

# In-Center Hemodialysis Standing Orders – Heparin Protocol

---

**Heparin** ICD 10 code: N18.6, End-Stage Renal Disease

**Purpose:** To provide optimal management of anticoagulation for in-center hemodialysis patients through the use of heparin.

**Heparin Dosing:** By bolus. Initial Heparin dose per physician order using heparin 1,000 units/ml vial.

1. Maximum initial bolus 8000 units.
2. Doses higher than 8000 units require Medical Director approval.
3. Physician requests for hourly heparin dosing do not require medical director or CMO approval, but all dosing and changes for hourly heparin must be managed by ordering physician.

**Heparin Dosing Adjustment:**

1. If clotting, notify MD by fax and increase initial bolus by 500u.  
Can repeat up once per treatment up to maximum total initial bolus limit of 8000 units. Clotting is defined as:
  - a. Shadows or black streaks in dialyzer, or extremely dark blood.
  - b. Clot formation in drip chambers, venous trap, arterial side header, or other sections of dialysis tubing at rinseback.
2. Decrease initial bolus by 500 units for prolonged bleeding and notify MD.  
Prolonged bleeding is defined as bleeding for greater than 10 minutes after removal of needles.
3. If pre-dialysis systolic blood pressure is >200 mm Hg or pre-dialysis diastolic blood pressure is >120 mm Hg, hold heparin and notify MD by phone.
4. If there is evidence of fall since last dialysis treatment, bruising, planned same day surgery, or planned same-day dental visit, notify MD by fax and decrease initial bolus by 50%. If signs of head trauma or contusion or active bleeding is present, such as nosebleed, vaginal bleeding, or suspected pericarditis, hold heparin and notify MD by phone.

Matthew Rivara, MD

Physician Name (Please Print)

**Patient Name** \_\_\_\_\_ **NKC#** \_\_\_\_\_