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CONFERENCE ABSTRACT

The Patient Held Active Record of Medication Status (PHARMS) Feasibility Study

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Introduction: Medication errors are a major source of preventable morbidity, mortality and cost. Many errors occur during transitional care, in particular at the primary-secondary care interface at the time of hospital admission and discharge. Novel interventions are required to facilitate integrated care and accurate transfer of medication information at this interface. With existing evidence supporting the use of information technology (IT) and the patient representing the one constant in transitional care, an electronic patient held medication record may provide a solution.

Theory/Methods: This study aims to assess the feasibility of introducing a Patient Held Active Record of Medication Status (PHARMS) device at the interface of primary and secondary care at hospital discharge using the Consolidated Framework for Implementation Research (CFIR). The study aims to assess efficacy of the device in addition to establishing acceptability of the initiative to key stakeholders and examining the process of its implementation.

Design: Mixed method, non-randomised intervention study with intervention and control arms.

Setting: Urban secondary care facility and four urban general practices.

Sample: Community dwelling patients ≥60 years, taking 3 or more medications admitted to medical and surgical wards.

Eligible inpatients were issued with the device which utilises USB technology and provides a link to the medication record in primary care. The device was used by the hospital doctor to

generate the discharge prescription and discharge medication information was transmitted electronically to the patient's primary care record.

Outcomes (based on realistic evaluation and CFIR domains): Clinical: Prevalence of prescribing error on discharge prescriptions in intervention and control arms.

Process evaluation: Qualitative interviews with patients, hospital health care professionals, General Practitioners (GPs) and IT professionals and non-participant observation.

Results: 127 patients have been recruited (63 intervention, 64 control). The prevalence of prescribing error has been determined on discharge medication information in both groups. A 28.4% reduction in prescribing error was found when comparing discharge medication information in both groups ($p<0.001$) with a complete absence of error pertaining to patient information, date, legibility, spelling and duration of dose among intervention patients.

Semi-structured interviews have been conducted with a census

sample of hospital doctors and GPs and are ongoing with patients and IT professionals. Preliminary qualitative analysis suggests that the device is useful and acceptable to hospital doctors and GPs.

Discussion and conclusions: Preliminary findings suggest that the introduction of a PHARMS device can reduce prescribing error at hospital discharge and is feasible and acceptable in both primary and secondary care.

Lessons learned: Due to its simplicity and reliance on USB technology, the PHARMS device appears to have overcome the existing shortcomings of technological infrastructure within primary and secondary care in Ireland with the potential for international impact. The clinical and realistic evaluation of this feasibility study will yield insights for a further more definitive evaluation PHARMS device. In addition, the findings of this study will contribute to knowledge in the broader area of implementation of technology in a healthcare context.

Limitations: Sample size.

Suggestions for future research: A future larger scale evaluation is warranted.

Keywords: medication error; transitional care; medication reconciliation; information technology.
implementation

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