# North Cumbria University Hospitals NHS Trust

## Quality Report

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This report describes our judgement of the quality of care at this trust. It is based on a combination of what we found when we inspected, information from our 'Intelligent Monitoring' system, and information given to us from patients, the public and other organisations.

# Summary of findings

## Letter from the Chief Inspector of Hospitals

The Care Quality Commission (CQC) carried out an unannounced inspection at North Cumbria University Hospitals NHS Trust on 25 and 26 July 2017 to gauge the safety of current practices regarding nasogastric tubes and progress in delivering the action plan identified in response to HM Coroner's concerns.

North Cumbria University Hospitals NHS Trust was subject to a comprehensive inspection in December 2016. We did not gather sufficient evidence to impact upon trust ratings from that inspection.

During this inspection we visited medical and surgical wards, paediatric units and intensive therapy units at both sites (Cumberland Infirmary, Carlisle and West Cumberland Hospital, Whitehaven).

This focussed inspection confirmed that the insertion and ongoing management of care of nasogastric tubes was safe, effective and well led.

However, we have asked the trust to take action to improve its documentation, exposure to clinical skills and to develop a specific policy for pregnancy regarding the insertion and ongoing management of nasogastric tubes.

**Professor Edward Baker**

Chief Inspector of Hospitals

# Summary of findings

## Background to North Cumbria University Hospitals NHS Trust

Her Majesty's Coroner concluded an inquest on 16 January 2017 into the deaths of two patients (Patient A and Patient B) cared for by North Cumbria University Hospitals NHS Trust.

This followed a separate and earlier inquest into the death of a patient at the trust in 2008 due to a misplaced nasogastric (NG) tube.

Patient A died in December 2012 at West Cumberland Hospital, Whitehaven, following the insertion of a nasogastric tube into his left lung resulting in the patient developing aspiration pneumonia. The pneumonia developed because the nasogastric tube was placed in such a way as to enter the left lung instead of the stomach.

Patient B died in April 2015 at the Cumberland Infirmary, Carlisle, following the insertion of a nasogastric tube into her right lung resulting in the patient developing aspiration pneumonia. The pneumonia developed because the nasogastric tube was placed in such a way as to enter the right lung instead of the stomach.

Although the individual circumstances were different, HM Coroner issued two 'Regulation 28 Report to Prevent Future Deaths' notices to the trust. These contained the following common themes regarding the management of nasogastric tubes:

1. Staff not being aware of policy;
2. Staff not reading the policy;
3. Staff not applying the policy;
4. Staff not following good practice;
5. The trust not ensuring compliance nor rolling out training to all who needed it;
6. Lack of checks and audits to establish competence and adherence to policy;
7. Failure of the trust to learn from the first death;
8. Lack of corporate memory (the issue of NG tubes was not on the risk register);
9. The trust not fully implementing the 2011 NPSA alert for over two years and only as a result of the second death;
10. Even after the second death not having systems in place to ensure compliance on the ward which contributed to the third death;
11. The trust policy growing in size from 20 to 36 pages in 7 years, making it difficult for busy practitioners to absorb (there are some 200 policies in the trust); and
12. The current policy has cross references to paragraphs which do not exist. These errors have been carried through three versions, and raise the risk of misinterpretation by staff and undermining their confidence in such an important document.

HM Coroner requested the trust take the following steps:

1. To consider an amplified 'summary and aim' at the beginning of the policy to drive home the main points;
2. To identify areas where statutory or mandatory training is required;
3. To consider the implementation of an online system of statutory mandatory training with a central recording system;
4. To take steps to ensure that good and compliant practice is actually taking place on the wards; and
5. To correct cross referencing errors in the policy.

In response the trust developed an action plan covering five key work streams aimed at improving organisational learning and nasogastric tube care:

Work stream 1- Safety Culture;

Work stream 2 – Learning & Development;

Work stream 3 – Policy and Practice;

Work stream 4 – Clinical Practice on NG Tube Care; and

Work stream 5 – Risk and Assurance.

