NURSING LEVEL

NTQF III

LEARNING GUIDE #36

Unit of Competence : Undertake basic wound care

Module Title : Undertaking basic wound care

LG Code : HLT NUR3 M07 LO2- LG34

TTLM Code : HLT NUA3 TTLM 0919v2

LO2: **Contribute to planning appropriate care for the client with a wound**

Instruction sheet -2 learning guide 2

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Discussing wound care
- Nursing care plan for wound care
- Physiology of wound healing processes
- Client comfort needs
- Potential impact of wound

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to:

- Discuss Wound care with the client in conjunction with the registered nurse.
- sequencing, timing and client needs are taken into account when planning care.
- Perform Primary health care principles and holistic approach are taken into account when planning care.
- processes Knowledge of physiological associated with normal wound healing in planning and delivering treatments is utilized
- Identify Client comfort needs are (e.g. pain relief) before undertaking wound care.
- Develop awareness of the potential impact of wound on client and/or family is

.**Learning Instructions:**

Read the specific objectives of this Learning Guide.

1, Follow the instructions described in number 3 to 7.

2, Read the information written in the “Information Sheets pages. Try to understand what are being discussed.

3, Ask you teacher for assistance if you have hard time understanding them.

4, Accomplish the “Self-check in page 8,14,19,23,

5, Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering each Self-checks).

6, If you earned a satisfactory evaluation proceed to other “Information Sheets ”. However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Activities .

Submit your accomplished Self-check. This will form part of your training portfolio.

_ **Reference** on page 28

Information Sheet-1	Discussing wound care

2.1. Discussing wound car

Initial assessment:- this must include on assessment of the client's overall status. It is important to have a health history, physical, mental & emotional baseline on which to plan your nursing interventions. If the wound is an emergency (haemorrhage) dehiscence, or evisceration) they your first responsibility is to help & apply principles of first aid. However, most wounds (surgical or chronic) do not require emergency management. A thorough assessment therefore will be possible & should include:-

Psychosocial concerns associated with wound. These are:-

- Anxiety
- Fear of pain disfigurement, financial loss.
- Anger
- Depression

Physical assessment of systemic factor that affect the wound.

Charting of your assessment should include the finding obtained from your examination of the wound:

→ Wound size & depth:- important if the wound is traumatic or chronic

→ Wound location:- should be specified

→Wound appearance:- edge is in close approximation with out swelling in surgical wound

→ Bleeding or drainage:- if present, its amount, colour & order should be characterized.

→ Sensation- pain burning loss of sensation

→ Infection-evidences

→Debris- presence or absence of debris.

→ Vital signs

→ Surrounding skin- colour & its condition

→Psychosocial response.

A sample nurse's note might look like this:-

6cm lower midline surgical abdominal incision with edges directly approximated, 12 silk sutures in place. No swelling or undue tension around sutures. Small amount dried blood present along suture line. No

evidence of drainage or ador. No redness or other signs of infection. Client voices no complaint of pain. States incision is uncomfortable when she moves or coughs.

Ongoing Assessment:-The frequency with which a wound is assessed is variable

For surgical wounds, the initial dressing is changed on the first postoperative day by the surgeon. There after the wound should be assessed at least every 24 hours until the sutures are removed, unless other order is written. Infected wound should be frequently assessed to prevent complication. Chronic wound such as pressure ulcers should be inspected daily

All findings should be documented.

Failure to chart observations & care in the person's record is assumed in a court of low to mean that the observation & care did not take place.

Assessment of wound based on its cause classification.

A. Neglected wound/ poor basic care

Many wounds do not heal simply because they are inadequately cared for. All necrotic tissue must be removed, surrounding infection treated appropriately with antibiotics, and good basic wound care instituted

Foreign material in the wound

Foreign material (wood, glass, pebbles, metal) may cause a reaction in the tissues that prevents wound healing. Ask the patient about the events that caused the wound and this may point you in the direction of looking for foreign bodies. An x-ray may be helpful, but many materials are not seen on x-ray. The foreign material must be removed before the chronic wound will heal.

The patient has a chronic wound on his thumb. This x-ray shows a piece of metal in the tissues, probably from a previous work injury.

Infection: An infected wound will not heal. If the skin around the wound is red/warm/swollen/tender start the patient on antibiotics. If

nfection are not present, antibiotic treatment is usually not warranted.

