



DTR Medical

your
single-use
solution



TIME



LIFE



COST

The savings benefits of single-use



single-use

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In a tough economic climate where purse strings are tightening and resources are limited, realising savings is vital. Reprocessing reusable surgical instruments has long been the standard process, but evidence suggests that single-use instruments, by comparison, can save considerable time, cost and possibly even lives.

T Time-saving

TIME Reprocessing medical instruments is complex and often underestimated, despite its frequency as a method used by clinical departments.

Waiting for instruments to be repaired or reworked can lead to delays in theatre lists and appointments. This not only creates extra administration time, but causes great additional concern and stress to patients and their families.

Healthcare professionals, especially nurses, lose time searching for medical instruments. In one recent study, 35% of nurses said they faced daily shortages of medical supplies¹.

There are several crucial stages to the reprocessing procedure that all take considerable time by different people:

- Counting and checking
- Re-working returns
- Tissue fixation damage

Research involving 861 UK hospital nurses found that each nurse spends an average of four hours a week searching for medication, patient records, and medical devices - the equivalent of around 23 days a year of lost time. About 17 minutes per day of this time is for medical devices, costing the NHS over £350 million per annum².



L Life-saving

LIFE

Simply put, would you want someone's human remains inside your body? Extreme as it sounds, there are some things that chemicals or cleaning methods may not completely remove. For example, abnormal proteins associated with rare prion diseases, such as CJD, are not living organisms and are therefore resistant to all conventional methods of decontamination. Potentially, when difficult to clean instruments are reused, these proteins can pass to the next patient and have adverse effects.

Any hospital or surgery has a duty of care to staff and patients to minimise the risk of infection. By disposing of an instrument after one use, many instances of infection are prevented, thereby minimising NHS costs, potential litigation, and mortality rates.



The argument for using sterile disposables has developed much momentum as evidence suggests rates of hospital related infection are grossly underestimated.

Based on 8.6 million surgical procedures in the UK per annum, an infection rate of 4.2% and treatment costs of approximately £2,100 per infection, the total costs of surgical site infection (SSI) in the UK is estimated at £758 million per annum³. However research suggests these figures are just the tip of the iceberg.

The only way that surgical procedures can be made completely safe is to use disposable instruments. Currently, there are not disposable equivalents for all medical instruments, yet with the rates of surgical site infections on the rise, and knowledge of the benefits increasing, single-use products have potential to offer reliable alternatives for all reusable products.

Perceived inadequacy with the long-term quality and efficiency of reusable instruments is building momentum as more clinical departments are shifting to single-use products. A surgeon would never reuse a scalpel blade, because it would be blunt and not fit for purpose. Why doesn't this logic currently apply to all sharp bladed instruments?

In 2010 alone, the media heavily publicised three cases where hospitals had to interrupt surgery schedules due to reusable instruments being found unclean and unsafe for use on patients.



A hospital in Wales had to cancel operations in June 2010 after out-sourcing the reprocessing of instruments resulted in quality control issues where many sets of instruments were found unusable⁴.

Similarly, two hospitals north of London discovered traces of contamination in sets of instruments again supplied by external services. Out of 200 kits supplied, 24 were found to be contaminated. Karen Jennings, Unison head of health who represents many health workers, commented, 'Unison has long been warning that taking sterilisation services out of hospitals is dangerous and could cost lives'⁵.

These hospitals unfortunately received bad press not because they were incompetent, but because cross-contamination risks are high and mistakes inevitably do happen. With single-use products, these issues are eradicated, significantly reducing the risk to patients' lives and providing them with a greater standard of care.





Cost-saving

To assess the total cost of using single-use disposables in favour of re-usable instruments, procurement personnel need to take into consideration more than initial purchasing cost.

The best way to illustrate these cost differences is by looking at the varying processes reusable and single-use instruments go through in order to be fit-for-purpose.

A reusable instrument is used on a patient; it must then be reprocessed – cleaned and decontaminated – before it can be used on another patient. For many hospitals their reprocessing is done off site in remote locations, and then sent back.



The table below compares the potential costs:

Reusable	Single-use
Initial purchasing costs	Purchasing costs - buy in bulk = economies of scale
Cost of transport to off site location	None
Cost of man power to reprocess the instrument	None
Cost of transport back	None
Cost of reprocessing resources – energy to make steam, use of chemicals, use of machinery	None
Cost of staff used to arrange for reprocessing to take place – collection and reassembling of instruments	None

Research collected via DTR Medical’s clinical consultations show that costs of reprocessing vary. Some reusable instruments can cost as little as £1 to reprocess, however their disposable equivalent also costs £1, so the question put to clinicians is: why take the risks with cross-contamination and potential time delays if there is no differentiation in price? As a comparison, other more specialised instruments used by private hospitals can cost as much as £9.