A Nasogastric Tube Steering Group. Chaired by the Medical Director had been set up to monitor delivery of the action plan. This was supported by a Clinical Reference Group.

Specific outputs identified were:

# Summary of findings

- Policy review by the Executive Medical Director, Consultant Intensivist and Head of Clinical Standards; amplified summary and aim to outline key requirements;
- Trust steering group in place to deliver the National Safety Standards for Invasive Procedures (NatSSIPs) and the development of Local Safety Standards for Invasive Procedures (LocSSIPs) including the insertion of nasogastric tubes;
- Clinical procedure and standard operating procedure developed to support policy;
- All medical staff to complete eLearning during induction as part of 'North Cumbria University Hospitals Trust – Trust Doctors Patient Safety Programme';
- All medical staff with responsibility for confirming the position of nasogastric tubes by X-ray must have completed the National Management Learning System (NMLS) Radiological Interpretation package ('Reducing the Risk of Feeding through a Misplaced Feeding Tube');
- Nurses must undertake the Scope of Professional Practice for NG feeding when their duties include care of patients with NG tubes;
- Improvements to the trust mandatory and training records held on the Electronic Staff Record; and
- Removed cross referencing errors in policy.

# Summary of findings

## Our judgements about each of our five key questions

| | Rating |
|---|---|
| **Are services at this trust safe?**<br>During this inspection we found the safety of current practices regarding NG tubes as follows:<br>• We observed all patients had their needs assessed and their care delivered in line with national safety guidance and standards.<br>• The current policy was clear that the misplacement of an NG tube on the original siting or displacement during ongoing monitoring was required to be reported as an incident;<br>• There had been no serious incidents regarding NG tubes since April 2015;<br>• Staff confirmed patient safety alerts were circulated throughout the trust following patient deaths in 2011 and 2015;<br>• Patient medical and nursing records were complete, legible and organised consistently. Records were clearly signed and dated;<br>• The electronic record system for NG placement compared well to paper based records and increases the safety of NG placement;<br>• All clinical staff involved in the practical insertion of a nasogastric tube were required to complete the mandatory training package for insertion of a nasogastric tube, which was being finalised at the time of inspection;<br>• The revised procedure places training and experience requirements on all clinical staff involved in the confirmation of NG tube placement through X-ray;<br>• Further nurse educator posts had been advertised and were due to be appointed at the time of inspection;<br>• A comprehensive 'Scope of Practice' document had been developed and was widely available throughout the trust to guide practice for the ongoing monitoring and management of NG tubes.<br><br>However,<br>• Although the intensive therapy unit (ITU) areas utilised an electronic recording system, this did not prompt the clinician in the event of a missed or incomplete field;<br>• Some nursing staff were unwilling to insert NG tubes.<br><br>**Incidents** | |

# Summary of findings

- Staff stated they were comfortable and confident in reporting NG related incidents through trust systems and stated these would include patient harms, near-misses and documentation errors. Documentation errors were firstly discussed with the clinician who inserted the patients NG tube for resolution.
- The current policy was clear that the misplacement of an NG tube on the original siting or displacement during ongoing monitoring was required to be reported.
- There had been no serious incidents regarding NG tubes since April 2015; this was confirmed in interviews with staff who said they were not aware of any NG related incidents since April 2015 and particularly since the conclusion of HM Coroner's inquest in January, 2017.
- Staff told us learning regarding the insertion, monitoring and management of NG tubes was shared through ward meetings, safety huddles, team briefings, and handovers. Staff were fully supported and attended regular meetings where feedback and learning was encouraged.
- Staff confirmed a number of patient safety alerts were circulated throughout the trust following patient deaths in 2011 and 2015. Ward managers ensured staff had reviewed alerts by completing a 'read and sign' document.

