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Geriatric Trauma Care PMG

1. Process/Procedure Description

The American College of Surgeons recognizes the geriatric population is increasingly involved in traumatic injuries and has higher mortality and complication rates compared to younger trauma populations. Because of the unique changes in physiology, physiologic reserve and comorbidities, we have established this practice management guideline. These guidelines aim to assist providers in improved risk-assessment, surveillance and prevention for our geriatric patients to minimize morbidity and mortality.

This Geriatric Trauma Guideline consolidates recommendations from the TQIP Geriatric Trauma Management Guidelines with practical application and consideration to the unique resources available for injured geriatric patients who receive care at the Erlanger Health Baroness Campus.

2. Who Should Read This Process/Procedure?

Medical Staff, Nursing Staff

3. Process/Procedure

Step:	Process Instructions/Description:
	Initial Stabilization Care Considerations: - Trauma Team Activation as applicable. Elderly patients can experience significant injury even with low impact mechanisms. Geriatric specific criteria located in level 3 activation: (Age > 60 years) with one or both of the following... - SBP <110 may represent shock after age 65 (or may not be tachycardic due to medications) - Patients with significant cardio or respiratory comorbidities
	Primary Survey Considerations:

- Airway:
 - Look for airway anomalies likely to complicate management including dentures and limited mouth opening (temporomandibular arthritis).
- Breathing:
 - Apply supplemental high flow oxygen early given limited respiratory reserve.
 - Maintain a low threshold for obtaining an arterial blood gas (ABG).
- Circulation:
 - Vital signs may be an unreliable guide in the elderly.
 - Baseline hypertension is common, and medications further obscure vital sign measurement.
 - Low end-tidal CO₂ or elevated base deficit on ABG may be better predictors of compensated shock in this population. Consider checking an ABG.
 - Geriatric patients with a systolic BP < 100 or HR > 90 should have a lactate level or base deficit determined early in their presentation to the hospital.
- ◦ Disability:
 - Patients with a history of trauma should have a rapid screen for the use of anticoagulants and anti-platelet medications upon arrival. A non-contrast CT scan of the brain should be done within 30 minutes of arrival if the patient is on any anticoagulants or anti-platelet medications, even in the face of trivial mechanism of injury.
 - CT scan of the brain should be repeated with any change in neurologic status. The geriatric patients are at very high risk for subdural hematomas and subarachnoid hemorrhage.
- Exposure:
 - Geriatric trauma patients are much more susceptible to hypothermia and corrective measures should be taken early and often.
 - Avoid hypothermia: Consider giving warmed IV fluids. Blood products (except platelets) may be given on the rapid infuser active warming. Warm blankets should be placed on patient and mechanical warming device (Bair Hugger) may be utilized if time permits.
- Goal-directed therapy
 - Geriatric trauma patients are very sensitive to both hypovolemia and fluid overload. Continue to monitor the geriatric patient fluid status. Foley catheters may be necessary to monitor fluid status during resuscitation. Patients requiring significant fluid resuscitation may need invasive monitoring and so should be moved to the intensive care unit (ICU) as soon as possible.

	▪ Avoid high-volume continuous intravenous (IV) fluid therapy in patients who have been appropriately resuscitated.
	• Secondary Survey Considerations: (For additional information refer to Trauma Alert – Adult policy) ◦ When clinically possible prioritize the spine clearance in geriatric trauma patients. Early mobilization and head of the bed-up is associated with decreased rate of aspiration and respiratory decompensation. ◦ It is important to obtain as thorough a list of medications as possible as many of them impact the physiologic response of the trauma patient. ▪ Due to the incidence of geriatric patients taking anticoagulants or anti-platelet medications there should be a rapid history to determine use of these medications. If the patient is on any of these medications urgent evaluation and possible reversal is warranted. ▪ A coagulation profile should be performed ASAP, including TEG platelet mapping for traumatic brain injuries or if there is a possibility that the patient is on anti-platelet medications. ▪ Consider medications that effect initial evaluation and care (Coumadin, anticoagulants, ASA, Beta blockers, ACE inhibitors, chronic narcotic use, benzos, antipsychotics, or hypoglycemic agents) ▪ Backboard clearance with special attention to risk of hypothermia and skin break down. ◦ Elder Abuse: ▪ Elder abuse is a term referring to any knowing, intentional, or negligent act by a caregiver or any other person that causes harm or a serious risk of harm to a vulnerable adult. This includes physical, emotional or sexual abuse, exploitation, neglect, or abandonment. The National Center on Elder Abuse (NCEA) suggests one in ten patients over the age of 65 are victims of abuse many of which go unreported. The circumstances surrounding the injury should be examined to detect this often unrecognized situation. Reporting of elder abuse is required for all health care professionals.
	General and Emergent Care Considerations:
	• Assess for secondary etiology of trauma: ◦ UTI ◦ Pneumonia ◦ Acute renal failure ◦ CVA ◦ Syncope ◦ Hypovolemia/dehydration

