



Pressure ulcer monitoring: a process of evidence-based practice, data sharing and joint efforts

Over the last few years, increasing attention has been directed toward the issues of healthcare evaluation and many factors have been identified as central to improving its quality. Using data to measure performance is an essential element. Whether the aim is to improve outcomes (for instance, reducing mortality among patients hospitalised), establish safety indicators, or improve a process of care, **data collection and interpretation are central to assessing the quality of healthcare.**

Data help determine where opportunities for improvement exist and enables documentation of the impact that system change interventions have made on the outcomes or processes of care for a clinical condition. Measuring performance is critical to learning how your care delivery compares with best practice. Digital technologies, tools, and equipment allow healthcare settings to quickly collect information about patients, their conditions and health outcomes. **Data need to be collected and measured to give a clear understanding of what methods are best to implement** personalised patient care as well as to assess and prevent unsafe care.

Monitoring recurring adverse events, such as pressure ulcers, is crucial to foster quality of care to make informed decisions to prevent patient harm, and ultimately to reduce costs in terms of patient morbidity and monetary costs. Pressure ulcers, also known as pressure injury, decubitus ulcers and bed sores, are very widespread adverse events in all care settings including acute care, community care and nursing homes. Once a patient develops a pressure ulcer (PU) the cost of their care increases dramatically, with the most significant cost occurring during any period of hospital admission, irrespective of whether the admission is for care of the pressure ulcer, or for any other reason. Therefore, an accurate monitoring and data analysis of the occurrence of pressure ulcers in patients has become of utmost importance.

In Europe there is **no uniform methodology** for collecting the necessary data that would sufficiently help monitor patients with this condition. Most of the PU assessment methods are based on the local know-how of the individual departments, or managers and healthcare providers, or they are performed within isolated local prospective and retrospective studies.

There are two types of measures, incidence and prevalence rates of occurrence:

- **Incidence** describes the percentage of people developing a new ulcer while in a facility or on a clinical unit. **Cumulative incidence (CI)** and **incidence density or rate (IR)** are different approaches to calculating incidence, based on the nature of follow-up time. Incidence density reflects variation in the lengths of time that at-risk individuals are observed and is calculated by dividing the number of new cases of a disease by the total of the lengths of time that each individual in the population was at risk, expressed as person-time (e.g., person-days). Cumulative incidence is the proportion of a population at risk that will develop an outcome in



a given period of time. It therefore provides a measure of risk, and it is an intuitive way to think about possible health outcomes.

- **Prevalence** describes the percentage of people having a pressure ulcer while on a clinical unit, for example. It may reflect a single point in time, such as on the first day of each month. This is known as *point prevalence*. However, it can also reflect a prolonged period of time, such as an entire hospital stay. This is known as *period prevalence*. Both types of prevalence rates (point and period) include pressure ulcers present on admission as well as new ulcers that developed while in a facility or on a clinical unit.

Because of the lack of national standards and agreement on how to measure and collect data, the **sharing and comparing of incidence, or prevalence data on pressure ulcers** (nationwide or at the EU level) is **simply not feasible**. In clinical settings without any systematic and validated PU registration system, estimating the incidence and prevalence of pressure ulcers will mostly prove an academic and time-consuming exercise, and will lead to imprecise estimations.¹ Nonetheless, PU occurrence is considered an indicator of healthcare quality and monitoring is important for assessing the costs of providing healthcare connected to PU and their consequences (e.g. prolonged hospitalization, increased costs of treatment, influence on the patient's quality of life, etc.).

Data collection and evaluation of PU and other adverse events must be designed to identify the extent of the problem in order to develop common guidance for timely preventive and corrective actions, e.g. assessing PU risk each time a new patient is admitted, reassessing risk daily, or when there is a significant change in the patient's condition, and making sure each care plan is tailored to meet the individual patient's pressure ulcer risk needs, and to disseminate outcomes and process measurement information to unit staff and key stakeholders.

A comprehensive information model for understanding the epidemiology of patient safety incidents, including PU/PI adverse events, is the Conceptual Framework for the International Classification for Patient Safety (ICPS). It aims to define, harmonise and group patient safety concepts into an internationally agreed classification in a way that is conducive to learning and improving the domain of patient safety across systems.

In line with this, it is critical to work together at a local, national and European level to better collect and analyse data on pressure ulcer occurrence and their associated complications. PU incidence monitoring and reporting procedures are the linchpin for making a real change in PU prevention. An integrated, comprehensive coordination and data exchange between the EU member states, OECD, health authorities, healthcare settings, healthcare professionals and competent stakeholders is vital to establish a standardised methodology across Europe. Such a scheme will ultimately lead to the establishment of national benchmarks for pressure ulcer prevalence and incidence, ultimately improving the quality of care for all patients and bringing health to a new level of efficiency.

¹ Collier M, *Pressure ulcer incidence: The development and benefits of 10 year's-experience with an electronic monitoring tool (PUNT) in a UK Hospital Trust*. EWMA J 2015; 15(2): 15–20.



For more insights, please read:

Pokorná A, Öien R F, Forssell H, Lindholm C, *International Cooperation in Pressure Ulcers Prevalence, Prevention and Treatment is Challenged by the Lack of National Registries*. Available at:

http://www.csmn.eu/en/czech-slovak-neurology-article/international-cooperation-in-pres-sure-ulcers-prevalence-prevention-and-treatment-is-chal-lenged-by-the-lack-of-59440?message=add&id_topic=59440&confirm_rules=1

Moore Z, Johanssen E, van Etten M A, *Review of PU prevalence and incidence across Scandinavia, Iceland and Ireland (Part 1)*. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/24159658>

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