Tromethamine (THAM) Discontinuation
Hans Ang, PharmD
June 20, 2016

Situation
Tromethamine (tris-hydroxymethyl aminomethane; also called THAM) has been discontinued by the manufacturer. There is no other manufacturer that produces THAM.

Background
THAM has intermittently been on back order for the past several months. It was just recently discontinued by the only manufacturer, Pfizer (Hospira), in the United States as of May 2016.

In patients with severe acidosis, alkali therapy is often used to prevent or reverse the detrimental consequences. Alkali therapy provides safety against acidifying stresses caused by further decreases in plasma bicarbonate or an increase in the partial pressure of arterial carbon dioxide. Currently, sodium bicarbonate and THAM are the only available alkali therapy agents FDA approved for these indications.

THAM is often used in place of sodium bicarbonate because THAM lacks the carbon-dioxide producing effects of bicarbonate. THAM is capable of buffering both metabolic and respiratory acids which leads to an increase in extracellular and intracellular pH without carbon dioxide generation. THAM has not been documented to be clinically more efficacious than bicarbonate. THAM also carries its own unique side effects including hyperkalemia, hypoglycemia, ventilator depression, extravasation risks, and hepatic necrosis in neonates.

Assessment
THAM has been discontinued by the manufacturer with no future production dates planned. THAM has no therapeutic equivalents. Other agents have been developed and researched, but none have ever come to market.

Sodium bicarbonate is still currently the most frequently used alkali therapy. THAM historically has been reserved for patients who could not tolerate the carbon-dioxide producing effects of sodium bicarbonate. With the discontinuation of THAM, sodium bicarbonate will still remain the agent of choice for patients with acidosis and requiring alkali therapy.

Recommendation
THAM will no longer be stocked by SHC Pharmacy.

Continue to use sodium bicarbonate as clinically needed for patients with severe acidosis. Attending physician should be consulted if sodium bicarbonate is not suitable for patient.