

# Quality and Productivity: Proposed Case Study

## Think twice, ask once

**Provided by: Queen Alexandra Hospital, Portsmouth**

**Publication type: Proposed quality and productivity example**

### Sharing good practice: What are 'Proposed Quality and Productivity' case studies?

The NICE Quality and Productivity collection provides users with practical case studies that address the quality and productivity challenge in health and social care. All examples submitted are evaluated by NICE. This evaluation is based on the degree to which the initiative meets the criteria of savings, quality, evidence and implementability.

Proposed quality and productivity examples are predominantly local case studies that meet most of the criteria but are yet to be fully implemented. This may be because they are at an early stage of implementation and further evidence is forthcoming. These proposed examples may still be of interest. Additional information will be requested within a year from the date of publication. A summary of findings is provided below along with comments and recommendations about how this case study may be developed.

#### **Overview**

A baseline assessment of the current practice of use of hospital supplies in 2 surgical theatres was carried out. An initiative to reduce preventable waste costs was then initiated, involving all stakeholders to embed good practice. Finally an unannounced audit was conducted to evaluate the success of the initiative. The results showed that the initiative had been adopted and there was a clear reduction in preventable waste costs.

#### **NICE comment**

The aim of the initiative was to reduce preventable surgical waste in hospital theatres without compromising patient care standards. It is not expected to have any impact on the quality of care because its remit is only the better management of hospital supplies. Sustainability is not yet proven. The initiative was implemented in 2 surgical theatres in Portsmouth.

Following the adoption of the 'Think twice, ask once' initiative, an unannounced audit of the theatres showed a reduction in preventable waste cost from £549.63 at baseline to £50.83 for the 2 theatres over the five day period.

## Details of initiative

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| <b>Purpose</b>                       | The aim of the initiative was to reduce preventable surgical waste in hospital theatres. The target was to demonstrate that cost savings could be made by 'quick wins' such as using alternative equipment and ensuring that medical supplies were only opened when they were needed.   |
| <b>Description (including scope)</b> | <p>Queen Alexandra Hospital is an NHS trust based in Portsmouth, England serving a population of 650,000. The hospital has 1,200 beds, 29 theatres and 6,300 full time equivalent staff. It treats in excess of 132,000 patients and is responsible for about 6,300 births each year. Approximately 35,000 operations are performed across the theatres.</p> <p>The project is based on a study to evaluate and quantify preventable waste in operating theatres and was conducted using 2 elective theatres (plastics and breast surgery). Data were gathered to evaluate the level of preventable waste over a 5-day period. The team then introduced some tips to help reduce preventable waste such as switching from wrapping whole surgical sets together to individual wrapping, decreasing autoclaving costs and switching to cheaper alternative equipment where possible. A preventable waste reduction of about 91% from the baseline was realised at the unannounced audit to evaluate the impact of the changes.</p> |
| <b>Topic</b>                         | Procurement, productive care, workforce productivity improvement.   |
| <b>Other information</b>             | <p>A useful starting point for this project was a publication showing how staff at UCLH's National Throat, Nose and Ear Hospital had demonstrated a reduction in preventable waste for equipment intended for cochlear implants.</p> <p>It is important to note that the savings realised in this case study may need to be adjusted for other types of theatres as this initiative was only carried out in two theatre settings and equipment usage may differ in other specialties.</p>   |

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## Savings anticipated

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| <b>Amount of savings anticipated</b> | Annual cash savings of £392,700 for a population of 650,000, equivalent to £60,400 per 100,000 population. |
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| <b>Type of saving</b>                            | Real cash savings as a result of reduced wastage in theatre consumables and equipment.  |
| <b>Any costs required to achieve the savings</b> | There are no identified non-recurrent or recurrent costs. Change was driven by motivated volunteers – clinicians and other staff dedicated to collecting data to demonstrate the effects of change.   |
| <b>Programme budget</b>                          | Various.  |
| <b>Supporting evidence</b>                       | <p>The study was carried out over 5 days by prospectively identifying items that were opened and not used in 2 elective surgical theatres. The wasted items equated to £550, translating to £7,970 per week and £412,420 per year when extrapolated across all 29 theatres in the Trust.</p> <p>A regional audit across 3 other trusts showed an average weekly waste cost of £121, indicating much higher waste costs at the Queen Alexandra Hospital. Using the average regional waste costs, it is estimated that savings across the region's 3,017 theatres could equate to £19,015,900 a year, excluding weekends.</p> |

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## Quality outcomes anticipated

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| <b>Impact on quality of care or population health</b>   | The aim of the initiative is to prevent wastage without compromising patient care standards. It is not expected to have any impact on the quality of care because its only remit is to reduce preventable wastage of hospital supplies. The surgeons are encouraged to use their discretion to ensure that the best level of care is still provided to patients.   |
| <b>Impact on patients, people who use services and/or population safety</b>                     | <p>Some cheaper product options are made available to surgeons and preventable wastage highlighted, but patient safety is not compromised because medical staff still have overall discretion of use.</p> <p>The savings from this initiative could be used to improve patient care at both departmental and trust levels by providing funding, for example for previously unavailable diagnostic equipment that could improve patient outcomes.</p> |
| <b>Impact on patients, people who use services, carers, public and/or population experience</b> | The initiative is not anticipated to have any impact on patient and carer experience because it focuses on preventable wastage and less expensive alternatives for medical staff during surgeries.   |

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Supporting evidence N/A

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## Evidence of effectiveness

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**Evidence base for case study** The evidence from this initiative is based on local opinion and experience. The initiative is also backed by findings of the Academy of Medical Royal Colleges that suggests that savings can be made by streamlining surgical equipment.