B. Chronic osteomyelitis

Consider infection of the underlying bone (called chronic osteomyelitis), particularly if there is a history of trauma or an open fracture. Chronic osteomyelitis is a real problem in the developing world. Because the infection in the bone prevents both the soft tissue and the injured bone from healing, it is a major cause of morbidity for patients who have sustained an open fracture. The patient usually requires 6 weeks of antibiotics and the bone must be debrided for healing to occur. The patient in has a chronic wound on the side of her knee. Several years earlier, she was in a car accident and had an open fracture of her tibia. The wound never healed properly. The underlying bone is infected and exposed. The entire area (infected bone and soft tissue) must be debrided before healing will occur.

C. Tobacco use

Many people are unaware on tobacco's ill effects on wound healing. Nicotine decreases blood flow by clamping down on smaller blood vessels. Oxygen delivering capacity is also diminished due to carbon monoxide. This is particularly damaging to traumatized tissue and relatively hypoxic tissues such as bone. Encourage your patient to stop the use of all tobacco products.

D. Cancer

A longstanding wound (present for months or years) that looks shiny and will not heal may be a cancer. Usually these wounds look a bit different than the usual open wound- edges are raised and more irregular, surrounding skin may be thicker. Be aware that chronic wounds in a burn scar can turn into a virulent skin cancer- when in doubt, take a small biopsy of the tissue and have it evaluated by a pathologist. The cancer must be completely excised for healing to occur.

Malnutrition is

a particularly difficult problem in rural areas. Adequate protein and calories are needed to promote wound healing. Vitamin C, A, iron, and zinc are also important nutrients for wound healing. If available, nutritional supplements for depleted patients are necessary.

F. Diabetes

Patients with diabetes can be notoriously slow healers. Keeping good blood glucose control will promote healing.

G. Medications

Look over your patient's medication list. Steroids and NSAID's can interfere with healing. Vitamin A 25,000IU/day orally or 200,000 IU/8 hours topically for 1-2 weeks may counter the effects of steroids.

H. Radiation Therapy (XRT)

A wound in a previously irradiated field may take a very long time to heal. A short course (1-2 weeks) of oral Vitamin E supplementation (100-400 IU/day) may be useful.

I. Poor circulation

For wounds on the lower extremities, feel for the pulses around the ankle and foot. If no palpable pulses are present, the patient has insufficient blood flow to the extremity and the wound may not hea

Self-Check -1	Short answer

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page

1, Mention the assessment finding obtained from your examination of the wound (3 points)

2, During Ongoing Assessment of the wound what should be assessed(3 points

Note: **Satisfactory rating - 3 points** **Unsatisfactory - below 3 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Answer

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Information Sheet-2	Nursing care plan for wound care

2.2. Nursing care plan for wound care

Interventions	Rationales
✓ Monitor site of **impaired tissue integrity** at least once daily for color changes, redness, swelling, warmth, pain, or other signs of infection.	Systematic inspection can identify impending problems early.
✓ Monitor status of skin around wound. Monitor patient's skin care practices, noting the type of soap or other cleansing agents used, temperature of water, and frequency of skin cleansing.	Individualize plan is necessary according to patient's skin condition, needs, and preferences.
✓ Provide tissue care as needed.	Each type of wound is best treated based on its etiology. Skin wounds may be covered with wet or dry dressings, topical creams or lubricants, hydrocolloid dressings (e.g., DuoDerm) or vapor-permeable membrane dressings such as Tegaderm. An eye patch or hard, plastic shield for corneal injury. The dressing replaces the protective function of the injured tissue during the healing process.
✓ Keep a sterile dressing technique during wound care.	This technique reduces the risk of infection in impaired tissue integrity.
✓ Premedicate for dressing changes	Manipulation of profound or extensive cuts or injuries

as necessary.	may be painful.
✓ Wet thoroughly the dressings with sterile normal saline solution before removal.	Saturating dressings will ease the removal by loosening adherents and decreasing pain, especially with burns.
✓ Monitor patient's continence status and minimize exposure of skin impairment site and other areas to moisture from incontinence, perspiration, or wound drainage.	This is to prevent exposure to chemicals in urine and stool that can strip or erode the skin causing further impaired tissue integrity.
✓ If patient is incontinent, implement an incontinence management plan.	This is to prevent exposure to chemicals in urine and stool that can strip or erode the skin.
✓ Administer antibiotics as ordered.	Wound infections may be managed well and more efficiently with topical agents, although intravenous antibiotics may be indicated.
✓ Tell patient to avoid rubbing and scratching. Provide gloves or clip the nails if necessary.	Rubbing and scratching can cause further injury and delay healing.
✓ Encourage a diet that meets nutritional needs.	A high-protein, high-calorie diet may be needed to promote healing.
✓ Monitor for proper placement of tubes, catheters, and other devices. Assess skin and tissue affected by the tape that secures these devices.	Mechanical damage to skin and tissues as a result of pressure, friction, or shear is often associated with external devices.
✓ Check every two (2) hours for proper placement of footboards, restraints, traction, casts, or other	Mechanical damage to skin and tissues (pressure, friction, or shear) is often associated with external devices.

devices, and assess skin and tissue integrity.

