Trauma Center Practice Management Guideline

Iowa Methodist Medical Center — Des Moines
Blank Children's Hospital – Des Moines

Hip Fracture Protocol	
ADULTS **Practice Management Guideline**	**Effective: 01/2026**
Contact: Trauma Medical Director/Trauma Program Manager	**Last Reviewed: 01/2026**

PURPOSE

To provide timely diagnosis, analgesia, risk stratification, and expedited operative planning for isolated hip fractures. Goal is to have isolated hip fracture patients to the OR within 36 hours of arrival to the hospital.

PROCEDURE

I. Timing and Care Sequence

A. ED Presentation

Imaging

- Radiographs **(obtain ASAP)**
  - Low AP pelvis + AP of affected hip
  - Full-length AP femur (assess distal lesions, deformities, implants for pre-op planning)
  - Chest X-ray **only if clinically indicated:** history of heart/lung disease or **new** pulmonary symptoms

Laboratory Tests

- CBC, Chem 10, INR/PTT
- Type and Screen

Electrocardiogram (ECG)

- Get ECG if: cardiac history, **new** cardiac symptoms, or no ECG within 12 months

Pain Control

- Supra-Inguinal Fascia Iliaca (SIFI) block by ED provider (if available)
- Acetaminophen (Tylenol):
  - 1000 mg TID ATC (IV acceptable if unable to take PO)
  - If hepatic impairment concern: 650 mg PO TID
- Opioids (PRN; avoid fentanyl due to short-acting profile)
  - **Age ≥ 70:**
    - Oxycodone 2.5 mg PO q3h PRN
    - Hydromorphone 0.2 mg IV q2h PRN severe pain
  - **Age < 70:**
    - Oxycodone 5 mg PO q3h PRN
    - Hydromorphone 0.5 mg IV q2h PRN severe pain

Warfarin (if patient is on and adherent) give:

- Vitamin K 5 mg PO x1 ASAP — **do not wait for labs**

Admission & Consultations

- Admit: Medicine Team (UP or TIC)
- Consult: Orthopedics as soon as hip fracture is diagnosed

- Additional consults per Hip Fracture Protocol (e.g., Geriatrics)

B. Inpatient (Admitted to Floor) - **Pre-op order set 3040515**

Diet/Fluids

- Admitted in evening: NPO after midnight for next-day surgery
- Admitted in morning: NPO now for potential same-day surgery
- Fluids: Per Hospitalist Team

Home Medications

- ACE inhibitors: **Hold** to reduce intra-op hypotension/AKI; OK to restart POD#1
- Beta-blockers/rate control: **Continue** without interruption

Pain Control (Floor)

- Acetaminophen:
    - 1000 mg PO QID scheduled for first 24 hours, then 1000 mg TID scheduled
    - If hepatic impairment concern: 650 mg PO TID
    - IV Tylenol acceptable if unable to tolerate PO
- Opioids (PRN guided by pain score):
    - **Age ≥ 70:**
        - Oxycodone 2.5 mg PO q3h PRN pain 4–6
        - Hydromorphone 0.2 mg IV q2h PRN pain 7–10
    - **Age < 70:**
        - Oxycodone 5 mg PO q3h PRN pain 4–6
        - Hydromorphone 0.5 mg IV q2h PRN pain 7–10

Consults / Care Coordination

- Geriatric Consult (co-management/delirium, polypharmacy, mobility)
- Post-Fracture Bone Health: Utilize order panel for patients **≥65 years**
- Pharmacy: Confirm home medication list and reconciliation

C. Operative Timing & Optimization

Goal: Surgery within 24 hours of ED presentation

- If arrived evening/overnight: optimize by 11:00 AM next day
- If arrived during daytime: optimize ASAP and no later than 11:00 AM next day
- Statement to be placed in chart by **Medicine** when **Patient is Optimized**
- Hospitalist ↔ Orthopedics: real-time communication if **any** additional testing/treatment required before OR

D. Postoperative Course - **Post-op order set 3040514**

Antibiotics

- Standard postoperative antibiotics x 2 doses (Ordered by Orthopedics)

Labs

- CBC, BMP, and others as clinically indicated by comorbidities

VTE Prophylaxis / Anticoagulation

- Lovenox 40 mg daily x 2 weeks starting POD#1 (Ordered by Orthopedics)
- Resumption of therapeutic anticoagulation: timing directed by Orthopedics
- If bridging needed: coordinated discussion among Orthopedics + Hospitalist ± Cardiology

Rehabilitation

- PT/OT: See patient morning after surgery

Foley

- Remove on POD #1 (Ordered by Orthopedics)
- Straight Cath PRN for retention (Ordered by Orthopedics)

Discharge

- Target discharge within 48 hours post-op (to home or facility)
- Follow-up:
    - Orthopedics: Ortho to schedule
    - Primary Care: Medicine facilitates PCP visit within 1 month of discharge home

