Hip Fracture Pathway: PROTOCOL

HFP CRITERIA

- **Inclusion**: Patients with a proximal 1/3 femur fracture in patient age >18 years old
- **Exclusion:**
  - Patients with other major traumatic injuries where trauma team activation is required.
  - Patients with acute severe medical instability require ICU care (e.g. acute MI, unstable angina, sepsis, DKA, AMS).

GOALS

- **Collaborative care** with enhanced communication (EM, IM, Ortho, Trauma (as needed), & Anesthesia)
- Early operative care **(goal within 24 hours).**
- Limiting opiate utilization for pain control
- Limited E.D. length of stay (LOS), early pre-op assessment and optimization of medical conditions
- Preventive management to reduce post-operative complications

EMERGENCY DEPARTMENT CARE

- **EM team**: diagnosis & identification of all major traumatic injuries & acute severe medical instability
  - **Orders**:
    - Testing: XR Hip, pelvis, CXR; CBC, CMP, PT/PTT, Type/Screen, EKG (p.r.n. cardiac enzymes, UA), Ethanol & HgbA1c
    - Pain Control: IV Tylenol. Fentanyl (prn); Femoral Nerve Block (FNB) to be done by Anesthesia
    - NPO, IV maintenance fluids
- **Level C Hip Activation**: **Trauma RNs will facilitate communication and Hip Pathway Checklist/Timelines**
  - Called by ED Team once hip fracture diagnosis made & higher level trauma activation criteria not met.
  - **Trauma team will continue to consult on all Level C activations (response time within 60 minutes)**
  - Ortho to bedside within **60** minutes. Admission order goal **120** minutes.
  - Anesthesia to bedside within **4 hrs.** Co-ordinate pain control plan and pre-op planning.
  - Hospitalist consult to bedside within **120** minutes. (See below for criteria)
  - After initial care, pain management to be directed by: **ANES team** **(with input from THE ADMITTING TEAM)**

PRIMARY ADMITTING SERVICE

- **Criteria for Primary Team (who admits which patient): This is a guide; consistency is crucial, although the decision should be made based on what is best for the patient.**
  - **Trauma**: Any patient with a proximal femur fracture and other acute traumatic non-orthopedic injury
  - **Ortho**: Any patient 64 or under, not meeting criteria to go to the trauma or internal medicine service as described.
  - **Internal Medicine**:
    (1) Any patient 65 years old or greater, irrespective of other medical issues.
    (2) Any patient who would require a medical admission in absence of their fracture (e.g. syncope, Sepsis)
    (3) Any patient, under 65 years old with 2 or more of the following:
    1. Hx of Coronary Artery Disease
    2. CHF: EF <40% at any time of signs of acute CHF (current pulmonary edema, elevated JVP, new LE edema not from other cause)
    3. Cardiac Arrhythmia: VF, VT, Asystole, 2nd/3rd degree Heart block, SVT, Atrial Fib or Flutter
    4. Diabetes: A1c>8 or BG >250 in the ED
    5. Previous stroke
    6. Renal disease: Current Cr >1.6, or new ARF (>20% increase in creatinine from baseline)
    7. Malignancy for which the patient has received therapy within the past year (radiation, chemotherapy or surgery)
    8. Parkinson's Disease requiring medication
    9. Uncontrolled Hypertension: >170/100 in the ED
    10. Severe or Acute COPD: FEV1 <60% of predicted, or with clinical signs of exacerbation
    11. Severe Asthma: history of steroid dependency or intubation; or with current exacerbation
    12. Active infection: UTI, pneumonia etc.
    13. Altered mental status
    14. Malnutrition: BMI<17 or albumin<2.8

