

## POTASSIUM MONITORING: DO WE GIVE IT THE ATTENTION THAT IT DESERVES?

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**Background:** Potassium (K<sup>+</sup>) is the principal intracellular cation and it is essential for the maintenance the function of multiple organs. It is a critical component of cardiac conduction and has a narrow therapeutic/toxic range.

**Purpose:** To analyze the effect of pharmaceutical intervention through computerized prescription order entry (CPOE) in hospitalized patients with K<sup>+</sup> disorders.

### Materials and Methods:

Observational, descriptive and prospective study.

Study period: 7 weeks.

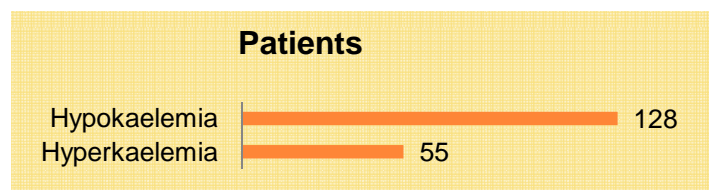
Previously, pharmacists introduced drug information involved in K<sup>+</sup> disorders as a support in the prescription program.

Daily pharmacists:

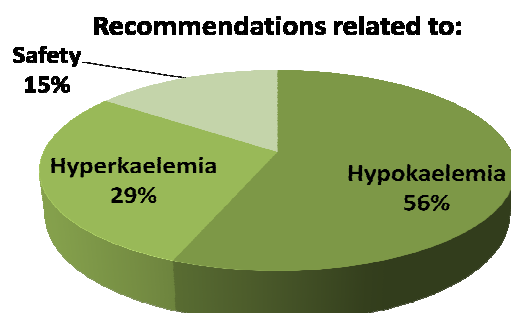
- Detected patients with blood K<sup>+</sup> level alterations using a link with laboratory data (<3.1 and >5.3 mmol/l).
- Reviewed the pharmacotherapy in order to detect possible medication errors related to K<sup>+</sup> disorders.
- Analysed the effect of pharmaceutical recommendations and physician acceptance rate.

### Results:

183 patients were included (67 ± 17 years old on average)



- A total of 3,380 medical orders were prescribed.
- 540 (16.0%) could affect K<sup>+</sup> levels mainly due to furosemide, piperaziline-tazobactam and meropenem.
- Pharmacists thoroughly studied 383 orders in terms of preventing possible medication errors.
- 232 (60.6%) required pharmaceutical recommendation, 130 of them (56.0%) were related to optimizing K<sup>+</sup> therapy in hypokalemia status and 35 (15.0%) were safety recommendations to closer monitoring.
- Clinicians accepted 72.4% of recommendations.



**Conclusions:** There is a high rate of prescriptions errors related to K<sup>+</sup> disorders that could lead to patient safety events. Pharmaceutical intervention through CPOE helps to minimize them and increases physician awareness of the necessity of a closer K<sup>+</sup> monitoring in these patients.