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Home Help: How something as small as a bag could make a big difference in the NHS

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Home help

Theone Wilson explains how something as small as a bag could make a big difference in the NHS



To design a 21st century nursing bag that will improve productivity and reduce transmission of infections

Nursing bag	PhD project: the client would be the NHS	David Swann
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Product	Client	Designer	Brief
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With crowded hospitals and a greater range of treatments available, many patients choose to be looked after at home. Healthcare in the home, though, needs to be as well-thought-out as treatment in the hospital. PhD student David Swann has taken an often overlooked but always present element of nursing - the bag - and considered how this could be improved to reduce disease transmission and make healthcare easier.

Despite being an essential piece of any nurse's kit, the bag's design has not been updated for years. "Doctors and nurses can still buy leather gladstone bags, which were designed in the 19th century!" says Swann.

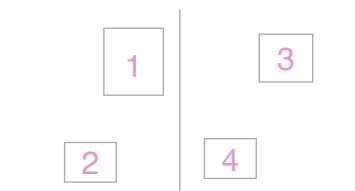
"The healthcare setting of the 21st century will be the home in both developed and developing countries," he continues. "Over 1 billion people on this planet receive patient healthcare

outside a hospital. In hospital the risk associated with catching a drug-resistant infection is one in 10 - outside this setting it can rise up to four in 10, according to the World Health Organisation." Hospital acquired infections (HAIs) are now considered to be a main disease threat in Europe.

The nursing bag plays a major part in this because it is transported everywhere that a nurse goes - the hospital, a sick patient's bedside, the boot of the car, another patient's home. Swann realised that it would be easy for germs to be transmitted in this way. A primary aim, then, in the redesign was to make patient safety a priority.

One flaw of the commonly used black bag is that it is hard

A primary aim in the redesign was to make safety a priority



In the bag | 1. Swann's nursing bag design 2. Opening and closing the bag 3. A hygienic workspace 4. Side view

to clean, encompassing many buckles and corners in which germs could hide.

Swann therefore ensured that his design is much easier to clean than previous models. He totally eliminated difficult-to-clean features such as clips, velcro buckles and straps. Meanwhile, the design has one main moulding, thereby avoiding part joints that can harbor bacteria. The drawer, too, is designed to be cleaned: it has an integral pull-lip rather than a drawer knob and slots on the side wall enable a 'wipe through' cleaning technique to be used.

Additional benefits of the design are that it can be used in a modular way with colour-coded compartments pre-packed with patient or treatment-specific materials or drugs slotted into the bag as needed; it is lightweight; and its hard non-permeable surfaces make it ideal to safely transport contaminated sharps.

A dedicated steering group from NHS East Riding supported the project, involving a broad cross-section of health professionals, from service development managers to community nurses. They helped in testing the bag; Swann organised a three-centre study to compare the effectiveness of the current bag against the new



via the simulated delivery of a leg ulcer dressing (the most common procedure performed by community nurses). Analysis of these results showed that the new bag's modularisation improved productivity, saving an average of one minute per treatment. Swann's calculations show that this could save up to 17 minutes per day, delivering a potential mean saving of up to £1,600 per nurse per year. He adds that with 250,000 community nurses this becomes a sizeable figure saved from the NHS budget.

The bag's modularisation improved productivity

Swann explains that the new design "improves productivity, patient safety and standardises the patient experience in an inconsistent and uncontrollable healthcare setting - the home." So will we soon be seeing it when the nurse visits? Swann confirms that he is in discussion with interested parties who wish to license the bag.

"A personal aspiration is that for each bag sold one is donated to the World Health Organisation's Patient Safety Programme to support the delivery of healthcare in non-hospital settings in developing regions," he concludes. It just goes to show that sometimes good design really can save the world. |