

video-recorded healthcare practitioners while prescribing, administering and monitoring VRIII. The video data were then transcribed and inductively coded to construct a deep understanding of the use of VRIII. A hierarchical task analysis (HTA) which is a core human factors approach (2) was used to represent the actual task for the use of VRIII.

Results: Twenty-two hours of video recordings of 10 healthcare practitioners were used to develop the final HTA with a top-level goal of controlling elevated BG using VRIII. The HTA clearly illustrated the complexity of using VRIII by highlighting more than 100 practical activities to achieve the goal. The observed challenges were mainly related to lack of knowledge e.g. the co-prescription of appropriate concurrent IV fluids, and system and technology problems e.g. the need for frequent BG monitoring. The analysis of the video data identified various strategies that healthcare practitioners used to respond to variability in work including knowledge, standardising practice e.g. the using of ready-to-administer insulin infusions, and context-dependent adaptations including asking available colleagues to countersign administration and assigning the monitoring task to other staff when the nurses were busy. Most of the observed adaptations had positive outcomes in terms of patient care delivery.

Conclusion: This study was the first to have explored how 'work is done' in reference to the use of VRIII using HTA. The study was limited by time, the Covid-19 pandemic and number of participants. However, the developed HTA provided detailed tasks and, by highlighting when and how adaptations were used, systematically presented the process as it was actually done. Future work will focus on using the data from this study to model RHC in the use of VRIII in a way that allows the study site to better enhance patient safety.

References

- Hollnagel E, Braithwaite J, Wears R. Delivering Resilient Health Care. Abingdon, Oxon: Routledge 2019.
- Stanton NA, Salmon PM, Rafferty LA, et al. Human Factors Methods: A Practical Guide for Engineering and Design. 2nd ed. England: Ashgate 2013.

UNDERSTANDING THE IMPLEMENTATION AND MEDIUM-LONGER TERM SUSTAINABILITY OF THE PRIMARY CARE PRESCRIBING SAFETY INTERVENTION, PINCER: PRELIMINARY RESULTS FROM A LONGITUDINAL PROCESS EVALUATION

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Introduction: Medication errors are an important cause of morbidity and mortality across primary care in England. In the National Health Service, approximately 71% of 237 million medication errors made annually are attributable to primary care(1). The complex pharmacist-led IT-based intervention to reduce clinically important medication errors (PINCER) intervention has been shown to significantly reduce medication errors when tested in a cluster randomised controlled trial and when implemented on a larger scale across one geographical region of England. However, with a national rollout of PINCER now underway across England,

there remains a limited understanding of whether and how wider implementation, impact and medium-longer term sustainability across diverse regions is achieved, and what factors may influence these processes.

Aim: This study aimed to explore the contextual factors that influenced the nature and extent of translation, implementation and sustained use of PINCER in diverse settings over time.

Methods: Intervention developers and personnel involved in the PINCER rollout and staff members from Academic Health Science Networks (AHSNs), Clinical Commissioning Groups (CCGs) and general practices from four regions of England, UK, were purposively recruited via research team connections and Clinical Research Networks. Interviews aimed to capture short-term (≤ 6 months), medium-term (6 – 18 months) and long-term (≥ 18 months) use of PINCER. Interview guides were informed by Normalisation Process Theory (NPT). Semi-structured, face-to-face or telephone interviews were conducted and digitally recorded. A preliminary thematic analysis was performed on the data collected.

Results: Forty-eight participants from 30 establishments, including two intervention developers, three involved in the PINCER rollout and five AHSN, seven CCG and thirty-one general practice employees were interviewed between June 2018 – June 2020. Their engagement with PINCER had either been in the medium (n=13) or long-term (n=17), (range 8 months - 5 years plus). Emerging themes identified in the preliminary analysis were: development and spread which incorporated intervention and training improvements as well as uptake, perceptions of PINCER which included awareness of PINCER as well as opinions on it and factors influencing the use of PINCER and sustainability which were mainly contextual but also related to PINCER functionalities. Within the development and spread theme, and relating to perceptions of PINCER theme, clear communication and ensuring there was an understanding of what PINCER entailed was considered important in initiating interest and uptake. Overall, PINCER was perceived positively. Key challenges to the implementation of PINCER identified were initial IT issues and workload. Policies advocating the use of PINCER, evidencing impact in reductions in the number of patients identified as being 'at risk' of hazardous prescribing and being able to benchmark results against other CCGs and practices helped facilitate the implementation and sustainability. Some changes made to prescribing and monitoring processes as a result of the implementation and use of PINCER, appeared to have become embedded into routine practice giving an indication of sustainable use.

Conclusion: Further interviews will establish if and how PINCER has been more widely adopted and normalised within primary care, in order to generate important learning to support its optimal and sustainable impact.

References

- Elliott R, Camacho E, Campbell F, Jankovic D, St James MM, Kaltenthaler E, et al. Prevalence and economic burden of medication errors in the NHS in England. Rapid evidence synthesis and economic analysis of the prevalence and burden of medication error in the UK. 2018.