

The impact of reconfirming nasogastric tube position on medicine administration: An audit

O.W. Tolson; A. Hitchings

Introduction: Nasogastric (NG) tubes are often essential for the administration of enteral medications in critically ill patients. While guidelines exist on the procedure to verify placement at initial insertion, the process to reconfirm placement of existing tubes (identifying covert displacement into the respiratory tract) is less clear. Following a “never event” of intrapulmonary feeding in our hospital, tighter procedures have been implemented to identify displaced tubes. We sought to evaluate the extent to which these measures may impact upon the administration of enteral medicines.

Method: We audited administration of enteral medicines via established (placement previously confirmed) NG tubes in the neurointensive care unit. Patients were identified contemporaneously using a snapshot method on a single day. All patients with an established NG tube were identified, and data collected for up to 3 days prior to the index date. Data included all prescribed, administered, and omitted doses of enteral medicines, and the interval between the scheduled and actual administration time. Where the delay was associated with a need to reconfirm NG tube placement, details were recorded.

Results: Thirteen patients were audited, of whom nine had an established NG tube. Between them, there were 20 patient-days of tube use and 188 scheduled enteral medicine doses. There were three episodes in which the tube was deemed unsafe to use based on hospital procedures (mean duration 107 minutes [range 56-140]). These directly affected the administration of 5 medicine doses (2.6%). Two medications were not given and one critical medication was delayed by 4.75 hours as a result. Median delay for medications unaffected by tube re-verification was 0 minute (± 30 , $n = 183$) and 286 minutes (± 239 , $n = 3$) for medications affected by tube reconfirmation. Medications affected by tube re-verification were significantly more delayed ($p = 0.0004$) and were more likely to be delayed by greater than 1 hour ($\chi^2 = 14.12$, $p = 0.0002$).

Conclusion: This audit has highlighted that the implementation of procedures to reconfirm placement of established NG tubes may result in delay or omission of enteral medicine doses. Even within this small audit, an instance was identified in which a time-critical medicine was delayed by more than 4 hours due to the need to reconfirm tube placement. While it is essential to avoid intrapulmonary feeding due to displaced NG tubes, the risk of this exceptionally rare event must be balanced against the risks associated with the introduction of precautionary measures.