



## Patient Safety Alert

### Nasogastric tube misplacement: continuing risk of death and severe harm

22 July 2016

Alert reference number: NHS/PSA/RE/2016/006

Alert stage: Two - Resources

Use of misplaced nasogastric and orogastric tubes<sup>1</sup> was first recognised as a patient safety issue by the National Patient Safety Agency (NPSA) in 2005<sup>2</sup> and three further alerts were issued by the NPSA and NHS England between 2011 and 2013.<sup>3-5</sup> Introducing fluids or medication into the respiratory tract or pleura via a misplaced nasogastric or orogastric tube is a Never Event. Never Events are considered 'wholly preventable where guidance or safety recommendations that provide strong systemic protective barrier are available at a national level, and should have been implemented by all healthcare providers.'<sup>6</sup>

Between September 2011 and March 2016, 95 incidents were reported to the National Reporting and Learning System (NRLS) and/or the Strategic Executive Information System (StEIS) where fluids or medication were introduced into the respiratory tract or pleura via a misplaced nasogastric or orogastric tube. While this should be considered in the context of over 3 million nasogastric or orogastric tubes being used in the NHS in that period,<sup>7</sup> these incidents show that risks to patient safety persist. Checking tube placement before use via pH testing of aspirate and, when necessary, x-ray imaging, is essential in preventing harm.

Examination of these incident reports by NHS Improvement clinical reviewers shows that misinterpretation of x-rays by medical staff who did not appear to have received the competency-based training required by the 2011 NPSA alert is the most common error type. Other error types involve nursing staff and pH tests, unapproved tube placement checking methods, and communication failures resulting in tubes not being checked. The reports included 32 incidents where the patient subsequently died, although given many patients were critically ill before the tube was introduced, it is not always clear whether the death was directly related to the misplaced tube.

Review of local investigations into these incidents suggests problems with organisational processes for implementing previous alerts. This Patient Safety Alert is therefore directed **at trust boards** (or their equivalent in other providers of NHS funded care) and the processes that support clinical governance. It is NOT directed at frontline staff. Some of the implementation issues identified were:

- problems with systems to ensure staff who were checking tube placement had received competency-based training
- problems with ensuring bedside documentation formats include all safety-critical checks
- problems maintaining safe supplies of equipment, particularly radio-opaque tubes and CE-marked pH test strips.

The resource set that accompanies this alert provides a range of support for trust boards (or their equivalents) to assess whether previous nasogastric tube guidance has been implemented and embedded within their organisations [improvement.nhs.uk/resources/resource-set-initial-placement-checks-nasogastric-and-orogastric-tubes](http://improvement.nhs.uk/resources/resource-set-initial-placement-checks-nasogastric-and-orogastric-tubes). It includes briefings to help non-executives and governors to understand the issues, summaries of safety-critical requirements of past alerts, self-assessment/assurance checklists, and learning from reported incidents.

## Actions

**Who:** All organisations where nasogastric or orogastric tubes are used for patients receiving NHS-funded care

**When:** To commence as soon as possible and to be completed by 21 April 2017

- 1 Identify a named executive director\* who will take responsibility for the delivery of the actions required in this alert.
- 2 Using the resources supplied with this alert, undertake a centrally co-ordinated assessment of whether your organisation has robust systems for supporting staff to deliver safety-critical requirements for initial nasogastric and orogastric tube placement checks.
- 3 If the assessment identifies any concerns, use the resources supplied with this alert to develop and implement an action plan to ensure all safety-critical requirements are met.
- 4 Share this assessment and agree any related action plan within relevant commissioner assurance meetings.
- 5 Share the key findings of this assessment and the main actions that have been taken in the form of a public board paper.\*\*

\* For organisations that are not trusts/foundation trusts and do not have executive directors, a role with equivalent senior responsibility should be identified.

\*\*For organisations without a board, an equivalent publically available alternative to a board paper should be identified eg a report on a public-facing website.

See page 2 for references

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## Resources

### Patient safety incident reporting

For detail of dates and search strategy within the National Reporting and Learning System (NRLS) and the Strategic Executive Information System (StEIS) see page x of the supporting *initial placement checks for nasogastric and orogastric tubes resource set* on the NHS Improvement website [improvement.nhs.uk/resources/resource-set-initial-placement-checks-nasogastric-and-orogastric-tubes](http://improvement.nhs.uk/resources/resource-set-initial-placement-checks-nasogastric-and-orogastric-tubes)

### References

1. Hanna G, Phillips, L, Priest O & Zhifang N (201) Improving the safety of nasogastric feeding tube insertion A report for the NHS Patient Safety Research Portfolio July 2010 [www.birmingham.ac.uk/Documents/college-mds/haps/projects/cfhep/psrp/finalreports/PS048ImprovingthesafetyofnasogastricfeedingtubeinsertionREVISEDHannaetal.pdf](http://www.birmingham.ac.uk/Documents/college-mds/haps/projects/cfhep/psrp/finalreports/PS048ImprovingthesafetyofnasogastricfeedingtubeinsertionREVISEDHannaetal.pdf)
2. National Patient Safety Agency - Reducing the harm caused by misplaced nasogastric feeding tubes 2005 [www.nrls.npsa.nhs.uk/resources/type/alerts/?entryid45=59794&p=4](http://www.nrls.npsa.nhs.uk/resources/type/alerts/?entryid45=59794&p=4)
3. National Patient Safety Agency Patient Safety Alert: Reducing the harm caused by misplaced nasogastric feeding tubes in adults, children and infants 2011 [www.nrls.npsa.nhs.uk/resources/type/alerts/?entryid45=129640](http://www.nrls.npsa.nhs.uk/resources/type/alerts/?entryid45=129640)
4. National Patient Safety Agency Rapid Response Report: Harm from flushing of nasogastric tubes before confirmation of placement 2012 [www.nrls.npsa.nhs.uk/resources/type/alerts/?entryid45=133441](http://www.nrls.npsa.nhs.uk/resources/type/alerts/?entryid45=133441)
5. NHS England Patient Safety Alert: Stage 1 - Placement devices for nasogastric tube placement DO NOT replace initial placement checks 2013 [www.england.nhs.uk/wp-content/uploads/2013/12/psa-ng-tube.pdf](http://www.england.nhs.uk/wp-content/uploads/2013/12/psa-ng-tube.pdf)
6. NHS England Never Events Policy and Framework 2015 [www.england.nhs.uk/patientsafety/never-events/](http://www.england.nhs.uk/patientsafety/never-events/)
7. Page 9 of the supporting *initial placement checks for nasogastric and orogastric tubes resource set* on the NHS Improvement website [improvement.nhs.uk/resources/resource-set-initial-placement-checks-nasogastric-and-orogastric-tubes](http://improvement.nhs.uk/resources/resource-set-initial-placement-checks-nasogastric-and-orogastric-tubes)

### Stakeholder engagement

- Medical Specialities Patient Safety Expert Group
- Children and Young People's Patient Safety Expert Group
- Surgical Services Patient Safety Expert Group
- Patient Safety Steering Group

For details of the membership of the NHS Improvement patient safety expert groups and steering group see [www.england.nhs.uk/ourwork/patientsafety/patient-safety-groups/](http://www.england.nhs.uk/ourwork/patientsafety/patient-safety-groups/)