

Management of Geriatric Hip and Femur Fracture

2025 Update

Intermountain Canyons and Desert Regions

Experts in orthopedic surgery, anesthesia, and emergency, hospital, and geriatric medicine developed this Care Process Model (CPM). It is to be used as an evidence-based resource for residents, attendings, and interdisciplinary team members involved in the care plan for geriatric patients with isolated hip or femur fractures. Goals include improving the time to surgery, decreasing mortality and readmission, and ensuring cost accountability and regulatory compliance.

What's new in this update?

Multimodal analgesia incorporating preoperative nerve block is strongly recommended to treat pain after isolated hip or femur fracture.¹

- Acute Pain Service (APS) can consult and administer a preoperative nerve block. See [APS contact list](#).
- See [Geriatric Hip and Femur Fracture Nerve Block Algorithm](#) for guidance.

Use standardized venous thromboembolism (VTE) prophylaxis after isolated hip or femur fracture.

- Apply mechanical VTE prophylaxis such as sequential compression device both pre- and post-op if no contraindications.
- Use the [UTAH VTE risk assessment model](#) (pg 5) to identify VTE risk factors (previous VTE, cancer, immobility, and peripherally inserted central venous catheterization) and calculate risk score.
- Initiate early mobilization. Get patient out of bed within 6 hours post-surgery. Patients will work with physical/occupational therapy for assessment, intervention, and development of a rehabilitation plan. See [pg 4](#) for details.

Begin addressing bone health before discharge.

- Order inpatient calcium and vitamin D treatment.
- Refer to PCP, orthopedic specialist or endocrinology for bone health evaluation and treatment or prescribe bisphosphonate at discharge. See Intermountain's [Bone Health and Fragility CPM](#) for details.

Interdisciplinary care improves patient outcomes.

- Hospitalists will admit or consult to provide medical management for geriatric hip and femur fracture patients.
- An interdisciplinary team which may include hospitalists, nursing, care management, as well as orthopedic, dietary, and rehab providers should be actively involved in the patient's care planning process. See [interdisciplinary care team review](#) on [pg 3-4](#).

Supporting Evidence

[Management of Hip Fractures in Older Adults: Evidence-based clinical practice guideline. \(American Academy of Orthopaedic Surgeons; 2021\)](#)

What's inside?

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Intermountain Measures

- Time from presentation to surgery (Goal <24 hours)
- Pain scores
- Opioid consumption rates
- Complication rates (VTE, infection, fracture, mortality)
- Readmission and return to ED rates (VTE, infection, fracture)
- Post acute care spending per patient
- Patient and caregiver education



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Management of Geriatric Hip or Femur Fracture

Patient ≥ 65 with hip or femur pain presents to the ED

Conduct Initial Assessment

- Hip and femur imaging
- Pulse oximetry, SpO2 goal ≥ 90%
- Labs: CBC, CMP, PT/INR
- Consider comorbidities (Chest X-ray, EKG, UA)
- DNR/DNI

Infection

Infections often manifest with atypical and subtle symptoms in geriatric patients and often include:

- Nonspecific declines in function
- Decline in mental status
- Loss of appetite
- Incontinence
- Exacerbation of chronic illness
- Fever is often difficult to detect in geriatric patients. Baseline oral temperature in older adults is 36.3°C (97.4°F)

Consider other diagnoses

Hip or femur fracture?

yes

Request Consultations

- Orthopedic consult
- Acute Pain Service (APS) consult for preoperative nerve block administration [APS contact list](#); [Geriatric Hip and Femur Fracture Nerve Block Algorithm](#); ¹⁻⁴

Providers (ED, orthopedic, anesthesia) engage in collaborative discussion with patient and family to decide if surgical repair is the best course of action.

[Treatment for Hip Fracture: a decision guide \(English/Spanish\)](#)

Decision for surgical repair?

