Standardization of Stress Dose Hydrocortisone in the PICU: A Quality Improvement Project

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QUALITY PROBLEM

- It is well known through previous literature and case reports that patients with known adrenal insufficiency (AI), and patients on chronic systemic corticosteroids require stress dose hydrocortisone (SDH) therapy in a critical care setting to remain hemodynamically stable.
- Critical illness-related corticosteroid insufficiency (CIRCI) is a term used to describe HPA axis dysfunction during severe illness that is frequently seen in pediatric critical care units across the United States.
- 2021 Surviving Sepsis Campaign pediatric guidelines recommend stress dose Hydrocortisone for suspected or proven AI and SIHPS still currently recommends SDH with CIRCI.
- Protocols across major institutions lack specific consensus regarding SDH dosing and initial laboratory orders for AI.
- There is debate remaining on the most appropriate diagnostic tests to stress dose Hydrocortisone in the Pediatric Intensive Care Unit that patients with known adrenal insufficiency (AI), and patients on chronic systemic corticosteroids require stress dose hydrocortisone (SDH) therapy in a critical care setting to remain hemodynamically stable.

THE TEAM

This team consists of Ryan Grammens DO, Pediatric Resident Physician, PGY II; Dr. Michele Hutchison, MD, Pediatric Endocrinology, and Dr. Anjali Subbaswamy, MD, UNMCH Pediatric Critical Care.

QI Project Aim

We propose the following QI will allow us to standardize an approach to stress dose Hydrocortisone in the Pediatric Intensive Care Unit that will be effective and utilized for >75 percent of presenting AI and CIRCI patients.

QI Framework

- IHI Model for Improvement.

REFERENCES