ANNEX 36. E Hygiene and skin care: pressure sores

Cleanliness and comfort are essential, both for physical and psychological reasons. Good standards of hygiene and skin care must be maintained by the spinal cord injury (SCI) patient, family and carers in order to ensure that once at home he or she is, and remains, as comfortable as possible.

One of the main ailments that affect patients who are bedridden, or whose mobility is severely restricted, is the pressure sore, commonly known as bedsore. Prevention requires that the patient, family and carers be aware of the potential problem. The mechanism that leads to the development of bedsores must be explained clearly and simply to the patient and family. This means that relatives and/or friends must immediately be involved in active preventive management 24 hours a day.

Simple preventive measures can be taken, beginning with the preparation of the bed using locally available materials as described in Annex 36.A.

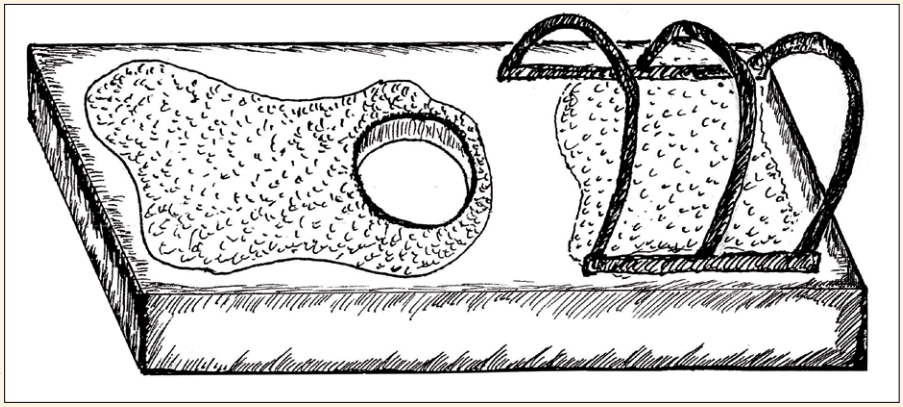

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Figure 36.E.1

Bedding and frame for the prevention of pressure sores.