**Records**

- We looked at patient medical and nursing records and saw they were complete, legible and organised consistently. Records were clearly signed and dated.
- All entries followed policy guidance and covered pre-insertion considerations, insertion checklist (primary and secondary checks), daily checks and on-going monitoring. All documents were completed in a timely manner, accurately and in full.
- Within ITU, the trust recorded this information on a bespoke electronic record developed by the trust.
- The NG checks on the electronic system mirrored the trust policy checklists. The system was easy to use, flowed well and covered all key questions related to NG safety.
- This electronic record system for NG placement compared well to paper based records and increased the safety of NG placement through improved communication, assured compliance with policy and enhanced audit capability. This is an example of good practice that could usefully be shared nationally
- However, a criticism of the electronic system was that it did not prompt the clinician in the event of a missed or incomplete

field therefore inadvertent omissions were possible. This allowed progress to NG feeding even if key safety aspects were not recorded (e.g. if the doctor did not confirm they have had NG tube placement X-ray training).
- Staff completed a minimum of daily checks on patients with an NG tube in place and on the wards, checks were completed on every occasion the tube was used and/or care was given, e.g. three to four times daily. Within ITU checks were completed twice daily, at the end of each shift.

**Mandatory training**

- The revised Local Safety Standards for Invasive Procedures (LocSSIPs) 'Insertion of a Nasogastric Tube' determined that all staff caring for patients with nasogastric tubes must have read and be aware of the contents of the trust 'Nasogastric Tube Policy'.
- Further, all clinical staff involved in the practical insertion of a nasogastric tube were required to complete the mandatory training package for insertion of a nasogastric tube, which was being finalised at the time of inspection.
- Following completion of training, this group of staff must complete the NG Competency Framework and be signed off as competent.
- The procedure also stated that all clinical staff involved in the confirmation of NG tube placement through X-ray must also complete the NMLS Radiological Interpretation e-learning training package and no foundation doctor (foundation year 1 and foundation year 2) is qualified to check NG tube position radiologically.
- A clinical skills sub-group were in the process of reviewing and approving mandatory training requirements and the revised procedures had not been widely disseminated at the time of inspection. Staff we spoke with were unclear if NG competencies and training would form part of the trust mandatory training programme.
- A part-time nurse educator was responsible for carrying out training for NG tube practice within the trust. Further posts had been advertised and were due to be appointed at the time of inspection.
- The training covered the ongoing monitoring and management of care for patients with an NG tube.
- A comprehensive 'Scope of Practice' document had been developed and was widely available throughout the trust to guide practice for the ongoing monitoring and management of NG tubes but did not cover the placement of tubes.

- Within ward areas training records were well kept and these covered the competencies around the rationale for selecting patients for NG feed and ongoing care.
- The nurse educator expressed the view that all staff would benefit from this training as they may rotate from wards with low numbers of patients with NG tubes to wards where patients with NG tubes were cared for on a more frequent basis.
- Senior nursing staff told us that although NG feed cases were relatively rare, staff coped well and the staff rota ensured there was always staff on duty competent to give NG care.
- New staff were supported by senior nurses to further develop their placement of NG tube competence through initial supervision and 'see one, do one, teach one'.
- Senior managers confirmed the trust relied on nursing staff being trained and gaining experience in the placement of NG tubes during undergraduate training and previous clinical posts where applicable.
- Doctors we spoke with at all grades, had to undergo on-line training in NG tube placement. A locum consultant confirmed he was not allowed to start practice until he had completed all mandatory training, including the NG tube placement module.
- A video and on-line training for interpretation of radiology images to support skills training in NG tube placement were in place.
- The safe placement of NG tubes was no longer part of mandatory skills within doctor's Foundation Programme training and was no longer delivered to Foundation Year doctors.

**Assessing and responding to patient risk**

- We observed that all patients had their needs assessed and their care delivered in line with national safety guidance and standards.
- Patient safety notices had been disseminated since April 2015 covering the procedures for obtaining and checking an aspirate, the use of the NG sticker, obtaining a chest X-ray, primary and secondary position checks and the use of fresh NG tubes and enteral syringes. Patient safety notices were complemented through training and awareness sessions.
- Staff were aware of the potential risks associated with NG insertion and tube use and confirmed they did not use NG tubes until all safety checks had been completed and the tube was confirmed safe to use.
- Staff checked tube integrity, positioning and 'pH levels' (a check using a test strip to confirm acidity levels and the correct position of the tube) prior to ongoing use.

