



Patient Safety Alert

Stage Three: Directive

Legionella and heated birthing pools filled in advance of labour in home settings

17 June 2014

Alert reference number: NHS/PSA/D/2014/011

Alert stage: Three - Directive

The following information and required action is based on advice from Public Health England:

Clinical issue

A severely ill neonate is known to have contracted *Legionella pneumophila* infection (Legionnaire's disease) following a home birth in a heated birthing pool that was filled in advance of the onset of labour. *Legionella* was isolated in samples from the pool.

Legionnaire's disease is extremely rare in childhood. From 1990-2011 there was only one case in children aged 0-9 years reported in England. Therefore, testing for legionella in ill neonates is not routinely part of neonatal infection screens.

There are two international reports of legionella infection after birth in birthing pools, both from the late 1990s.^{1,1}

Heated birthing pools

There are a number of companies providing heated pools for hire. The pools are delivered around **two weeks** before the expected delivery date, immediately filled from the domestic hot water supply, and the temperature maintained via a pump and heater until labour and delivery. If *Legionella* is present in the pool pump equipment or the domestic supply, the warm water in the heated pool provides ideal growth conditions, potentially over several weeks.

Various disinfection regimes are recommended by the companies. There appears to be no specific routine assessment of *Legionella* risk in the information provided by the companies.

- This alert is to highlight the importance of women not labouring or giving birth in a birthing pool which has been filled prior to the onset of labour **and** where the temperature has been maintained by use of a heater and pump.
- It is essential to note that this alert does NOT refer to birthing pools **of any type** which are filled from domestic hot water systems **at the time of labour**.
- **Pumps of any type** should be used solely for pool emptying and not for recirculation.

Investigations by the relevant local authorities and the Health and Safety Executive continue.

¹ www.cid.oxfordjournals.org/content/33/9/e103.full

¹ www.ncbi.nlm.nih.gov/pmc/articles/PMC154682

For further advice please contact your local Public Health England Health Protection Team

www.hpa.org.uk/AboutTheHPA/WhatTheAgencyDoes/LocalServices/

Actions

Who: All NHS organisations providing midwifery, neonatal and microbiology services

When: As soon as possible but no later than 30 June 2014



Disseminate this alert to all Heads of Midwifery, Neonatal Operational Delivery Networks, Local Supervising Authority Midwifery officers, Trust Directors of Infection, Prevention and Control (DIPCs), Microbiologists, Neonatal Paediatricians.



Organisations should ensure that heated birthing pools (incorporating both a pump and heater) ***filled in advance of labour***, are not used for labour or birth, in the home setting, until definitive advice on disinfection/safety is available.

Birthing pools which have been filled at the ***time of onset of labour*** in the home setting are excluded from this action provided that pumps are used solely for pool emptying and not for recirculation.



Legionnaires' disease should be considered in the differential diagnosis of severe respiratory infection/sepsis in any neonate who had a water birth. Appropriate advice should be taken from a microbiologist.



As a precautionary measure organisations should confirm any birthing pools within hospital control are covered by the organisation's *Legionella* Management Control Policy/Procedures.