To date, one patient in Australia and more than 50 patients worldwide have been identified with Mycobacterium chimaera infections associated with heater-cooler devices (HCDs) used during cardiac surgery. There is evidence to suggest that patients are infected when bacteria in the device’s built-in water reservoirs becomes airborne. The risk for mycobacterial infection from contaminated aerosols from HCDs is considered to be very low compared with the overall risk of surgical and valve infection.

In September, the Australian Commission on Safety and Quality in Health Care (ACSQHC) issued attached National Infection Control Guidance relating to HCDs, which include recommendations for microbiological baseline testing of all HCDs in service.

Consistent with the guidance issued by the ACSQHC, the TGA recommends baseline testing, then follow-up testing in accordance with the manufacturer’s instructions.

The Clinical Excellence Commission recently convened an expert working group to develop attached recommendations for undertaking water testing of HCDs. The working group recommends that:

- Heterotrophic plate testing (HPC) should be performed
- Water sources to test include tap water after it is filtered; the circuits for both heating and cooling; and, if used, the cardioplegia circuit
- Initially, water be tested monthly for three months; then three monthly if colony forming units (cfu) counts are consistently below an agreed minimum
- While there are currently no available international or Australian standards for water quality in HCDs, an initial cut-off of 200 cfu/ml with a review after 6 months testing would be appropriate.

The CEC strongly recommends that NSW public health facilities using HCDs during cardiac bypass surgery implement the expert working group’s recommendations.

The CEC will review the results of HPC testing after six months.

Should you or your staff have any enquiries, please contact Dr Paul Curtis, Director Governance and Assurance, by phone on 9269 5569 or by email at paul.curtis@health.nsw.gov.au.

Yours sincerely

Carrie Marr
CHIEF EXECUTIVE