¹GS1 & Nursing Standard, May 2010, *Survey of 861 UK Hospital Nurses*.

²ibid

³Clinical Services Journal (Sept, 2010) 'Calculating the cost of SSIs', <http://www.clinicalservicesjournal.com/Story.aspx?Story=7093>

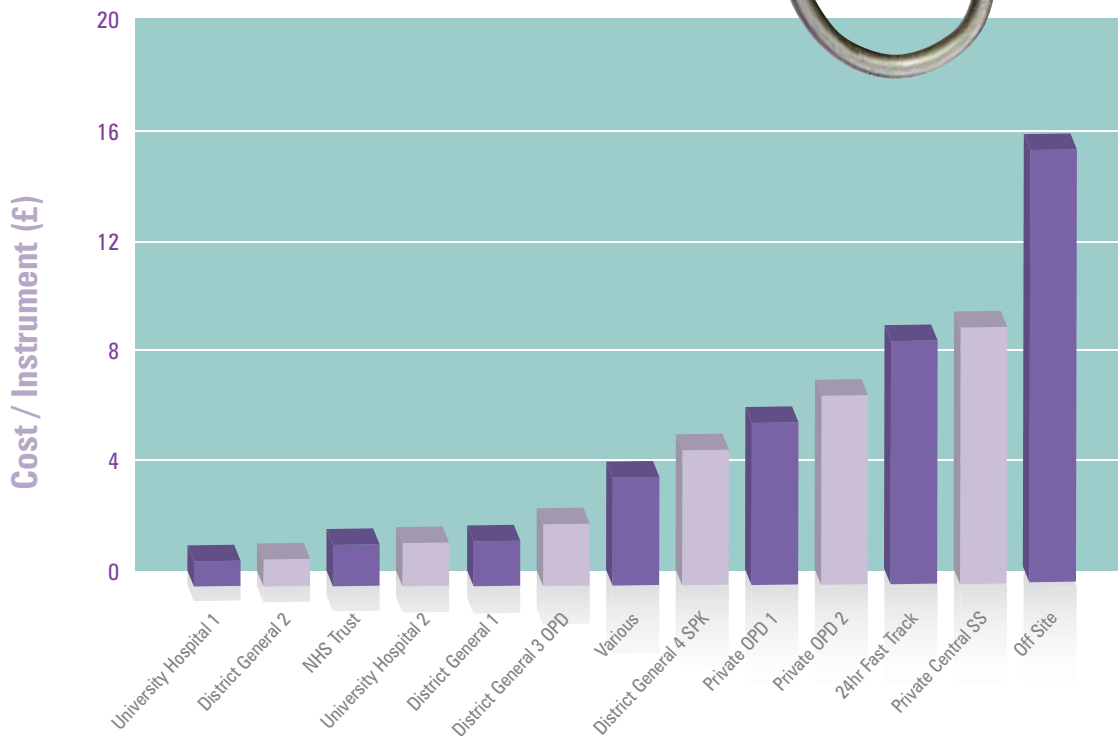
⁴Western Mail, Jun 4 2010, 'Operations cancelled over 'dirty' surgical instruments', <http://www.walesonline.co.uk/news/wales-news/2010/06/04/operations-cancelled-over-dirty-surgical-instruments-91466-26584001/>

⁵BBC News London, Aug 20 2010, 'Hillingdon ops ban over kit contaminated with flesh', <http://www.bbc.co.uk/news/uk-england-london-11035725>

The savings benefits of single-use

There are other less tangible costs that are not always realised, but very important when discussing cost savings:

- No repairs are needed with single-use, something that occurs regularly with reusable instruments to keep them sharp, straight and 'fit for purpose'. The typical cost of repair for an instrument is £50. Replacement can often be more cost effective than repair, but this raises costs. Single-use rules out these problems
- Expensive and fine precision instruments are at greatest risk of damage, and where financial losses are the highest
- Busy clinical units need multiple sets of instruments to cope with high patient numbers which can put pressure on capital costs of new re-usable equipment
- Reusable instruments can put patients at risk of healthcare-acquired infections (HCAIs), such as surgical site infections (SSI). An SSI may present as a relatively trivial and spontaneously limited wound discharge, for example 8-9 days after an operation, or as a life-threatening postoperative complication. Patients' well-being aside, these infections have huge cost implications on NHS Trusts as patients can spend up to 14 extra days in hospital
- Disposing of instruments after one use may seem a waste of resources but compared to the costs associated with reusable products, the cost-saving speaks for itself



