

# Who Determines the Treatment for Pressure Ulcers in the Elderly?

Efraim Jaul MD MPH

Department of Skilled Geriatric Nursing, Herzog Hospital, affiliated with Hebrew University-Hadassah Medical School, Jerusalem, Israel

**ABSTRACT:** The issue of professional responsibility for the treatment and care of the patient with pressure ulcers (PU) is crucial as it impacts on mortality, financial costs and the patient's quality of life. Pressure ulcers in the elderly present a complicated health problem with multifactorial etiologies. Since the pressure ulcer is the final common pathway of multiple underlying factors and medical conditions, the approach when dealing with the elderly is not only local wound management but systemic – i.e., it relates to the patient's overall condition, comorbidities, nutritional status, and disabilities. With the increase in longevity and disability, the prevalence of PU is higher and has concomitant severity and complications. For treatment to be effective it must be comprehensive and multidisciplinary. The traditional, and pivotal, role of the nurse in coordinating treatment has expanded and now includes more active collaboration with the physician and the multidisciplinary team regarding the development and course of the wound. Physicians are required to be knowledgeable, actively involved, and alert to reversible multifactorial etiologies, in order to determine the goal and level of aggressive treatment during the course of PU.

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**KEY WORDS:** pressure ulcers (PU), elderly, physicians' knowledge, role of physician, professional responsibility, multidisciplinary team

A common problem of the sick aged is pressure ulcers. Also known as decubitus ulcers or bedsores, PU are associated not only with suffering and reduced quality of life but also longer hospital stay, burgeoning health care costs, and significant mortality [1,2]. The prevalence of PU among those 65 years and older discharged from hospital has more than doubled over the past 10 years [3]. In a prospective 18 month cohort study of advanced dementia in 323 nursing homes, 38.7% had PU (10% at 9–12 months before death and 30% at 0–3 months before death) [4]. Pressure ulcers often lead to infections and complications with muscle and bone involvement. Others become non-healing

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chronic wounds, indicating arrest of the healing process for long periods, even years, and occasionally predicate the time of death [5].

The following questions may arise during the course of treating PU in an elderly patient. Who decides which complementary or advanced technology should be applied? Should debridement be used, and if so what type, and who should perform it? What happens when PU worsen, become infected or non-healing, and who decides on the treatment? Who should be involved with the ethical and end-of-life issues implicated with PU? Who should decide on the extent of aggressiveness in treating PU?

Traditionally the nurse has played the central role in coordinating treatment of PU. With the increased longevity and disability of the elderly the prevalence of PU is increased, as are the severity and complications. This has required a change in approach – one that is comprehensive and multidisciplinary.

PU treatment represents an excellent opportunity for professionals to communicate and work together by sharing information individually and as a group. It is recognized that the most effective treatment of PU involves the multidisciplinary team. Each professional discipline can apply its own expertise to PU prevention, assessment and treatment with the prime aim of avoiding complications [6,7].

How is the treatment initiated? The nurse is usually the first to encounter a bedsore: being either informed by the caregiver (family, helper, or orderly) of the presence of the sore, or discovering it on examining the skin at admission to medical wards. The nurse makes an initial assessment and treatment decision if the ulcer is not in an advanced stage. If the condition improves, the physician is usually not involved and only records the nurse's actions. If the wound does not improve, worsens due

to infection or needs debridement, the nurse calls the treating physician to evaluate the situation and revise the treatment plan. The physician in most cases does not treat the bedsore at advanced stages but

refers the case to a specialist (plastic or vascular surgeon). The physician should make a general assessment of the patient's overall status to rule out any underlying or superimposed medical condition that may lead to or complicate the wound,

such as diabetes mellitus, vascular insufficiency or electrolyte imbalance. Reversible conditions are also considered, such as undernourishment, infection, anemia, or immobilization, and are referred to the multidisciplinary team or to a surgeon or other specialists. The process is thwarted when the physician and the multidisciplinary staff are not involved or consulted. The following two cases illustrate this involvement.

The first was an 89 year old man with recurrent stroke, chronic ischemic heart disease, diabetes mellitus and cardiac catheterization, immobility and urinary incontinence. He had been hospitalized three times for aspiration pneumonia in the previous 3 months. He was then discharged to a PU unit after developing three bedsores, one of them particularly large and deep in the sacrum. After assessment by the nurse and the physician he was referred to the speech therapist who determined that the patient's swallowing reflex was slow and delayed. The speech therapist prescribed a feeding protocol and an oral mixture. The nurse and speech therapist informed the patient's family and private caregiver of the situation. Once successful feeding was established, the dietitian determined the optimal foods, consistencies and dietary supplements of calories and protein. In a case like this, if the attempt at oral feeding is unsuccessful, then tube feeding is considered with the patient and his/her family at a meeting with the physician, nurse and social worker. The issue of tube feeding is discussed in the weekly multidisciplinary meeting.

