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Impact Inclusion Innovation Investment

Analogue to digital

Digital Sepsis Alert

ARC Northwest London

The challenge
Sepsis remains a major cause of avoidable mortality in acute hospitals, with delays in recognition and timely antibiotics contributing significantly to poor outcomes. The Digital Sepsis Alert (DiAIS) programme in Northwest London used real-time electronic health record data to identify patients at risk of sepsis and prompt earlier clinical assessment and treatment.

The approach
ARC Northwest London researchers used a mixed-methods approach, combining quantitative outcome analysis with qualitative insights into how clinicians engaged with the alert, helping to identify design features and workflow practices that optimised timely and appropriate responses.

The outcomes and impact
An evaluation across regional acute hospitals found that patients flagged by the alert experienced a 14% relative reduction in in-hospital mortality and were 35% more likely to receive intravenous antibiotics within one hour. The alert also supported earlier recognition of clinical deterioration and was associated with shorter hospital stays.

The findings provided NHS decision-makers with robust guidance on the safe and effective use of digital clinical decision support systems. They informed local quality improvement initiatives and offered a scalable model for adoption across other hospital trusts. The study also highlighted practical lessons for implementing digital alerts in routine care, demonstrating how embedding technology within clinical workflows can enhance patient safety, accelerate treatment, and improve system-level efficiency.

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