RUHS Hip Fracture Pathway
March 1, 2018

ADMISSION & PRE-OPERATIVE PLANNING	○ **Ortho Team:** ○ Early Admission order & **Pre-Op Hip Fracture Orders** ○ Orthopedic H&P ○ Obtain Surgical Consent & discuss with patient and family ○ Order DVT prophylaxis ○ Arrange OR time within **24 hours** and document in note. ○ Discuss plan directly with Anesthesia immediately after ER assessment ○ **Internal Medicine:** ○ Admission Orders if above criteria met. May be asked to consult/co-manage as well. ○ Consult to be completed with note/recommendations within **120** minutes ○ Pre-operative risk stratification & medical management recommendations/orders ○ **Discuss directly with anesthesia and orthopedics after seeing the patient** ○ Document present on admission conditions (UTI, Cardiac Arrhythmias, delirium, dementia) ○ Cognitive assessment for dementia; **Geriatrics Consult** for all patients 65 years old and greater; Consider Vit D level for patients > 64 yrs ○ **All Primary Teams: Case Management Consult** at the time of admission: begin DC planning/placement/equipment.
PERI-OPERATIVE CONSIDERATIONS	○ **Pre-Op and OR Considerations:** ○ Antibiotics per Ortho ○ IVF ○ Pain Management: ANES to emphasize/direct non-narcotic pain control ○ **Recovery Room Considerations:** ○ Management: Ortho & Anesthesia ○ If patient needs ICU admission, management by Internal Medicine/ICU team ○ Post-op management team for floor same as admitting service unless condition has changed ○ Post-op lab orders: See order set ○ Avoid telemetry if no clinical indication
POST-OPERATIVE CONSIDERATIONS	○ **Post-operative order sets** ○ POD#1 labs ordered ○ VTE prophylaxis; Antibiotics per Ortho (plan and duration documented) ○ **Physical Therapy Consult Ordered; Case Manager Consult Re-ordered** ○ Pain management (ANES to develop): ▪ FNB removal by anesthesia **POD # 1-2** ▪ Use Pain Assessment Tools; IV Acetaminophen parameters; IV opiate parameters • Considerations: transition to PRN after 24-48 hours; breakthrough pain plan ○ Physical Therapy Order: ▪ Up to chair, POD #0 (no later than POD #1) ▪ Ambulation 2 times a day ○ Preventing common post-operative complications ▪ Renal: IVF, holding ace/arb 2-3 days, following creatinine ▪ Delirium: limiting opiates ▪ Cardiac: antithrombotic treatment, beta-blockers, htn management ▪ Pulmonary: I/S usage, up to chair POD 0-1, Bronchodilators as needed ○ Discharge planning, plan DC for **POD# 2** ○ Multidisciplinary Rounds DC planning, input from PT, nursing, primary care
D/C	○ DC done by Primary (Admitting) Team ○ DC Home: Order home health follow-up (PT & RN), VTE prophylaxis ○ Post-op appointment scheduled prior to dc home with ortho (within **1-2 weeks**); ○ PCP appointment scheduled within **5-7** days of DC; Osteoporosis Treatment and Follow-up plan per PMD

TRAUMA RN BEDSIDE CHECKLIST: Hip Fracture Pathway		
PATIENT NAME:	**MRN:**	**Date:**
CRITERIA	○ PATIENT MEETS INCLUSION CRITERIA (REVIEWED WITH ED ATTENDING/SENIOR RESIDENT): ○ Diagnosis of proximal 1/3 femur fracture on x-ray made and no exclusion criteria exist	
EM Team Care	○ **EM team**: ORDERS PLACED (within 20 minutes of arrival) ○ Testing: XR Hip, pelvis. ○ If highly suspicious for fracture: CXR; CBC, CMP, PT/PTT, Type/Screen, EKG, Ethanol, HgbA1c ○ Consider based on case: cardiac enzymes, UA ○ Pain Control: IV Tylenol. Fentanyl (prn) ○ NPO, IV maintenance fluids	
Level C Activation	○ **Level C Hip Activation Made**: **Trauma RNs will facilitate communication and Hip Pathway Checklist/Timelines** ○ Called by ED Team once hip fracture diagnosis made & higher level trauma activation criteria not met. ○ Time of Activation: _____. ○ Trauma Service at bedside: _____. (Goal < 60 minutes) ○ Ortho to bedside at _____ (Goal < 60 minutes) ○ Anesthesia notified by Ortho (ANES attending #18313): _____. ANES Bedside (Time: _____), Goal < **4 hrs** ○ **Ortho requesting Peripheral Nerve Block (PNB) [ ] YES [ ] NO** ○ **Ortho resident to mark site for PNB** ○ Hospitalist consult (if needed, see protocol) to bedside (Time:) (Goal <**120** minutes). (See criteria)	
	○ **Admitting service identified per protocol: _____** ○ **Admit order written. Time: _____ (Goal <120 minutes from Activation/Consult Time).**	
ADMISSION & PRE-OPERATIVE PLANNING	**Ortho Team:** ○ Surgical Consent Obtained & Patient/family aware of plan ○ Order DVT prophylaxis ○ OR scheduled time _____ Goal < **24 hours,** documented in note. ○ Peri-operative antibiotics ordered **ANES:** ○ Pain management plan discussed with Ortho and IM. **IM (if involved):** ○ Pre-operative risk stratification & medical management recommendations/orders ○ **MEDICAL clearance/timeline discussed directly with anesthesia and orthopedics after seeing the patient** ○ Document present on admission conditions (UTI, Cardiac Arrhythmias, delirium, dementia) ○ **Geriatrics Consult** for all patients 65 years old and greater; Consider Vit D level for patients > 64 yrs **ALL: [ ] Case Management Consult** at the time of admission: begin DC planning/placement/equipment	