The Impact of User-friendly nursing procedures on utilisation of a dedicated IV access team

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Introduction

the IntraVenous Insertion (IVI) Team is a group of registered nurses who have been inserting IV cannulae (IVC) and peripherally inserted central catheters (PICCs) at the John Hunter Hospital. since 1997 Along with IVC & PICC insertion, the IVI team provide education, IVC skills assessment for nurses and medical officers, and consultative services on vascular access.

Recently, members of the IVI team noted a consistent increase in requests for consultations for CVC / PICC care e.g. PICC line dressings, repair of Groshong® PICCs, unblocking CVCs. The increase in consultations meant that there was less time for inserting catheters.

A strategy was needed to improve the skills of nurses on the wards to reduce demands on the IVI team. Inservice education has limited reach, and generally does not get to nurses on afternoon, night and weekend shifts. Small group education is labour-intensive and needs to be repeated multiple times to reach adequate numbers of staff. It is unclear how long information is retained following small group education sessions. The team felt that a step by step guide to different CVC procedures, using photographs to illustrate each step, would be an innovative way of reaching the maximum number of nursing staff regardless of whether they were permanent, casual or agency staff. The photo-guides were designed to be attached to dressing / procedure trolleys in each of the ward areas.

Why Photo-Guides?

The power of imagery to educate and inform should not be ignored. We need to incorporate visual media into the workplace to assist nurses in their day to day work.

High patient turnover and acuity means there is less time for nurses to wade through traditional nursing procedure manuals looking for specific procedures.

Attaching the photo-guides to trolleys places them at the nurse's fingertips

Visual guides clarify the written word with linked images

Nurses instantly know by comparison that the step they are taking is correct

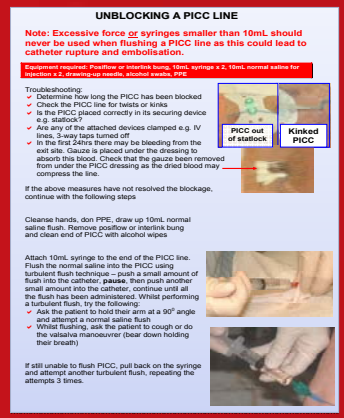
Laminated photo-guides can easily be wiped clean.

Using rivets and cable ties allows out-dated procedures to be easily replaced.

Methods

A small group of nurses developed the hospital's written procedures into essential steps and determined the images that would be required to accompany the text. The images needed to portray crucial points or areas where clinicians may have difficulty without a visual prompt.
Initial draft photo-guides were developed and distributed to key stakeholders e.g. Infection Prevention & Control Unit. Comments and feedback were incorporated into subsequent versions.
Members of the IVI Team attended ward meetings to educate nurses about use of the photo-guides.

The evaluation of the photo-guides included:
-Number of consults for related problems pre & post implementation
-Number of nursing staff receiving information on the photo-guides
-Feedback from nursing staff on usability of the guides
-Condition & number of photo-guides still in place after three months



Results

The photo-guides were distributed to 20 adult wards in February 2010. Over the two month period following the implementation, there was an 80% reduction in the number of consultations for unblocking a CVC, a 37.5% reduction in consults for repairing a Groshong® PICC, and 71% reduction in consults for CVC dressings (see Table 1).
At the end of March 2010, 84 nurses had been educated by the IVI team and feedback at these sessions was overwhelmingly positive.
All photo-guides remain intact and in place in each of the wards.

Consultations	January Before Photo-guide Introduction	February - March Post Photo-guide Implementation
General PICC consult	21	19
PICC Unblocking	5	1
PICC Repair	8	5
CVC / PICC dressing	7	2

Discussion & Conclusion

Intravenous nursing practice instruction must keep pace with changing times. We now live and work in a multimedia fast-paced age. There is an expectation that essential information will be user-friendly and close at hand when it is required. To accommodate these needs, we developed a 21st Century model of visual photo-guides to assist nurses at the bedside to perform essential CVC/PICC care.

The IVI Team felt that maintenance of an intact clean CVC/PICC dressing was essential nursing practice when caring for a person with a central line. We were concerned that ward nurses were referring problems with central venous catheters to them rather than completing this care themselves. The potential delay whilst waiting for the IVI team can mean that a damaged or blocked catheter will not be able to be restored, leading to loss of the CVC or PICC. To give these lines the best chance to be salvaged, we needed to improve the confidence of ward nurses to troubleshoot as soon as the problem arises.

Early results indicate that the introduction of visual photo-guides have been successful in reducing the number of IVI Team consultations for CVC / PICC procedures. The use of photo-guides can easily be transferred to other areas of nursing practice.

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