Hospitalist admits or consults for medical treatment and surgical optimization *

Is patient stable enough for surgery?

yes

Orthopedic surgeon places surgical order

Pre-surgical Tasks

- Surgical and anesthesia consents
- Advanced directives

Surgery
(Goal <24 hrs)

See Post-operative Care [pg 3](#)

*Pre-surgical VTE Prophylaxis

- [UTAH VTE risk assessment](#)
- DOAC management in preparation for surgery [Hip Fracture Surgery DOAC Management](#)
- Mechanical prophylaxis (Sequential Compression Device)

once stable

Consider ICU placement or consult a specialist

Does patient need admission?

yes

Hospitalist admits or consults for medical treatment

once stable

Consult Care Management for transition and discharge planning needs

Refer to appropriate care

Palliative Care	Hospice
Rehabilitation	Home Health
Skilled Nursing Facility (SNF)	
Long-term acute care hospital (LTACH)	

Delirium or dementia

- Evaluate mental status (AVPU-Alert, Voice, Pain, Unresponsive) and Glasgow Coma Scale
- Identify delirium using CAM or B CAM tools
- Perform cognitive health assessment using Mini-Cog and MocA
- Minimize narcotic use with multimodal pain control
- Minimize delay of surgery
- Initiate non-pharmacologic delirium reduction interventions ([pg 3](#))

Post-operative Care ^{6,7}

Perform daily interdisciplinary team review	
Topics	Guidance
Pain Management	<ul style="list-style-type: none"> Acute care nurses refer to the fact sheet, Nerve Blocks in Geriatric Hip Fractures (GHF). Set realistic pain management goal with patient and family. See iPAT (English/Spanish). Prescribe appropriate pharmacology. Many drugs must be titrated differently due to increased sensitivity and physiology of the older adult. Consider a prophylactic pharmacologic bowel regimen such as an osmotic laxative (e.g. polyethylene glycol) ⁸ and stimulant laxative (e.g. bisacodyl). Avoid potentially inappropriate medications such as: <ul style="list-style-type: none"> Barbiturates, benzodiazepines, and opioids such as meperidine and pentazocine Non-benzodiazepine hypnotics (eszopiclone, zolpidem, zaleplon) Skeletal muscle relaxants (e.g. chlorzoxazone, metaxalone, methocarbamol, orphenadrine) Non-COX NSAIDs Consult acute pain services (APS) if needed. See APS contact list. Consider limiting opioids. See Tapering Opioid Pain Medication CPM.
Mobilization and Skin	<ul style="list-style-type: none"> Attempt to get patient out of bed <6 hours after arriving at the floor. Physical Therapy assessment scheduled <24 hours post-op. Occupational Therapy evaluation/treatment. See PT/OT therapy details on page 4. Provide Q2 turning. Assess fall risk and employ appropriate interventions.
Delirium Management	<ul style="list-style-type: none"> Open blinds from 8 AM to 6 PM and turn lights and TV off from 10 PM to 6 AM. Discontinue telemetry and continuous pulse oximetry if possible. Re-time morning labs for 6 AM if possible. Saline lock IV from 10 PM to 6 AM. Contact provider if medications need to be administered during this window for instructions. Ask patients if they use contacts/glasses, hearing aids, or dentures and contact family to bring them if not already present. Contact provider if no bowel movement in 48 hours. Consult pharmacy. Medication recommendation needed. Review medications list for polypharmacy and contact covering provider.
Respiratory	<ul style="list-style-type: none"> Assess for respiratory distress. Assess for symptoms, signs or history of dysphagia (swallowing evaluation and aspiration precautions if needed). Head of bed elevated at all times with repositioning. Get patient out of bed for all meals if possible; sit upright while eating and for one hour after eating.
VTE prophylaxis	<ul style="list-style-type: none"> Ensure mechanical prophylaxis is present (sequential compression device) unless contraindicated. Have patient spend as much time out of bed as possible. Ensure patient is on anticoagulation pharmacology. See EPIC order sets for anticoagulation recommendations. Use UTAH VTE risk score. Evaluate labs, including PT/INR if patient taking warfarin and renal function if taking a direct oral anticoagulant (e.g. apixaban or rivaroxaban).
Bone Health and Nutrition	<ul style="list-style-type: none"> Begin calcium and vitamin D for bone health. For complicated osteoporosis or recurrent fractures, consider Endocrinology or Tele-endocrinology consult. Consider bisphosphonate (alendronate) at discharge. See Intermountain's Bone Health and Fragility CPM. Consult dietician for evaluation of malnutrition and diet recommendations.

