Taking decontamination into the community

Portable and easily transportable HPV foggers aid award-winning cleaning initiative at North Tees and Hartlepool NHS Foundation Trust

How do you stop *Clostridium difficile* coming into a hospital? In an innovative solution North Tees and Hartlepool NHS Foundation Trust has taken hospital training and decontamination standards into the community, helping to dramatically reduce infections.

The scheme won national recognition, winning the Nursing Times Infection Prevention and Control Award 2012. A key element of the process has been the use of small, easily transportable, yet highly efficient HPV fogging units, which the trust also deploys as part of the room decontamination process across its hospital sites.

Graeme Kelly, the trust’s operations quality and infection control manager, told *Inside Hospitals* “We had been using HPV fogging units as part of the trust decontamination process for some time. As part of this we deliver a ward decent programme whereby we decant, deep clean and bio-decontaminate the equivalent of 40 to 50 wards per year. While the system we had was effective the machines were relatively large and not easy to move around.

Within the trust we operate a proactive and a reactive service. We were looking for a portable and easily transportable solution to make the hospital fogging process easier and to enable us to offer the service to the community. We wanted to use the small and light weight Oxypharm units from Innotec Hygiene Solutions for the efficacy we need. The portable nature of the product has been highly enabling to us to provide services across the trust and to the wider community.”

After undertaking the initial assessment with a trial unit using both indicator strips and gas detectors fitted with hydrogen peroxide sensors in order to measure the safety and effectiveness of the system, Graeme explained: “They are easy to use and the process is quick too. The time element is critical to all hospitals. Using the fogging units, the teams are able to return an area to the clinical staff very quickly, ensuring patient flow is not adversely affected.

Ward hygienists Sharon Howard, Angela Alderson, Kirsty Coulson, and Karen Brown lead the trust’s deep clean team which undertakes a rolling programme of ward decontamination as part of the ward decent programme, whilst also offering the reactive and proactive service to all wards and departments at University Hospital of Hartlepool and University Hospital of North Tees. The team also undertakes the community decontamination aspects of the award-winning service.

Sharon explained: “The decontamination team was set up four years ago. We have a decent ward and have been providing the service to each ward and department, even those which are unable to decant such as critical care and neonatal wards where we provide what’s called an in-situ programme.

“We also aim to decontaminate every room which has been occupied by a patient with C. diff.”

Kirsty said: “The porters had to move the HPV machines we originally used, which were heavy and awkward to transport. They were large and constantly breaking down due to coming to the end of their serviceable life."

“The new machines are so straightforward to use and portable, they make it very easy. We have a good working relationship with domestic and infection prevention and control.”

The trust has six Oxypharm machines in total - five machines at North Tees and one at Hartlepool.

The nursing UAC and infection control teams said that the machines are compact, easy to transport, uncomplicated to programme, straightforward to use and very lightweight. A wheeled bag makes movement around the hospital corridor.”

Kevin added: “I feel the area of decontamination in care homes in relation to *C. difficile* infections has not so far received the attention it should nationally as the impact on the hospital discharge burden, although currently not well defined, could be large. “Our trust, with the introduction of our innovative: pathways to healthcare programme offers a unique vision for improving collaboration in healthcare between hospitals and the community. Consequently, healthcare for the patient does not end on discharge but is extended onwards with the aim of keeping patients in a safer environment in the community. “This project has resulted in a no re-occuring *C. difficile* over a year in care homes - a significant improvement on previous years.”

Describing the award-winner health economy approach to reducing *C. difficile*, the trust’s operations quality and infection control manager, said: “The trust’s overall aim of the project were:

1. To prevent hospital admissions relating to *C. difficile* infections (toxin-positive or symptomatic PCR)
2. To reduce the hospital *C. difficile* infection burden since 2009. The community aspect of the trust’s decontamination service is coordinated by Kevin Lawler, infection prevention and control nurse specialist, and Gill Roberts, infection control nurse-care homes.

Outlining the scenario many hospitals face, Kevin explained: “The trust employs a team of ward hygienists who have successfully provided a high standard specialist deep cleaning and decontamination service to our wards since 2009. The infection prevention and control department works very closely with ward staff to utilise this service.

― After discharge from hospital, there is a significant potential for the patient to be returning to a room which has been insufficiently cleaned and consequently exposed to spores. Similarly, repeat occurrences of *C. difficile* infection within the care home where there are a significant resident population, can lead to an eventual hospital admission and subsequent spore dispersal. Mismanagement of spore dispersal may lead to subsequent colonisation of other residents, potentially leading to either further infection or even attributable, symptomatic, *C. difficile* episodes.”

The overall aims of the project were: "To prevent hospital admissions relating to *C. difficile* infections (toxin-positive or symptomatic PCR)"

"To reduce the hospital *C. difficile* infection burden since 2009."