

**Medical devices–induced pressure injuries among patients
admitted to Intensive Care Units in Jordan: Cross-Sectional
Observational Study**

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Abstract

Background: Medical device-related pressure injuries (MDRPIs) are a significant concern in Intensive Care Units (ICUs), affecting patient outcomes and healthcare costs.

Aim: This study aimed to assess the prevalence and risk factors for MDRPIs among patients admitted to ICU in Jordan.

Methods: A cross-sectional observational study was conducted at Al-Bashir Hospital, involving 242 adult ICU patients. Data collection included demographic and clinical information, Braden Scale assessments, and Pressure Injury Classification Tool at baseline and follow up (after 72 hours). Descriptive and inferential statistics were employed using SPSS software.

Results: The prevalence of MDRPIs among ICU patients was 47.9%, the most common device assailed with MDRPIs are ECG electrodes, pulse oximeters (100%), and Foley catheters (96.6%) being. Significant risk factors included age, marital

status, range of motion, presence of infection, and feeding routes. Longer hospital and ICU stays also correlated with higher MDRPI rates. Common anatomical locations for MDRPIs were the chest, arms, mouth, and nose.

Conclusion: The high prevalence of MDRPIs and identified risk factors highlight the need for targeted preventive strategies and interventions in ICUs. Improved monitoring and tailored care plans are essential to mitigate MDRPI development and enhance patient outcomes.

Keywords: Medical device-related pressure injuries, intensive care unit, prevalence, risk factors, Jordan, Braden Scale.