Geriatric Fracture Pathway

Effective Date: 1/13/26

Retires Policy Dated: N/A

Original Effective Date: 1/13/26

Updated Date: N/A

Purpose

To provide a standardized, evidence-based approach for the management of geriatric fractures (patients ≥ 65 years) to improve clinical outcomes, decrease morbidity and mortality, reduce hospital length of stay, prevent complications such as delirium, venous thromboembolism, and pressure injuries, and optimize functional recovery and long-term quality of life.

Inclusion Criteria

- Patients aged ≥ 65 years
- Sustained an acute fracture, including but not limited to: hip, femoral shaft, pelvis, acetabulum, proximal humerus, vertebral body fractures
- Mechanism typically low-energy (e.g., ground-level fall), but inclusion extends to moderate-energy trauma if physiologically geriatric
- Exclude isolated minor fractures without functional impairment (e.g., nasal, finger fractures)

Goals

- Decrease hospital length of stay (LOS) to a median of 5–7 days
- Decrease inpatient mortality to <5% and 30-day mortality to <7% (American College of Surgeons TQIP, 2023)
- Achieve 1-year survival rates exceeding 85%
- Restore patients to their baseline pre-injury functional status where possible
- Implement early multidisciplinary care involving orthopedics, geriatrics, anesthesia, nursing, pharmacy, rehabilitation, and social work

Initial Evaluation (Emergency Department)

Step	Action
Triage	Immediate triage as "High Risk Geriatric Trauma" with trauma team notification for any fracture suggestive of fragility injury
Primary Survey	Follow ATLS principles, modified for geriatric considerations: assess airway protection, risk of occult hypoperfusion, and cognitive baseline
Early Labs	CBC, BMP, Magnesium, Phosphate, Lactate, Coagulation Panel, Type & Screen, Troponin if suspected cardiac event
Early Imaging	CXR and pelvis x-ray; CT Head (liberal usage due to high incidence of asymptomatic intracranial hemorrhage); additional imaging based on clinical suspicion
Orthogeriatric Consultation	Mandatory for all patients with femur, pelvis, or vertebral fractures to initiate co-management model
Pain Control	Multimodal analgesia protocol: acetaminophen scheduled, regional anesthesia (e.g., fascia iliaca block) if appropriate, low-dose opioids only as needed, avoid NSAIDs if renal dysfunction

Admission Criteria

All geriatric fracture patients should be admitted under co-management with Orthopedic Surgery and a Hospitalist experienced in geriatric care

Comprehensive assessment at admission

- Frailty scoring (Clinical Frailty Scale or Edmonton Frail Scale)
- Comorbidity assessment (Charlson Comorbidity Index)
- Cognitive screening (Mini-Cog or MoCA)
- Functional status evaluation (baseline mobility, ADLs)

Preoperative Optimization (within 24 hours)

Domain	Action
Cardiac Risk	Rapid evaluation per ACC/AHA Guidelines; prioritize minimal necessary cardiac workup to avoid surgical delay; use RCRI (Revised Cardiac Risk Index) for stratification
Delirium Prevention	Implement non-pharmacologic bundle: reorientation, family presence, glasses/hearing aids use, sleep promotion strategies (American Geriatrics Society, 2015)
DVT Prophylaxis	Begin mechanical prophylaxis immediately (sequential compression devices); pharmacologic prophylaxis within 24h unless contraindicated (prefer LMWH over UFH)
Antibiotics	Administer first-generation cephalosporin (e.g., cefazolin) within 1 hour preoperatively; add gram-negative coverage if open fracture suspected (TQIP, 2023)
Anemia Management	Transfuse if hemoglobin <8 g/dL in symptomatic patients or <9 g/dL with active cardiac disease

Surgery Timing

Surgical repair within 24 hours of hospital admission is the goal

- Surgical delay beyond 48 hours associated with:
- 1.5–2.0x increased mortality
- Higher rates of delirium, infections, and prolonged rehabilitation needs
- Early communication with anesthesia, cardiology, and OR scheduling teams critical to achieving surgical timing targets (ACS Best Practices Guidelines, 2019)

Postoperative Care

Step	Action
Early Mobilization	Mobilization on Postoperative Day (POD) 0 or 1 with PT/OT; prioritize weight-bearing as tolerated for most fractures
Delirium Management	Confusion Assessment Method (CAM) performed every shift; avoid sedating medications; maintain sleep-wake cycle
Nutrition	Initiate high-protein, calorie-dense diet immediately; supplement with oral nutritional supplements (ONS) like Ensure® or Boost®
DVT/PE Prophylaxis	Continue pharmacologic and mechanical prophylaxis until full mobility regained or minimum 14–28 days
Discharge Planning	Initiate early case management; assess rehabilitation needs, social supports, and arrange SNF or inpatient rehab transfer as appropriate