Another case demonstrating the necessity of multidisciplinary involvement was a 76 old patient with Parkinson's disease and dementia. He had multiple wounds on both medial knees, termed "kissing lesion," resulting from severe rigidity and spasticity. The involvement of the physical therapist and the occupational therapist included attempts to release the spasticity and increasing range of motion of the knees, coupled with instructions to the orderlies on how to position pillows between the knees and under the patient's legs to alleviate pressure on the wounds.

Pressure sores in the elderly are not isolated phenomena of the skin but are influenced by multiple systemic factors of aging, comorbidity and disability [8]. PU is the final common pathway of multiple underlying factors and should be approached and recognized as a geriatric syndrome [9]. The approach is therefore local and systemic, preventive, and pro-active to improve the quality of life for the patient and the family. The systemic factors include aging, skin friability, reductions in microvascular flow of the epidermis, reduction in lean body mass, and aging of the immune system [10,11]. Comorbidity refers to diseases that contribute to soft tissue edema, such as congestive heart failure, neurological disorders that increase spasticity (Parkinson's disease, stroke,

multiple sclerosis), and agitation (pain, delirium, constipation) on the one hand and somnolence on the other (sleeping pills, delirium). Decreased skin perfusion occurs with hypotension, heart failure and hypovolemia [12]. Impaired regional blood flow due to arteriosclerosis, venous insufficiency (varicose veins) or lymphedema may also contribute to the development and complications of pressure sores [13].

Diseases impairing the immune system delay the healing process and increase the risk for infection and the development of a bedsore. Malnutrition is a common result of illness, and a positive correlation has been found between malnutrition and the incidence of PU [14].

The list of medications should be reviewed and reduced to the minimum, especially those causing anorexia, somnolence, bladder dysfunction, reduced blood pressure, rigidity, constipation, and side effects to the skin. All of these processes may coalesce and predispose to the formation of PU [15,16].

Functional disability increases with age and includes impaired mobility and reposition, urinary and/or stool incontinence and cognitive impairment, all resulting in the development of a bedsore [17].

Recently, the Israel Ministry of Health published guidelines for the treatment of non-healing wounds, including PU [18]. The most current "health basket" (issued in 2011) was extended to include advanced technologies for treating non-healing wounds. These guidelines specify designating physician specialists in wound care who are authorized to recommend advanced technology, which includes hyperbaric oxygen or negative pressure wound therapy. The guidelines also place

importance on training the treating physician and the multidisciplinary team on the use of the relevant technology. Three levels of wound care are defined. Initial treatment is given by the primary team (nurse and doctor) in the patient's home or the community clinic under the supervision of the family physician. The next level of care is at an outpatient clinic with a multidisciplinary team specializing in wound care and comprising a specialist physician and other staff with extensive training and experience in wound care. The third level is hospitalization or long-term inpatient care provided by the multidisciplinary team under the physician's supervision.

In 2006 the Nursing Department of the Ministry of Health established a similar designation of case manager wound care nurse. Post-graduate courses for nurses are now provided, giving a broadened approach to the treatment of pressure ulcers. Currently, worldwide, whether at home, the medical office, long-term care, or in the hospital, it is the nurse who detects, assesses and manages pressure ulcers. Each medical institution and local health fund employs a nurse – especially trained in wound management – assigned to coordinate treatment for bedsores [19,20].

**Efficacious treatment of pressure ulcers in the elderly requires a comprehensive approach and a multidisciplinary team**

Who then is responsible for the patient's care if both the nurse and physician are accountable for the PU treatment? It is the physician's responsibility to examine the wound and seek systemic factors beyond the local wound that may have contributed to the development of the sore, or for external factors that could have been prevented or treated. More importantly, it is the physician, with his/her specific knowledge and maximum experience, who will optimally manage a pressure ulcer [21]. Geriatricians and physicians (internists and general practitioners) are required to be knowledgeable about PU etiology, pathogenesis and treatment and to be more directly involved in the diagnosis and management in order to reduce morbidity, long hospitalization and health care costs, as well as delay mortality.

How can these goals be accomplished? It is essential that physicians receive initial and periodic training in the detection, evaluation and treatment of pressure ulcers, including awareness of clinical practice guidelines developed by the Agency for Health Care Policy and Research (AHCPR) [22]. This can be in the context of a continuing medical education forum, with certification, financed by the health funds or the Ministry of Health. Such a course is especially important for residents specializing in geriatrics, internal or family medicine. Ideally, each medical setting or facility for the elderly should be obligated to employ one or more certified physician/geriatricians with overall responsibility for PU policy and treatment.

#### THE PHYSICIAN

The role of the physician is important since the appearance of a pressure ulcer in an elderly patient is often a signal that medical conditions are exacerbating. A superimposed or underlying condition is exemplified by the inability of the patient to reposition after a stroke, hip fracture, or acute metabolic or infection event. These underlying conditions contribute to the formation of the PU and to its exacerbation with the worsening of the medical condition.

