 Department of Health Government of Nunavut		<b>NURSING POLICY, PROCEDURE AND PROTOCOLS</b>	
		<b>Community Health Nursing</b>	
<b>TITLE:</b>		<b>SECTION:</b>	<b>POLICY NUMBER:</b>
<b>Wound Closure: Skin Adhesive</b>		Clinical Procedures	11-011-00
<b>EFFECTIVE DATE:</b>	<b>REVIEW DUE:</b>	<b>REPLACES NUMBER:</b>	<b>NUMBER OF PAGES:</b>
February 10, 2018	February 2021		5
<b>APPLIES TO:</b>			
Community Health Nurses			

**POLICY:**

**A Registered Nurse working as a Community Health Nurse may apply skin adhesive (e.g. Dermabond® for the purpose of wound closure.**

**Skin adhesive is not to be used if any of the following applies:**

1. **Animal bites**
2. **Jagged or stellate lacerations**
3. **Severely contaminated wounds**
4. **Ulcers**
5. **Puncture wounds**
6. **Mucous membranes**
7. **Areas of high moisture content (e.g. axillae or groin)**

**DEFINITION:**

Dermabond is a cyanoacrylate tissue adhesive that forms a strong bond across apposed wound edges, allowing normal healing to occur below.

**PRINCIPLES:**

Skin adhesive may replace sutures 5-0 or smaller in diameter for laceration repair. It is best suited for small, superficial lacerations, it may also be used on larger wounds where subcutaneous sutures are needed.

**RELATED POLICIES, GUIDELINES AND LEGISLATION:**

Procedure 11-011-01    Applying Skin Adhesive

**REFERENCES:**

Burns, TB., and Worthington, JM. (2000). Using Tissue Adhesive for Wound Repair: A practical guide to Dermabond. *American Family Physician*

## PROCEDURE 11-011-01

### NURSING CONSIDERATIONS

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1. Control of bleeding is the first priority, as well as assessing the ABCs.
  - a. Excessive wound seepage before closure may prevent good bonding to the epithelial layer
2. Extremity and torso wounds tend to heal better when subcutaneous sutures are placed first.
3. If adhesive must be used on areas of high tension or mobility (e.g. joints), this area should be immobilized in a splint to prevent premature peeling of the adhesive.
4. When skin adhesive is used on scalp wounds, care should be taken to avoid getting excess adhesive in the client's hair.
5. Dermabond reaches maximum bonding strength in two and one-half minutes.
6. All lacerations must be thoroughly inspected for damage to underlying structures, such as tendons or bones, as well as for foreign bodies. Obtain a good history of the incident and past medical history, including immunization status (ensure Tetanus is up to date).
7. Devitalized tissue should be debrided before a wound is closed, which appears with a blue or black appearance and is often shredded. Only simple debridement shall be performed by the registered nurse.
8. Remove all rings and other jewelry from injured hands or fingers.
9. Follow the guidelines and protocols contained within the *Communicable Disease Manual* for post wound care. For example, dog bite protocol.