✓ For patients with limited mobility, use a risk assessment tool to systematically assess immobility-related risk factors.	This is to identify patients at risk for immobility-related skin breakdown.
✓ Do not position the patient on site of impaired tissue integrity. If ordered, turn and position patient at least every 2 hours, and carefully transfer patient.	This is to avoid the adverse effects of external mechanical forces (pressure, friction, and shear).
✓ Maintain the head of the bed at the lowest degree of elevation possible.	To reduce shear and friction.
✓ Educate patient about proper nutrition, hydration, and methods to maintain tissue integrity.	The patient needs proper knowledge of his or her condition to prevent impaired tissue integrity.
✓ Teach skin and wound assessment and ways to monitor for signs and symptoms of infection, complications, and healing.	Early assessment and intervention help prevent the development of serious problems.
✓ Instruct patient, significant others, and family in the proper care of the wound including hand washing, wound cleansing, dressing changes, and application of topical medications).	Accurate information increases the patient's ability

	to manage therapy independently and reduce the risk for infection.
✓ Encourage the use of pillows, foam wedges, and pressure-reducing devices.	To prevent pressure injury.
✓ Educate the patient the need to notify the physician or nurse.	This is to prevent further impaired tissue integrity complications.

Self-Check -2	Say true or false

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page

1, . No need of Monitoring patient's skin during cleaning.

2, Wet thoroughly the dressings with sterile normal saline solution before removal.

3, Instructing patient, significant others, and family in the proper care of the wound including hand washing, wound cleansing, dressing changes, and application of topical medications.

4, Teaching skin and wound assessment and ways to monitor for signs and symptoms of infection, complications, and healing.

5, the nurse does not Administer antibiotics as ordered.

Note: **Satisfactory rating - 3 points** **Unsatisfactory - below 3 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Answer

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Information Sheet-3	Physiology of wound healing processes

2.3. Physiology of wound healing processes

A. Physiology of immune system The response of tissue to injury goes through several phases.

Inflammatory phase.

Vascular & cellular responses occur immediately when tissue is cut or injured , vasoconstriction of vessels occurs and fibrin platelet clot forms in an attempt to control bleeding . in these phase blood clot form, wound becomes oedematous & then debris of damaged tissue and bleed clot are phagocytised with one to four days.

Proliferative phase.

Fibroblast multiply and form a lattice from work for migrating cells cell form a buds at edges of wound, these buds develop in to capillaries. The nut source for the new granulation tissue. Generally in these phase collage produced, granulation of tissue formed and wound tensile strength collagen produced, granulation of tissue formed and wound tensile strength increased in the 5-20 days of injury.

Maturation phase.

After 3 weeks of injury fibroblast begin to leave wound. The scar appears until collage fibrils reorganize in to tighter positions.

In the physiological in to tighter positions.

IN the physiology process of wound healing , the strength of skin after 2 wks only 3-5% of original strength. By end of month 35-59% and never more than 70-80 of strength is regained.

B. phases of Wound Healing

Wound healing differs according to how much tissue has been damaged.

first intention- Wound made aseptically, with minimal of tissue distraction and properly closed as with sutures, heal with little tissue reaction.

Second Intention/granulation/ :Wound in which pus formation (suppuration) has occurred or in which the edges have not been approximated, the process of repair is less simple and takes longer, such as in deep laceration, burns and pressure ulcers.

Third Intention: Healing occurs when there is a delay in the times between the injury and closure of wound, for example, wound may be left open temporarily to allow for drainage or removal of infectious materials, scaring is common.

C. General Factors necessary for healing

Age - Younger people have more active cells.

Nutrition - Protein, Vitamins "A and C" essential for healing, vitamin "k" for blood clot,

Adequate circulation - depends on heart action, state of blood vessels, composition of blood. E.g. hemoglobin, WBC, fluid, O_2 and food substances.

D, Local Factors affecting healing

Hemorrhage - accumulation of blood create dead spaces as well as dead cells that cause infection

Inadequate immobilization e.g. vigorous exercises, chronic cough or constipation.

Presence of **-** Foreign object. E.g. sequestrum, drain tube

- Fistula or sinus

- Neoplasma

- Excessive haematoma

- Excessive tissue damage
- Edges of wound inverted
- Sutures too loose allowing too much movement between edges.
- Sutures too tight cutting down blood supply
- Inadequate venous drainage of area and infection

E, General Factors healing

Old Age - the older age patient, the less resilient tissue.

