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Background

Kaiser-Permanente Los Angeles Medical Center (LAMC) is a 560 licensed bed facility, providing regional cardiovascular (CV) services, including 1,200 open heart surgeries annually. A comprehensive multi-modal, multi-disciplinary approach to blood product conservation is utilized in every patient undergoing open heart surgery in accordance with current STS/ SCA/ AmSECT/ SABM clinical practice guidelines.¹ The LAMC blood bank was purposely located next to CV OR, separate from other laboratories, to minimize transport

time. National constraints of cryoprecipitated AHF (cryo AHF) prompted LAMC to implement Pathogen Reduced Cryoprecipitated Fibrinogen Complex (also known as INTERCEPT[®] Fibrinogen Complex or IFC). IFC has the same benefits in treating coagulopathy as cryo AHF but with minimal order to ready time as it can be stored thawed, at room temperature, for 5 days.² The increased shelf life also minimizes wastage risk. In July 2021, LAMC incorporated IFC into the blood bank inventory, and in August 2021, LAMC

transfused their first patient with the product. 20 months post-implementation, after 576 patients were transfused with 949 IFC 4-pool units, the institution reviewed a portion of the product experience and found that IFC reduces waste, provides supply stability, and reduces order to dispense time. Additionally, all previous issues with supply stability due to the pandemic blood shortages and general national seasonal product shortages are no longer occurring.

CERUS DISCLAIMER: This institution's poster includes discussion of Pathogen Reduced Cryoprecipitated Fibrinogen Complex which should not be used for factor VIII replacement. See Package Insert for indications, contraindications, warnings and precautions.

Aims

- Assess whether IFC allowed for shortening of order to issue time.
- Determine whether integration of IFC reduced wastage over AHF only inventory.

Methods

LAMC Blood Bank reviewed records for the cryo AHF units issued from September 2019 through February 2020, just prior to the pandemic, and records from September 2022 through February 2023 during which 60% of inventory was IFC and 40% was cryo AHF. September 2022 to February 2023 was selected to provide analogous time of year segments as close to the end of the pandemic as possible. Wastage and time from order to ready for pick up at blood bank data were recorded.

Conclusions

Implementation of IFC enabled our blood bank to:

- 1) Reduce preparation time of ordered products.
- 2) Reduce wastage.

In addition to above, IFC has provided supply stability and supports LAMC's goals of excellence in patient safety by providing a pathogen reduced product.

Results

Comparison of data from prior to pandemic (September 2019 through February 2020), when LAMC had a single inventory of cryo AHF, to near the end of pandemic (September 2022 to February 2023), when LAMC had a dual inventory of 60% IFC and 40% cryo AHF, shows that implementation of IFC reduced the use and inventory issues experienced by LAMC when only cryo AHF was available.

1. Availability: pre-thawed IFC reduced order to ready for pick up times by 70% for the CV OR (30 minutes to 9 minutes) (Figure 1).
2. Wastage rates: decreased by 60% (6.1% to 1.6%) because IFC could be returned to blood bank inventory if not used (Figure 2).

Figure 1: Order to Issue Time

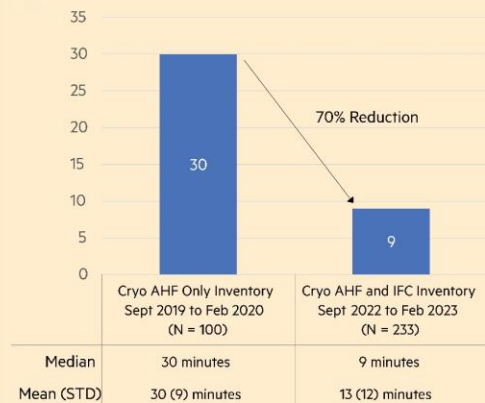
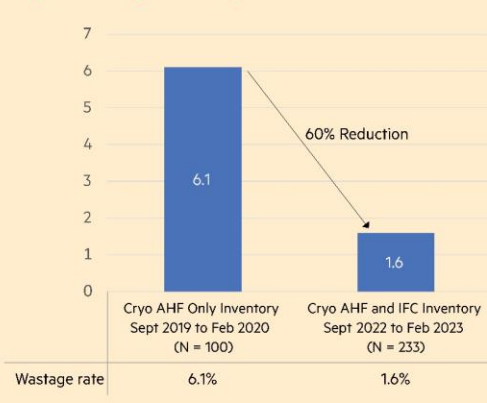


Figure 2: Wastage Rate of Cryo (%)



References

1. Tibi P, McClure RS, Huang J, et al. STS/SCA/AmSECT/SABM Update to the Clinical Practice Guidelines on Patient Blood Management. *Ann Thorac Surg* 2021;112(3):981-1004. (In eng). DOI: 10.1016/j.athoracsur.2021.03.033.
2. INTERCEPT Blood System for Cryoprecipitation [Package Insert]; For the manufacturing of Pathogen Reduced Cryoprecipitated Fibrinogen Complex. Concord, CA: Cerus Corporation; January 20, 2021.