Purpose:

Pressure injuries are harmful, painful and potentially preventable. These injuries increase hospital length of stay and healthcare costs, and are associated with increased mortality. While pressure injury prevention is well-researched and practiced in the hospital setting, one area that has not been well investigated is prior to and on arrival to hospital. The objective of this study was to investigate the prevalence of pressure injury in adults on arrival by ambulance to the emergency department to determine areas where nursing assessment and preventative intervention may be improved.

Methods:

An observational, cross-sectional descriptive study design was used. Participants (n = 212) were recruited from the emergency departments of two Australian tertiary hospitals. Full skin inspection and pressure injury risk assessment, using Braden and Waterlow scores, were undertaken within one hour of presentation.

Results:

Pressure injuries were identified in 11 participants, giving a prevalence of 5.2% at ambulance presentation (11/212). Nearly two thirds of participants 60.4%, n = 128) were admitted to hospital and nearly all participants with an identified pressure injury (n = 10) were admitted to hospital, giving a prevalence of 7.8% (10/128) at the ward entry point. Participants with pressure injury and those at high risk of injury were found to have spent significantly longer in the ambulance and within the emergency department. During ambulance transport and in the first hour of presentation to the emergency department it was rare that pressure-relieving interventions were implemented, even for those with an identified pressure injury and those at high risk. In this study, the Waterlow score identified more patients at high-risk of pressure injury than the Braden Scale.

Conclusion:

The results indicate that early pressure injury surveillance and risk assessment is merited at the point of presentation to the emergency department so that prevention and treatment can be implemented at the earliest possible opportunity. Also, if pressure injuries are not identified at the hospital point of entry there is potential that such injuries may later be incorrectly classified as hospital-acquired, potentially incurring financial penalties. Whilst it may be considered challenging to manage pressure injuries within the ambulance and emergency department, preventative intervention should commence in the ambulance, while the patient is in transit, and should be continued in the emergency department with the use of pressure-relieving devices, particularly for those identified as being at high risk. At-risk patients who remain on non-pressure-relieving surfaces in the ED are at increased risk of PI development.
Keywords:
Emergency care nursing, Pressure injury prevention and Risk assessment

References:

Abstract Summary:
Pressure injury prevention in the ambulance and emergency department has not been well explored. This study identified 5% prevalence on ambulance arrival, with very little preventative intervention implemented in the ambulance or emergency department. In these settings, it is concluded that pressure-relieving surfaces should be implemented for all at-risk patients.

Content Outline:
Introduction
- Pressure injury is preventable
- Pressure injury causes harm to patients and incurs cost to health facilities
- Pressure injury prevention has not been well studied in the emergency department

Main content
- Research methodology: prevalence study
  - Research main results
    - Prevalence at presentation to emergency department and on admission to ward
    - Ambulance journey time and emergency department length of stay of those at high-risk and those with identified pressure injury
    - Identified pressure injury preventative interventions for those at risk
    - Risk profile of patients, and comparison of Braden and Waterlow scores

Conclusions
- Pressure injury prevalence is significant at the point of presentation to the emergency department in patients arriving by ambulance
- Pressure-relieving support surfaces should be used within the ambulance, especially for those at greater risk and for longer journeys, and within the emergency department
- Early surveillance within the emergency department is required to determine which patients are at risk so that preventative intervention may be implemented
- If pressure injury surveillance is not conducted at the hospital point-of-entry then there is potential for some to be missed that may later be inadvertently recorded as hospital-acquired pressure injuries; potentially incurring financial penalties
Author Summary: Paul has published widely, spoken at many international and national conferences, and is currently involved with several research projects in intensive care and emergency care. He is current President of the World Federation of Critical Care Nurses (WFCCN) and past-President of the Australian College of Critical Care Nurses. He helped establish WFCCN and is Emeritus Editor of its journal Connect. Paul is a European Federation of Critical Care Nursing Associations Fellow, and WFCCN Honorary Ambassador.