Malnutrition - especially when associated with malignant disease

Obesity - fatty tissues are susceptible to wound separation (dehiscence) and wound infection.

Existing disease such as congestive heart failure and diabetes

Cortisone therapy.

Self-Check -3	Short answer

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page

1, List the three phases of wound healing and explain them (2 points)

2 , what are those general factors Necessary for wound healing (3 points

3, Mention local factors affecting wound healing(2 points)

Note: **Satisfactory rating - 3 points** **Unsatisfactory - below 3 points**

Answer Sheet

Score = _____
Rating: _____

Name: _____ Date: _____

Answer

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Information Sheet-4	Client comfort needs

2.4. Client comfort needs

Safety and Comfort devices

- **Safety**: - It is to protect oneself from harm, e.g. mechanical injury.
- **Safety** is typically responsibility shared by everyone present in an environment, but this may not be applicable in the health care environment because of different reasons such as; Altered level of consciousness, Loss of ability to move and Loss of ability to think clearly.
- **Comfort**:-Comfort is a feeling of physical and mental well-being freedom from worry, fears or pain. In general comfort measures are aimed at reliving debilitating symptoms to conserve energy for healing & fighting infection.
- Are the mechanical devices to promote comfort to the patient
- Are invented articles which would add to the comfort of the patient when used in the appropriate manner, by reliving the discomfort and helping to maintain correct posture?

Causes of discomfort:-

- Pain
- Restriction of movements due to weakness
- Wrinkled, soiled and wet sheet
- Delayed or inadequate attention to meet the personal needs.
- Lack of exercise
- Temperature extremes
- Too bright lights and glares
- Fear and anxiety due to illness
- Insecurity feeling
- Lack of sleep
- Uncomfortable position
- Indigestion and irregular bowl movements

Purpose of patient safety and comfort:-

- To relieve pain and worry
- To provide position of comfort and ease
- To place patient in comfortable bed.

- To provide proper atmosphere to increase the moral of patient during illness.
- To adjust bed and other apparatus in the proper manner
- To give maximum rest and sleep during illness

Self-Check -4	Short answer

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page

1, Write the difference between safety and comfort (2 point)

2, List at least 5 causes of discomfort (2 point)

3, Write Purpose of patient safety and comfort (2 point)

Note: **Satisfactory rating - 3 points** **Unsatisfactory - below 3 points**

Answer Sheet

Score = _____
Rating: _____

Name: _____ Date: _____

Answer

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2, _____

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Information Sheet-5	Potential impact of wound

2.5. Potential impact of wound

introduced the concept of‘ forever healing’ and other work has led to the concept of permanent ‘wounding’. For the patient this requires learning to live with the pain, emotional problems and social isolation associated with delayed healing. patients with chronic leg ulcers have a poorer quality of life.

Similar findings have been found for people with diabetic foot and pressure ulcers. Although it is possible to measure the direct health costs of wound care, the implications for individual patients and their family are more difficult to measure. multiple clinic visits or weekly dressing appointments over many months Treatment of a non-healing wound is demanding on both the patient and carers’ time, and frequently requires. For younger patients this may involve time off work or loss of employment with significant financial implications for them and their families. This can also affect car as well as their general health and social wellbeing. The more wound healing is delayed the more it impacts on the patient. Symptom control is important in all wounds, but particularly for those of long duration. Pain management, exudates control and odor management are some of the patient and his/her family’s quality of life. Failure to control these issues will adversely affect concordance and increase the chance of non-healing. extreme psychological impact that hard-to-heal wounds have on the patient, as well as the challenge they pose to the clinical team in terms of resource expenditure. Non-healing can also have a psychological influence on clinicians who are providing care, who may be emotionally overwhelmed by their inability to alleviate suffering and achieve wound healing.Reducing health costs is a recurring global issue. Wound management is a major area where there is a drive for improved cost-effectiveness.Costs are higher for hard-to-heal and long duration wounds as the frequency of therapy, staff time and product use increases Reducing costs while optimizing quality of life for patients with delayed wound healing requires the following

Self-Check -5	Say true or false

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page

1, Emotional problems and social isolation are associated with delayed wound healing

2 , the direct health costs of wound care has great implications for individual patients and their family are more difficult to measure

3 , Wound management is a major area where there is a drive for improved cost-effectiveness

4, multiple clinic visits or weekly dressing appointments over many months are not potential impact on wound healing.

Note: **Satisfactory rating - 3 points** **Unsatisfactory - below 3 points**

Answer Sheet

Score = _____
Rating: _____

Name: _____ Date: _____

Answer

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REFERANCE

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