## PROCEDURE

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1. Position client on the stretcher, so excess adhesive does not run off into areas not meant to be glued. The laceration should be well lit, preferably with an overhead procedure light, and your equipment should be within easy reach.
2. Assemble equipment, perform hand hygiene and apply gloves.
3. Clean, irrigate and explore wound (may not be able to explore wound until area anesthetized).
  - a. Irrigate wound with copious amounts of normal saline solution.
  - b. A large (20ml) syringe with a large bore IV catheter (needle removed) is effective in forcing out bacteria and debris from the wound.
  - c. Vigorous irrigation is required to remove bacteria and particulate matter. Irrigation should continue until all visible, loose particulate matter has been removed.
4. Prepare wound by scrubbing a wide area of skin surrounding the wound with an antiseptic solution (e.g. 10% povidone-iodine solution or chlorhexidine gluconate) to remove contaminants.
  - a. It is important to remove all particulate matter; any material left in the dermis may become impregnated in the healed tissue and result in a disfiguring “tattoo” effect.
  - b. Avoid introducing any cleansing agent directly into the wound because many are toxic to local tissues and may interfere with wound healing.
5. Anesthetize the region if indicated (as per Procedure 11-009-01).
6. Place a single fenestrated drape or multiple folded drapes over the wound site.
7. Explore the entire depth and the full extent of the wound under direct visualization with good lighting in a bloodless field. Attempt to locate hidden foreign bodies, particulate matter, bone fragments, and any injuries to underlying structures that may require repair (e.g. tendons, ligaments, blood vessels). A metal probe or forceps will assist in the identification of deep structures and foreign bodies.
8. Debride devitalized areas as needed. If devitalized areas are extensive, a physician must be consulted.
9. Dermabond comes in a single-use vial in sterile packaging. It consists of an outside plastic casing with an inner glass ampule containing 0.5 mL of adhesive that can be expressed through the applicator tip once the vial has been crushed.
10. The edges of the wound must be approximated manually and evenly. If there is uncertainty about whether this can be done, the wound should probably be sutured instead.
11. Crush the vial between the thumb and index finger and inverted. The vial must be used within a few minutes.
12. Gently squeeze the vial so the adhesive until a drop begins to form at the applicator tip. Then apply to the apposed wound edges with gentle brushing motions. Never press the applicator tip into the wound.
  - a. After applying adhesive across the wound edges, hold the edges together for at least 30 seconds before releasing.



- b. Reapply the adhesive in an oval pattern (at least three layers) around the wound to add greater strength to the wound closure.
  - c. The first layer of adhesive reaches maximal strength within two and one-half minutes; the subsequent layers usually take longer to dry because less moisture is available for polymer formation.
- 13. If the adhesive inadvertently covered an area not intended to be glued, it should be wiped off immediately with dry gauze.
  - a. If a finger or forcep becomes inadvertently adhered to the client during the procedure, place pressure on the client's skin adjacent to the edge of the object and gently roll the object away.
- 14. If the wound edges are aligned, the wound should not be touched until the adhesive dries completely
  - a. If the wound edges are not aligned after the first application of adhesive, wipe the adhesive off immediately with dry gauze. (a window of approximately 10-seconds before the adhesive cannot be wiped off).
  - b. If the adhesive has already dried, apply an antibiotic ointment or petroleum jelly for 30 minutes to loosen the adhesive for removal.
- 15. Do not apply topical antibiotics to the closed wound because of the risk of causing the adhesive to break down and peel prematurely.
- 16. Administer tetanus prophylaxis in accordance with the *Nunavut Immunization Guide*.
- 17. A wound dressing is not required, as the skin adhesive acts as a water-resistant bandage. However, a bandage may be applied to children to prevent the child from 'picking' at their wound.

#### CLIENT EDUCATION

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- 1. Dermabond must be kept dry for at least five days for normal healing.
  - a. Client may shower normally but must be instructed to pat the area dry immediately following the shower.
  - b. Avoid taking baths to avoid premature peeling.
- 2. Instruct the client to monitor the wound for infection and to contact the nurse-on-call if any signs or symptoms are noted.



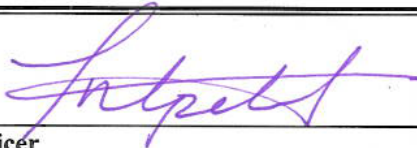

## DOCUMENTATION

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Document the history and physical examination in the client health record, including any preliminary x-ray findings. If a physician was consulted, document his/her name and any recommendations given.

Clearly document the procedure, client teaching, and any follow-up arranged.

Complete WSCC forms, if applicable.

Approved by:		11 FEB 2011
Chief Nursing Officer		Date
		
Deputy Minister of Health and Social Services		Date
Effective Date:		
April 1, 2011		