# Summary of findings

- Staff stated they immediately discontinued use of the tube if they had concerns regarding any safety check until the safe positioning had been confirmed in accordance with policy.
- Nursing staff on wards completed a 'two nurse check' prior to using any NG tube. This check included a review of the insertion documentation and safety checks before feeding.
- Some nursing staff were unwilling to insert NG tubes and in some clinical areas where exposure to NG tubes was limited, staff sought advice from 'more expert' staff on how to manage patients with NG tubes. As a result this role was mainly carried out by the Stroke Specialist Nurse.
- Nursing staff confirmed that medical staff were supportive when they had concerns regarding NG tube management.
- Medical staff inserted all NG tubes within the intensive therapy unit and the Critical Care Outreach Team (CCOT) confirmed they relied on medical staff to undertake the procedure and did not insert NG tubes.
- The trust did not allow foundation year doctors to verify NG tubes were safe to use. Such authorisation was required by a doctor of middle grade (or above) and who had also completed the required e-learning. This was consistent with the revised LocSSIP.
- Trust radiologists gave priority in reporting X-rays where the request was to confirm positioning of a NG tube.

**Are services at this trust effective?**

During this inspection we found the effectiveness of current practices regarding NG tubes as follows:

- The final decision leading to the insertion of NG tubes was not summarised in all records;
- There was variability in registered nurse exposure to the clinical skill of NG tube insertion and ongoing care and management of patients with NG tubes.
- There was uncertainty amongst some staff about the reason for pH set less than national policy;
- We did not see a specific policy, insertion record or LocSIPPS for pregnancy.

However,

- All patients had their needs assessed and their care planned and delivered in line with existing policy and procedures compliant with national guidance and NPSA alerts;

- The trust was updating the policy and had drafted a local safety standard operating procedure (LocSSIP) which was being finalised for a proposed launch in August 2017;
- The audit of NG tube insertion and ongoing care was managed effectively;
- Staff commented very positively on the training provided by the clinical nurse educator;
- The completion of documentation was excellent, and all investigations and discussions were clearly recorded and appropriate.

**Evidence-based care and treatment**

- We saw that patients had their needs assessed and their care planned and delivered in line with existing policy and procedures. The trust policy currently in use ('Nasogastric Tube Policy – Adult, version 12) was updated and recirculated in November 2016.
- Patient treatment was in accordance with national guidance and NPSA alerts - 'Reducing harm caused by misplaced nasogastric feeding tubes' (2005), 'Reducing harm caused by misplaced naso and orogastric feeding tubes in babies under the care of neonatal units' (2005), 'Reducing the harm caused by misplaced nasogastric feeding tubes in adults, children and infants' (2011) 'Harm from flushing of nasogastric tubes before confirmation of placement' (2012) and 'patient safety alert on placement devices for nasogastric tube insertion (2013).
- The trust was updating the policy and had drafted a local safety standard operating procedure (LocSSIP) which was being finalised for a proposed launch in August 2017.
- We saw draft policies and procedures and these were fit for purpose. They were clear, with inaccurate cross referencing removed as requested by HM Coroner.
- A monthly audit of NG tubes was undertaken on each ward where NG tubes had been inserted or ongoing care was given. Reports from staff records supported each business unit to monitor training compliance and incidents involving NG tubes were sent to the Head of Dietetics on a monthly basis.
- The associated trust safety checklist documentation related to pre-insertion checks, insertion checks and daily checks was comprehensive and reflected current practice guidelines.
- The completion of documentation was good, and all investigations and discussions were clearly recorded and appropriate. However, the final decision was not summarised in all records.

