

**OCCUPATIONAL EXPOSURES TO BLOOD AND BODY FLUIDS  
PREVENTING HOLLOW-BORE NEEDLESTICK INJURIES  
IMPLEMENTATION CHECKLIST**

**Recommendations include recommended devices**

*Recommendation 1*

Replacement of conventional needles and syringes for intramuscular and subcutaneous injections with the VanishPoint® retractable syringes with pre-attached needle (also refer Queensland Health Standing Offer Arrangement {QH SOA} 234):

- 1 mL insulin with 29G x ½" (13 mm) needle
- 1 mL insulin with 27G x ½" (13 mm) needle
- 1 mL tuberculin with 27G x ½" (13 mm) needle (available on exemption only)
- 1 mL tuberculin with 25G x 5/8" (16 mm) needle (available on exemption only)
- 1 mL tuberculin with 25G x 1" (25 mm) needle (available on exemption only)
- 3 mL standard with 23G x 1" (25 mm) needle
- 3 mL standard with 23G x 1½" (38 mm) needle
- 3 mL standard with 22G x 1" (25 mm) needle
- 3 mL standard with 22G x 1½" (38 mm) needle
- 3 mL standard with 21G x 1" (25 mm) needle
- 3 mL standard with 21G x 1½" (38 mm) needle
- 3 mL standard with 25G x 5/8" (16 mm) needle
- 3 mL standard with 25G x 1" (25 mm) needle

*Recommendation 2*

Replacement of steel-winged infusion sets ('butterflies') with a safety system for subcutaneous and intravenous infusions:

- Becton Dickinson (BD) Saf-T-Intima™ Integrated IV Catheter (with Y Adapter)

*Recommendation 3*

Removal of steel-winged sets ('butterflies') for both intravenous and subcutaneous purposes other than infusions e.g. routine blood collection. There is currently no safety butterfly on QH SOA, the following devices are available but have different mechanisms of activation:

- Terumo® Surshield™ Safety Winged Blood Collection Set
- BD Safety-Lok™ Blood Collection Set
- BD Vacutainer® Push Button Blood Collection Set

*Recommendation 4*

Utilisation of needle-free intravenous access systems:

- Baxter Interlink™ (split septum) System
- Cardinal Health Alaris SmartSite® (mechanical valve) Needle-Free System

*Recommendation 5*

Utilisation of single-use only blood collection tube holders ('vacutainers'):

- VanishPoint Blood Collection Tube Holder
- BD Vacutainer® One-Use Holder
- A multi-use blood collection tube holder (BD Pronto) is available however, it is suggested that the only areas whose prime responsibility is blood collection should use this device e.g. Queensland Health Pathology Service (QHPS).

*Recommendation 6*

Utilisation of safety intravenous cannula for peripheral vein catheterisation:

- BD Insite™ Autoguard™ Shielded IV Catheter

**The following checklist should be used as a guide to assist with the implementation of the Recommended Practices to Prevent Hollow-Bore Needlestick Injuries**

Measure	Compliant		*If No State Action or Comments
	Yes	No*	
<p>1. Nominate key contact person(s) within each facility for implementation?</p> <p>_____</p> <p><i>(CHRISP advised of key contact person/s)</i></p>			
<p>2. Determine implementation timeline including 'go live' date for the facility and/or Health Service District (HSD)?</p>			
<p>3. Establish a multidisciplinary Implementation Team including the following representatives (where applicable)?</p> <ul style="list-style-type: none"> <li>i. Infection Control (also involve link/liaison program representatives)</li> <li>ii. Occupational Health and Safety</li> <li>iii. Material Managers</li> <li>iv. Clinical Product Coordinator/Supply Department representative</li> <li>v. Nursing Unit Managers/Clinical Nurse Consultants</li> <li>vi. Enrolled Nurses/Assistants in Nursing and others that manage stock</li> <li>vii. Phlebotomy staff</li> <li>viii. Quality and Safety Representative</li> <li>ix. Patient Safety Officer</li> <li>x. Staff Development Educator/s including Medical</li> </ul> <p><i>All the stakeholders in the process must be included, in order to gain the buy-in and cooperation of all parties – medical staff must be part of the team.</i></p> <p><i>Some suggestions to attract and retain excellent team members include using data to define and solve the problem.</i></p> <p><i>Select those that want to work on the project rather than trying to convince those that do not.</i></p>			

