using the tube and should have sent him back immediately.

“The patient contracted peritonitis, possibly due to the fact that the tube had been sutured incorrectly in the first place. The peritonitis was a direct result of poor initial management and follow up care.

“There are many different types of tubes and protocols in place. Patients are sent to us from several centres (six major hospitals) with gastrostomy tubes but we had no specific policy or protocol in place for dealing with this aspect of care.

“This incident did shake everyone up. The district general hospital asked us to investigate and draw

some conclusions. I met with the consultant and senior nurse and we had a draft of the Rapid Response Report sent to us. Our serious clinical incident forum group also met to discuss the issues. This multidisciplinary team is chaired by a consultant clinical oncologist and attended by clinical and non-clinical staff. It meets on a monthly

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basis and discusses all serious incidents at the trust, devises action plans and reports on outcomes.

“As a result of the investigation we agreed that our oncology centre needed a specialist head and neck nurse to care for patients with feeding tubes as well as those with tracheostomy tubes. The appointment will start in September. We also set up training sessions to educate clinical staff to in the care of patients with enteral tubes and we've emphasised that staff must ask for advice earlier. In the case of this incident, we didn't act soon enough.

“The RRR produced several recommendations as a result of this case and gave us more weight to pursue the new measures. It's about good communication and learning from incidents. In line with the RRR, patients now have alert stickers on their notes to say they had a tube placed ‘x’ number of days ago. If pain from feeds is severe or prolonged post procedure, or the tube is leaking, staff must stop the feed, contact the hospital that fitted the tube and arrange a CT scan immediately.

“Staff are much more alert since the incident. One month ago we had a similar adverse event: a patient had a leaking radiologically inserted gastrostomy. The feed was stopped and the dietitian asked the medical team for a CT scan, which was done immediately. A medical review was requested and discussion with the surgical team who placed the tube took place. We did everything in line with the RRR guidelines and the patient suffered no prolonged adverse effects.”

#### EVERY REPORTED INCIDENT COUNTS

Each serious incident you report is reviewed at the NPSA. We see if there is potential for national action (an RRR) by looking for further evidence of harm in our database of more than four million incidents reported by nurses, doctors and others. Each RRR starts with a single incident – in this case, the death of a recently discharged child with a gastrostomy. Please keep reporting to ensure safer care. [tinyurl.com/npsaguidance](http://tinyurl.com/npsaguidance)

Find the Rapid Response Report and supporting information on the NPSA website at [tinyurl.com/RRR-PEGcomps](http://tinyurl.com/RRR-PEGcomps)

#### DID YOU KNOW?

- About 15,000 gastrostomies are inserted annually in the UK.
- The risks of post insertion complications may present after initial gastrostomy insertion and after tube change/replacement.
- Depending on the insertion method, gastrostomy tubes may also be known as PEG (percutaneous endoscopic gastrostomy), PIG (per-oral image guided gastrostomy), RIG (radiologically inserted gastrostomy) and PRG (percutaneous radiological gastrostomy). Other abbreviations used include LIG (laparoscopic insertion of gastrostomy), LAPEJ (laparoscopic assisted PEG), LAPEJ (placement of a PEG with laparoscopic assistance into the jejunum) and PEATs (percutaneous enteral access tubes).
- This RRR relates to gastrostomies, but the same risks may present with jejunostomies.