ENTERAL FEEDING SYSTEMS: RISK OF CONTAMINATION AND INFECTION

SUMMARY

Enteral feeding systems are susceptible to microbial contamination which may result in systemic infection, particularly in vulnerable or immuno-compromised patients. Advice is given on good practice for healthcare staff.

BACKGROUND

1. Manufacturers of enteral feeding system components may designate their products for either single-use or single patient use or reuse; for definitions see MDA Device Bulletin DB2000(04).

2. One of the main risks associated with enteral feeding is microbial contamination which can cause systemic infection. This is particularly significant for vulnerable patients including neonates, patients with burns and those with compromised immune systems. Microbial contamination can be caused by inappropriate handling and cleaning of the feed and delivery system, extended hanging times and poor hygiene practice.

3. This notice has been produced to address variations in clinical practice involving the selection and management of enteral feeding system components. It is aimed at components such as feeding bags, giving sets, extension sets, and feed assembly components rather than naso-gastric tubes and implanted components. It takes into account advice provided by the Medical Devices Agency’s Microbiology Advisory Committee.

4. The Medical Devices Agency has published updated advice on the implications and consequences of reusing designated single-use devices; see Device Bulletin MDA DB2000(04). In summary:
   a) Devices designated single-use must not be reused under any circumstances.
   b) The reuse of single-use devices can affect their safety, performance and effectiveness, exposing patients and staff to unnecessary risk.
   c) The reuse of single use devices has legal implications.
   d) Adverse incidents involving enteral feeding systems should be reported (to the Incident Reporting and Investigation Centre at Scottish Healthcare Supplies).

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SCOTTISH HEALTHCARE SUPPLIES
Gyle Square Edinburgh EH12 9EB
A Division of the National Service Scotland for NHSScotland

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FAX: 0131 314 0722   E-MAIL: iric@shs.csa.scot.nhs.uk
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ACTION

5. This notice should be brought to the attention of all appropriate managers, staff and users.

6. Appropriate enteral feeding system components should be selected in accordance with the needs of each individual patient taking into account the risk of microbial contamination and the clinical condition of the patient. Sterile single-use feeding system components should be selected for those with compromised immune systems and other vulnerable patients.

7. The number of connections in enteral feeding systems should be minimized.

8. All staff involved in the preparation and administration of enteral feeding systems should be fully trained.

9. Enteral feeding system components which are designated single-use should not be re-sterilized or reprocessed. It is recommended that single-use components used for continuous feeding are replaced after a maximum of twenty-four hours.

10. Local procedures should exist to control the reuse of single patient use components. In the case of enteral feeding administered as a series of intermittent feeding episodes, single patient use tubes should be washed out with cooled-boiled water or sterile water when feed is not being delivered.

11. It is recommended that single patient use components which are difficult to clean thoroughly, e.g. giving sets, are discarded after a maximum period of twenty-four hours.

12. If the manufacturer’s reprocessing instructions are not clear or if they are not available, the components should not be reprocessed or reused.

13. Healthcare staff should observe appropriate hygiene procedures when handling enteral feeding system components, and hands should always be washed meticulously. In addition, alcohol hand-rub may be used to decontaminate clean hands. Consideration should also be given to the wearing of gloves and masks.

14. Patients who administer their own feeds do not normally require to wear gloves, but they should be taught how to wash their hands and use alcohol hand-rub if required.

15. Ready-made, full strength feed should be used if possible and decanting should be avoided.
SAFETY ACTION NOTICE
By arrangement with the Scottish Executive Health Department

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16. Feed that is reconstituted prior to use should be prepared under suitably controlled conditions in order to minimize possible contamination. Feed may be reconstituted using either cooled-boiled water or sterile water. Sterile water should always be used to reconstitute feeds for vulnerable patients including neonates, patients with burns and those with compromised immune systems.

17. Feed should not be used beyond its expiry date, and hanging time should be within that defined by the manufacturer or local policy.

18. Each feeding system should be labelled with the patient’s name, the date and time that the feed was set up and the time that the feed is due for completion.

REFERENCES

References for further reading provided by Medical Devices Agency (MDA)


ENQUIRIES

The British Association for Parenteral and Enteral Nutrition
BAPEN Office, Secure Hold Business Centre
Studley Road
Redditch
Worcs
B98 7LG

Website www.bapen.org.uk

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