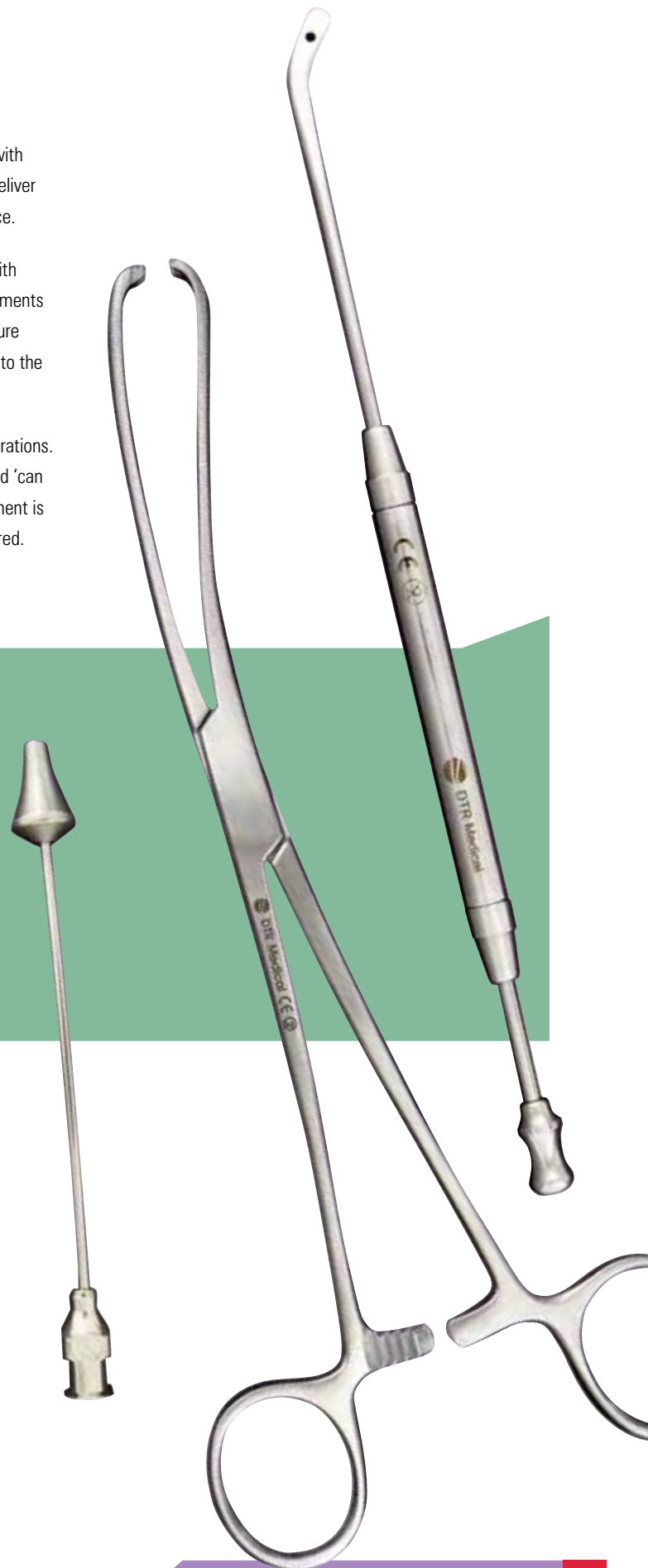
DTR Medical

DTR Medical, established in 2005, provides medical professionals with high quality innovative single-use sterile disposable products that deliver patient and clinical value combined with exceptional levels of service.

The company prides itself on building long-standing relationships with key clinical staff, who understand the needs of their hospital departments and patients. Customer retention is a priority for DTR, and they ensure constant, high quality service delivery, bringing innovative products to the surgical table.

Research and customer feedback are integral to DTR Medical's operations. The questions customers are encouraged to ask are 'do you do?' and 'can you get?' The company's ethos ensures that new product development is led by the customer, so that real time clinical need is always delivered.

DTR Medical believes that the benefits of single-use products speak for themselves. The **T** time, **L** life and **C** cost savings they provide are significant, and DTR's fast growing customer base proves this.





DTR Medical

Our mission is to provide medical professionals with high quality single-use sterile disposables that deliver patient and clinical value combined with exceptional levels of service.

We operate our own production facilities equipped with ISO class 7 cleanrooms and the company is accredited to ISO9001:2008, ISO13485:2003 and MDD2007/47/EC.



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