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Optimizing the management of acute kidney injury at an United Kingdom District General Hospital: A quality improvement project

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Statement of the Problem: The improper management of Acute Kidney Injury (AKI) is a leading cause of preventable morbidity and mortality, which costs NHS England an estimated £1.02 billion per year. At our hospital a preliminary analysis revealed that only 41.1% of patients identified to have AKI on admission were managed in full accordance with the hospital-specific care bundle.

Aim: This project is set out to improve complete compliance with the local AKI care bundle, within 24 hours of admission. We targeted three wards and aimed to increase overall compliance by 20% over a three-month period.

Methodology: Data was collected from 68 patients over 14 weeks (5/10/17-11/01/18) during which changes were implemented in the form of Plan-Do-Study-Act (PDSA) cycles, according to the quality improvement methodology. Two weeks of preliminary data collection were followed by three four-week cycles. These consisted of: Alterations to the hospital's medical admission pro forma, a hospital-wide screensaver and posters on target wards (PDSA1); a care bundle sticker (PDSA2) and a consultant-led teaching, aimed at junior doctors (PDSA3).

Results: Complete compliance with the hospital AKI care bundle rose to 62% (PDSA1), 83.5% (PDSA2) and 87.5% (PDSA3); a total increase of 46.4% on baseline. Failure to complete urinalysis accounted for 83.3% of cases in which management was sub-optimal. Following its introduction, the sticker was used in just 6.25% of patients (n=2), but led to full compliance with the care bundle in both cases.

Conclusion: This project far surpassed our initial target, demonstrating that the cumulative effect of several simple interventions can make a significant contribution to the optimal management of AKI.

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