It is important that the physician acquire sensitivity in detecting subtle clinical changes, including the possible sources of infection (urinary, respiratory tract or septic wound), cognitive impairment or changes in the level of alertness, and increased pain. A large septic PU has the potential of spreading to bone, blood or skin causing osteomyelitis, sepsis or cellulitis and also inducing hyperglycemia, congestive heart failure or respiratory failure.

Ancillary tests and tools should be available as diagnostic tools, such as the ankle-brachial index (arterial flow) for an ischemic leg as well as monofilament examination for diabetic feet. The Braden and Norton risk assessment scales and nutritional laboratory blood analyses are used similarly to

assess the risk for the development of PU. The skin of every immobile and disabled elderly patient at each medical visit is examined by the physician for PU, particularly where bony prominences contact hard surfaces, including the sacrum, trochanters and heels. This procedure is similar to that for the diabetic and peripheral vascular patient on a routine visit, whose feet are regularly inspected by the physician for diabetic or ischemic ulcers. The treatment of PU also raises ethical questions such as feeding route, amputation, surgical debridement, do-not-resuscitate orders, and level of aggressiveness of treatment.

#### THE NURSE

The nurse plays a key role, not only in assessing and treating the local wound but particularly in prevention and maintenance, including proper hygiene, incontinence care and frequent application of skin-moisturizing creams. Detection involves frequent scheduled skin examinations, particularly after each bath. Local treatment uses any of a variety of dressings and local agents that must be adjusted to the evolving picture of the wound, man-

dating that the nurse make daily treatment decisions. The nurses are responsible for on-the-job training of orderlies, including how to turn and position the patient both in bed and in a wheelchair, how to

detect and report bedsores, and how to transfer the patient from bed to wheelchair and back again without causing harm.

The nurse plays the central role in coordinating the treatment as well as taking part in the actual treatment with the multidisciplinary team (dietitian, rehabilitation therapist, social worker). The nurse has to communicate with the treating physician (GP, internists, geriatricians) and inform them on the development and course of the wound.

In the author's Skilled Nursing Department there is a weekly ward round by the physician and nurse for all patients with PU when weekly multidisciplinary decisions are made regarding the appearance or deterioration of the wound.

#### REHABILITATION THERAPISTS (SPEECH THERAPISTS, PHYSICAL THERAPISTS AND OCCUPATIONAL THERAPISTS)

Speech therapists evaluate the patient's swallowing ability, maximize oral feeding and even train the patient to eat the optimal food texture. Thus, tube feeding can often be prevented or eliminated. The physical therapist is responsible for preserving and even increasing the range of motion of the patient's joints, as well as preventing contractures and spasticity. By separating the limbs from each other, "kissing lesions" are prevented. Splints may be applied to the wrists, elbows and knees to achieve this. Physical therapists deter-

### Geriatricians and physicians (internists and GPs) must be knowledgeable about the etiology, pathogenesis and treatment of pressure ulcers

mine what type of wheelchair best serves the patient's needs. Maintaining patient safety in the wheelchair requires appropriate devices including inserting a wedge pillow to prevent the patient from sliding while seated. Occupational therapists prevent and treat hand contractures, usually by means of exercises (both passive and active) or splints. Pressure sores on the hands are prevented by keeping the fingers from pressing upon the palm.

**THE DIETITIAN**

Based on evaluation of the patient's nutritional status, the dietician makes a recommendation, with ongoing assessment, about which formula to feed the patient, how much, and at what rate. This recommendation includes specifics on total caloric, protein, fat, carbohydrate, vitamin and mineral intake, as well as fluid requirements.

**THE SOCIAL WORKER**

This member of the team provides moral support to relieve anxiety and feelings of guilt on the part of the family. It is the role of the social worker to place the patient in the most appropriate setting, ranging from home with caregiver to a long-term facility. The social worker also helps the family in the acquisition of devices for pressure relief.

**CONCLUSIONS**

It is important to recognize pressure ulcers as a major health condition. This condition is not a separate entity requiring only local treatment, but a part of the whole body requiring systemic treatment. Early detection, prevention, both local and systemic treatment and quality of care, are all affected by pressure ulcers which require a comprehensive approach. Collaboration between the various disciplines and more active participation are essential for providing optimal prevention and treatment.

**Address for correspondence:**

**Dr. E. Jaul**

Director, Dept. of Skilled Nursing, Herzog Hospital, P.O. Box 3900, Jerusalem 91035, Israel

**Phone:** (972-2) 531-6872

**Fax:** (972-2) 653-6075

**email:** jaul@zahav.net.il

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**“In science it often happens that scientists say, “You know that’s a really good argument; my position is mistaken,” and then they would actually change their minds and you never hear that old view from them again. They really do it. It doesn’t happen as often as it should, because scientists are human and change is sometimes painful. But it happens every day. I cannot recall the last time something like that happened in politics or religion”**

Carl Sagan (1934-1996), American astronomer, astrophysicist, cosmologist, author, science popularizer and science communicator in astronomy and natural sciences. He spent most of his career as a professor of astronomy at Cornell University where he directed the Laboratory for Planetary Studies