Pressure Ulcers:
A Population Health Issue

Fact sheet

What is a pressure ulcer*?

- A pressure ulcer is an injury (also known as a 'bedsore', or 'decubitus') to the skin and underlying tissues that can extend to the joints and bones.

What causes a pressure ulcer?

- Pressure ulcers are usually caused by sitting or lying in one position, with no movement for a long time, or by a medical device pressing on the skin.

What are the underlying mechanisms?

- Pressure and shearing force in the tissues squashes the cells (deformation) and reduces blood flow and thus oxygen (ischemia). Both can cause cellular death (necrosis) of the tissues.

Which body location is most concerned?

- Any location where tissue will be compressed between a bony prominence and a bed, chair (mostly buttocks, hips and heels) or medical device (such as a cast, oxygen mask, or nasogastric tube)

How many people suffer from pressure ulcers?

- Anyone of any age, old or young, may get a pressure ulcer
- At any point in time, approximately 10% of hospital patients and 5% of community nursing patients will suffer from pressure ulcers.

Who are most affected by pressure ulcers?

- All those with transient or permanent reduced mobility/movement, especially when combined with circulation deficits and poor skin health
- All those with a medical device (catheter, tube, oxygen mask etc) in situ
- People of any age (from premature babies/neonates to the elderly) with one or more of the above-mentioned risk factors

What are the consequences of pressure ulcers?

- They are painful and can become infected; they can leave scars that reopen easily.
- Severe pressure ulcers take a long time to heal and are thus expensive to manage.
- They significantly lower quality of life (they are painful and smelly).
- Medical device-induced ulcers on the face cause significant life-long disfigurement.
- They may cause death.

* **Note:** Pressure ulcers are usually abbreviated 'PU'. In this fact sheet, we use the complete name for clarity of communication. In the more detailed text below, we use the abbreviation.

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What can we do to avoid pressure ulcers?

- Many pressure ulcers can be avoided.
- To avoid pressure ulcers, the detection of at-risk patients, followed by the implementation of preventive measures, is important.
- Preventive measures require material and human resources (mattresses, special cushions, regular repositioning, nutritional support and incontinence management).
- Education of and collaboration among health care professionals, lay carers and patients is needed.

Conclusions?

- Pressure ulcers constitute a very common, painful, costly and highly prevalent public health issue. They affect the population across all ages (from neonates to the elderly).
- A greater emphasis on prevention is essential for reducing the incidence of pressure ulcers and decreasing the cost of treatment.
- Resources supporting the prevention of pressure ulcers must be allocated and given a high priority on the patient safety agenda.

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Background

Pressure ulcers (PU), also known as bed sores, pressure sores or decubitus, are localised areas of tissue damage arising due to excess pressure and shearing forces[1]. These wounds range in severity from superficial tissue damage to full-scale tissue destruction[2] (see Figure 1). PUs occur most often in individuals who have activity or mobility problems and are exposed to sustained pressure/shear forces[3]. Advances in critical/neonatal care have also led to an increased incidence of medical device-related PUs. Thus, they can occur in persons of any age, from the very young being nursed in specialised intensive care units, to the very old, receiving care in long-stay settings. A recent report from the OECD suggests that PUs are a significant threat to patient safety. The report also concludes that prevention is substantially cheaper than treatment[4].

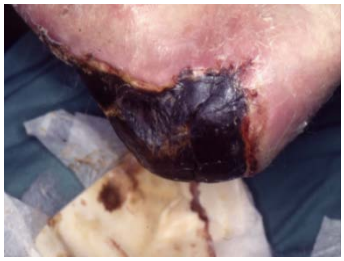

Figure 1: Pressure ulcer on the heel with full-scale tissue destruction.

Economic impact

Revenue spent on PUs is a concern, as most PUs can be avoided with appropriate risk assessment and the use of interventions targeted at combating these risk factors[5]. However, despite this premise, it is estimated that approximately 4% of annual healthcare budgets in Europe are being spent on PUs, with nursing time accounting for 41% of these costs[6]. PUs have also been shown to increase length of hospital stay, readmission and mortality rates[7, 8]. Approximately 15% of all hospital activities and expenditures are a direct result of adverse events. The most burdensome adverse events include venous thromboembolism (VTE), PUs and infections[4]. The highest number of additional bed days caused by adverse events are attributable to PUs and VTE[4].

Prevalence

Despite advances in technology, preventative aids and increased financial expenditure, PUs remain a big concern[9]. At any point in time, approximately 10% of hospital patients and 5% of community nursing patients are suffering from pressure ulcers (prevalence rates in high-risk institutions may range from 8.8% to 53.2%, with incidence rates varying from 7% to 71.6% across Europe, the U.S. and Canada[10]). Furthermore, 72% of all PUs occur among those over the age of 65[11]. A recent study has identified that 22% of those under community nurse care had a PU[12].

Effect on the person

PUs have a large impact on those affected. The wounds may become seriously infected and may be foul smelling[13]. Pain is one of the most commonly cited complaints, and this pain is often intractable and exacerbated by some of the treatments employed to manage the wound[14]. Serious life-long facial disfigurement is also a consequence of medical device-related PUs. It is evident that people with PUs have a significantly lower health-related quality of life compared to the at-risk patient population without PUs[15]. Data from the UK show that, of the six most common adverse events, the greatest burden was exerted by PUs, equating to a total loss of 13,780 healthy life years[4]. Worryingly, patients

may die as a direct result of a PU. In fact, global mortality directly attributable to PUs has increased by 32.7% between 2000 and 2010[16].

Patient Safety

Given that PUs constitute a common, costly, highly prevalent public health issue that affects the population across all ages and across all health care settings, a greater emphasis on prevention is essential for reducing the burden of PUs. Based on this, we argue that the prevention of PUs be made a high priority topic on the patient safety agenda within the EU. To achieve this, we advocate for the use of standardised monitoring of PU incidents, with targeted prevention measures to reduce incidents, such as use of the SSKIN[17] bundle, made available across the continuum of care.

Adopting PU prevalence as a key performance indicator across the wider healthcare sector in the EU will ensure that adequate monitoring of both incidents and use of prevention measures may be achieved. Based on these prevalence data, elements of care delivery that require improvement may be identified, and interventions may be employed in a targeted manner. There is an urgent need for both investment in the development of medical devices and standards for their implementation. Data-sharing will lead to the sharing of experiences and skills. However, international cooperation in PU prevention and treatment is currently challenged by the lack of national registries[18].

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