Factors that predispose elderly patients to iatrogenesis

1. Senescent decline and decreased reserve in organ function.
2. Multiple co-morbidities and medications
   a. Drug-Drug interactions
   b. Drug-Disease interactions
   c. Multi organ system decompensation
3. Adverse environment of the ED
   a. Unfamiliar surroundings
   b. High ambient noise level
   c. Hallway as a treatment area
   d. Insufficient analgesia
4. Atypical presentation of disease
   a. Absence of chest pain in ACS
   b. Absent or less prominent fever in infectious processes
   c. Adverse drug reaction as presenting symptoms (e.g., falls, dizziness, delirium, syncope)
   d. Occult shock presenting with muted symptoms
5. Potentially dangerous or high risk therapies
   a. Anticoagulation in high fall risk patients
   b. Thrombolytic therapy for stroke in elderly > age 80
   c. Weigh risks versus benefits in frail older patients by balancing prognosis, preferences and underlying medically complexity.

References

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<table>
<thead>
<tr>
<th>Intervention in ED</th>
<th>Potential Risks</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foley catheter</td>
<td>UTI; Urethral injury caused by patient self-manipulating catheter to relieve discomfort</td>
<td>Use straight catheter specimen collection; Strict adherence to proper indications for Foley; Chronic Foley should be changed every 30 days, even in ED</td>
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<tr>
<td>Spinal immobilization w/ long spine board &amp; cervical collar</td>
<td>Delirium; Agitation; ↑ pain in other areas; pressure ulcer risk</td>
<td>Move quickly to clear cervical spine; clinically by NEXUS where appropriate or w/ x-ray imaging &amp; remove long spine board &amp; collar</td>
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<tr>
<td>Bed rest</td>
<td>Pressure ulcer risk</td>
<td>Turn the patient every 2 hours, if long stay or boarding in ED</td>
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<tr>
<td>Medications</td>
<td>Falls; Delirium; over sedation leading to aspiration</td>
<td>Proper evidence-based med selection w/ drug-drug, drug-disease ADR’s kept in mind; Start low &amp; go slow in dosing; Avoid anticholinergic overtreatment; Avoid benzos in non-w/drawal states</td>
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<tr>
<td>Central line placement</td>
<td>Hemorrhage; Pneumothorax; Arterial puncture &amp; bleeding; Air embolism; Infection</td>
<td>Avoid CVP when possible; Use ultrasound guidance techniques for placement whenever possible</td>
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<tr>
<td>Tethers, including IV lines; telemetry monitoring; Posey restraints; pulse ox finger monitors; Foley catheters; padded hand mittens; nasal cannulas; automated BP cuffs</td>
<td>Delirium; Agitation; ↑ fall risk from moving to foot of bed</td>
<td>Use tethers only when necessary; Bed rails up; Trendelenberg bed position, if tolerated clinically; Treat agitation w/ appropriate meds; Family @ bedside; Avoid hallway bed usage in these patients; Reduce vital sign checks during overnight boarding to floor frequency &amp; policy</td>
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<tr>
<td>NPO</td>
<td>Electrolyte imbalance; Weakness &amp; deconditioning; Dehydration w/ ↑ pre-renal azotemia</td>
<td>Assess NPO status in ED every 6 hrs; Avoid orders for NPO status &gt; 6 hours on general ED bridging orders</td>
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