

EVALUATION OF A QUALITY MONITORING PROGRAMME FOR INTRAVENOUS FLUID MANAGEMENT

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BACKGROUND AND IMPORTANCE

Intravenous (IV) fluid stewardship can support caregivers to optimize the patient's outcome, avoid fluid overload or electrolyte disorders, and control costs. In november 2018, a hospital-wide IV fluid guideline was implemented on all adult wards of the University Hospital of Brussels as part of a stewardship programme. Implementing such an initiative requires monitoring to guarantee guideline adherence.

AIM & OBJECTIVE: to evaluate the impact of an internal audit on IV fluid use and identify opportunities to improve quality monitoring.

MATERIALS & METHODS



5PSQ-133

 Development of <u>5 quality indicators</u> on fluid management (adapted from a framework for optimisation of intravenous fluid prescribing based on the 2013 NICE Guideline on Intravenous fluid therapy in adults in hospital¹):



• Evaluation of the quality indicators in an internal audit in a 721-bed Belgian university hospital

<u>Cross-sectional data collection</u> by pharmacist trainee on the adult wards every two weeks over a six-month period (August 2019-January 2020)

Universitair Ziekenhuis Brussel



Two electronic reports sent to ward stewards

(22 physicians, 16 nurses):

3 months after the start: first period (T1)
 6 months after the start: second period (T2)

Results of T1 and T2 were compared statistically using SPSS® v26 software (Chi-squared test and interrupted time series (ITS) analysis).



At the end of January 2020: electronic <u>survey</u> sent to all fluid stewards to identify elements in the audit process requiring optimisation.



RESULTS

INTERNAL AUDIT

Prescription for IV fluid present

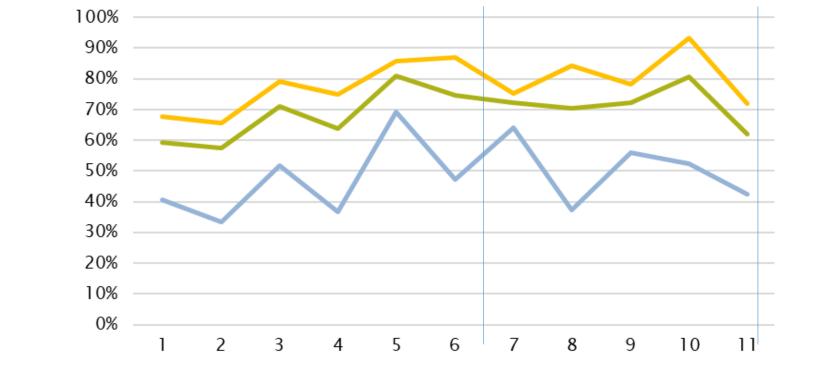
Recent weight documented in patient file

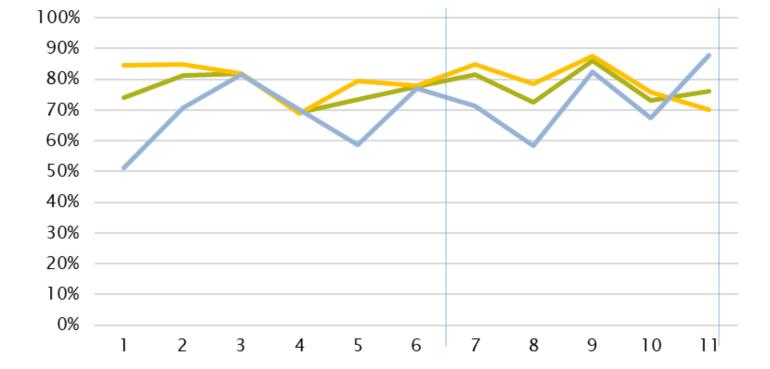
Data collection

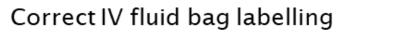
- 12 measurements (T1: 1-6; T2: 7-11) in 17 wards
 - 12 internal medicine wards
 - 5 surgical wards
- Included patients and IV fluid bags
 - 729 patients (T1: 361; T2: 368)
 - 758 IV fluid bagsv (T1: 381; T2: 377)

