ALBERTA PRECISION LABORATORIES
Leaders in Laboratory Medicine

Laboratory Bulletin

DATE:	21 February 2023
TO:	Provincial: Physicians, Nurses, and Healthcare Practitioners
FROM:	Transfusion and Transplanation Medicine Provincial Program
RE:	**Fibrinogen Concentrate Substitution for Cryoprecipitate Orders**

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Key Message

- The availability of cryoprecipitate is being phased out and it will not be restocked at hospital facilities.

How this will impact you

- Cryoprecipitate order requests will be reviewed by Transfusion Medicine while cryoprecipitate is available on site, but based on approved established criteria may still be substituted with Fibrinogen Concentrate (FC).
- The ability to order cryoprecipitate will be deactivated when cryoprecipitate stocks have been depleted.

Background

- Whole blood donations can be further processed to create red cells, plasma and platelets. In order to make cryoprecipitate, a subcomponent of plasma, that whole blood unit would not be processed to create platelets. To maximize platelet production and to improve blood safety by transitioning to a pathogen reduced inventory, cryoprecipitate and cryosupernatant plasma are being phased out. Cryosupernatant plasma will be replaced with Solvent Detergent Plasma and Cryoprecipitate will be replaced with Fibrinogen Concentrate. The National Advisory Committee on Blood and Blood Products (NAC) has developed national guidelines for the use of Fibrinogen Concentrate (FC) in clinical situations. NAC Statement on Fibrinogen Concentrate Use in Acquired Hypofibrinogenemia
    - NAC guidelines state that Fibrinogen replacement plays an important role in management of massive bleeding post cardiac surgery, trauma and in obstetrical hemorrhage, however there is still uncertainty as to the optimal fibrinogen replacement product and dose.
    - There is no evidence of superiority of one fibrinogen replacement source over the others in terms of clinical effectiveness. However, fibrinogen concentrate is pathogen inactivated and has a preferred safety profile in terms of transmissible disease risk as compared to cryoprecipitate.
    - Fibrinogen concentrate offers logistical advantages, including a more precise fibrinogen dose, simpler preparation and efficiency of administration.
    - Fibrinogen concentrate is safe for use in all ages, including neonates.

Action Required

- Physicians must order pre and post-infusion fibrinogen levels when requesting Fibrinogen Concentrate (FC).
- Cryoprecipitate order will be cancelled and Fibrinogen Concentrate (FC) order must be placed based on individual patient's needs.

- In cases where Fibrinogen Concentrate (FC) substitution is contraindicated, prescribers must contact Transfusion Medicine. Cryoprecipitate may be imported after discussion with TM Physician with the understanding that provision will encounter significant delay.

Dosing Information

- Pre-infusion Fibrinogen level is required and must be tested within 24 hours of request. Post-infusion Fibrinogen level is required to determine efficacy and subsequent doses. For specific dosing requirements, please see the product monographs linked below.

References

1. Fibrinogen Concentrate Indications and Dosing (APL TM Provincial SOP)
2. NAC Statement on Fibrinogen Concentrate Use in Acquired Hypofibrinogenemia
3. RiaSTAP™ Fibrinogen Concentrate (Human) Monograph (AHS)
4. FIBRYGA™ Fibrinogen Concentrate Monograph (AHS)

Questions/Concerns

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