

Geriatric Trauma Patient Management Guidelines

Rationale: To assure older adults (>65 years of age) receive age-appropriate care following trauma

I. Admission Orders:

- Past medical history/Past surgical history within 24h
- Medication reconciliation by Pharm D within 48h
- Admission nurse to obtain FRAILITY Score in Epic
- Reversal plan for anticoagulation
 - If questionable Factor Xa Inhibitor use, can obtain LMW heparin level to detect presence (not amount) of drug.

Drug Class	Anticoagulant	Reversal Plan
Vitamin K antagonist	Warfarin (Coumadin)	• Vitamin K 10mg x 1 (use caution in patients with active VTEs and/or prosthetic heart valves) • FFP – Do not use if evidence of heart failure, pulmonary edema, or Jehovah’s Witness • PCC (K-centra) – If not a candidate for FFP or rapid reversal indicated – repeat INR 6 hours post-administration
Factor Xa Inhibitor	Apixaban (Eliquis) Rivaroxaban (Xarelto) Edoxaban (Savaysa) Betrixaban (Bevyxxa)	• PCC (K-centra) – repeat INR 6 hours post-administration
Direct Thrombin Inhibitor	Dabigatran (Pradaxa)	• Praxbind – dosing per eStar advisor

- Additional Labs
 - B12/Vit D/TSH/FT4
 - Hgb A1C
 - Venous lactate (if polytrauma) – if elevated obtain arterial lactate
 - CK- if prolonged down time or crush injury
- EKG
 - Obtain orthostatics. Nursing to document in flow sheet.

II. Admission: ICU vs. Step-down:

- Decision for TICU vs step-down is based on clinical judgment. However, if patient has any of the following, they should be considered for admission to the Trauma ICU:
 - Rib fractures (4 or greater) with increase in O2 requirement >6L NC (see APS PMG)
 - Multiple long bone fractures
 - Severe pelvic fractures
 - Hypotension: SBP < 110

III. Geriatric Consultation when step-down status:

- FRAILTY score of 4 or 5
- Polypharmacy – greater than 5 home medications
- Greater than 2 high risk medications
- Recurrent falls and/or persistent delirium
- Concern for dementia or decision-making capacity
- Multiple high-risk comorbidities such as:
 - COPD [COPD Exacerbation](#)
 - Heart failure
 - Hypertension requiring multiple agents
 - Uncontrolled diabetes
- Hip fractures/Fragility fractures – consider pre-geriatric assessment prior to OR
- Okay to schedule specific geriatric consult work up studies outpatient (i.e. carotid duplex)

IV. Specific Interventions for Geriatric Trauma Patient

- Bedside swallow – if concerned, consult Speech therapy
- Documented PharmD Medicine Reconciliation within 48 hours of admission
- Delirium minimization (See Trauma Delirium PMG) [Trauma Delirium Management](#)
 - Avoid benzodiazepines
 - Reduce antipsychotic dosing by 50%
 - Avoid Haldol >5mg or quetiapine >100mg
 - Priority for transfer out of receiving and ICU
 - Avoid anticholinergics
 - Consider narcotic-sparing analgesia regimen
- Consider beginning a medication taper for inappropriate home medications while inpatient and continued upon discharge.
 - <https://medstopper.com/> - assists w/ developing taper schedule; ensure patient agrees
- Avoid Haldol & olanzapine in Parkinson's disease – quetiapine preferred if needed
- Avoid tramadol for pain d/t increased adverse side effects – low dose oxycodone preferred
- Sleep aids: melatonin 6mg at 18:00 preferred. May add Trazadone 25mg at 20:00 and titrate up. Avoid Ambien.
- Early mobilization and standing orders for OOBTC for all patients who are not on bed rest status.
- For patients with challenging delirium hindering placement, consider requesting bed on 7RW. Consider PM&R consult to evaluate and provide recommendations for optimizing rehab potential if IPR is recommended.

V. Goals of Care – discussion and documentation in medical record within 24h of admission

- Code Status – mandatory
- Identify if patient has Advance Directives and a Surrogate Decision Maker
- Consider Palliative care consult for:
 - Surrogacy/advanced directive

- Family conflict concerns
- Unclear goals of care
- FRAILTY score of 5

Geriatric Polypharmacy: Medications to Avoid

- Tricyclic antidepressants (i.e. amitriptyline, imipramine)
- Promethazine
- Hydroxyzine
- Benztropine
- Scopolamine
- Nitrofurantoin (do not use if Cr Cl <60 ml/min)
- Alpha-1-blockers: terazosin, doxazosin. Tamsulosin is preferred if able.
- Central alpha-agonists: clonidine, guanfacine, methyldopa
 - If clonidine is home med, restart at appropriate dose for current vitals and wean as tolerated – do not stop abruptly if patient has used long term
- Barbiturates
- First generation antihistamines (i.e. chlorpheniramine, diphenhydramine)
- Megestrol: poorly tolerated, increased VTE risk
- Anti-spasmodics (bladder): tolterodine, oxybutynin, dicyclomine
- Opiates: If long acting needed oxycontin is preferred over MS Contin (long-acting morphine)
- Second generation antipsychotics (example: quetiapine, olanzapine)
 - If absolutely necessary for care & safety, please refer to the Trauma Delirium PMG
- Benzodiazepines: Do not use for insomnia, anxiety, agitation, or delirium. May be appropriate for seizure disorders, palliative care, benzo withdrawal, or peri-procedural.
- Cyclobenzaprine
- Tramadol
- Oral estrogen: If on home oral estrogen, please hold while inpatient d/t increased VTE risk. Consider changing to patch upon discharge.

Developed by:

Leanne Atchison, PharmD

Caroline Banes DNP, APRN, ACNP-BC

Jennifer Beavers, PharmD

Bradley Dennis, MD

Bethany Evans RN, MSN, ACNP-BC

Cathy Maxwell PhD, RN, FAAN

Kimberly Beiting, MD

Rachael Petry, MD

Shelley Ross, APRN

Reviewed/Updated: 3/2020, 4/2022, 5/2024

References:

American Geriatrics Society Updated BEERS Criteria for Potentially Inappropriate Medication Use in Older Adults. *J Am Geriatric Soc.* January 29, 2019.

Geriatric Trauma Management Guidelines. Trauma Quality Improvement Program. American College of Surgeons. November 2023.

The American Geriatrics Society 2023 Beers Criteria Updated Expert Panel. American geriatrics society updated beers criteria for potentially inappropriate medication use in older adults. *J Am Geriatrics.* March 7, 2023.

Abdulraheem IS. Polypharmacy: a risk factor for geriatric syndrome, morbidity, and mortality. *Aging Sci.* 2013; 1(2): e103.

Gnjidic, D., Couteur, D., Kouladijan, L., Hilmer, S. Deprescribing trials: methods to reduce polypharmacy and the impact on prescribing and clinical outcomes. *Clinical Geriatric Medicine.* 2012; 237-253. doi: 10.1016/j.cger.2012.01.006

Rastogi R, etal. *JAMA Intern Med.* 2021;181(3):345-352.