

**THE NETHERSOLE NURSING PRACTICE RESEARCH UNIT
EVIDENCE-BASED PROTOCOL ON TOPICAL SKIN CARE
FOR OLDER POPULATION**

Standard statement

Skin hydration and integrity is maintained.

Expected outcomes

1. The older person will be free from skin dryness and the associated discomfort.
2. The older person will be free from incontinence-associated dermatitis.
3. The older person will be free from skin breakdown.
4. The older person will be free from grade one pressure sore.

Structure standard

The care team for managing the skin health includes:

- NNPRU
 - Conduct comprehensive assessment of skin health and associated risk factors for skin problem.
 - Develop an evidence-based skin care protocol and revise if necessary.
 - Provide training to ward staff on evidence-based skin care.
 - Evaluate the effectiveness of the skin care protocol.
- Ward nurse
 - Implement the care protocol with individual needs taken into consideration in care planning.
 - Maintain effective communication with other healthcare providers to optimize the care.
 - Monitor the effects of the skin care practice as suggested in the protocol.
- Health care assistant
 - Provide skin care according to the care protocol.

Process standard

1. Assessment and Planning

A comprehensive skin assessment is taken initially to assess the older person's current skin condition. The assessment comprises general skin health assessment and specific assessment to skin problem if presence.

1.1 Risk assessment

Skin integrity risk assessment tool and Braden scale are used to assess the older person's risk of developing skin tear and pressure sore respectively.

1.2 General skin condition

This part is to assess four aspects of skin health, including skin temperature, skin colour, skin moisture and skin turgor. Patient's subjective perception of their skin health and their usual skin care habits are also explored in this part.

1.3 Specific skin condition

1.3.1 Skin tear

- Skin tear refers to any partial thickness or full thickness traumatic wound due to shearing or friction forces.
- The severity of skin tear can be classified by means of the Payne-Martin Classification for Skin Tear (Payne & Martin, 1993).
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1.3.2 Pressure Ulcer

- Watch for skin redness and integrity at bony prominence area when providing care, such as turning.
- Pressure ulcer is defined as any localized skin lesion over a bony prominence due to pressure, or pressure in combination with shear (European Pressure Ulcer Advisory Panel (EPUAP), 2009).
- Observation for signs of skin redness, localized heat, edema, induration (hardness) and integrity at bony prominence area.
- The severity of pressure ulcer can be categorized according to the staging system recommended by EPUAP (2009).

1.3.2 Incontinence-associated dermatitis

- Incontinence-associated dermatitis is defined as inflammation of the perineal or peri-genital skin resulting from prolonged contact with urine or stool (LeBlanc et al., 2010).
- Inspect skin on colour and integrity at the perineal and buttock area.
- The severity of incontinence-associated dermatitis can be classified by

using the IAD Intervention Tool (IADIT) (Junkin & Selek, 2007).

2. Implementation

2.1 Basic skin care

Purpose: To maintain skin cleanliness and promote skin health and comfort.

2.1.1 Skin cleansing

- Wash hands before the application to reduce the risk of infection.
- Keep fingernails short and smooth to prevent damaging the skin during the procedure.
- Use bath oils, soap substitutes (e.g. Aqueous cream) or emollients for bathing to maintain skin hydration.
 - Soaps, shower gels and bubble baths are not recommended as they will irritate and dry the skin.
- Pump dispensers are preferable to prevent contamination and cross-infection.
- If the products are prepared in a pot, use a clean spatula or spoon to decant the product to reduce the risk of contamination of the product.
- Apply soap substitute to the skin before washing or apply it on a soft cloth to damp skin.
- Use warm rather than hot water to wash.
- Finish bathing / showering in about 10 - 15 minutes.
 - Prolonged washing time makes skin become waterlogged and this will weaken the hydrolipid film and increase skin permeability that result in dryness.
- Gently pat the skin dry with soft towel instead of rubbing after cleansing.
 - Rubbing can damage skin surface.
- Daily cleansing is preferable
- Do not contaminate the pot emollient.
- Bathroom temperature 20 – 27 degree Celsius.
- Precaution to fall risk should be taken as the products can make the bathroom slippery.
 - Use non-slip mat to prevent slippery incident.
 - Clean the bathroom floor with hot soapy water, then rinse and dry it thoroughly.

2.1.2 Skin protectant

- Types
 - Apply leave-on emollient product to help trapping moisture into the skin.

