

Summarization of Needed Measures to Prevent Infection during Wound Dressing (A Brief Communication)

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The Measures for Infection Prevention During Wound Dressing are as Following

Ensuring Having a Clean Field/Zone Before Dressing a Wound

This can be achieved by routine cleaning and disinfection of environmental surfaces (Centers for Disease Control and Prevention [CDC], 2023).

Aseptic Supplies

Availability of sterile supplies and checking the following:

1. Expiration date on the pack,
2. Indicator of sterilization on the pack,
3. Inspecting for contamination potential as tears or moisture (Gulf Cooperation Council – Centre for Infection Control [GCC-CIC], 2018).

Aseptic Technique

Non touch technique to prevent transmission of infective agents to the wounds (Pennsylvania department of health, 2018).

No touch technique was recommended for applying wound dressing (Open Resources for Nursing [Open RN], 2021; Pennsylvania department of health 2018; The Royal Children's Hospital Melbourne [RCH], 2023), and also when cleaning the wound (Pennsylvania department of health, 2018).

Direction of Wound Irrigation

Starting at the wound peripheries and then externally in circular pattern (Lewis & Pay, 2023).

In post-operative wounds, the potential of least contamination is the suture line, and it was recommended to be cleaned first (Open RN, 2021).

N.B

There are contraindications of irrigation, such as: actively bleeding wounds, and scalp wounds (Lewis & Pay, 2023).

Each container of normal saline is to be used for only one patient and labeled with date to be discarded after 24 hours after opening (Open RN, 2021).

Hand Hygiene (HH)

HH at moment number 2 of World Health Organization (WHO) five moments of HH; which is before clean/aseptic procedure (World Health Organization [WHO], 2009).

HH at moment number 3: after exposure to body fluids risk (WHO, 2009).

HH after removal of gloves (WHO, 2009).

Correct technique of HH and for enough duration, are required (WHO, 2009).

Personal Protective Equipment (PPE)

Clean gloves (non-sterile) when there is contact with non-intact skin, blood, mucous membrane. As when there is wound dressing (Gulf Cooperation Council – Centre for Infection Control [GCC-CIC], 2018).

Sterile gloves were recommended for wounds dressing if:

1. Touching wound directly (RCH, 2023); or if there was no using of sterile forceps (Open RN, 2021),
2. Wounds which require procedures that lasts more than 20 minutes (RCH, 2023),
3. Large wounds (RCH, 2023),
4. Wounds at several sites of the patient (RCH, 2023),
5. For surgical wounds (as when removing sutures) if there was indications regarding patient's condition, and/or wound characteristics (e.g. depth of the wound) (Open RN, 2021).

Gloves should be changed between tasks related to the same patient (WHO, 2009).

Gloves, gown, face mask, eye protection when irrigating wound (CDC, 2023; Lewis & Pay, 2023).

N95 mask when the case needs airborne precautions (such as: wounds infected by mycobacterium tuberculosis) (GCC-CIC, 2018).

Correct donning and doffing of PPE is needed (GCC-CIC, 2018).

Steps

1. HH before preparing the field (Open RN, 2021; Pennsylvania department of health, 2018; RCH, 2023).
2. Using antiseptic wipes for the surface where supplies will be placed (Pennsylvania department of health 2018), then surface barrier (Open RN, 2021) such as chux pad (Pennsylvania department of health, 2018). Then add only the needed supplies for the patient (CDC, 2023; Pennsylvania department of health, 2018), using aseptic technique (Pennsylvania department of health, 2018).
3. HH before starting the wound dressing (Open RN, 2021; Pennsylvania department of health, 2018, RCH, 2023).
4. Non-sterile gloves (Open RN, 2021; Pennsylvania department of health 2018) and face mask (Pennsylvania department of health, 2018). N.B: Other needed PPE can be used at this step (Pennsylvania department of health, 2018).
5. Barrier pad under the patient wound (Open RN, 2021; Pennsylvania department of health, 2018; Lewis & Pay, 2023).
6. Removing previous dressing (Open RN, 2021; Pennsylvania department of health, 2018; RCH, 2023), and discard immediately (Pennsylvania department of health, 2018).
7. Removing gloves (Open RN, 2021; Pennsylvania department of health, 2018), and discard immediately (Pennsylvania department of health, 2018).
8. HH (Open RN, 2021; Pennsylvania department of health, 2018).
9. New gloves (Pennsylvania department of health, 2018; Open RN, 2021), and other needed PPE (Open RN, 2021).
10. Wound assessment (Open RN, 2021; Pennsylvania department of health, 2018), and cleaning (Open RN, 2021; Pennsylvania department of health, 2018; RCH, 2023) using non-touch technique (Pennsylvania department of health, 2018).
11. Dressing of the wound (Open RN, 2021; Pennsylvania department of health, 2018; RCH, 2023). There are multiple types of wound dressings; and the choice depends on wound assessment (RCH, 2023). For application of medication (e.g. ointment) into a wound, sterile applicator is to be used (Pennsylvania department of health, 2018). Multi-dose topical medications are to be labeled and used for one patient, if possible; but if not possible then they should be stored away from patient care areas (CDC, 2023).
12. Disposal of single-use supplies in the waste bag (RCH, 2023). The segregation into biohazardous or general waste might be according to medical waste policy and local regulations.

13. Re-usable equipment to be placed in a biohazard container including needed solution (CDC, 2023) (then will be transported to sterilization unit).
14. Removing gloves (Open RN, 2021; Pennsylvania department of health, 2018) and discarding.
15. HH (Open RN, 2021; Pennsylvania department of health, 2018; RCH, 2023).
16. Cleaning (Pennsylvania department of health, 2018; RCH, 2023), and disinfecting work surface (Pennsylvania department of health, 2018).

Conflict of Interest

None.

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