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Title: Barcode Medication Administration: An assessment of readiness to implement in an Irish neonatal unit

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Introduction: Medication administration errors (MAEs) are the medication incidents that cause most patient harm and death in hospitals (1). Barcode Medication Administration (BCMA) technology is an evidenced based approach to significantly reducing MAEs (2). It is part of the eHealth Ireland vision for hospital pharmacy and is required to achieve Level 6 on the Health Information and Management Systems Society (HIMSS) EMR adoption model. In the USA, 66% of hospitals have implemented BCMA, implementation across Europe is increasing but not in Ireland.

Aims: To access readiness to implement BCMA after the implementation of an Electronic Health Record (EHR) and to identify and document any gaps.

Methods: A multidisciplinary BCMA readiness assessment using a validated tool (3) was conducted. Participants included IT, neonatology, nursing and pharmacy management. The detailed results were then collated under organisational readiness framework of people, processes and technology (4) subheadings to allow identification of gaps in the broader building blocks of the hospital's readiness. A site visit to an Irish hospital using BCMA was conducted to triangulate findings.

Results: Key gap analysis findings included:

People - Lack of nursing and pharmacy informatics staff in appropriate roles in hospital.

Processes - Hospital pharmacy service model that cannot not support neonatal BCMA.

Technology -

   a) Pharmacy information system not interoperable with other hospital information systems.
   b) Lack of medication interoperability standards such as a National Medicinal Product Catalogue.

Conclusion: There are large gaps in our hospital's readiness to implement BCMA. Implementation is not just about procuring technology. People and processes will require significant investment in terms of staffing and pharmacy infrastructure. Further research should be conducted looking at successful BCMA implementations in HIMSS Level 6/7 sites internationally to develop an appropriate migration path for our hospital and to plan for other EHR projects in Ireland.

References:

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