

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



Graeme Kelly, the trust's operations quality and decontamination manager

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 decontamination 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 decant 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



University Hospital of North Tees



Decontamination team: (left to right) Kirsty Coulson, Karen Brown, Julia Kitchen, Jayne Arnold, Diane Stead, Veronica Collier, Sharon Howard, Angela Alderson and Andrew Williams

process easier and to enable us to offer the service to the community.

"The small and light weight Oxypharm units from Innotec Hygiene Solutions have the efficacy we need. The portable nature of the product has been key to enabling 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 decant 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 decant 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. Neill Simmons, of Innotec Hygiene came in to give a demonstration, added Kirsty:

"After working with the other equipment you think 'this can't be all there is to it, it's too easy'. It's small, which is very important and so easy to use."

After sealing ventilation and isolating smoke alarms in the room, the team place indicator strips around the area to be decontaminated - these change colour indicating the strength of the chemical. The process is also safe for all clinical equipment which is placed in the area for decontamination too. Mattresses are opened up so that the machines can 'fog' inside, as are cupboards and drawers.

Once the dimensions of the area to be decontaminated have



Compact: the machines are easily moved in a wheeled bag

been calculated and 'dialed' into the simple to operate machines it's a relatively quick process - just six to nine minutes for the actual HPV dry gas dispersal process, and up to 45 minutes contact time, so the rooms are now cleaned, bio-decontaminated and handed back in three hours. That's all it needs to 'do its magic'. Once the process is complete a gas detector fitted with a hydrogen peroxide sensor meter is used to check that there is no residual HPV.

Sharon said: "We use one machine in a side room, one in a bay, and two or three in a



Lesley Wharton, assistant director of nursing and infection prevention, and Kevin Lawler, infection prevention and control nurse specialist

corridor."

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

The ward hygienists said that the machines are compact, easy to transport, uncomplicated, easy to programme, straightforward to use and very light. A wheeled bag makes movement around the hospital



very simple, while the lightweight machines can easily be transported to community locations in the boot of a car

With time being such a crucial factor, the team was equally enthusiastic about the speed of the Oxypharm process. "We do a side room in an hour," said Kirsty.

Sharon added: "A bay, once cleaned, can take just two hours. The nursing staff can't believe it can be done so quickly and efficiently."

"We have a good working relationship with domestics and infection prevention and control."



HPV power: the trust has six of the compact Oxypharm HPV machines across two sites

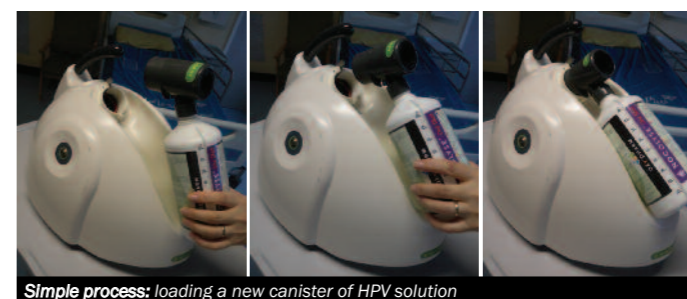
The community aspect of the trust's decontamination service is coordinated by Kevin Lawler, infection prevention and control nurse specialist, and Gill Roberts, infection control nurse-care homes.

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 symptomatic residents may lead to an eventual hospital admission and consequent spore dispersal. Mismanagement of spore dispersal may lead to subsequent colonisation of other residents, potentially leading to either an outbreak or non-attributable, symptomatic, *C. difficile* episode."

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. diff* infection burden the service has



Simple process: loading a new canister of HPV solution

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 disease burden, although currently not well defined, could be large."

"Our trust, with the introduction of our *momentum: 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 outwards with the aim of keeping patients in a safer environment in the community."

"This project has resulted in a no re-occurring *C. difficile* over a year in care homes - a significant improvement on previous years."

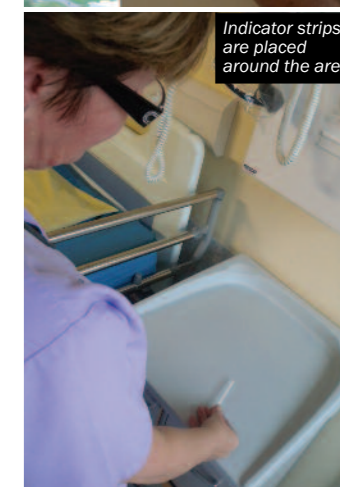
Describing the award-winning health economy approach to reducing *C. difficile*, the *Nursing Times* stated: Healthcare is struggling to reduce *C. difficile*. Often affected patients have numerous hospital admissions. Some have been returned to care homes and have recurrent symptoms. The trust's infection prevention and control/facilities teams offers a service to care homes to train, educate and support nurses and carers to understand and manage infection control rates. The same cleaning and HPV fogging service used in the hospitals is offered to care homes, along with training and education and support to safely care for

residents in the care home. This is a true healthcare economy project between care homes, the foundation trust and commissioners.

- To increase collaborative working between community organisations and the Trust in order to share knowledge and expertise
- For care homes to view the deep cleaning process with buy into the hospital decontamination service
- To prevent 'bed blocking' within care homes during an outbreak.



Laser-aided room sizing is straightforward



Indicator strips are placed around the area



Checking for any residual HPV

residents in the care home. This is a true healthcare economy project between care homes, the foundation trust and commissioners.

For more, call Neill Simmons at Innotec Hygiene Solutions on 07791 797955, e-mail neill@innotechygenesolutions.com or visit www.innotechygenesolutions.com

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