

## **“Does the use of an EHR-integrated pathway for the care of patients with hyponatremia decrease the incidence of overcorrection of serum sodium compared to usual care? – Preliminary Data Report”**

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### **Abstract**

Hyponatremia is one of the most common electrolyte abnormalities in the emergency department, involving complex workup with the possibility of irreversible consequences for overcorrection, such as pontine demyelination syndrome (PDS) or osmotic demyelination syndrome (ODS). The University of Colorado Emergency Department has been using an embedded EHR pathway for treatment, and this study's primary aim is to evaluate the effect of this pathway on management and patient outcomes. The primary outcome of this study is to determine whether implementing a predetermined computer-based pathway within the EHR reduces the incidence of hyponatremia overtreatment. Specifically, this study compares the rate of serum sodium correction exceeding 8 mEq/L within a 24-hour period between patients treated using the pathway and those receiving standard care without the pathway. This report presents preliminary data focusing on select secondary outcomes, as further statistical analysis is pending. In the study, we analyzed 671 patients treated with the pathway compared to 2,238 patients managed prior to the implementation of the EHR pathway. The selected secondary outcomes included the number of renal consults ordered, hospital length of stay, and 60-day mortality. It was found that management of patients using the pathway resulted in a statistically significant increase and greater consistency in renal consults ordered. However, initial data analysis showed no statistical difference in length of stay or 60-day mortality.