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<p>4. New devices will need to be ordered and conventional devices withdrawn.</p> <p><b>Only one type of each device must be selected due to the differing methods of operation/activation of the safety feature i.e. either the Becton Dickinson Interlink or Cardinal Health Alaris Smartsite intravenous access system (refer <a href="#">Safety Device Ordering Details</a>)</b></p> <p>i. Establish baseline of:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Conventional devices currently being used and applications (examples of applications are included in the Action column)</li> <li><input type="checkbox"/> Safety devices currently being used and applications (examples of applications are included in the Action column)</li> <li><input type="checkbox"/> Steel-winged infusion/collection set applications (examples of applications are included in the Action column)</li> <li><input type="checkbox"/> Pre-packed pharmaceuticals with syringe +/- needle being used</li> <li><input type="checkbox"/> Procedural kits which contain syringe(s) and needle(s) being used</li> </ul> <p>ii. Select device(s) for:</p> <ul style="list-style-type: none"> <li>- Intramuscular (IM) injection</li> <li>- Subcutaneous (SC) injection</li> <li>- Insulin injection</li> <li>- Intravenous (IV) injection</li> <li>- Intravenous infusion</li> <li>- Subcutaneous infusion</li> <li>- Blood collection</li> <li>- Peripheral intravenous catheterisation</li> </ul> <p>iii. Determine where conventional needles and syringes will need to be retained and implement measures to restrict usage to those areas e.g.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 1 mL (tuberculin with no needle) syringe for accurate measurement of micro-doses of medication (note a oral medication syringe is available on QH SOA 599)</li> <li><input type="checkbox"/> 5 mL, 10 mL and 20 mL standard syringes for IV administration and local anaesthetic administration &gt;3 mL</li> <li><input type="checkbox"/> 18 gauge (blunt) needle for drawing up medication</li> <li><input type="checkbox"/> 21 gauge needle for administration of medication into infusion bags and blood collection</li> <li><input type="checkbox"/> 27 gauge needles for administration of local anaesthetic</li> </ul>			<p>Applications:</p> <ul style="list-style-type: none"> <li>- Intramuscular injections</li> <li>- Subcutaneous injections</li> <li>- Intravenous injections</li> <li>- Injection into intravascular administration sets e.g. infusion bags, burettes</li> <li>- Administration of local anaesthetic</li> <li>- Blood collection</li> <li>- Needles required for pre-packed pharmaceuticals</li> <li>- Needles used to prick skin grafts</li> <li>- Needles used to collect histology samples</li> <li>- Fine needles used as pointers for biopsies</li> <li>- Biopsies</li> </ul> <p><i>Features to consider when selecting a suitable device include:</i></p> <ul style="list-style-type: none"> <li>- <i>provision of a rigid cover that allows the hands to remain behind the needle</i></li> <li>- <i>the safety feature is in effect before disassembly and remain in effect after disposal</i></li> <li>- <i>be an integral part of the device</i></li> <li>- <i>be simple and obvious in operation</i></li> <li>- <i>be cost effective, and</i></li> <li>- <i>not compromise patient care.</i></li> </ul>

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iv. Determine stock level v. By implementation date: <ul style="list-style-type: none"> <li><input type="checkbox"/> Conventional needles and syringes replaced where indicated</li> <li><input type="checkbox"/> All steel-winged infusion sets removed or replaced with safety device</li> </ul>			
5. Action Plan to Implement Recommended Practices <ul style="list-style-type: none"> <li>i. Develop an Action Plan which includes the strategies, tasks, timeline and responsibility for implementation.</li> <li>ii. Identify indicators of performance improvement to measure progress and how frequently the indicators will be monitored (also refer <a href="#">Recommended Practices</a>), for example –               <ul style="list-style-type: none"> <li>- Changes in the frequency of certain types of injuries</li> <li>- Frequency of compliance with the use of a newly implemented safety device</li> <li>- Frequency of compliance with use of conventional devices.</li> </ul> </li> </ul>			
6. Hollow-bore NSI data should be reviewed by the Implementation Team (where possible at least 2 previous years of data should be available depending on the facility size) to provide a baseline assessment which will be used to develop the Action Plan i.e. develop a profile of how injuries are occurring and a list of current prevention strategies, for example: <ul style="list-style-type: none"> <li>- <i>What occupational groups most frequently sustain sharps injuries?</i></li> <li>- <i>What devices are most commonly involved in sharps injuries?</i></li> <li>- <i>What circumstances or procedures contribute to sharps injuries?</i></li> <li>- <i>What devices with sharps injury prevention features have been implemented?</i></li> <li>- <i>Is there a list of recommended work practices to prevent sharps injuries?</i></li> <li>- <i>What communication tools have been used to promote safe sharps handling techniques?</i></li> <li>- <i>How are sharps containers managed?</i></li> </ul>			
7. NSI data should be made available to enlist support and engage staff within the facility. Results should be reported regularly and prominently. For larger facilities, reporting should occur monthly.			
8. The implementation date must be recorded on the Infection Control Occupational Exposure Surveillance Plan to assist with measuring the effectiveness of interventions			
9. Staff are aware that all episodes of NSI related to a safety device will be investigated by Infection Control and clinicians will be required to assist with identifying factors that may have contributed to the NSI			