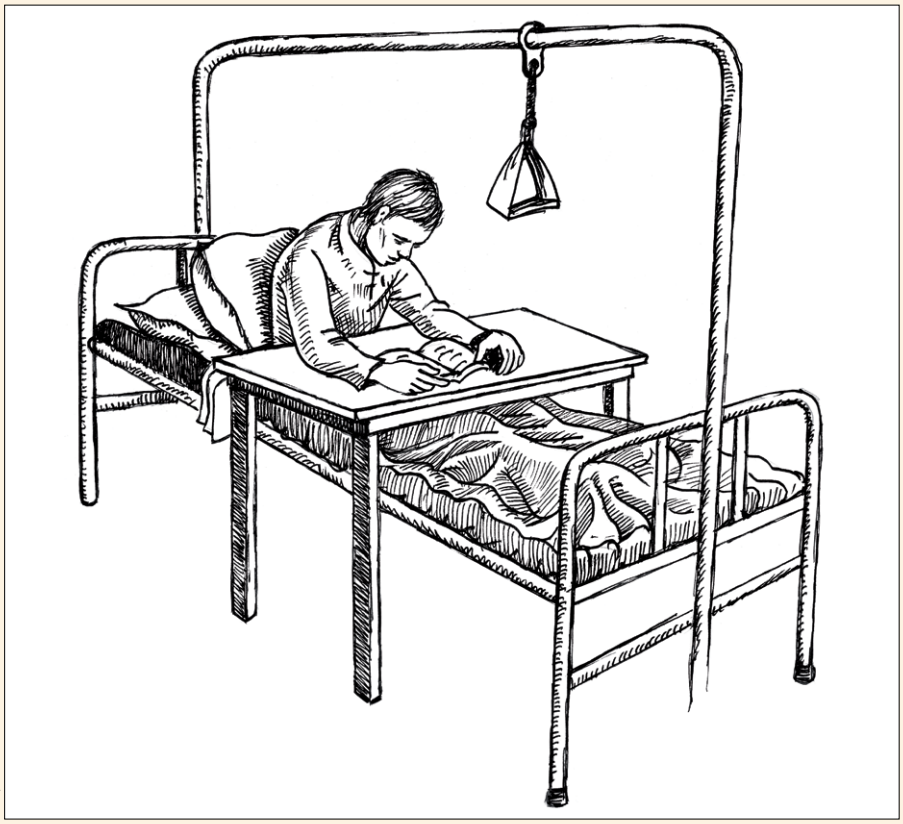

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Figure 36.E.2

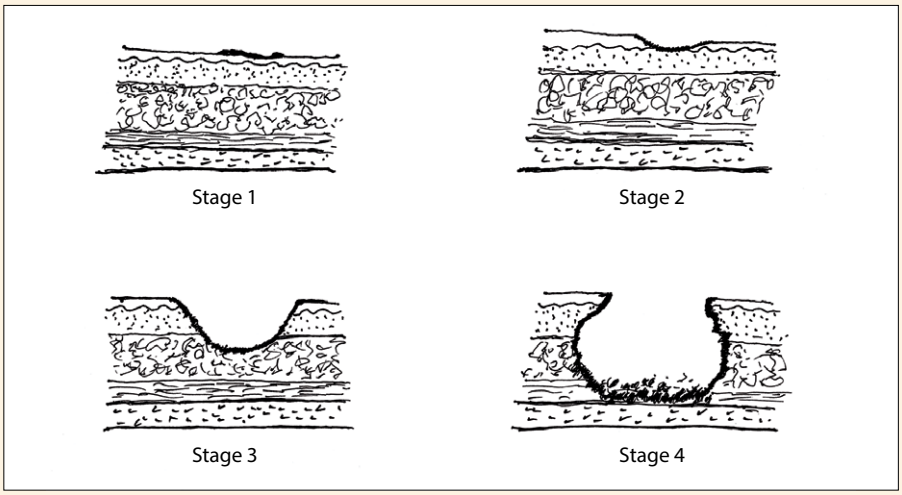
Bed organized to make the SCI patient's life as comfortable as possible.

In addition, the nursing care that is started in the hospital as described in Section 36.8.1 must be continued at home. The patient, family, and any other home-carer must be taught these procedures while the patient is hospitalized.

Stage	Tissue damage and clinical observations
Stage I	Skin is not broken. Redness of skin, which does not disappear when pressure is relieved. In people with dark skin redness may not be apparent. Heat, swelling or induration may be present. In people with dark skin, the induration may be *felt* more easily than *seen*.
Stage II	Partial-thickness skin loss of epidermis and/or dermis. The pressure sore is superficial and appears as an abrasion or blister. Heat and swelling are present.
Stage III	Full-thickness skin loss extending into the subcutaneous tissues but not through the fascia.
Stage IV	Ulceration extends into the muscles and bone.
Stage V	Ulceration extends into supporting structures such as tendon, joint capsule, or organs (urethra, rectum, vagina).
Wound condition	Clinical observations
A	Wound is clean and covered by granulation tissue.
B	Necrotic tissue is mixed with granulation tissue, but no infection is present.
C	Infected and necrotic ulcer.

Table 36.E.1 Classification of stages of pressures sores.

Figure 36.E.3
Stages of pressure sores.



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36.E.a Home-care team treatment of bedsores and equipment

In the first stages bedsores can be treated and healed by simple measures that can be taken by the family and home-care team (stages I and II). More serious conditions will require referral to out-patient or even in-patient treatment in hospital or a physical rehabilitation centre (Table 36.E.2). At all stages, it is *essential* to prevent all pressure on the bedsore.

Golden rule: "no pressure on the pressure sore".