(Table continued on next page)

Post-operative Care (continued) ^{6,7}

Perform daily interdisciplinary team review	
Topics	Guidance
Education	<ul style="list-style-type: none"> • Medication and prescription education. • Activities of Daily Living education. • DVT/PE prevention exercise review. • Your Guide to Joint Replacement (English/Spanish) • Nerve Block for Pain Control After Surgery: Home Instructions (English)/(Spanish) • Tapering Opioid Pain Medicine patient education (English)/(Spanish) • Osteoporosis Treatment: What you should know (English)/(Spanish) • Fall Prevention for Adults (English/Spanish) • Stopping Elderly Accidents, Deaths and Injuries: Patient and Caregiver Resources • Fall Prevention Resource Flyer Canyons (English)/(Spanish) Peaks and Desert (English)/(Spanish)
Plan Care Transition	<ul style="list-style-type: none"> • Consult Care Management for transition and discharge planning needs. • Discharging provider refers patient to PCP, Endocrinology, or Orthopedic Specialist and communicates the importance of follow-up visits consisting of: <ul style="list-style-type: none"> – Labs: Vitamin D, CMP, TSH – Testing: Bone Mineral Density test (DEXA); Do Not delay treatment with bisphosphonates for bone density testing. – Medication: Calcium, vitamin D, bisphosphonates and other osteoporosis treatments. See Bone Health and Fragility CPM. – Assessment of fall risk and employment of appropriate interventions: See Falls Prevention CPM.

Inpatient occupational and physical therapy

Following surgery (typically during 24 hours post-operation), a physical therapist will meet with the patient to conduct an initial assessment and create a post-op physical therapy (PT) plan. The PT assessment typically includes:

- Reviewing medical history
- Identifying patient discharge disposition goals
- Assessing balance and fall risk
- Analyzing gait
- Assessing range of motion (ROM), including hip flexion, extension, abduction, adduction

The resulting plan will focus primarily on achieving optimum discharge disposition goals, **particularly those associated with discharge to home**. During the hospital stay, the Physical therapist will guide the patient in ROM and strengthening exercises. The Physical therapist will also teach the patient how to get in and out of bed, rise from a chair, ambulate with an assistive device, and use stairs (if required at home). The goal of these PT sessions is to help the patient transition to home and outpatient physical therapy if, indicated.

Occupational therapy is essential for reassimilation into the home environment. The Occupational therapist will instruct the patient and family on activities of daily living (ADLs), such as dressing, bathing, safe transitions, and household mobility. The patient's need for ongoing occupational therapy after discharge is considered during the discharge assessment.

UTAH VTE Risk Score ^{9,10}		
The UTAH score is a 4-element risk assessment model that incorporates 4 validated risk factors.	Clinical considerations	Points
	Prior VTE	1
Any total value >0 indicates being at risk for VTE.	Cancer diagnosis	1
	Immobility (order for bedrest)	1
	PICC/central line	1

CARE PROCESS MODEL EXPERT CONSULTANTS

Warren L. Butterfield MD;
Associate Medical Director: MSK,
Orthopedic Trauma (Canyons/Desert)

Adam Balls MD;
Medical Director: ED/Trauma (Canyons)

Brady Barker MD;
Orthopedic Trauma Surgery

Justin Hawes MD;
Orthopedic Trauma Surgery

Melanie Johnson BSN, ONC;
MSK Clinical Initiatives Manager

Nate Momberger MD;
Orthopedic Surgery

Michael Pirrozi MD;
Senior Medical Director-Med/Surg and
Hospitalists (Canyons)

William Shakespeare MD;
Senior Medical Director- Anesthesiology
Surgical Ops (Canyons)

Alaynah Stolen RN;
System Pain Management
Operations Manager

Heidi Thompson PhD;
Senior Medical Writer

Scott Woller MD;
Chair of Dept. of Medicine;
IMC (Canyons)

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This CPM presents a model of best care based on the best available scientific evidence at the time of publication. It is not a prescription for every physician or every patient, nor does it replace clinical judgment. All statements, protocols, and recommendations herein are viewed as transitory and iterative. Although physicians are encouraged to follow the CPM to help focus on and measure quality, deviations are a means for discovering improvements in patient care and expanding the knowledge base. Send feedback to Warren L. Butterfield MD; Associate Medical Director; Canyons Musculoskeletal Service Line, Intermountain Health; warren.butterfield@imail.org

