Saving Lives: reducing infection, delivering clean and safe care

Using high impact interventions

Using care bundles to reduce healthcare associated infection by increasing reliability and safety

The Health Act 2006 Code of Practice for Prevention and Control of Healthcare Associated Infections[1] states that 'Effective prevention and control of Healthcare Associated Infections has to be embedded into everyday practice and applied consistently by everyone,' and that NHS organisations must audit key policies and procedures for infection prevention and control.

In 2007, the EPIC group[2] noted that 'standard infection control precautions need to be applied by all healthcare practitioners to the care of all patients.

Every clinician has the potential to significantly reduce the risk of infection to their patients by ensuring that they consistently comply with evidence based practice and guidelines every time they undertake a clinical procedure. Bion and Heffner in 2004[3] noted safety and reliability are the most important components of quality in healthcare.

Individual clinicians, clinical teams and organisations need to have a way of measuring compliance to these procedures in order to assure themselves that safe reliable care is being delivered consistently. High impact interventions (HIIs) or care bundles, provide the means to do this.

The HIIs in Saving Lives relate to those key clinical procedures which can increase the risk of infection if not performed appropriately. They have been developed to provide a simple way of highlighting the critical elements of a particular procedure, the key actions required and a means of demonstrating reliability using compliance measurement.

The purpose of the HIIs is to minimise unwarranted variation in practice by providing a way of identifying where compliance needs to be increased and a measure of how often all elements are performed for a given procedure. The tool is also the means by which results can be quickly fed back to staff and actions can be agreed and implemented. Progress can be tracked using run charts which can be generated by the tools in Saving Lives.

This section describes in more detail the principles behind the HIIs and how you can implement and use them in your care setting.

This introduction includes sections on

- What are high impact interventions?
- How do the high impact interventions work?
- Using the spreadsheet tools
- Feeding back to staff

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What are HIIs?

The HIIs are based on a "care bundle" approach, which links evidence, a measuring tool and a strategy for improving the clinical process to deliver evidence based practice. This approach was included in the NHS Modernisation Ageny's *'10 Reliability Changes for Service Improvement'*[4] and is the basis for the American Institute of Healthcare Improvements (IHI) *'Save 100,000 Lives'*[5] and *'Protecting 5 million lives from harm'*.[6]

Direct measurement of a clinical process is a technique which has been recognised to have advantages over outcome based monitoring,[7–10] and is the principle of this tool. By looking at the process of care delivery over a short timescale, improvements in the care process can be identified quickly and put into action. Lilford, et al[7] recommend concentrating on 'direct measurement of adherence to clinical and managerial standards'.

Instead of just looking at a single element of care the HIIs link together a number of care elements in a procedure. Patient outcomes can be systematically improved when all these elements are performed consistently. Leaving specific elements out or not doing them correctly increases the risk of infection.

The tools provide a method of measuring how effective the clinical process is and a way of improving it. Specifically these tools are designed to reduce the risk and spread of HCAI by focusing on the risk factors which cause infections, for example hand hygiene and use of intravenous lines.

How do the HIIs work?

The method relies on a mix of cognitive (educational), administrative (charting the clinical process) and behavioural (feedback of results) aspects. These have been described by Cook,[11] et al and are similar to the National Patient Safety Agency's 'clean**your**hands' campaign.[12]

The tools (on the CD or at www.clean-safe-care.nhs.uk) show the key elements relevant to a specific clinical procedure which need to be observed and recorded as having been done. To ensure local ownership, observation can be performed by identified clinical staff within the ward or department as part of a peer review process. It does not need to be the responsibility of Infection Control Teams.

The frequency of observation for each measurement can be decided locally according to levels of infection. However, experience has shown that a short timescale for making observations, feeding-back results and clinical staff generating improvement ideas, allows for changes in the clinical process to be made rapidly. The process is summarised as:

Observation > Feedback results > Ideas for improvement > Improve

The tools (provided on the CD or at www.clean-safe-care.nhs.uk) are not designed to be a continuous record of practice. They serve as a way of identifying where improvements can be made for overall performance and on delivery of individual care elements (see the example top of opposite page outlining how these work in practice).

A Pareto[13] analysis or examination of infection data across a trust can serve to identify priority areas for using the HIIs eg where infection numbers are highest, or where there appears to be an identified risk concerned with particular proceedures. However, the principle of the HIIs can be applied to all clinical areas as required. The tools use a simple tick-box that allows rapid completion. Ticking a box shows that the care element was given/performed or not applicable.

Using this basic information, a percentage compliance with each element can be calculated and crucially provides an overall picture of compliance for a given procedure (i.e all elements performed) – see example top of opposite page.

Care elements / Observation	Care element 1	Care element 2	Care element 3	Care element 4	All elements performed
1	✔		✔	✔	
2	✔	✔		✔	
3	✔	✔	✔	✔	✔
4	✔	✔	✔		
5	✔	✔	✔	✔	✔
Total number of times an individual element was performed	5	4	4	4	2
% when element of care was given	100%	80%	80%	80%	40%

This example shows that while most care elements were performed on only two occasions were ALL elements performed correctly. Overall compliance with all elements was only 40% and as a result the risk of infection was significantly increased.

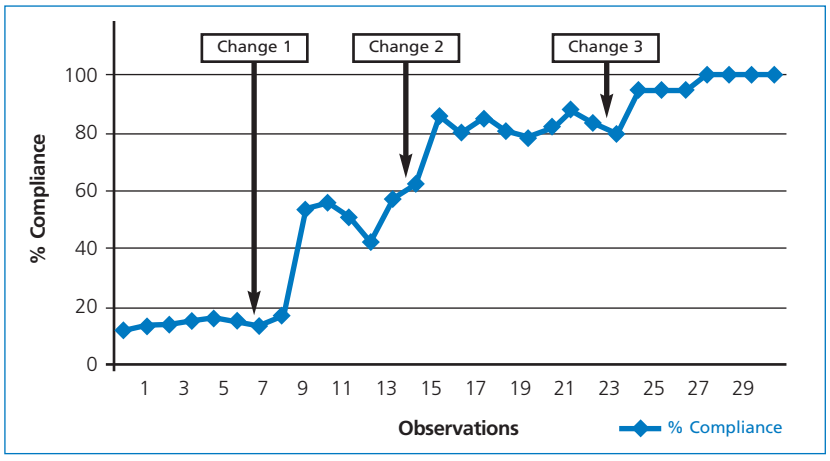
The above example shows how HIIs can be used to:

- Identify when all care elements are performed (100% compliance)
- Measure compliance of individual care elements
- Enable you to focus improvement action on those elements which are not consistently performed in order to ultimately achieve 100% compliance every time

Feedback to clinical staff

Feeding back the findings of observations to clinical staff promptly is key[14] so that ideas can be generated to improve practice quickly. Re-observation can show the effectiveness of the actions you have agreed and provide a means of undertaking continuous quality improvement.

The example below shows a graph representing the change in compliance associated with three different ideas to improve the clinical process. Timely, continual, feedback to clinical professionals allows changes in a clinical process to occur rapidly.



Janice Stevens
Programme Director, MRSA/Cleaner hospitals, DH.

www.clean-safe-care.nhs.uk

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