

INTRODUCTION OF NEW NEEDLELESS VALVE DEVICES ACROSS A LOCAL HEALTH DISTRICT

Robert Robinson¹, Louise Maher², Rondelle Jenkins³

¹ Clinical Nurse Consultant Infection Control, Nepean Blue Mountains Local Health District, Penrith NSW, Australia

² Clinical Nurse Consultant Cancer Care Services, Nepean Blue Mountains Local Health District, Penrith NSW, Australia

³ Clinical Nurse Consultant Nepean Intensive Care Unit, Nepean Hospital, Penrith NSW, Australia

Introduction

In keeping with best practices and as new technologies become available, a review of Peripheral Intravenous Cannula (PIVC) and Central Venous Access Device (CVAD) needleless valve products was undertaken in 2016 by the Vascular Access Working Group (VAWG) at Nepean Blue Mountains Local Health District (NBMLHD). Needleless valve devices have been used for many years in healthcare. The current devices across NBMLHD needed to be reviewed and changed. However, a change of this magnitude across multiple specialities requires specific planning to ensure the devices are appropriately reviewed, trialled in clinical practice and then implemented so they are safe for use on our patients.

Methods

Regular VAWG meetings occurred with key healthcare stakeholders across a variety of speciality areas and support from the chosen company. A number of key strategies included a timeline of events in the months prior to trial, education / training across multi disciplines, communication by different streams, procurement support for clarifying contract items, ordering new stock and reporting / evaluations during and post trial. As these were new products specifically for use on PIVC and CVAD devices to be introduced into NBMLHD, we were required to undertake a trial. However the VAWG members deemed that a trial was too difficult to manage in selected locations as patients constantly move across clinical areas and interventional specialities. The decision was made for a hospital wide trial with continuation, unless patient safety issues were identified.

CODE	PRODUCT DESCRIPTION	PRODUCT USE	PRODUCT IMAGE
2000E	BD SmartSite™ needle free connector	BD SmartSite™ eliminates the need to use accessories and blunt cannulas	
20039E	SmallBore 15cm extension set, BD SmartSite™ needle free connector and rotating male luer lock	Helps to reduce manipulation at catheter site	
NP1000	BD MaxPlus™ Clear needle free connector	When used in combination with clinical best practices can help reduce CLABSI and Catheter occlusions. Improve outcomes, reduce cost and enhances safety!	

DO NOT USE any of the following devices to access the valve:

References:
 1. Long Y. New innovations in addition to the central line bundle which are associated with a sustained reduction of central line associated bloodstream infections. Paper presented at Infection Control Conference 2016, 10-11 Nov, New Zealand.
 2. CDC. 10 Bundles for Reducing Central Line Associated Bacteremia (CLABSI). Additional Measures Used to Reach the Goal: 1. Use a checklist for central line insertion and maintenance. 2. Use a central line-associated bloodstream infection (CLABSI) prevention bundle. 3. Use a central line-associated bloodstream infection (CLABSI) prevention bundle. 4. Use a central line-associated bloodstream infection (CLABSI) prevention bundle. 5. Use a central line-associated bloodstream infection (CLABSI) prevention bundle. 6. Use a central line-associated bloodstream infection (CLABSI) prevention bundle. 7. Use a central line-associated bloodstream infection (CLABSI) prevention bundle. 8. Use a central line-associated bloodstream infection (CLABSI) prevention bundle. 9. Use a central line-associated bloodstream infection (CLABSI) prevention bundle. 10. Use a central line-associated bloodstream infection (CLABSI) prevention bundle.

Contact Details:
 Questions: Please contact the CNE for your clinical area. If after hours, please contact the after hours CNE.

Evaluation form PIVC

Evaluation period: 24th October to 25th November 2016. Please complete one form per person.

