

Pressure Ulcers in Critical Care Units: Research Notes from the Jordanian Context

Laila Habiballah, PhD, RN
Department of Nursing, Irbid National University, P.O. Box 2600 Irbid, 21110, Jordan

Abstract

Pressure ulcer is a common problem among hospitalized patients, especially those admitted to critical care units. Limited evidence existed about this problem in this particular population worldwide and in Jordan. This paper will describe the existed literature regarding pressure ulcer within Jordanian context focusing on the critical care units.

Keywords: Pressure ulcer, critical care unit, Jordan

A Pressure Ulcer is a localized injury which occurs on a bony prominence as a result of pressure, shear or both (EPUAP and NPUAP, 2009). It is a common problem, that can arise in a variety of healthcare settings, such as long-term care facilities, nursing homes, and community hospitals (Gunningberg et al., 2013). However, this problem is reported to be most prevalent in acute care hospitals (Cremasco et al., 2013) where patients have more serious health problems, as well as limitations in activity and mobility. It is believed that PU can increase a patient's length of stay in hospital by up to seven days (Anthony et al., 2004), and can increase the cost of hospitalization (Dealey et al., 2012).

A lot of variation exists in the literature regarding PU prevalence. Worldwide, prevalence rates have been reported to range from 5 to 54% (Tubaishat et al., 2017). This huge variation could be explained by differing methodologies used, since data collection tools, designs, settings, samples and populations may differ across studies, and definitions of PU may vary. However, these variations make any comparison between studies problematic. Thus, in this work, only existing clinical findings about PU in the Jordanian context will be analysed. Jordan was chosen as a case study for many reasons. Firstly, evidence from just one country, where patient and hospital characteristics are more uniform, can be compared more easily. Secondly, this problem has been established to exist in Jordan, though many studies also addressed many limitations encountered in their studies, so more light needs to be shed on it. Thirdly, although few studies have been conducted in Jordan on this subject, a team of researchers tries their efforts to dig inside this topic, and here we are going to address and analyze their work.

Previous studies on PU in the Jordanian context have been carried out in variety of care settings. However, this paper will focus specifically on the situation in relation to PU in critical care units and departments, since patients in these units usually have a higher risk of developing PUs than other hospitalized patients, due to their common co-morbidities (Tubaishat, 2014c). A stay in these units is very expensive and the existence of PU in these complicated cases may increase a patient's length of stay and therefore the total cost. This could be a significant burden on the health care system in a country with such limited resources as Jordan.

Regarding the prevalence of PUs, Jordanian studies, including work describing prevalence in pediatric units, have reported a range of between 6.6 and 24% of the total population of patients (Habiballah and Tubaishat, 2016, Al-Ashhab et al., 2013). Although no specific research study has estimated the size of the problem solely in Jordanian critical care units, ICUs have been included in the targeted units of previous Jordanian work about PU prevalence and incidence. One cross sectional study of 300 patients from two hospitals in the north of Jordan found the prevalence of PUs in critical care units (29%) to be much higher than in surgical and medical wards (11%) and in orthopedic wards (14%) (Tubaishat et al., 2011). Two years later a duplicate study by the same authors demonstrated an increase in the total prevalence rate in the same hospitals to 16% and in ICUs to 44% (8).

One further study (Alja'afreh and Mosleh, 2014) reported a slightly higher prevalence than the aforementioned studies. In a survey of one tertiary hospital in central Jordan, 30 patients out of 190 had developed PUs, giving a prevalence of 24%. However, this was calculated across only two selected medical wards. The prevalence in ICUs was not discussed.

With reference to a different target population, two studies about PU prevalence in Jordanian pediatrics units were found (Al-Ashhab et al., 2013, Habiballah and Tubaishat, 2016). In the first, the prevalence of PU occurrence among 166 patients admitted to two hospitals was recorded as 6.6%. Of those reported to have PUs, around 91% were residents in ICUs (Habiballah and Tubaishat, 2016). The other study reported a prevalence of 8.2% from a total sample of 784 pediatric patients in a multicenter study, and also found that ICUs reported the highest occurrence of PUs (43%). Both studies agreed with the international literature regarding pediatric PUs (Kottner et al., 2010, Schluer et al., 2009). One more study addressed the incidence of PUs among children admitted only to ICUs. It was found that, of 212 patients in one hospital, 19 had developed PUs over an 8-week

period giving an incidence rate of 9% (Willock et al., 2016).