- Evaluation for falls (#1 mechanism for trauma >65 yo). Nursing assessments should include a Fall Risk Assessment. Consult Physical Therapy and/or Occupational Therapy to evaluate high fall risks when indicated.
- Rib Fracture Management:
 - Please refer to the trauma Rib Fracture practice management guideline.
- Solid Organ Injury Management:
 - Geriatric trauma patients with solid organ injury may be managed successfully using non operative techniques but require some additional precautions.
 - The geriatric patient should be evaluated for admission to the ICU.
 - Any sign of deterioration should result in surgical or IR intervention.
 - Patients should have repeat imaging at 24-48 hours for spleen and renal lacerations. Renal injuries should be re-imaged with delayed imaging to evaluate for urinoma.
- Pharmacy Considerations and Resources:
 - Resumption of home medications in geriatric trauma patients should prioritize maintaining physiological baselines while minimizing the risk of delirium and secondary injury. Resumption is generally indicated for medications managing chronic neurological, respiratory, endocrine, and cardiac conditions, provided the patient is hemodynamically stable (typically SBP > 110 mmHg) and lacks acute organ dysfunction (e.g. AKI). Crucially, all home medications must be screened against the AGS Beers Criteria® to identify and hold potentially inappropriate medications - specifically anticholinergics, certain sedatives, and oral antihyperglycemics - that may exacerbate post-traumatic complications.
 - Medication reconciliation using the AGS Beers Criteria® should be complete within 72 hours of admission however this should be a focus on those patients boarding or waiting to be admitted while in the ED.
 - NEURO
 - Antipsychotics
 - In general, resume home doses unless there is concern for AMS and/or ability to obtain accurate neurological exam
 - Chronic benzodiazepines okay to resume, consider ordering PRN rather than scheduled
 - Hold anticholinergics, especially for patients with AMS
 - Parkinson's/Dementia
 - Resume carbidopa/levodopa
 - Resume donepezil and/or memantine
 - Consider holding for patients with bradycardia
 - Resume AEDs
 - Pain meds

	▪ Resume multimodal pain control medications, as appropriate ▪ Consider opiate history (including methadone) when determining initial dosing needs
	◦ CARDIOVASCULAR ▪ Evaluate hemodynamic status prior to resuming antihypertensives, hold if SBP < 110, consider resuming at ½ dose unless patient hypertensive ▪ Hold ACEi/ARB in the setting of AKI and/or hyperkalemia ▪ Hold BB/non-DHP-CCB in the setting of bradycardia ▪ Hold nitrates in the setting of ICH (i.e., nitroglycerin, isosorbide) ▪ Transition nifedipine XL to amlodipine if unable to swallow whole ▪ Hold diuretics unless there is concern for volume overload ▪ Hold thiazides in the setting of hyponatremia or TBI patients with elevated sodium goals ▪ Consider resuming antiarrhythmics (consider Cardiology consult if unsure) ▪ Evaluate QTc for patients on amiodarone, dofetilide, sotalol ▪ Patients on flecainide should have concomitant negative chronotropic therapy ordered ▪ Consider holding digoxin if concern for renal dysfunction or toxicity ▪ Resume statins unless there is concern/evidence for liver dysfunction or rhabdomyolysis ◦ RESPIRATORY ▪ Resume long-acting inhalers with equivalent nebulized formulary medication ◦ GI ▪ Resume PPI, change to IV if unable to take PO ▪ Resume lactulose ▪ Resume pancreatic enzymes ◦ RENAL ▪ Resume BPH meds, transition tamsulosin to terazosin if patient unable to swallow whole ▪ Hold non-selective alpha blockers (i.e terazosin, prazosin, doxazosin) if SBP < 110 ◦ HEME ▪ Resume anticoagulation/antiplatelet therapies as appropriate

- ID
 - Resume antibiotics for chronic prophylaxis (i.e. h/o endocarditis w/ retained hardware)
 - Hold if already receiving antibiotics for a different indication
- ENDOCRINE
 - Resume thyroid medications
 - Consider IV Synthroid if prolonged NPO status anticipated
 - Hold oral antihyperglycemic medications (transition to SSI)
 - Evaluate glycemic control, diet status, surgical plans, etc prior to resuming basal insulin
 - If appropriate, consider resuming ½ dose of basal insulin unless patient is hyperglycemic
- The geriatric population is more sensitive to analgesic medication. Recommend initial lower doses to avoid hypotension or respiratory decompensation.
- Focus should be on using multimodal pain therapy and opioid minimization.
- Agitated geriatric patients should be evaluated for hypoxia, hypoventilation, and shock, before administration of any sedatives.
- Sedative medication such as benzodiazepines should not be routinely used in the elderly population. Consultation with attending trauma surgeon should be undertaken prior to starting the use of benzodiazepines. The combination of these medications with analgesic drugs can cause significant respiratory decompensation or worsen delirium.
- If starting or advancing opioid treatment, consider also starting a bowel regimen to address risk of constipation.