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**Evidence to date of deliverables from implementation** Baseline data was collected to understand current practice. The project was then implemented. A subsequent unannounced audit showed a significant reduction in waste from the theatres, and resulting cost savings, without compromising patient safety.

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**Supporting evidence** The initiative was implemented across 2 theatres, predominantly used by the Breast and Plastic Surgery Service in the Queen Alexandra Hospital, Portsmouth. The baseline data collected initially over a 5-day period showed potential savings of £549.63 in preventable waste costs. Once the initiative had been embedded, an unannounced audit was carried out, which showed that the preventable waste costs were reduced to £50.83 for the 2 theatres. This shows a successful implementation of the project, with the resultant benefits of about 91% savings compared with the baseline information. The project has not currently been replicated in other surgical departments in the Trust. However, there has been staff movement between theatres and it is hoped that some of what was learnt has been transferred to those theatres. The audit aspect of the project was replicated by 3 regional trusts to gather baseline data, which helped in the estimated cost savings information presented in this submission.

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## Details of implementation

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**Implementation details** The initiative initially began as an audit to evaluate and quantify the amount of preventable waste across operating theatres, with an aim to identify areas for potential savings and evolved over 6 months. Over a week (5 days), data was gathered for 2 elective operating theatres (plastic and breast surgery) at the Queen Alexandra Hospital in Portsmouth. The data collected related to identifying items that were opened for procedures but were not used. Examples include sutures, dressings and surgical instruments. Over the period, 37 operations were evaluated and 25 demonstrated opportunities for preventable waste savings. These included 81 consumables and 4 items of equipment.

This audit was disseminated to 3 other regional trusts, including similar theatres for comparison. The average preventable waste

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they identified from the exercise was £121.21, compared with £549.63 for Portsmouth. This highlighted the potential for savings at the Trust. The project received support from allied healthcare professionals, management and clinical staff of all levels.

The project group set about printing and laminating posters to highlight opportunities for avoiding preventable waste. A Listening Into Action Group was started, with a remit to identify areas for immediate change as well as longer term projects. Volunteers were recruited from staff at all levels as 'waste champions', who were encouraged to challenge wasteful behaviour, regardless of perpetrator seniority, position or work line.

The project group collaborated with procurement to identify cheaper alternatives for expensive items and source them for use if appropriate.

The group also forged an alliance with sterilisation services to begin individual wrapping of items used regularly. This prevented whole surgical sets being opened and incurring re-sterilisation costs. The average internal cost for autoclaving whole surgical sets is £12.50, compared with £2.50 for individual items so this collaboration provided instant opportunities for cost savings.

The project highlighted 'quick wins' by using a traffic light system to identify expensive items and any cheaper alternatives, to help medical teams identify potential savings. A league table of expensive items in theatre demonstrated the exact value of items, which influenced the practice of surgeons and the scrub team. Surgeons were made familiar with new equipment, but ultimately had discretion over which equipment to use to ensure the best patient outcomes.

An unannounced re-audit was carried out to see whether there were any changes in practice since the initiative. It found that preventable waste had reduced by about 91% from the baseline.

The project relied on motivated volunteers as well as engagement with key stakeholders to achieve the objective of reducing preventable waste and identifying areas for savings in the Trust.

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| <b>Time taken to implement</b>         | The project was carried out over a 6-month period in 2 theatres in a hospital trust.  |
| <b>Ease of implementation</b>          | The scale of change was measured and occurred over a 6-month period. Implementation cost was minimal because it depended on volunteers. The only costs were for printing and laminating posters and stickers, which came out of the departmental budget. Posters and stickers highlighted small changes that could prevent wastage and volunteers informed people of the plans. |
| <b>Level of support and commitment</b> | The project received good support from all stakeholders. The managers were motivated to prevent wastage and the medical   |

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|                                   | staff felt an ethical responsibility to reduce any avenues of potential wastage.  |
| <b>Barriers to implementation</b> | All key stakeholders – such as management, procurement and clinical staff – were motivated to support the initiative. The project even managed to forge an alliance with the sterilisation service to customise equipment wrapping to suit the theatre requirements. Accordingly, there were no highlighted barriers to implementation. |
| <b>Risks</b>                      | The main risk consideration was ensuring that there was no compromise in the quality of equipment used to deliver patient care. This was maintained by allowing surgeons discretion in the final decision about which equipment was best for their patients.  |
| <b>Supporting evidence</b>        | N/A   |

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## Further evidence

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| <b>Dependencies</b> | The initiative depended on motivated volunteers and engaging staff and clinicians who were dedicated to collecting data to demonstrate the effects of the changes implemented. |
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## Contacts and resources

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| <b>Contacts and resources</b> | <p>If you require any further information please email: <a href="mailto:qualityandproductivity@nice.org.uk">qualityandproductivity@nice.org.uk</a> and we will forward your enquiry and contact details to the provider of this case study. Please quote reference 16/0005 in your email.</p> <ol style="list-style-type: none"><li>1. <a href="#">UK doctors have 'ethical duty' to prevent waste</a>. BBC. 6 November 2014.</li><li>2. <a href="#">The work of staff at UCLH to make patient services and procedures more efficient has been highlighted by national media</a>. University College London Hospitals. 6 November 2014.</li><li>3. Queen Alexandra Hospital Clinical Strategy, March 2014. Viewed: 6 October 2015</li></ol> |
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