

Medical Device/Equipment ALERT

Ref. MDEA(NI)2004/29

Issued: 22 June 2004

For:

IMMEDIATE ACTION	
ACTION	✓
UPDATE	
INFORMATION REQUEST	



**NORTHERN
IRELAND
ADVERSE
INCIDENT
CENTRE**

	Section
Medical Device/Equipment: Enteral feeding tubes (nasogastric)	▶ ①
There are a number of methods, used singly or in combination, to check the position of nasogastric tubes. One of these methods is testing of aspirate. There is a potential for a malpositioned nasogastric tube to go undetected if blue litmus paper is used to test the aspirate to confirm placement of the tube in the stomach. Blue litmus paper may not distinguish between the acidic pH of gastric contents and other fluids.	▶ ②
Action by: All staff responsible for placement of nasogastric tubes and administration of fluids via these tubes	▶ ③
Action: Do not use blue litmus paper for checking nasogastric tube placement. Use pH indicator paper/strips covering the appropriate range and follow the advice contained overleaf when implementing the change	▶ ④
Distributed by NIAIC to: Chief Executive of each HSS Board Chief Executive of each HSS Trust Chief Executive of each Agency NIAIC Liaison Officers General Medical Practitioners Hospices	▶ ⑤
Contacts NIAIC contacts for technical aspects. Details of NNNG contact for clinical guidance.	▶ ⑥
Feedback Requirements to NIAIC Please report malposition of nasogastric feeding tubes to NIAIC	▶ ⑦

This Alert is on our web site: <http://www.dhsspsni.gov.uk/niaic>

1. DEVICE/EQUIPMENT:

Enteral feeding tubes (nasogastric)

2. PROBLEM:

Testing of the aspirate is one of a combination of methods used to check nasogastric tube placement. There is a potential for a malpositioned nasogastric tube to go undetected if blue litmus paper is used to test the aspirate taken from the tube. The Medicines and Healthcare products Regulatory Agency (MHRA) is aware of one incident where this had occurred and contributed to the death of a patient.

Blue litmus paper will turn pink in the presence of acid regardless of the level of acidity (i.e. pH <7). Therefore, this paper is not sufficiently sensitive to distinguish between the pH of different fluids, specifically between bronchial and gastric secretions.

When performing an aspirate test, the use of pH indicator paper instead of litmus paper is supported by several papers.^{1,2} Guidelines published by NHS Quality Improvement Scotland,³ Northern Ireland Clinical Resource Efficiency Support Team (CREST)⁴ and forthcoming guidelines on adult enteral feeding by The National Nurses Nutritional Group (NNG) recommend that pH indicator paper be used to test the aspirate.

1. Rollins H (1997) A nose for trouble. Nursing Times, December 3, Volume 93, No 49, 66-67.
2. Colagiovanni L (1999) Taking the tube. Nursing Times Supplement, 95 (21), 63-66.
3. Nasogastric and gastrostomy tube feeding for children being cared for in the community. Best practice statement. (2003) ISBN 0-9542652-6-2.
4. Guidelines for the management of enteral tube feeding in adults. (2004) ISBN 1-903982-08-1.

3. ACTION BY:

All staff responsible for placement of nasogastric tubes and administration of fluids via these tubes.

4. ACTION:

- Define expected pH range for secretions to be tested such as gastric and bronchial secretions, giving consideration to variables such as the use of antacids and proton pump inhibitors.
- Select the appropriate paper for your requirements (pH indicator paper is available in several ranges and graduations of pH).
- Follow the instructions for use provided by the manufacturer of the pH indicator paper and the nasogastric tube.
- Ensure all staff are appropriately trained in the use of the pH indicator paper and the interpretation of the results.

5. ONWARD DISTRIBUTION TO:

Please bring this notice to the attention of all who need to know or be aware of it. This will include distribution to:

- Risk Managers
- Health & Safety Officers/Advisors
- Clinical Governance Leads
- Medical Directors
- Clinical Directors
- Nurse Directors
- All Wards
- Medical, Nursing and Care Staff
- Respiratory Care Nurse Specialists
- Special Care Baby Units
- Theatre Managers
- Practice Nurses
- Directors of Public Health
- District Nurses
- Lead Nurses
- Palliative Care Nurses
- Specialist Home Enteral Feeding Nurses
- Independent Health and Social Care Providers – Private Clinics, Residential and Nursing homes through HSS Board R&I Units

6. CONTACTS:

Clinical guidance enquiries to the National Nurses Nutritional Group should be addressed to:

Mrs Lynne Colagiovanni
Nutrition Nurse Specialist
Queen Elizabeth Hospital
Dept. of Nursing
University Hospitals
Edgebaston
Birmingham B15 2TH
Tel: 0121 627 2094
E-mail: lynne.colagiovanni@uhb.nhs.uk

Enquires to NIAIC should quote reference number MDEA(NI)2004/29 and be addressed to:

Northern Ireland Adverse Incident Centre (NIAIC)
Health Estates
Estate Policy Directorate
Stoney Road
Dundonald
Belfast BT16 1US

Tel: 028 9052 3868
Fax: 028 9052 3900
Email: NIAIC@dhsspsni.gov.uk

7. FEEDBACK:

Please report malposition of nasogastric feeding tubes to NIAIC



Brian Godfrey
NIAIC Manager

HOW TO REPORT ADVERSE INCIDENTS

Adverse Incidents relating to medical devices, non-medical equipment, plant and buildings should be reported to NIAIC as soon as possible. Advice on how to report is given in MDEA(NI)2004/01. If you are in doubt about how to report incidents, please speak to your liaison officer or contact NIAIC using the telephone number provided. Adverse Incident reporting forms and an on-line reporting facility are available on the NIAIC website at www.dhsspsni.gov.uk/niaic

Heath Estates is an Executive Agency of the Department of Health, Social Services and Public Safety