



State of New Jersey  
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Lt. Governor

SHEREEF M. ELNAHAL, MD, MBA  
Acting Commissioner

**Certificate of Waiver  
Advanced Life Support Services**

Pursuant to the provision of the New Jersey Administrative Code, specifically N.J.A.C. 8:41-11, a waiver is issued to:  
**All New Jersey Mobile Aeromedical Care Programs**

Granting specific relief from the following provision(s) of Chapter 41 of the New Jersey Administrative Code, specifically permitting Mobile Aeromedical Care programs to stock and utilize blood and blood products, by modifying the following chapter to read:

**SUBCHAPTER 11. SPECIFIC AIR MEDICAL SERVICE REQUIREMENTS**

**8:41-11.8 Additional basic equipment and supplies: Aeromedical Units (AMUs)**

(c) Clinical flight staff may use medications and solutions not listed at N.J.A.C.8:41-6.1 during the transport of a patient, including blood and blood products. The clinical flight staff shall monitor these agents and shall be knowledgeable of the side effects, contraindications, dosage and therapeutic ranges.

**Justification:** 1. The Food & Drug Administration has noted critical shortages of isotonic IV solutions since November 2017. 2. Blood products are associated with improved survival (at various endpoints) and reduced coagulopathy for trauma patients compared to isotonic fluids. Transfusion reactions were negligible (<0.01%). 3. The changes from "Registered Nurse" to "Clinical Flight Staff" is required because nursing best practice requires *"that two (clinical flight staff) will check the blood against the order, check the client's identity, check the client's blood type against the type of blood that will be infused, check the expiration of the blood or blood component, and check the client's number against the blood product number. The (clinical flight staff) will also visually inspect the blood for any unusual color, precipitate, clumping and any other unusual signs."*

**Equivalency:** Blood products are similar but superior to, isotonic IV solutions currently utilized for trauma patients.

**Terms & Conditions:** All Medical Directors for Mobile Aeromedical Care Programs utilizing blood products shall have written protocols demonstrating best practice for blood product policy and procedure, including specific protocols directing when clinical flight staff may use blood products. Clinical flight staff shall successfully complete an education program covering the indications, actions, route, dosage, storage and rotation of the blood products prior to them being carried on the Mobile Aeromedical Care Unit.

For: Shereef F. Elnahal, Acting Commissioner

By: Scot Phelps, JD, MPH, Paramedic  
Director, Office of Emergency Medical Services

References: Fluid Shortages: <https://www.fda.gov/Drugs/DrugSafety/ucm585052.htm>

Best Practices: <https://www.registerednursing.org/nclex/blood-products/>

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Expiration date: Indefinite