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II. Anesthesia/Surgery Considerations

A. Preoperative Antibiotics
- Standard pre-op antibiotics per protocol (Anesthesia/Ortho to follow local guideline)

B. Tranexamic Acid (TXA)
- 1,000 mg IV at case start
- Contraindications:
    - Known hypersensitivity/allergic reaction
    - Subarachnoid hemorrhage
    - Recent/active thrombosis (DVT/PE/ischemic stroke)
    - Severe renal impairment (CrCl < 30 mL/min)
- If concerns: attending-to-attending discussion

C. Nerve Block
- Consider repeat nerve block if ED-performed block was >12 hours prior

D. INR Management (Pre-op)
- INR 1.6–1.8: Order 1unit FFP on call to OR; give ~30 minutes prior to case start

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III. Anticoagulation & Comorbidities

Only **unstable conditions** should delay going to the OR. For anesthesia decisions, call **Anesthesia Charge Phone: 515-205-9214**

A. Implanted Devices
- Pacemaker/ICD, spinal cord stimulator, deep brain stimulator, bladder stimulator
    - Pre-op team identifies device-specific perioperative protocols based on device recommendations

B. Antiplatelet & Anticoagulant Management

Aspirin
- Continue Aspirin at all doses

Warfarin
- Hold Warfarin
- Give Vitamin K 5 mg PO x1 ASAP in ED (ED to order)
- Type & Screen
- Goal INR ≤ 1.5 for surgery (can proceed if INR ≤ 1.8 with FFP en route to OR)
- Re-check INR 12 hours after Vitamin K dose

Clopidogrel, Prasugrel, Ticagrelor (P2Y12 Inhibitors)
- Continue if:
    - Acute Coronary Syndrome (ACS) with stent within 12 months
    - Drug-eluting stent in last 6 months (Non-ACS)
    - Bare metal stent within last 1 month (Non-ACS)
- Do not delay surgery (patient will receive general endotracheal anesthesia GETA)

Dabigatran, Rivaroxaban, Apixaban, Edoxaban) (NOACs)
- Hold and document date and time of last dose
- Review current creatinine clearance, clearance depends on renal function
- Proceed with general anesthesia typically:
    - **≥ 24 hours** after last dose for most NOACs with normal renal function
    - **≥ 48 hours** after last dose of dabigatran or apixaban, or when high bleeding risk

- **Decision to delay beyond 24 hours** should be made collaboratively by Orthopedics, Medicine, and Anesthesia, weighing risks of bleeding vs delay
- Specific hold times:
  - Apixaban: Hold 24 hr if CrCl ≥ 50 mL/min; 48 h if CrCl < 50 mL/min
  - Dabigatran**:** Consider idarucizumab for urgent reversal if surgery cannot be delayed

Bridging (for warfarin)

- **Very high-risk — bridging indicated:**
  - Mechanical mitral valve; mechanical aortic valve with prior stroke/TIA
  - Recent embolic stroke (< 3 months)
  - Atrial fibrillation with CHA_2DS_2-VASc ≥ 7 (and not high bleeding risk) or stroke/TIA < 3 months
  - VTE < 3 months, severe thrombophilia, or VTE during past anticoagulation discontinuation
- **Moderate risk — individualized bridging decisions:**
  - AF + CHA_2DS_2-VASc 5–6
  - Prior stroke/TIA > 3 months ago
  - Reversible VTE 3–12 months ago
- **Restart bridging** (unless contraindicated): **~24 hours after surgery**

C. Pulmonary Compromise

COPD/Asthma:

- Continue inhaled bronchodilators/steroids
- Acute exacerbation
  - Delay surgery, consider steroids for 24-48 hrs
- Stress dose steroids for significant chronic use

Acute bronchitis/pneumonia:

- Assess for sepsis/SIRS/bacteremia and treat as necessary
- Surgical timing via team discussion

Obstructive Sleep Apnea (OSA)

- Continue CPAP
- If OSA suspected but undiagnosed, consult Respiratory Therapy

D. Anemia

- Transfusion trigger: Hgb < 8 g/dL for orthopedic surgery patients

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IV. Patients Requiring a Cardiology consult and echocardiogram

- Concern for Congestive Heart Failure (CHF) with exacerbation/decompensation
- ECG with new ST changes, conduction abnormality, or new/unstable arrhythmia
- Acute coronary syndrome
- History of moderate or severe pulmonary hypertension
  - Cardiology/echo if no echo within 12 months
- Moderate/severe aortic or mitral stenosis/regurgitation
  - Cardiology/echo if none within 12 months
- New exam findings suggesting undiagnosed valvular disease
- Concern for cardiac cause of fall/syncope

*** Please call Cardiology in real time to ensure echo is completed expediently**

A. Other unstable conditions that may require subspeciality consultation:

- Acute stroke syndrome
- Seizure induced fall
- Acute renal failure