Quick, simple, low cost HPV boosts infection control at Derby
Less than an hour to decontaminate a four-bed bay

Derby Hospitals NHS Foundation Trust is making good use of low cost, easy to use Oxypharm HPV machines - with outstanding results.

Describing earlier trials of various disinfection options, Helen Forrest, lead nurse infection prevention and control, told Inside Hospitals, "We've done a research project, taking over eight side rooms and infecting them with C. diff 017. Using the same staff to ensure consistency, each room was treated with a different disinfectant. The eight treatments were chlorine releasing agent, sporidical wipe, microfibre, microfibre with chlorine releasing agent, hydrogen peroxide vapour, steam, super heated steam, and ozone. We looked at the kill rates for the bacteria, and brought in a Health Economy team, who looked at the cost, time factor and cost.

"We graded all to come up with a top three, all statistically better than the control, Oxypharm HPV, chlorine releasing agent, and sporidical wipe. We then did a larger trial in a four-bedded bay with all the normal furniture and an en suite. We've had some indicator strips in which are typically hard to reach areas when doing a deep clean - bed mechanism, curtain track, plug hole, shower head, bedside drawer, for example. The Oxypharm unit was placed in one corner and the door of the en suite left open. Once the room area had been entered it took about six minutes for the actual HPV dry gas dispersal process and about 45 minutes for the contact time. That's all it needs to do its magic. So in an hour the room was ready to be used.

"And the result? It was brilliant," said Jackie. "All the indicator strips changed colour. We were shocked." Helen agreed, adding: "It does exactly what it says on the tin. The trial was repeated in a single room with an en suite, again with the indicator strips. And again Oxypharm worked perfectly. The beauty of the 6% HPV we use is that it's not strong enough to cause any problems - we feel perfectly safe, yet it gives outstanding results," added Jackie. Each trial was completed within an hour.

"We've had eight side rooms and infecting them with C. diff 027. Using the disinfectant - a microfibre with chlorine releasing agent, hydrogen peroxide vapour, steam, super heated steam, and ozone. We looked at the kill rates for the bacteria, and brought in a Health Economy team, who looked at the cost, time factor and cost. We graded all to come up with a top three, all statistically better than the control, Oxypharm HPV, chlorine releasing agent, and sporidical wipe. At the time we were using chlorine releasing agent and sporidical wipe, so we stayed as we were."

"The Oxypharm machine takes up to 21 full ward closures in a service. We've good cleaning standards, so we're effectively deep cleaning clean. We have the validations from Oxypharm and felt that with the trials we've done that the 6% concentration is sufficient, and that's been the case. We know we can go to 12% if we want to. Neill, MD of Oxypharm's UK supplier Innolyte Hygiene Solutions, explained: "The machine uses a non-corrosive, non-allergenic biodegradable gas, with no residue. The disinfectant range comprises both 6% - as used at Derby - or 12% hydrogen peroxide in distilled water, for preventative or curative treatments respectively. Their nebulised diffusion initiates the self-destruction of bacteria with no creation of resistance. They are totally bio-products, totally safe for the environment."

The latest test reports and outstanding independent test data illustrate impressive log reduction against numerous pathogens, including C. diff, MRSA, and norovirus. For more, call Neill Simmons at Innolyte Hygiene Solutions on 07791 797955, e-mail neill@innotechygenersolutions.com or visit www.innotechygenersolutions.com

Jackie Marriott, left, assisted head of facilities, Paul Brooks, assistant director of facilities management, and Helen Forrest, lead nurse infection prevention and control, explained: "The latest tests report sheets show that the deep cleaning clean. We have the validations from Oxypharm and felt that with the trials we've done that the 6% concentration is sufficient, and that's been the case. We know we can go to 12% if we want to. Neill, MD of Oxypharm's UK supplier Innolyte Hygiene Solutions, explained: "The machine uses a non-corrosive, non-allergenic biodegradable gas, with no residue. The disinfectant range comprises both 6% - as used at Derby - or 12% hydrogen peroxide in distilled water, for preventative or curative treatments respectively. Their nebulised diffusion initiates the self-destruction of bacteria with no creation of resistance. They are totally bio-products, totally safe for the environment."

Neill added: "We're working a floor by floor rota or a priority if there's a phone call from infection control.

Decontamination duo
In a four-week schedule the trust's decontamination team of David Derwent and one for Royal Derby Hospital's two-man HPV decontamination team works a split shift - one morning, one afternoon, with both in at weekends to treat outpatient areas and clinics. "The decontamination team has a four-week schedule to go around each ward and clinical area, enhancing the normal cleaning," said Jackie. "Nursing staff take all the equipment that's not being used, such as drips stands, commodes, and note trolleys, into an available side room, decontaminating everything with HPV. It's entirely safe for equipment. Oxypharm have done a lot of validations. It gives an 'icing on the cake' clean to all the equipment."

"We use Oxypharm for norovirus and C. diff in terminal cleans. Whenever the team is doing a four-bedded bay the wards put the equipment in there too," added Jackie. "Besides the beds and side rooms, we've done the sensitive meter on the 'safe' side and it didn't register anything."

Inflatable door for faster, easier cleaning
Two-minute solution creates isolation area and helps cleaning teams

Better Healthcare Awards in 2011 and the PATVTS Patient Choice Award at the same event.

The Derby Door has now been in production for three years, with the trust receiving a third of these products, and a batch of the first doors off the production line. These are regularly used throughout the hospital where it is a boon to cleaning and infection control. "It takes just two minutes to inflate and there's an emergency deflate," explained Paul. "It's self-sealing - you don't need to keep blowing it up. We can use them back to back to make an air lock. There's an advantageously low rate for NHS hospitals of £600 to £1,000 depending on the size of the door required. Sales have been to hospitals in the North and one on the South coast," said Paul. "And a hospital in Kent, Australia.

Helen Forrest, lead nurse infection prevention and control, added: "We use the Derby Door to isolate a four-bedded bay to simplify a cohort ward. It's a good visual barrier too and makes you think about what you should do when you go through."

Jackie Marriott, assistant head of facilities, said: "It's made of good quality material, with heavy duty welding. It's stood up to all the typical abuse you would expect - no punctures."

For more on the Derby Door, e-mail paul.brooks@nhs.net