Abstract:

Introduction: Peripheral intravenous catheters and intraosseous devices have been widely used in the prehospital setting for a considerable period. Changes in technology and guidelines have led to an increase in situations where use of these devices in a prehospital setting is recommended. Despite being commonplace they are not without risk of harm to the patient.

Study objective: To examine critically the research-based literature related to incidence of insertion of peripheral intravenous catheters and intraosseous devices, the use of these vascular access devices and to determine which health professionals insert them, most commonly, in the prehospital setting.

Methods: An integrative review was undertaken using material retrieved following a systematic search of research literature databases, grey literature and secondary sources written in English. No date limit was applied to the search and the searching was undertaken until September 2019. Articles specifically addressing peripheral intravenous catheter and intraosseous device use in the prehospital setting were selected.

Results: The search resulted in 20 articles being included in the review, 17 related to peripheral intravenous catheters and three for intraosseous devices. All articles related to observational studies across a variety of services and settings.

Conclusion: The role of vascular access in the prehospital setting continues to be significant, particularly for patients who are critically unwell. This review identified that differences in service structure, geography and the patient’s condition all impact on the insertion and use of these vascular access devices. Despite this there are limited data reported that can allow prehospital clinicians and services to benchmark their practice.

Reference: