Date: 4/1/2020

To: Trinity Health Medical Oncologists, Pharmacists, Pharmacy Buyers and Pharmacy leaders

From: Bob Ripley, Vice President and Chief Pharmacy Officer and Philip Stella, M.D., Oncology Clinical Excellence Council Chairperson

Subject: Potential Cyclophosphamide Intravenous Supply Chain Shortage that could Impact Availability of Cyclophosphamide by End of April, 2020

Memo

Dear Colleagues,

The recent outbreak of the COVID-19 virus may impact the supply chain of injectable cyclophosphamide that is manufactured in China (Sandoz brand).

Other manufacturers of generic cyclophosphamide for injection on contract with HealthTrust include:

- Baxter
- Bluepoint Labor
- Amneal Bioscience.

The Sandoz product is the current agent purchased by most TH sites.

Conservation Guidance

In light of this situation, the Trinity Health (TH) Medical Oncology Expert Panel, a subgroup of the Oncology Clinical Excellence Council recommends the following:

**Intravenous Cyclophosphamide Conserving Measures:**

1. Consider limiting use of intravenous cyclophosphamide to the following oncology patients:
   a. Curative intent treatment for which the cyclophosphamide containing protocol is the only clinically appropriate NCCN Category 1 recommendation.
   b. Patients currently enrolled in a clinical trial on a treatment protocol that includes intravenous cyclophosphamide and does not offer an alternative regimen option for "Provider Preference"

2. Consider the use of oral cyclophosphamide for treatment protocols that have clinical evidence to support equivalent efficacy to intravenous cyclophosphamide.
3. Consider the use of alternative Category 1 or Category 2A protocols that do not contain intravenous cyclophosphamide for patients that have a cancer diagnosis with palliative or disease control intent.

4. Consider recommending use of alternative agents for patients receiving intravenous cyclophosphamide for non-oncology indications.

5. Pharmacy Measures-
   a. Conserve intravenous cyclophosphamide by utilizing extended dating of the reconstituted solution by diluting vials with sodium chloride (6 days stability from time of reconstitution to a 2% concentration, refrigerated) and further diluting in Dextrose 5% solution or 0.45% Sodium Chloride (6 days stability from time of reconstitution, refrigerated).
   b. Round doses down to the nearest 100 mg during verification to minimize waste.
   c. Communicate with TH pharmacy leaders to keep on hand a 30-45 day supply of cyclophosphamide based on past usage patterns so as to be prepared.

Useful Links:


nccn.org

Togethercare Data (1 month, Michigan) - FYI- this worksheet has two tabs- one with the cyclophosphamide intravenous containing protocols used to date, and the second with a listing of all cyclophosphamide containing protocols.