Ensuring reusable equipment meets patients’ needs and infection prevention guidelines

Commode spillages can contaminate the hospital environment and compromise patient dignity. A team had equipment designs modified to address these issues.

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ABSTRACT Goodbody J, Gallo M (2010) Ensuring reusable equipment meets patients’ needs and infection prevention guidelines. Nursing Times; 106: 27, 15-17. This article describes the processes used by an infection prevention and control team to identify a commode chair that would meet the needs of patients in an acute teaching hospital, and could be easily cleaned and disinfected. Some of the strategies used to ensure the commode was fit for purpose could be applied when searching for other reusable equipment for patient use.

When the new build at University Hospitals Coventry and Warwickshire (UHCW) Trust was opened in 2006, the commodes used were deemed not fit for purpose. They did not fit correctly over the toilets, which differed in height and width, so body fluids were spilled onto floors, and they were rusting – this may have been caused by the disinfectant used to decontaminate them.

Universal precautions suggest all blood and some body fluids are potentially infectious (Ayliffe et al, 2000) so the clinical environment at UHCW was at risk of contamination from microorganisms every time one of the commodes was used over a toilet. Body fluid spillage onto the floor can also compromise patients’ dignity and expose people to unnecessary infection risk.

As part of the compliance criteria in the Health and Social Care Act (Department of Health, 2009), service providers must prevent occupational infection and protect their staff from exposure to infections that are communicable. Thus, use of these commodes could be viewed as a breach of the act.

BACKGROUND

Any equipment used by different patients must be decontaminated appropriately following each use (Pratt et al, 2007). Infection outbreaks may be associated with incorrect decontamination of equipment (Rampling et al, 2001). Commodes used by patients with C. difficile infection should be cleaned with agents that contain at least 1,000ppm of chlorine (DH and Health Protection Agency, 2008).

As the commodes were rusting and the disinfectant used by the trust was not listed in the manufacturer’s guidance, it was felt that an alternative commode, which would fit over all existing toilets and could be disinfected with 1,000ppm of chlorine solution, was required.

PURCHASING NEW EQUIPMENT

National guidance and evidence based guidelines on equipment decontamination must be considered when new equipment is purchased for hospital use. Companies that supply the NHS with reusable equipment, such as commodes, must first provide decontamination guidelines (Medicines and Healthcare products Regulatory Agency, 2006), which must be considered by any organisation before it purchases new equipment (MHRA, 2001). The DH (2009) states that manufacturers’ guidance should be followed when decontaminating reusable medical devices. If trusts do not comply with this and equipment is damaged by untested disinfectants, safety may be compromised and the guarantee may be void.

Decontamination considerations

Chlorine releasing agents – as recommended by DH and HPA (2008) for cleaning commodes used by patients with C. difficile – may not be compatible with all equipment. As UHCW already decontaminates commodes with agents containing 1,000ppm of chlorine, the infection prevention and control team (IPCT) had to ensure that any new models were listed as compatible with it.

Placing some components of the new commodes through a thermal disinfector was also considered as a means of achieving a high level of disinfection. The IPCT stipulated to potential suppliers that this must be also incorporated into decontamination guidelines of replacement models.

Search for a commode

After considering these factors, the IPCT decided to test a chair commode from Roma Medical. This already had many positive features, including an antimicrobial coating.

The commode was tested in two wards but did not fit correctly over the toilets. It became apparent that, because of the design of the toilets, no standard commode would fit and a bespoke design was required. The
IPCT also felt that the commode should be modified in order to reduce the number of dirt traps, making it easier to clean and disinfect.

Design modifications

The IPCT collaborated with the manufacturer of the commode to make a number of changes to the design. These included the following:
- Reducing the depth of the chair so the commode aperture could be placed centrally over hospital toilets;
- Increasing the height so the commode would clear all toilets when fitted with a bedpan rack;
- The development of a removable footrest for ease of cleaning;
- Redesigning the armrests as a single unit to remove dirt traps;
- Reaching agreement with the manufacturer of the thermal disinfecter used at the trust to ensure that parts of the commode could be deep cleaned in its washer.

Trial and evaluation

Once decontamination guidelines had been agreed and the commode modified according to specifications, a prototype was developed. This was sent to the orthopaedic wards to trial and evaluate for two weeks. In line with MHRA (2006) guidance, a senior nurse was given instructions on dismantling and reassembling the equipment to enable effective decontamination. These instructions were then cascaded to other staff members.

At the end of the trial period, evaluation forms were completed (Box 1). This resulted in a modification to the footrest bar at the request of an occupational therapist, who asked for it to be moved back slightly to enable optimal handling and moving technique. Following further assessment by the rehabilitation and physiotherapy therapists, the commode received a positive evaluation.

![FIG1. THE COMMODE WAS MODIFIED TO MEET THE TRUST’S NEEDS](Image)

Education and training

It is important that staff receive adequate training to use new equipment properly and decontaminate effectively using the correct disinfectants. The Nursing and Midwifery Council (2008) states that “nurses must be involved in appropriate training that will maintain and develop competence and performance”. Additionally, it is a requirement of the Health and Social Care Act 2008 that staff are educated to prevent and control healthcare associated infections (DH, 2009).

Once the final design of the commode had been agreed and evaluated in practice, the manufacturers undertook a robust training programme to educate staff on how to use the commode safely and how to dismantle and reassemble it to enable adequate decontamination.

To ensure that the commodes are being decontaminated correctly, the manufacturer agreed to undertake yearly audits at UHCW.

CONCLUSION

UHCW now has a commode that not only promotes patients’ dignity but also can be easily decontaminated. It reduces the risk of cross infection and therefore ensures staff are not put at risk through exposure to body fluids. This has been achieved by following national guidance and evidence based guidelines, and by working closely with a manufacturer to make the necessary modifications to the equipment. In the experience of the IPCT, most companies will collaborate with a trust in order to meet its needs if a problem with a product is identified.

This work has underlined the importance of following decontamination guidelines provided by manufacturers as well as checking the compatibility of disinfectants when purchasing new equipment for patient use. This not only protects the warranty of equipment but also reduces the infection risk to patients and staff. This article has also demonstrated the importance of evaluating new products in practice and collaborating with manufacturers and other members of the multidisciplinary team to ensure the product is fit for purpose.

REFERENCES


