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Guideline Statement for the Implementation of the Neutral Zone in the Perioperative Environment

Introduction

The perioperative environment poses several challenges for reducing the risks of sharps exposure injuries. According to Davis, one-fourth of suture needle injuries and more than half of scalpel injuries occur during passing between surgical team members.² The perioperative environment is a high risk environment, and surgical team members routinely face the risk of contamination of bloodborne pathogens from sharps and percutaneous injuries. The establishment of the neutral zone is an evidenced-based practice implemented to reduce sharps and percutaneous injuries in the perioperative environment. The neutral zone, also referred to as the “no pass” or “no touch” technique, is used for the placement of sharps during the surgical procedure to prevent person-to-person transfer of sharps.²

AST Guideline Statement

A neutral zone should be established for the placement of sharps during a surgical procedure to ensure that no person-to-person passing of sharps occurs. The creation of a neutral zone will assist in the reduction of percutaneous injuries and blood exposures commonly caused by the hand-to-hand transfer of sharps during surgical procedures. The establishment of a neutral zone is only effective when a team approach is utilized and positive communication occurs among the perioperative team members.³

Exceptions to the Use of the Neutral Zone

There are situations in when use of the neutral zone is negated and hand-to-hand transfer of sharps remains an appropriate action. Examples include:

1. Surgeon's discretion when he/she cannot avert his/her eyes from the surgical field to the neutral zone.
2. Surgeon cannot reach the neutral zone due to patient positioning.
3. Microscope or loops are being used by the surgeon.

Examples of Neutral Zone Devices

Any device utilized as the neutral zone should be large enough to adequately contain the sharps used, should not be easily tipped over, and preferably mobile. Examples include:

- Instrument/magnetic mat
- Emesis basin or transfer basin

Strategies for Exposure Prevention (*Adapted from Lancaster General Hospital*)

| Strategy | Implementation |
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| 1. The neutral zone is dedicated for sharps only. All other instruments are passed hand-to-hand. Only one sharp in the neutral zone at a time. | Identify the neutral zone in consultation between the CST and the surgeon. |
| 2. Do not hold the neutral zone device. | Place the neutral zone device in the designated area keeping the fingers out of the way. |
| 3. Orient the sharp in the neutral zone to facilitate the surgeon being able to pick it up with her/his dominant hand without having to turn or reposition body. | Alert the surgeon that the sharp item has been placed in the neutral zone and ready to be picked up. |
| 4. Avoid need to reposition the needle holder in the surgeon's right or left hand. | Ensure that suture needles are correctly positioned and clamped. |
| 5. Move neutral zone as needed to accommodate the surgeon. | Open and positive verbal communication is maintained between the CST and surgeon. |
| 6. Avoid contact with the suture needle when surgeon has finished using. | Keep sharp end of suture needles grasped between the needle holder when finished using. |
| 7. Use no-touch technique when placing drains. | Use a grasping instrument to position drains. |
| 8. When finished using a sharp, the surgeon continues to utilize the use of the neutral zone. | Surgeon returns the sharp to the neutral zone and avoids passing it back directly to the CST. |

Additional Sharps Safety Techniques

- Never recap hypodermic needles. When recapping is unavoidable, a one-handed technique or safety device should be utilized.
- Sharps on the Mayo stand or back table should be placed in a central location.
- Utilize a small sharps container to store needles and to promote a safe and accurate count of sharps, such as needles and knife blades.
- Load needles immediately prior to use to avoid open needles on the Mayo stand or back table.
- Avoid using hands or fingers to retract, or for any skills that an instrument could be utilized.
- Provide verbal notification when passing a sharp.
- When possible, keep hands away from the surgical field, when sharps are in use.
- After pulling a drain trocar through an exit wound, replace the guard onto the sharp tip, using a grasping instrument, rather than fingers.

Competency Statements

| Competency Statements | Measurable Criteria |
|---|---|
| <p>1. CSTs are knowledgeable of the risks and hazards associated with sharps and percutaneous injuries in the perioperative environment.</p> <p>2. CSTs can identify the need for the establishment of a neutral zone in the perioperative environment.</p> <p>3. CSTs integrate the use of various neutral zone devices.</p> <p>4. CSTs monitor the perioperative environment and implement exposure prevention strategies when appropriate.</p> | <p>1. Educational standards as established by the <i>Core Curriculum for Surgical Technology</i>.¹</p> <p>2. The subject area of Standard Precautions and use of the neutral zone is included in the didactic studies as a surgical technology student.</p> <p>3. Surgical technology students practice the application of Standard Precautions and use of the neutral zone in the mock O.R. setting, including exhibiting the knowledge through skill check-off exams.</p> <p>4. Surgical technology students apply the principles of Standard Precautions and use of the neutral zone during clinical rotation and are evaluated by instructors and preceptors.</p> <p>5. CSTs apply the principles of Standard Precautions and use of the neutral zone in the perioperative setting as practitioners.</p> <p>6. CSTs complete continuing education to remain current in their knowledge of Standard Precautions and neutral zone.</p> |

References

1. *Core Curriculum for Surgical Technology*. 5th ed. Littleton, CO: Association of Surgical Technologists; 2002.
2. Davis MS. *Advanced Precautions for Today's O.R.: The Operating Room Professional's Handbook for the Prevention of Sharps Injuries and Bloodborne Exposures*. 2nd ed. Atlanta, GA: Sweinbinder Publications; 2001.
3. Frey K, Ross T, eds. *Surgical Technology for the Surgical Technologist: A Positive Care Approach*. 4th ed. Clifton Park, NY: Delmar; 2014.