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<p>10. Updating of Policies, Procedures, Protocols and Work Practices</p> <ul style="list-style-type: none"> <li>i. All existing policies and procedures within the facility should be submitted to the Implementation Team for review in line with the Recommended Practices.</li> <li>ii. Establish a timeline and allocate responsibilities for updating of policies etc where gaps are identified.</li> <li>iii. Care plans, critical pathways and other related documents are updated to reflect recommended practices</li> </ul>			
<p>11. An internal, multidisciplinary education strategy will be developed to inform staff of the changes to policies and procedures.</p> <p><b>CHRISP will be responsible for organising and coordinating the initial education and training for the retractable syringes. Subsequent training will be the responsibility of the individual facility. Support in relation to other safety devices should be organised directly with the supplying company (refer Attachment 1).</b></p> <ul style="list-style-type: none"> <li>i. All HCWs who use the devices will need to be informed of changes to practice, and provided with education and training in order to use the new devices safely</li> <li>ii. The Recommended Practices will form part of ongoing teaching to relevant new staff</li> <li>iii. The following barriers to staffs' adherence to recommended practices should be considered to improve guideline adherence: <ul style="list-style-type: none"> <li>- Knowledge (lack of awareness or lack of familiarity)</li> <li>- Attitudes (lack of agreement with specific or general guidelines, lack of outcome expectancy, lack of self-efficacy, lack of motivation – inertia of previous practice)</li> <li>- Behaviour (external barriers, guideline factors – contradictory, environmental factors – lack of time, lack of resources)</li> </ul> </li> <li>iv. Whilst focused education is essential, systematic modifications may also be required to improve compliance i.e. removal of all non-essential needles and syringes</li> </ul>			
<p>12. Determine what strategies will be used to communicate the introduction of the safety devices to staff e.g. posters, email, screensavers, personalised messages/memorandums</p>			
<p>13. A process for assessing each ward/unit has been established to ensure recommended safety devices are available.</p>			

## **Attachment 1**

### **INDUSTRY CONTACTS FOR TRAINING**

#### **Retractable Syringes:**

VanishPoint Syringes – distributed by Scientific Educational Supplies (SES)

Ph: 1800 656 434

<http://www.ses.com.au> (Internet Access Required)

#### **Needle-Free Intravenous Access Systems:**

Alaris – Cardinal Health

Ph: 1800 110 551

<http://www.cardinalhealth.com.au> (Internet Access Required)

Becton Dickinson (BD) and Baxter

Ph: 1800 656 100

<http://www.bd.com/anz/> (Internet Access Required)

#### **Winged Infusion and Blood Collection Sets:**

Becton Dickinson (BD) and Baxter

Ph: 1800 656 100

<http://www.bd.com/anz/> (Internet Access Required)

Terumo Corporation

Ph: 1800 837 866

<http://www.terumomedical.com/> (Internet Access Required)

#### **Blood Collection ('vacutainers'):**

Becton Dickinson (BD)

Ph: 1800 656 100

<http://www.bd.com/anz/> (Internet Access Required)

VanishPoint blood collection tube holder – distributed by Scientific Educational Supplies (SES)

Ph: 1800 656 434

<http://www.ses.com.au> (Internet Access Required)

#### **Safety Peripheral Intravenous Catheter:**

Becton Dickinson (BD) and Baxter

Ph: 1800 656 100

<http://www.bd.com/anz/> (Internet Access Required)