Discharge Criteria

- Medically stable (afebrile, hemodynamically stable for >24h)
- Pain controlled with oral analgesics
- Able to mobilize with or without assistive devices
- Adequate cognition or caregiver support for safe discharge
- Follow-up appointments arranged (orthopedic surgery, primary care, osteoporosis management)

Quality Metrics and Benchmarks

Metric	Target (based on ACS TQIP, 2022)
Inpatient Mortality	<5%
30-Day Mortality	<7%
1-Year Survival	>85%
Surgical Delay	>48h<10% of all cases
LOS	Median of 5-7 days; avoid >10 days unless medically justified

Mortality Risk Factors

- Surgical delay >48 hours (Hazard Ratio [HR] 2.03) (TQIP, 2023)
- Pre-existing cognitive impairment or dementia (Odds Ratio [OR] 1.75) (ACS Geriatric Trauma Guidelines, 2020)
- Severe frailty (Clinical Frailty Scale score ≥6) significantly predicts poor outcomes (OR 2.4) (ACS, 2019)
- Malnutrition, anemia, and postoperative delirium are additional predictors of increased mortality and institutionalization (Gleason et al., 2015)

Special Considerations

- Palliative Care Referral: In patients with severe pre-existing illness, poor baseline functional status, or those declining surgical intervention, initiate early palliative consultation
- Fall Risk Assessment and Prevention Plan: Evaluate home environment, assess vision/hearing, review medications, and provide patient education before discharge
- Bone Health Optimization: Ensure vitamin D (≥800 IU daily) and calcium supplementation; screen for osteoporosis (DEXA scan if not already done); refer to endocrinology or fracture liaison services (American Association of Orthopaedic Surgeons, 2014)

Version Control Record			
Version	**Date**	**Author/Reviewer**	**Description of Changes**
1	1/13/26	Paul Wisniewski, D.O.	Initial review and update to reflect latest evidence/practice

References

- American College of Surgeons. *Best Practices Guidelines for Geriatric Trauma Patients*, 2019.
- American College of Surgeons Trauma Quality Improvement Program (TQIP). *Geriatric Trauma Management Guidelines*, 2023.
- American College of Surgeons. *TQIP Annual Report: Geriatric Trauma*, 2022.
- American Association of Orthopaedic Surgeons. *Management of Hip Fractures in the Elderly: Evidence-Based Clinical Practice Guideline*, 2014.
- Gleason LJ, Mendelson DA, Kates SL, Friedman SM. "Results of a Geriatric Fracture Program: Early Surgery and Coordinated Care." *J Orthop Trauma.* 2015;29(4):188-193.
- Watne LO, Torbergsen AC, Conroy S, et al. "Delirium Is Associated with Increased Mortality after Hip Fracture Surgery." *Dement Geriatr Cogn Disord.* 2014;38(5-6):367-375.
- American Geriatrics Society. *Clinical Practice Guidelines for Postoperative Delirium in Older Adults*, 2015.
- Kates SL, Mendelson DA, Friedman SM. "Orthogeriatric Care Models: Strategies to Improve Care for Geriatric Hip Fracture Patients." *Clin Geriatr Med.* 2014;30(2):317-329.

Disclaimer for Evidence-Based Guidelines

The **Evidence-Based Guidelines** provided by **Cutting Edge Surgical Medical Group**, a division of **Paul J. Wisniewski, DO, Inc.**, are intended to offer general information and guidance based on current research, clinical best practices, and expert opinions in the medical field. These guidelines are designed to assist healthcare professionals in making informed decisions regarding patient care, but they are not a substitute for personalized medical advice, diagnosis, or treatment.

Important Notes:

- The guidelines are for informational purposes only and are not intended to replace professional medical judgment. They should be used as a reference and adapted to the specific needs of individual patients.
- Application of these guidelines should be made by healthcare providers, taking into account the unique medical history, condition, and circumstances of each patient.
- While **Cutting Edge Surgical Medical Group** strives to provide the most accurate, up-to-date, and evidence-based information, we cannot guarantee that all content on the website is free from errors, omissions, or outdated information. Medical knowledge evolves rapidly, and guidelines may be updated periodically.
- **Cutting Edge Surgical Medical Group** does not assume responsibility for the outcomes of any medical decision or intervention based on the use of these guidelines. The use of this information is at the user's own discretion.
- Healthcare providers are encouraged to consult the latest peer-reviewed research, professional standards, and individual patient assessments before making clinical decisions.

For specific medical concerns, treatment advice, or patient management, please consult directly with a qualified healthcare provider.