

## **Abstract**

### **Background**

Hyperkalemia is a significant electrolyte abnormality that can be fatal with the onset of acute arrhythmias. Common diseases and medications can predispose patients to hyperkalemia, so knowing how to best prevent the progression of hyperkalemia is imperative to patient outcomes and survival. Currently there is no single preferred method for managing hyperkalemia.

### **Objective**

This study can help direct hyperkalemia treatment by examining the efficacy of different medication regimens in different clinical cases.

### **Methods**

In this retrospective cross-sectional chart review, data were collected using electronic health record data from a non-profit teaching hospital. The study sample (N=97) included hospitalized adults who had hyperkalemia with a serum potassium  $\geq 6$  mEq/L. Each chosen drug, dose, route, and frequency was compared to the change in serum potassium level within 8 hours.

### **Results**

A total of 97 patients were analyzed. Medication regimens containing sodium polystyrene sulfonate (SPS) dosed at 15 g statistically significantly reduced the serum potassium level to  $< 5.5$  mEq/L within the 4-8 hour interval after drug administration. All other statistical tests were not significant.

### **Conclusion**

Patients were more likely to achieve a serum potassium level  $< 5.5$  mEq/L within 4-8 hours after drug administration if sodium polystyrene sulfonate 15 g was administered as a component of the medication regimen. Calcium gluconate, sodium bicarbonate, insulin regular, and a potassium binder were each administered to more than half of all patients with hyperkalemia.