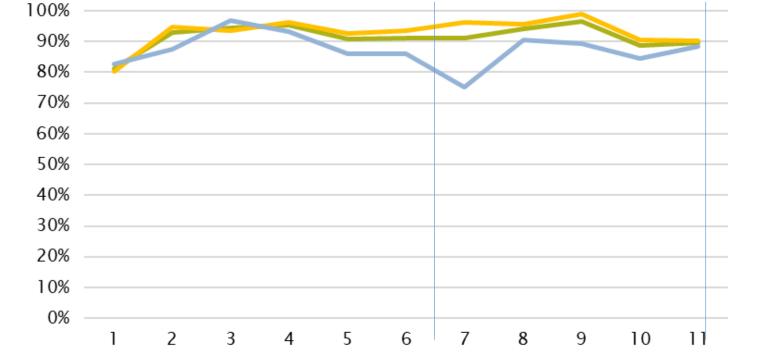
Quality indicator analysis

- 'Prescription' and 'Labelling': close to target value
- 'Documented indication': low (21%)
- 'Body weight monitoring':
 - Significantly better results in internal medicine wards (T1: 82.1% vs. 62.5%, p<0.05; T2: 80.2% vs. 66.3%, p<0.05).
- 'Electrolyte monitoring':
 - Significant increase between T1 and T2 (90.3% vs. 96.2%, p<0.05), though not attributable to our intervention in ITS analysis.
 - Internal medicine wards had significantly better results compared to surgical wards (T1: 95.3% vs. 77.8%, p<0.05; T2: 98.4% vs. 91.3%, p<0.05).

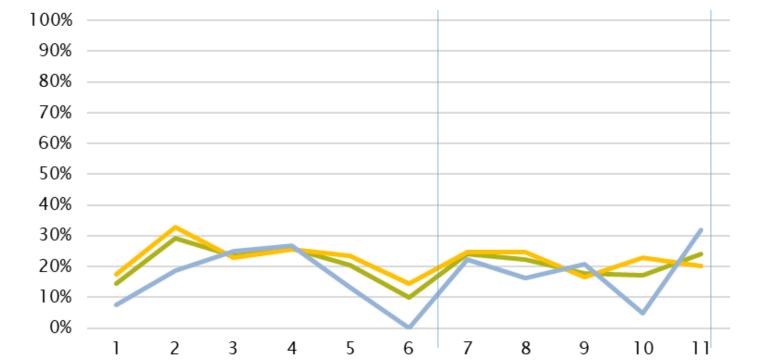


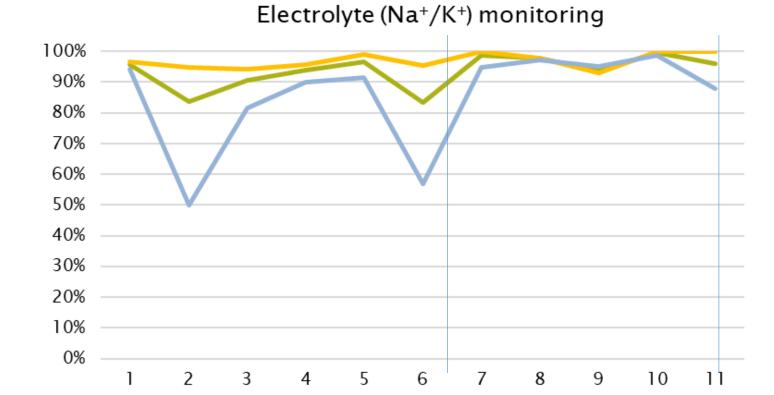






Indication mentioned in patient file





Legend: Total Internal medicine Surgery Electronic report sent to stewards

Overall, no effect of intervention in ITS analysis noted.

SURVEY

- 32% response rate (physicians: 27.2%, nurses: 37.5%)
- Feedback report: appropriate format and length (median scores: 3/5)
- Only 33% of the stewards had communicated the results to colleagues.



CONCLUSION & RELEVANCE

- Awareness of <u>electrolyte monitoring increased</u> among physicians but the direct impact of our feedback remains unclear.
- The <u>documentation of indication</u> requires <u>targeted action</u>.
 <u>Quality indicators with results close to target</u> need <u>re-evaluation</u>.
- Overall results suggest a <u>persistent need for increased awareness and</u> <u>training</u> on IV fluids, especially on surgery wards.

4. Audit and feedback should include tailored communication with staff.

REFERENCES - ¹Royal Liverpool & Broadgreen University Hospital NHS Trust (RLBUHT), Optimisation of intravenous fluid prescribing: framework for changing practice through education and audits – Audit Data Collection Tool; 2018.