



We identified 606 records of incidents associated with infusion devices that had occurred in a private home and were reported to the UK National Reporting and Learning Service (2005-2015 inclusive). We used thematic analysis to identify key themes” Lyons and Branford (2018).

Abstract:

OBJECTIVE: Complex medical devices such as infusion pumps are increasingly being used in patients’ homes with little known about the impact on patient safety. Our aim was to better understand the risks to patient safety in this situation and how these risks might be minimised, by reference to incident reports.

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DESIGN: We identified 606 records of incidents associated with infusion devices that had occurred in a private home and were reported to the UK National Reporting and Learning Service (2005-2015 inclusive). We used thematic analysis to identify key themes.

RESULTS: In this paper we focus on two emergent themes: detecting and diagnosing incidents; and locating the patient, lay caregivers and their family in incident reports. The

majority of incidents were attributed to device malfunction, and resulted in the patient being under-dosed. Delays in recognising and responding to problems were identified, alongside challenges in identifying the cause. We propose a process model for fault diagnosis and correction. Patients and caregivers did not feature strongly in reports; we highlight how the device is in the home but of the care system, and propose an agent model to describe this; we also identify ways of mitigating this disjoint.

CONCLUSION: Devices need to be appropriately tailored to the setting in which they are employed, and within a system of care that ensures they are used optimally and safely. Suggested features to improve patient safety include devices that can provide better feedback to identify problems and support resolution, alongside greater monitoring and technical support by care providers for both patients and frontline professionals. The proposed process and agent models provide a structure for reviewing safety and learning from incidents in home health care.

Reference:

Lyons, I. and Blandford, A. (2018) Safer healthcare at home: Detecting, correcting and learning from incidents involving infusion devices. *Applied Ergonomics*. 67, p.104-114.

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