Facility / Clinical area: _____ Date: _____
 Designation: EN / RN / RM / MO

- Were you provided with training / education on the use of this device?
A. Yes B. No
- How many patients did you use the device on during the evaluation period?
A. 1-10 B. 11-20 C. 21-30 D. Greater than 30 times
- How often would you have accessed these devices during the evaluation period?
A. 1-10 times B. 11-20 times C. 21-30 times per shift D. Greater than 30 times
- What did you access these devices for?
A. IV flush or fluid bolus
B. IV line access for continuous fluids or administer medication
C. Multiple use of A and B
D. Did not access the devices

1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Device is easy to use					
Shape, size and profile of the device appropriate for patient use					
Surface of the device easy to disinfect with a swab					
The luer lock feature on the device remains secure when using a luer lock syringe or connecting to IV line					
Recommend this device based on your evaluation					

Comments: _____

Please return this evaluation to CNE in your clinical area

Evaluation form CVC

Evaluation period: 24th October to 25th November 2016. Please complete one form per person.

Facility / Clinical area: _____ Date: _____
 Designation: EN / RN / RM / MO

- Were you provided with training / education on the use of this device?
A. Yes B. No
- How many patients did you use the device on during the evaluation period?
A. 1-10 B. 11-20 C. 21-30 D. Greater than 30 times
- How often would you have accessed these devices during the evaluation period?
A. 1-10 times B. 11-20 times C. 21-30 times D. Greater than 30 times
- What did you access these devices for?
A. IV flush or fluid bolus
B. IV line access for continuous fluids or to administer medication
C. Multiple use of A and B
D. Did not access the devices
- What type of catheter did you access?
A. CVC (Short-term / Hickman / Vascath) B. PICC C. Portacath D. A + B + C devices

1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Device is easy to use					
Shape, size and profile of the device appropriate for patient use					
Surface of the device / valve easy to disinfect					
The luer lock feature on the device remains secure when using a luer lock syringe or connecting to IV line					
Recommend this device based on your evaluation					

Comments: _____

Please return this evaluation to the CNE in your clinical area

Results

Education and communication across the facility and organisation occurred before the trial period. This included an extensive four week period prior to the start date and a planned education / training sessions for clinical staff. Communication strategies to relevant key stakeholders occurred along with support from the company to provide flyers, educational material and ongoing training. During the trial period, support from members of the VAWG committee occurred and clinical staff were asked to complete an evaluation form. This resulted in the successful implementation of these two devices. There was no identified patient safety or education concerns during this time.



Conclusion

The transition from one product device to another can be achieved with thorough planning, achievable timelines and ongoing support from all relevant staff within the organisation and the chosen company. Very clear guidance was agreed upon and provided by the company to ensure all NBMLHD and NSW Health policies and procedures were incorporated and reinforced to staff during education / training sessions. In this case, the months leading to the start date was essential in ensuring a successful implementation change within a large tertiary hospital and later across NBMLHD facilities / services.

SmartSite™ and MaxPlus™ IV Connector & Sets

As a gatekeeper, catheter IV connectors should provide access without acting as an avenue for microbial contamination.

20 minute education sessions

Time: 11:30, 14:30, 16:30, 19:30
 Date 1: Monday, 16th October
 Location: Theatre, Health Block
 Date 2: Wednesday, 19th October
 Location: Health Block, Building 2

BD, 4 Research Park Drive, Macquarie University Park, North Ryde NSW 2113
 Toll Free: 1800 656 100

bd.com

Acknowledgement

We wish to thank all committee members of the NBMLHD VAWG for their assistance and support. BD for their commitment with the changeover process, education and training.

References

- William R. Jarvis. "Choosing the Best Design for Intravenous Needleless Connectors to Prevent Healthcare-Associated Bloodstream Infections" Infection Control Today. August 2010 volume 14 No 8.
- Lynn C. Hadaway, Deb Richardson "Needleless Connectors: A Primer on Terminology" Published in Journal of infusion nursing: 2010