

water

■ HYGIENE CENTRE



Sherwood Forest Hospitals NHS Foundation Trust

An engineering risk assessment minimises the risk of *Pseudomonas aeruginosa* contamination and saves lives.

Context: In 2012 an outbreak of *Pseudomonas aeruginosa* in Belfast, resulted in the deaths of 3 new-born babies, infections with *Pseudomonas aeruginosa* have become a real concern in hospital acquired infections.

The Challenge

The dutiful completion of water sampling for *Pseudomonas aeruginosa* within the augmented care facilities at King's Mill Hospital (every 6 months, in line with HTM04-01 Part C) started to return an increased number of positive water sample counts at various locations. The sample results were reviewed by the Water Safety Group [WSG] and it was agreed that a more detailed understanding of the potential causes was needed. The WSG commissioned an engineering assessment of the augmented care areas to help with the root cause analysis.

During the previous 12 months (essentially two rounds of sampling for *Pseudomonas aeruginosa*) the number of positive water samples were increasing. It is inevitable that there will be some positive counts with each round of sampling and action taken to resolve those sporadic counts. However, repeat counts at outlets for each period of sampling 'flagged' up more of a concern to the WSG. The Consultant Microbiologist was keen to explore all potential causes for the counts. For example, was there a failure in local use and management of the outlet that the sampling programme was detecting?

**“The Trusts’
Authorising Engineer
[Water] was able
to outline what
an engineering
assessment would
include and how
this would identify
engineering issues
at the outlets”**

**Ben Widdowson
Head of Estates & Facilities**

The Solution

The clinical risk assessment completed by the Infection Prevention Control team had already identified the six areas within the hospital classed as augmented care. The engineering assessment focused on all outlets in these six areas and 298 outlets were assessed in total. The onsite assessment took eight days, the risk assessing being supported by the Estates Competent Persons who were able to facilitate access to the areas, as well as 'behind' the scenes i.e. IPS panels.

For each outlet there were thirty six criteria assessed, such as who uses the outlet, the type of fittings, dimensions of the outlet, details of associated components, the hot and cold water supply temperatures, frequency of use and relative proximity of soap, sanitiser and towel dispensers.

The Results

The engineering risk assessment was reported in an Excel spreadsheet with a separate worksheet being dedicated to one of the six augmented care areas. Having the report format in Excel had two benefits; the ability to filter data quickly and the conditional formatting allowed for quick identification of non-compliant occurrences through cell colouring. This format allowed the WSG to quickly assimilate the number of issues at each outlet, occurrences such as use of flexi hoses, poor position of return loops, failing return loop temperatures, excess use of components associated with the outlets.

At the time of drafting the case study the engineering assessment action plan was under review by the WSG for agreeing the proposed means of mitigating the risk from Pseudomonas aeruginosa.

About King's Mill Hospital

King's Mill Hospital is part of the Sherwood Forest NHS Foundation Trust, which provides hospital services for 420,000 people across Mansfield, Ashfield, Newark, Sherwood and parts of Derbyshire and Lincolnshire. The Trust has three hospitals, King's Mill, Newark and Mansfield Community Hospitals, as well as running some services from Ashfield Community Health Village. In 2016-2017 the Trust helped deliver 3,400 babies and saw 150,000 patients at the King's Mill Emergency Department.

Water Hygiene Centre Services

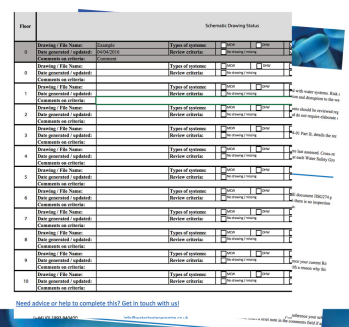
The Water Hygiene Centre has a wealth of experienced, qualified and dedicated consultants with over 60 years' experience, all of which offer unbiased, independent advice and support. As a company we aim to establish long term relationships with our clients providing them with continuity and assurance of expert risk management solutions for water hygiene and legionnaires disease.

If you would like to find out more about risk management and water safety visit www.waterhygienecentre.com or book a free consultation.

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Sewerage Cleaning Station					
Panel	Work	Location	Notes	Priority	Status
1	Check for leaks	Panel 1	Leak at floor level	High	In Progress
2	Check for leaks	Panel 2	No leaks detected	Low	Complete
3	Check for leaks	Panel 3	Leak at ceiling level	Medium	Pending
4	Check for leaks	Panel 4	Leak at wall level	Medium	In Progress
5	Check for leaks	Panel 5	Leak at floor level	High	In Progress
6	Check for leaks	Panel 6	No leaks detected	Low	Complete
7	Check for leaks	Panel 7	Leak at ceiling level	Medium	Pending
8	Check for leaks	Panel 8	Leak at wall level	Medium	In Progress
9	Check for leaks	Panel 9	Leak at floor level	High	In Progress
10	Check for leaks	Panel 10	No leaks detected	Low	Complete