

# Scottish Guidance for Decontamination and Monitoring of Cardiac Heater Cooler Units.

## Description

*Mycobacterium chimaera* is a non tuberculous mycobacterium which is a member of the *Mycobacterium avium* complex, an environmental organism commonly found in tap water. Clinically the bacteria is associated with respiratory disease or disseminated disease in immunocompromised patients. *M. chimaera* has been implicated in over 100 cases of prosthetic valve endocarditis and disseminated mycobacterium disease throughout Europe and the USA since 2011 which has been linked to contaminated water heater cooler units (HCU) used during cardiac surgery. Whilst no clinical cases were identified in Scotland a national incident team recommended the production of national guidance for the decontamination of HCUs in NHSScotland.

## Methodology

A rapid review of the scientific literature was undertaken to review the decontamination of HCUs and informed the background to the guidance document. All four cardiac centres in Scotland were visited and processes observed and discussed. Manufacturers instructions were reviewed and included as part of the process with the inclusion of standard infection control precautions as per the national infection prevention control manual (NIPCM).

## Aims/Objectives

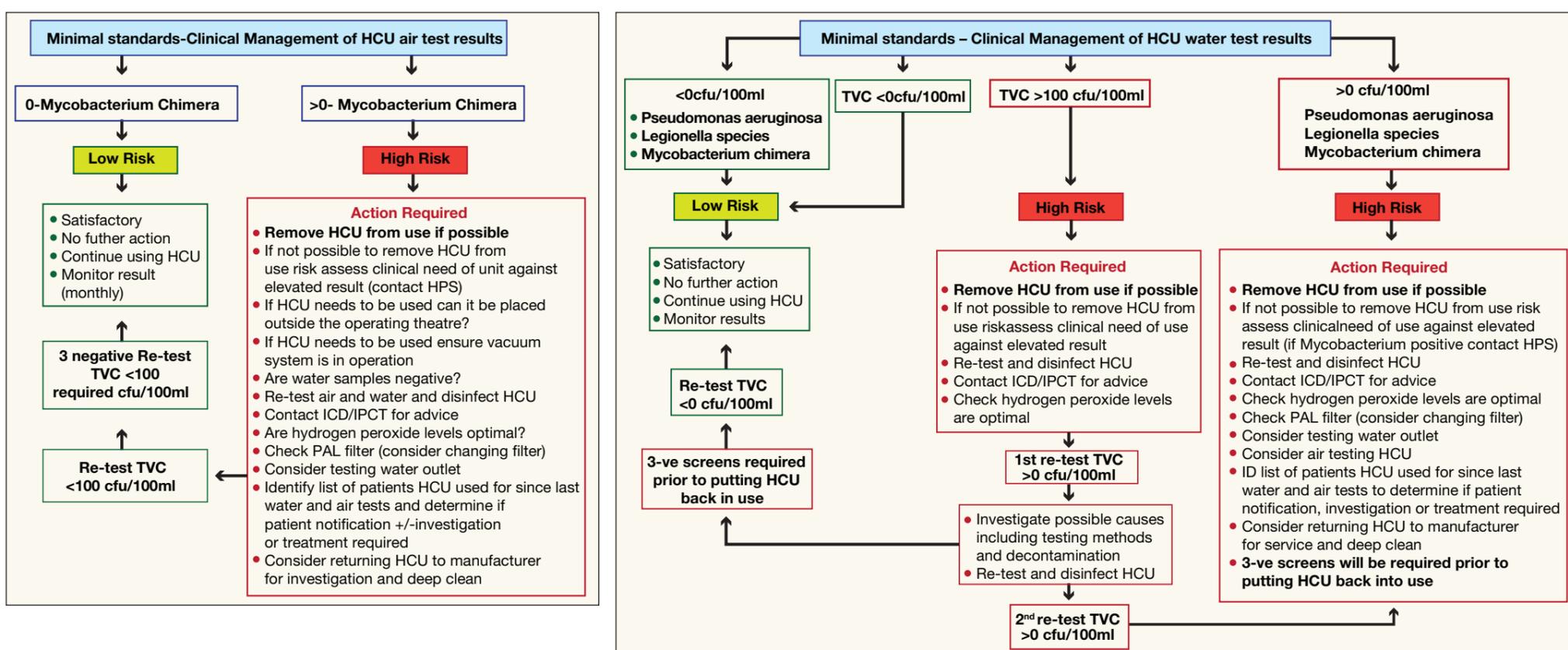
HCUs are not classed as a reusable medical device as they do not come in to contact with the patient however they must be maintained according to the manufacturer's instructions. The aim of this guidance is to standardise practice across Scotland for the decontamination of HCU and for the monitoring of water results whilst maintaining compliance with manufacturers instructions.

## Results/Outcomes

Overall all four national centres are following the guidance laid out within the PHE Infections Associated with Heater Cooler Units Used in Cardiopulmonary Bypass and ECMO Scottish Appendix. Some variation to Practice was evident but this was agreed locally following discussions with the local Infection prevention and control team and/or the water safety group. All centres during the visits welcomed a national guidance document especially regarding the management of water testing results.

A number of recommendations have been made for the decontamination of HCUs within NHSScotland. The recommendations cover; Risk assessments, Technical requirements water supply management, Infection control management, Decontamination, Microbiological testing and testing result actions.

With algorithms for water and air testing results for use when interpreting results and corresponding actions.



## References

Health Protection Scotland. (2019) NHSScotland Guidance for Decontamination and testing of Cardiac Heater Cooler Units (HCUs). Health Protection Scotland. Available from; <https://www.hps.scot.nhs.uk/web-resources-container/nhsscotland-guidance-for-decontamination-and-testing-of-cardiac-heater-cooler-units-hcus/>

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