Estates & Facilities Alert

Ref. DH (2010) 03
Gateway Ref. 14265

	IMMEDIATE ACTION	
For:	**ACTION**	✓
	INFORMATION	
	UPDATE	

Issued: 05/05/2010

Action underway by: 24/05/2010

Action completed by: 30/11/2010

	Section
Equipment: Flexible water Supply Hoses	
Problem: When used for the supply of potable water, flexible hoses may have an enhanced risk of harbouring Legionella bacteria and other potentially harmful microorganisms.	► ①
Action: Flexible hoses used in potable water supply systems should be identified and risk assessed for the possibility of contamination with harmful microorganisms.	► ②

Action by:

Chief Executive/Board Member with special responsibility for health and safety, in accordance with local procedures, should ensure that this alert is brought to the attention of appropriate staff which may include:

- Liaison Officers
- Risk Managers
- Health & Safety Officers/Advisors
- Clinical Governance Leads
- Estates Managers
- Directors of Mental Health
- Directors of Public Health
- Day Care Centres
- Independent Health and Social Care Providers – Private Clinics, Residential and Nursing Homes

CONTACTS:

Enquires should quote reference number DH (2010) 03 and be addressed to:

Defects & Failures
Department of Health
Estates & Facilities Division 3N12
Quarry House
Quarry Hill
Leeds
LS2 7UE
Email: mb-defects&failures@dh.gsi.gov.uk

Manufacturers details where appropriate

This Alert is on our web site: http://www.dh.gov.uk

1. PROBLEM:

1. Flexible hoses (also known as 'tails') are often used in the supply of water to equipment such as baths, wash hand basins, showers, ice making machines, dish / glass washers, drink vending machines, drinking fountains, endoscope washers, clothes washing machines and wash down hoses (please note that this list is not exhaustive). They may also be connected to system components such as pressure reducing valves, non-return valves, strainers, thermostatic mixing valves and shower mixers.

2. Flexible hoses may be used to link between hard pipework and equipment, often for convenience rather than being necessary. They are typically steel braided with a synthetic rubber inner lining such as EPDM (ethylene propylene diene monomer).

3. Health Facilities Scotland (HFS) has received reports that high levels of *Pseudomonas* and *Legionella* bacteria have been found in water samples taken from water outlets fed by flexible hoses, confirmed by testing of the hoses, which revealed colonisation of the lining. The lining of the material in these reports was EPDM. However, it is possible that other lining materials (and washers within the couplings) could be similarly affected.

4. New lining materials such as PE (polyethylene), PEX (cross-linked polyethylene), LLDPE (linear low-density polyethylene) and PVC C (post-chlorinated PVC) are now on the market and others are likely to follow. However, their long-term performance regarding the growth of microorganisms is still unknown. Changes in this situation may be reflected in future guidance.

5. This notice applies to flexible hoses from mixed water supplies as well as to separate hot and cold water systems and feeds. This notice is **not** concerned with primary heating circuits, sealed chilled water systems or shower hoses (between mixer and showerhead).

2. ACTION:

6. This notice should be brought to the attention of all appropriate managers and staff, and in particular to capital planning / estates / facilities managers and their design teams and contractors.

7. Flexible hoses used in potable water supply systems should be identified and risk assessed for the possibility of contamination with harmful microorganisms.

8. An action plan should be developed by the health provider, which gives priority to areas of highest risk (i.e. those with persons vulnerable to infection). Depending on the risk assessment, the action plan should address replacement of flexible hoses with hard or soft bendable metal or plastic pipes.

9. Where flexible hoses must be used (e.g. on essential equipment such as hi-low baths) they must be lined with a suitable alternative to EPDM, as well as being WRAS approved. Care should be taken to avoid kinking or distorting them during installation.

10. Risk assessments should be reviewed regularly and whenever there are changes to the patient user group or alterations made to the potable water system.

11. Enquiries regarding specific types of flexible hose should be directed to the manufacturer/supplier.

This Alert is on our web site: http://www.dh.gov.uk

3. REFERENCES:

12. Health Technical Memorandum 04-01: *The control of Legionella, hygiene, 'safe' hot water, cold water and drinking water systems*

4. BIBLIOGRAPHY:

13. EPDM flexible hoses, The Water Regulation Advisory Scheme (WRAS), January 2006

14. Dr T Makin (2007) *Legionella – infection prevention studied*, Health Estate, Journal of the Institute of Healthcare Engineering and Estates Management, Volume 61, No: 10

15. Dr J Rogers, et al. (1994) Influence of plumbing materials on biofilm formation and growth of Legionella pneumophilia in potable water systems, Applied and Environmental Microbiology, Volume 60, No: 6, pl1842-51

HOW TO REPORT DEFECTS & FAILURES

Defects and failures relating to non-medical equipment, plant and buildings should be reported to the Department as soon as possible. Advice on how to report can be found in DH (2008) 01. Defect and failure reporting forms and an on-line reporting facility are available on the NHS Information Centre website at www.efm.ic.nhs.uk