- There was uncertainty amongst staff spoken with about the reason for pH set at less than 4 when national policy is less than pH 5.5.
- The revised policy and insertion record allowed for an effective response to go straight to X-ray rather than to pH stage where there was high risk of aspiration.
- Insertion records reviewed were completed appropriately and showed the rationale for further action taken and the insertion of NG tubes were safe. An X-ray was reviewed and showed that the NG tube had been placed appropriately and safely. The other case was solved by direct vision endoscopically.
- The insertion record for the trust confirms the time of insertion and clearly states 'If all criteria cannot be met, do not feed, call for senior review and help'.
- The trust had decided not to include a section detailing deviations from policy on the IR as this may cause ambiguity. In both cases reviewed, explanations were handwritten between existing text, in the margin, making reasoning hard to follow and audit difficult.
- We did not see a specific policy, insertion record or LocSIPPS for pregnancy. Staff confirmed there was a scope of practice wiithin paediatric wards and the Special Care Baby Unit based on national neonatal feeding guidance.
- Staff were aware that the revised policy would reference paediatric practice and would be disseminated within the few weeks following our inspection with associated training.

**Patient outcomes**

- The trust completed two audits relating to NG management. The first, referred to as 'Audit-R', was collated and updated as an ongoing concern as NG tubes were inserted or when a patient was transferred into a new clinical area with a tube inserted.
- Managers monitored compliance (on a RAG rating – with green indicating compliance with local performance indicators). This allowed senior staff to identify ward, divisional and site trends.
- The Deputy Director of Nursing receives a weekly report on NG incidents, this is reviewed and any incidents escalated to the patient safety panel.
- We were provided with 'Audit-R' results that showed nine wards at Cumberland Infirmary provided returns, seven reported issues of non-compliance between January 2017 and July 2017. At West Cumberland Hospital, two wards provided data and these were RAG rated 'green' or compliant.

- The ward manager of wards identified as non-compliant with a RAG rating of red or amber, (referred to as a 'red flag'), were contacted by senior staff to develop an action plan in response. We saw these identified training and development for individual members of staff.
- The NG audit submitted via Audit-R was being reviewed to set a fixed audit date each month, making it easier to identify areas which failed to submit and provide support, and also to refine the audit tool to make it less cumbersome but ensure safety critical areas were audited.

**Competent staff**

- The remit of the designated clinical nurse educator was initially to support ITU staff and this had been extended to providing advice and support to ward based nursing staff across both sites.
- The training for nursing staff followed a 'Scope of Practice' competency based framework covering 'top tips', 'do's and don'ts' and reviewing Nursing and Midwifery Council documentation standards but not practical training of NG tube insertion. The clinical competency of NG tube insertion was monitored and managed locally by ward based practice mentors and supervisors.
- There was variability in registered nurse exposure to the clinical skill of NG tube insertion and ongoing care and management of patients with NG tubes.
- We were advised by a newly qualified nurse that she completed practical insertion of NG tubes on simulation dummies during her nurse training and had been supervised performing the same on patients during clinical placement. She added that there had been no formal assessment of competence of this skill and that some colleagues had not inserted NG tubes on patients prior to registration.
- Nurses commented very positively on the training provided by the clinical nurse educator but considered there was no reference point on training requirements and competence for NG insertion and management. Staff said this was a "grey area" and wanted clarity on what was expected.

## Are services at this trust well-led?

During this inspection we found the leadership and management of current practices regarding NG tubes as follows:

- Clear governance processes were in place to manage the progress of the trust action plan developed in response to HM Coroner.
- In response to HM Coroner's concerns there was progress on the development of a revised nasogastric tube policy, a local Standard Operating Procedure (LocSSIP) and an Insertion Record.
- The outputs from the work streams were to be widely communicated and consulted upon, beginning in August 2017.

However,

- There had been delay in finalising policy and procedures;
- Staff were unsure on the progression of the trust action plan due to a lack of clear communication;
- There was a reluctance of some staff to undertake the placement of NG tubes;
- Senior staff we spoke with were not always clear about the leadership of the policy group and how training was currently set up.