Two main conclusions can be drawn from the data reported. The first is that prevalence is much higher in critical care units, and this should open the eyes of policy and decision makers in Jordan regarding this issue. The second that the problem is on the rise and this should ring alarm bells, prompting all those involved in the healthcare sector in Jordan to establish a national prevention plan.

From another perspective, with regard to PU prevention, both general and critical care nurses in Jordan have been reported to hold positive attitudes (Tubaishat et al., 2013). In fact, however, a positive attitude alone is not enough, since, despite their attitudes, it has been found that some Jordanian nurses, including critical care nurses, still use outdated interventions like massages and doughnut-shape rings for PU prevention (Tubaishat and Aljezawi, 2014, Saleh et al., 2013). Furthermore, a number of barriers to PU prevention, such as staff shortages, including in ICUs, a lack of time, and the presence of uncooperative patients have also been highlighted (Tubaishat et al., 2013, Qaddumi and Khawaldeh, 2014).

Knowledge about PU has also been shown to be significantly related to the quality of care nurses – including ICU nurses - provide, and their willingness to apply preventive measures (Qaddumi and Khawaldeh, 2014, Saleh et al., 2013). According to Saleh et al. (2013), highly educated nurses and those who had undertaken training on PU risk assessment as well as prevention, were noticeably more likely to use risk assessment scales, and to implement prevention measures and treatment (Saleh et al., 2013). This finding was supported by another cross sectional study of 141 nurses working in 8 Jordanian hospitals (Qaddumi and Khawaldeh, 2014), where most nurses were found to lack sufficient knowledge about PU prevention. Yet, those who had received training on this issue were the most likely to apply PU prevention methods for their patients. Saleh et al. (2013) also reported that the type of hospital affected the treatment being applied by Jordanian nurses. Nurses in private hospitals, for example, were the most likely to perform PU treatment for their patients.

In general, however, nurses in Jordan, including those working in critical care, do not provide adequate prevention for their PU patients. In one study, only 17% of patients who were deemed to be in need of preventive treatment based on their risk scores, actually received such therapy (Tubaishat et al., 2011). Similarly, in a more recent study, only 19% of those who were considered high risk received appropriate preventive care (Tubaishat and Aljezawi, 2013) and in another study conducted in long term care facilities, only 28% of residents at risk of developing PU receive the required prevention (Aljezawi et al., 2014).

To some extent, the findings of this paper, which has taken Jordan as a case study can be comparable to those of other studies worldwide. However, a detailed comparison is beyond the scope of this short paper. Here, the aim was to highlight a number of important clinical notes which need further analysis and evaluation by stakeholders in Jordan, as follows:

- The paper reviewed and analyzed the situation with regard to PU in the Jordanian context concluding that this problem exists, that it is on the rise, and that it needs to be the focus of greater attention.
- Extra attention should be paid to patients in critical care units, since they are at higher risk than patients in other wards. One existing study explains that critical care patients are associated with certain risk factors that make them prone to PU development, such as moisture, decreased mobility, the presence of three chronic diseases or more, and hypoalbuminemia (Tubaishat, 2014c)
- Minimal preventive care is provided to PU patients by staff, and thus attitudes towards PU prevention should be improved, and any barriers or obstacles that hinder prevention should be tackled.
- Knowledge and skills in relation to PU prevention should be enhanced through in-house teaching in critical care units, by means of lectures, workshops, or seminars. Furthermore, e-learning programs may also be an appropriate method for delivering training on this topic. (Tubaishat, 2014b, Tubaishat, 2014a).

To conclude, further attention should be paid both to patients in critical care units and to the staff working within them. Despite the lack of research to date in Jordan, this paper has outlined the current situation regarding PU prevalence and PU preventive care, with a hope in our mind that nurses will now have a clearer picture.

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