

A high impact intervention for a high impact intervention: Improving documentation of peripheral venous access insertion in theatre

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Abstract

The Department of Health's 'High Impact Intervention (HII) – Peripheral intravenous cannula care bundle' lists six actions to be performed at the time of peripheral intravenous cannulation. Audit of compliance to these requires documentation. We assessed documentation on the anaesthetic charts of 50 surgical patients. Purpose-made stickers were then placed on all anaesthetic charts. Re-assessment of a further 50 patients' charts demonstrated a significant improvement in documentation of the bundle post intervention (Fisher's exact test $P < 0.0001$). This is an example of how a low-tech intervention can produce a high impact improvement in documentation.

Keywords

Peripheral venous access, peripheral cannulae, high impact intervention, documentation

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Background

Peripheral intravenous cannulas are the most commonly used intravenous access in hospitalised patients. They are used in operating theatres for administration of medications, fluids and blood products as well as for blood sampling. They are usually considered a low-risk intervention; however, they may be associated with complications such as hematoma, phlebitis, pain and infection.

The 'High Impact Intervention (HII) – Peripheral intravenous cannula care bundle' lists six actions to be performed at the time of peripheral intravenous cannulation (Figure 1) (Department of Health, 2010). The aim of the care bundle is to ensure appropriate and high-quality patient care. Risk of infection is reduced when all elements within the clinical process are performed.

The Health and Social Care Act 2008: Code of Practice on the Prevention and Control of Infections and Related Guidance requires that 'registered providers must audit compliance against key policies and procedures for infection prevention' (Department of Health, 2015). Effective audit of compliance is only possible if documentation is complete.

Proper documentation is essential for continuity and legal documentation of care.

The Health and Care Professions Council (HCPC) on standards of conduct, performance and ethics 2016 states 'Accurate and clear documentation of clinical record must be completed promptly as soon as possible after providing care, treatment or other services' (Health and Care Professions Council, 2016).

The General Medical Council's *Good Medical Practice 2013* emphasises that registered doctors should maintain clear, accurate and legible documentation of clinical records (General Medical Council, 2013).

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Figure 1. Six actions in the Department of Health’s ‘High Impact Intervention – Peripheral intravenous cannula bundle’.

Insertion actions
1. Aseptic Technique
<ul style="list-style-type: none"> ▪ Procedure is carried out using a recognised aseptic technique. ▪ Needle free device used when available. ▪ A new cannula is used for each attempt. ▪ Cannula is flushed in line with local policy.
2. Hand hygiene
<ul style="list-style-type: none"> ▪ Hands are decontaminated immediately before and after each cannula insertion contact using the correct hand hygiene technique. <i>Use of the World Health Organizations ‘5 moments of hand hygiene’ or the National Patient Safety Agency (NPSA) ‘Clean you hands campaign’ is recommended.</i>
3. Personal protective equipment
<ul style="list-style-type: none"> ▪ Disposable apron and gloves to be worn and disposed of following use and between patients.
4. Skin preparation
<ul style="list-style-type: none"> ▪ 2% chlorhexidine gluconate in 70% isopropyl alcohol is used and allowed to dry for at least 30 seconds. <i>If a patient has a sensitivity use a single patient use povidone–iodine application.</i> ▪ In line with local policy for neonates.
5. Dressing
<ul style="list-style-type: none"> ▪ A sterile, semi-permeable, transparent dressing is used allowing observation of insertion site.
6. Documentation
<ul style="list-style-type: none"> ▪ Document date, reason for insertion, catheter size, operator undertaking insertion and if insertion was high risk with signature.

Figure 2. Purpose- made stickers for documentation of the ‘HII – Peripheral intravenous cannula care bundle’ actions.

High Impact Intervention Care Bundle

INSERTION OF A PERIPHERAL LINE

Doctor/Nurse (name & grade) Date

	Yes	No
Which site ?.....		
Disposable Tourniquet used ?		
Site decontaminated using 2% chlorhexidine gluconate in 70% isopropyl alcohol ?		
Hands decontaminated ?		
Gloves worn throughout procedure ?		
Aseptic non touch technique used?		
Sterile dressing over site ?		
Safe disposals of sharps at point of use ?		

All actions within the bundle have been standard practice within our institution for many years; however, the anaesthetic charts currently in use in our hospital do not have a dedicated place for documentation of compliance with the care bundle.

The aim of this project was to assess compliance of documentation of peripheral line insertion in the anaesthetic department and to determine whether the use of sticker

improves documentation of peripheral venous cannulation on the anaesthetic charts.

Methods

There are 20 main operating theatres and two postoperative recovery areas in our Trust. A two-part prospective audit was designed to collect data to measure documentation of

peripheral venous cannulae sited in patients for elective surgical procedure before and after the proposed interventions.

The proposed intervention was the placement of a green sticker that included date of insertion and name of the inserting anaesthetic doctor. It incorporated all the important elements of the high impact intervention care bundle such as asepsis, dressing and disposal of sharps.

A baseline audit measured documentation of the HII actions on the anaesthetic charts of 50 consecutive patients who had cannulae inserted in theatre. Purpose-made stickers of the HII care bundle actions were then placed on the anaesthetic charts of patients before surgery (Figure 2).

Data were subsequently collected from a further 50 patients' anaesthetic charts post intervention.

Anaesthetists working in the operating theatres were not aware that data were being collected either pre or post intervention.

Results

The two-tailed Fisher's exact test was used to calculate the *P* value. A *P* value < 0.001 is considered statistically highly significant.

The six HII actions for peripheral cannula insertion were documented in 1/50 patients (2%) prior to intervention and in 26/50 patients (52%) post intervention (Fisher's exact test *P* < 0.0001).

Discussion

Placement of stickers on anaesthetic charts significantly improves the documentation of the six actions to be performed at the time of peripheral intravenous cannulation in the Department of Health's 'High Impact Intervention (HII) – Peripheral intravenous cannula care bundle'. Documentation of these is important in order to be able to demonstrate compliance with this standard.

Importantly, the improvement in documentation did not require education or behavioural change of those anaesthetists working in the operating theatres. In fact, since all actions within the bundle have been standard practice within our institution for many years, no behaviour change was

necessary beyond improving documentation. Instead, the mere presence of a designated space to document the actions resulted in the improvement. With our project, we were able to assess the true impact of the sticker. We have only shown that this sticker is useful over a short period of time. It is uncertain as to whether this benefit will be maintained in distant future. To ensure sustainability of the project, future print runs of anaesthetic charts will be re-designed to include this space.

This is low-tech intervention, which produces a high-impact improvement in documentation of compliance with care standards.

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