**Governance, risk management and quality measurement**

- A report (25 July 2017) to the public meeting of the Trust Board confirmed that the action plan developed in response to HM Coroner had been approved by the board in March 2017. The Safety and Quality Committee had reviewed the delivery report at its meeting in July 2017.
- Further, this showed that a Nasogastric Tube Policy had been updated, consulted on and was in the final stages of approval. A clinical reference group had been established to ensure the clinical aspects of the policy had been thoroughly reviewed and approved.
- The Standard Operating Procedure for the insertion of Nasogastric Tubes had been developed in accordance with the updated policy and included the development of the safety critical elements of the Insertion Record.
- The report to the Board also identified that progress had been made with clarifying and updating the training and audit requirements supporting the updated policy.
- The deputy Director of Nursing advised that In order to monitor which wards have patients with NG tubes in place a flag system is to be implemented in September 2017. This will facilitate Trust oversight of NG tubes and the ability to undertake spot check audits.
- The Central Alerting System (CAS) Policy had been rewritten and was being finalised prior to circulation for consultation and exception reporting on CAS alerts.

# Summary of findings

- There had been slippage in the progress of some elements of the trust action plan in response to HM Coroner's Regulation 28 requests.
- Some staff considered the progression of the trust action plan had been slow but understood the outcomes of the work streams were about to be rolled out.
- Staff confirmed they received an e-mail to alert them of policy changes and considered it was then their responsibility to ensure they were aware of all trust policies, updates and changes.
- The trust steering group had representation from senior clinicians (across a range of specialities), senior nursing staff, dietetics, patient safety and governance.
- Senior staff we spoke with were not always clear about the leadership of the policy group and how training was currently set up. Some were inconsistent or lacked awareness of training, e.g. the differences between medical and nurse training, and that nurses had no formal competency framework for the placement of NG tubes and who was allowed to interpret X-rays.
- We were advised by senior staff that all outputs from the work streams set up in response to HM Coroner were to be widely communicated and consulted upon beginning in August 2017.

**Staff engagement**

- All staff were aware of changes to the trust policy following the previous incidents and all could locate these on the trust intranet site. Some staff were not aware of the ongoing work related to the action plan and associated work streams in response to the inquest.
- Doctors and nurses inserting, confirming and giving ongoing care on a day to day basis have been invited to the clinical reference group.
- Senior nursing staff considered there was more to do in terms of training and raising awareness of any policy changes to remove staff apprehension and ensure learning from the previous incidents was fully embedded.
- Senior nursing staff considered training needed to be across the whole organisation and not just in the clinical areas where the incidents occurred or where patients with NG tubes were cared for 'more often'.
- It was clear that staff on wards at West Cumberland Hospital had been adversely affected by the previous incident related to NG feeding on ITU at the hospital, the similar event at Cumberland Infirmary, and the inquest conclusion.

# Summary of findings

- As a result, there was a reluctance of ward staff to undertake the placement of NG tubes and this role was mainly carried out by the Stroke Specialist Nurse. This had the potential to cause delays in NG feeding and unnecessary removals and replacements.
- A number of staff involved in the inquest process felt the limited input from trust legal representatives and access to counselling services via occupational health was of little reassurance.
- Staff involved in the previous incidents completed a personal reflective analysis of their involvement. This was used to form the basis of any shortfalls in knowledge and clinical skills which required action.

**Innovation, improvement and sustainability**

- The electronic record system for NG placement and ongoing care developed by the trust increased the safety of NG placement through improved communication, assured compliance with policy and enhanced audit capability.
- In order to monitor which wards have patients with NG tubes in place a flag system is to be implemented in September 2017. This will facilitate trust oversight of NG tubes and the ability to undertake spot check audits.

# Outstanding practice and areas for improvement

## Areas for improvement

**Action the trust MUST take to improve**

**Action the hospital SHOULD take to improve**

- Ensure the proposed new insertion record includes details of the decisions leading to the insertion of NG tubes in all records;
- Ensure consistency in registered nurse exposure to the clinical skill of NG tube insertion and ongoing care and management of patients with NG tubes;
- Develop a specific policy, insertion record or LocSIPPS for pregnancy.