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ACUTE KIDNEY INJURY – CLINICAL

SP198 ELECTRONIC CLINICAL DECISION SUPPORT FOR THE EARLY RECOGNITION AND MANAGEMENT OF ACUTE KIDNEY INJURY: QUALITATIVE EVALUATION OF END-USER EXPERIENCE

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Introduction and Aims: Electronic clinical decision support (eCDS) systems have been suggested as a possible solution to deficiencies in AKI care and have been widely adopted despite limited evidence. The broader literature, however, describes alert fatigue, end-user disengagement and unintended consequences, particularly when systems are introduced with limited end-user input. A nationwide mandate now standardises the biochemical algorithm for reporting AKI but end-user interfaces remain heterogeneous with variations in IT capability, alert intrusiveness and accompanying content. Even a single, uniform eCDS may not suit all circumstances depending on the target user and local workflow. We undertook a single-centre, qualitative evaluation of end-user experience of an AKI eCDS to identify those factors affecting its use and incorporation into routine practice.

Methods: Targetting medical end-users, AKI eCDS was configured within the organisation's electronic patient record (EPR) system. Triggered at a threshold serum creatinine (Cr) rise of 25 umol/L/day it linked to clinical guidance and automated ordering of investigations. The study was undertaken across two, 4 month phases. In phase 1 initial experience on 3 pilot wards allowed refinement of the tool. Assessments continued in phase 2 following activation across all 61 adult, non-critical care wards. End-users were identified from EPR trigger reports and purposively sampled across specialties and grade. Following informed consent, retrospective in-depth interviews were conducted by a trained, qualitative researcher. Audio records were transcribed and analysed according to Normalisation Process Theory. Recruitment continued until no new themes emerged.

Results: Thematic saturation was achieved with 24 interviews. The AKI alert reflected the surveillance activity of medical staff and as such was accepted as potentially useful though "pop-ups" were universally disliked. Junior staff were more likely to recognise the potential utility of the tool whilst senior staff were more sceptical, tending to view it as a hindrance. The requirement for engagement with the alert before its dismissal (e.g. to prevent further alerts related to dialysis) was universally unpopular due to interference with workflow. Technical limitations prevented presentation of a comprehensive Cr history within the alert with users frequently diverting back to source data without linking through to guidance or automated ordering. A perception of erroneous alerting affected the tool's credibility although many end-users stated that the alert influenced prioritisation of patient review.

Conclusions: Our study revealed themes similar to those described in the earlier literature. Systems intruding on workflow, particularly involving complex interactions, may not be sustainable even if there has been a positive impact on care. The optimal balance between intrusion and clinical benefit of AKI eCDS requires further evaluation.