BEDSORE STAGE	TREATMENT	Wound condition		
		A	B	C
		Clean with granulation tissue	Necrotic tissue with granulation tissue	Necrotic tissue with infection
Stage I Intact skin. Skin is red and does not return to normal colour when pressure is relieved.	**Exclude all pressure** on the area until redness disappears. Patient and family can address this, under home-carer's supervision.	no	no	no
Stage II Partial-thickness skin loss of the epidermis and/or dermis. The sore is superficial and presents as an abrasion or blister.	**Exclude all pressure on the sore.** Clean the sore and the surrounding skin with saline. Cover the sore with moist gauze dressing (using Ringers lactate). Change the dressing 2-3 x daily. If the gauze sticks to the wound during removal, first soak it with saline to avoid removing granulation tissue. Home-carer or family should perform this task.	yes	no	no
	Exclude all pressure on the sore. Clean the sore and the surrounding skin with saline or povidone solution in a ratio of 1:3. Cover the sore with moist-to-dry gauze (using Ringers lactate). The gauze should be moist, but not too wet and not too dry. After one day the gauze dries and sticks to the wound. It helps to remove dead tissue during dressing change. Change the dressing 1x daily. Home-carer or family should perform this task.	no	yes	no
	Exclude all pressure on the sore. Cleaning and dressing same as above. Home-carer should seek medical advice for the administration of oral antibiotics.	no	no	yes
Stage III Sore extending to the subcutaneous tissue, but not through the fascia.	The patient should be admitted to hospital or to a rehabilitation centre. Treatment after discharge according to hospital staff's instructions.	yes	no	no
	The patient should be admitted to hospital for the debridement and stay for dressing in the hospital or dormitory of a rehabilitation centre until the bedsore is healing. Treatment after discharge according to hospital staff's instructions.	no	yes	no
	The patient should be admitted to hospital for the debridement and stay for dressing after debridement. Treatment after discharge according to hospital staff's instructions.	no	no	yes
Stage IV Sore extends to the muscle and bone.	The patient should be admitted to a dormitory of a rehabilitation centre or to hospital. Treatment after discharge according to hospital staff's instructions. Bedsores at stage IV can also heal without surgical treatment but it can take months or more than one year for the pressure sore to close completely.	yes	no	no
	The patient should be admitted to hospital for the debridement and stay for dressings. Treatment after discharge according to hospital staff's instructions.	no	yes	no
	The patient should be admitted to hospital for debridement. Treatment after discharge according to hospital staff's instructions.	no	no	yes
Stage V Extensive destruction of deep structures, such as tendon, joint capsule, organs (e.g. urethra, rectum, vagina).	Hospitalization and plastic reconstructive surgery is indicated. Post-operative treatment depends on the hospital. Treatment after discharge according to hospital staff's instructions.			

Table 36.E.2 Guidelines for the assessment and treatment of bedsores.

General principles

1. Introduce yourself to the patient and the family and state the goal of your visit.
2. Explain what a bedsore is; its causes and possible consequences.
3. Repeat the importance of hygiene.
4. Describe the treatment procedure.
5. Position the patient appropriately and comfortably.
6. Wash your hands and dry by waving them in the air.
7. Prepare the dressing material: kidney dish with 2 forceps, gauze, povidone, sodium chlorine, povidone 1:3 solution, adhesive tape, scissors, and dustbin.
8. Create a sterile area.
9. Wearing disposable gloves, remove the bandages and the first layer of the soiled dressing cover.
10. Using forceps, remove the other dirty gauzes, and dispose of the forceps after removal of the rest of the soiled dressing (do not use this forceps again).
11. Remove the gloves.
12. Clean the bedsores with a new sterile forceps and gauze.
    - Change the gauze as often as necessary.
    - If the bedsore is clean, wipe from the inside of the wound to the outside skin.
    - If the bedsore is dirty, wipe from the outside skin towards the wound.
    - If there is fibrin or necrotic tissue, soften with saline solution (one day). Use gauze to remove fibrin and scissors for necrotic tissue. Compress the wound until bleeding stops and then cover.
    - Pus is yellow in colour, smells bad and is usually associated with other signs of infection.
13. Cover the wounds with gauze pads and apply a bandage if possible, otherwise use adhesive tape.
14. Position the patient correctly: no pressure on the pressure sores.
15. Find the possible causes of the bedsore, and instruct the patient and family on how to remove these causes.

Dressings

The objectives of dressing a wound are:

- *protection* – to prevent contamination from the external environment and to protect against possible trauma;
- *healing* – to favour tissue regeneration;
- *absorption* – to absorb discharge from the wound;
- *disinfection* – to destroy pathogenic organisms;
- *compression* – to stop haemorrhage.

Equipment

Dressing area:

- light
- bench with cotton sheet and plastic sheeting
- water, soap and towel

Sterile dressing set:

- kidney dish wrapped in sterilized cloth
- the kidney dish contains:
  - 1 sheet to create a sterile working area
  - 2 forceps
  - 1 clamp
  - 1 pair of scissors

Dressing trolley with:

- 1 drum of sterile gauze pads
- clean plastic sheet
- adhesive tape
- bandages
- disposable gloves
- antiseptic – povidone, saline solution, Ringers lactate, paraffin gauze, gentian violet

Waste disposal:

- container for waste
- container for dirty plastic sheet and sterilizing cloth
- container for kidney dishes and dressing instruments