There are a range of emollient products, such as lotions, creams and ointments.

- Lotions and creams which contain higher water content are lighter in texture. They are more readily to be absorbed into the skin, but the period of effect may be shorter.
- Ointments are the most greasy and occlusive as they are oil based. Their effects last longer and are more effective for dry, fissured skin.
- Choice of emollient is determined according to the skin condition, environmental factor and individual preference (Please see the diagram below).
- The general rule is that the drier the skin, the greasier the emollient should be used.
- Older people who use paraffin-based products, such as White Soft Paraffin, Liquid Paraffin or Emulsifying Ointment should be advised to keep away from fire, flames and cigarettes because these products can be easily ignited.
- Ingredients
 - Humectants, such as glycerol, lactic acid, propylene glycol and urea, may be added to some of the products to increase its water-holding capacity.
 - Aqueous cream if include sodium lauryl sulphate (SLS) in the ingredient should not be used as a leave-on product. SLS damage the skin barrier and can cause irritant reactions.
- Frequency and timing of application
 - Leave-on emollients should be applied right after bathing to trap moisture.
 - They have to be applied at least twice daily or every 2-3 hours whenever the skin feels dry.
 - More frequent application may be needed for lighter products and exposed areas.
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- Dosage
 - Amount of each application can be based on the severity of skin dryness (Penzer & Ersser, 2010).
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	Normal	Dry	Severe Dry
Face	2g (~ 1/2 teaspoon)	4g	6g
Each arm	5g (1 teaspoon)	10g (1 dessert spoon)	20g (1 table spoon)
Chest	5g (1 teaspoon)	10g (1 dessert spoon)	20g (1 table spoon)
Abdomen	5g (1 teaspoon)	10g (1 dessert spoon)	20g (1 table spoon)
Each thigh	5g (1 teaspoon)	10g (1 dessert spoon)	20g (1 table spoon)
Each shin	5g (1 teaspoon)	10g (1 dessert spoon)	20g (1 table spoon)
Upper back	5g (1 teaspoon)	10g (1 dessert spoon)	20g (1 table spoon)
Lower back	5g (1 teaspoon)	10g (1 dessert spoon)	20g (1 table spoon)

- Method of application
 - Wash hands before the application to reduce the risk of infection.
 - Keep fingernails short and smooth to prevent damaging the skin during the procedure.
 - Pump dispensers are preferable to prevent contamination and cross-infection.
 - If the products are prepared in a pot, use a clean spatula or spoon to decant the product to reduce the risk of contamination of the product.
 - Apply emollients to all parts of body.
 - Use smooth, downward strokes, in the direction of hair growth to prevent folliculitis.
 - Do not massage or rub the emollient in order to prevent folliculitis.

2.2 Advanced skin care

Purpose: To prevent the development of pressure ulcer and incontinence-associated dermatitis through topical skin care.

2.2.1 Skin cleansing

- Spray no-rinse cleansing foam directly onto the patient's skin.
 - Cleansing the skin with soap and water decrease the natural sebum content of the epidermis and hence increases the transepidermal water loss (TEWL).
 - The efficacy of the foam is reduced if it is placed onto a cotton pad before the application.
- Gently wipe the soiled area with clean damped cotton pads.
 - Do not scrub the skin as the friction induced can damage the skin.
- If the skin remains stained, lay damped cotton pads on the area for a couple of seconds and pat softly if needed.

2.2.2 Skin protection:

- Change diapers every 2 hours or soon after episode of incontinence.
- Apply barrier cream, for example Zinc Oxide cream or petrolatum, to skin that appears erythematous to prevent further irritation from subsequent episodes of incontinence.
 - Avoid products with high concentrations of humectants because the skin may already be overhydrated or macerated from continuous exposure to urine or feces or possibly sweat.
 - It can be difficult to remove zinc oxide from the skin. It is not necessary to remove it completely with each cleaning.

3 Evaluation

- Reassess the skin conditions on regular basis as needed and each time when care is provided. .
- Monitor the effect of skin care regimen and watch out for any irritation or adverse effects.

Outcome standard

- The older persons can maintain optimal skin moisture.
- The older persons do not suffer from skin tear, incontinence-associated dermatitis and pressure sore.
- The older persons are satisfied with the suggested skin care
- The older persons can acquire basic skin care practice.