Internal Medicine Geriatric Consulting Service:

- Internal Medicine consultation should be considered at the time of admission for patients admitted to the Trauma Service who meet the following criteria*:
 - Age 65 or older and
 - Anticipated length of stay 48 hours or greater and
 - Present with 3 or more comorbidities
 - The following is a list of the pre-existing conditions set by the National Trauma Data Standard (NTDS) but is not meant to represent all conditions relevant to IM Geriatric Consultation.
 - Advanced Directive Limiting Care
 - Alcohol Use Disorder
 - Angina Pectoris
 - Anticoagulation Therapy
 - Attention Deficit Disorder/Attention Deficit Hyperactivity Disorder

- Bleeding Disorder
- CVA
- COPD
- Chronic Renal Failure
- Cirrhosis
- Congenital Anomalies
- CHF
- Current Smoker
- Currently Receiving Chemotherapy for Cancer
- Dementia
- Diabetes Mellitus
- Disseminated Cancer
- Functionally Dependent Health Status
- HTN
- Mental/Personality Disorders
- MI
- PAD
- Steroid Use
- Substance Use Disorder

*The Trauma Attending may consult Internal Medicine at any time regardless of the above listed criteria (i.e. one or more active medical conditions necessitating consult). Conversely, consultation need not be requested on every patient meeting the above criteria if there are no active medical issues.

- **Reasons for consultation**

- Medication reconciliation
 - Anticoagulant administration following trauma and/or traumatic brain injury
 - Polypharmacy suspected of contributing to a traumatic event; e.g., a fall
- Blood Pressure Control
- Blood sugar control
- Atrial Fibrillation

- **Who decides to place an IMGT consult?**

- Decision to consult will be at the discretion of the Trauma Attending, actual consult will be placed by a member of the Trauma Team.

- **How will consults be placed?**

- Trauma Team may access AMION for the service navigator and initiate an EPIC chat to attach the chart and place the consult. The service navigator will assign to the appropriate team member.

	◦ Trauma team will enter an inpatient consult order for the Internal Medicine Geriatric Trauma team (specified in the order comments). • When will consults be placed? ◦ Consults will be placed 7 days per week between 7 am and 5 pm. Consults (unless an urgent medical need) will <u>not</u> fall on night float. • Is there a limit to these consults? ◦ IMGT patients shall not take up more than 3 spots on a 14 patient team (5 spots on a 20 patient/double intern or double senior team). ▪ This is to ensure ample room for diversity of illness and other admits. ◦ In the event that the demand exceeds team availability, please notify the Academic IM Medical Director. ▪ Keep in mind that these are consults; for patients without active medical issues, signing off would be appropriate. • Which teams do these patients go to? ◦ The service navigator will assign consults to the appropriate team member and distribute according to census numbers, keeping in mind the 3 per team limit. • Who sees these patients? ◦ To start, these patients will be seen by the Senior resident on the ward teams. • Service Transfer ◦ This is a consult only service. Any request for transfer of primary care of the patient should be rare and made only after attending to attending discussion. • What about Cross Cover? ◦ Trauma will cross cover these patients. If there is a medical cross cover question, the trauma night person can either contact pager 8000 or utilize EPIC chat. • What will be the process for communicating with the primary Trauma team? ◦ Frequent verbal communication between the teams is expected to close the loop on the plan of care.
	Inpatient Considerations & Available Resources:
	• Complications: ◦ Complications in the geriatric population occur frequently and contribute significantly to poor outcomes. A high index of suspicion, early identification, and prompt care can improve outcomes. Attention to the following list may reduce some of the more common complications and risks in the geriatric population: ▪ DVT prophylaxis ▪ Stress ulcer prophylaxis

	▪ Decubitus ulcer prevention ▪ Ventilator associated pneumonia protocols, if intubated ▪ Early nutrition – enteral if possible ▪ Early deconditioning - early OT/PT/rehab involvement • Delirium Assessment & Screening: Regularly evaluate and address delirium risk factors. Monitor and provide delirium interventions – CAM and CAM-ICU. • Ongoing Aspiration Evaluation and Screening Guideline • Nutrition Assessment: Part of nursing admission standards. Triggers in place for Nutritionist consult. • Pressure Ulcer Risk Assessment: Part of nursing admission and ongoing assessment. • Falls Risk Assessment: Part of nursing admission and ongoing assessment. • Physical and Occupational Therapies: Should be consulted on each geriatric trauma admission to assess physical function and identify any impairment. They are also available for evaluation and assessment for safe disposition planning. They can assist with referral processes for home risk assessments. • Speech Therapy: automatically consulted on any patient with a positive aspiration evaluation screening. Also consulted on patients with head injuries and when indicated for cognitive impairment screening. • Case Management, Trauma Nurse Navigator: At the time of admission these roles will collaborate and begin developing a plan for transition to post hospital care. They will assist with coordinating medical equipment and home health services as needed/ requested.
	Discharge Considerations: • All discharges to a care facility will have a discharge summary complete prior to discharge. • The AVS will provide clear information regarding follow up and other discharge instructions. • Trauma specific discharge teaching will be completed and documented.

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Approval Signatures

Step Description	Approver	Date
VP Approval	Jessica Holladay: VP & CNO Surg & Trauma Svcs	05/2026
Trauma Services Committee Approval	Stephanie Spain: Trauma Prgm Mgr Adult	05/2026
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Applicability

Erlanger Health - Baroness