Quarterly Collaborative Call #24
April 18, 2017 2:00 – 2:30 p.m. CST

Critical Thinking: (R) CVA AND Orthostatic Hypotension as Fall Risk Factors
AGENDA

1. Housekeeping
   – Quarterly Calls

2. KNOW Falls Debrief

3. Need for targeted interventions based on reporting

4. Open Discussion and Questions
Quarterly Calls

Agenda

1. Summarize your progress, what is going well, what are the barriers?
2. Feedback/discussion of event reports
3. What have you learned by working together as a team? Any changes in your team?

2 weeks before call email Katherine:
• Your most recent meeting minutes
• Ensure fall event data in KNOW Falls is current

1 week before call, Katherine will email agenda, fall event report, most recent team minutes
Purpose of Quarterly Calls

• Facilitate your team’s ability to reflect on your progress (De Dreu, 2002)
  – Review objectives of your program
  – Discuss how to implement your program
  – Discuss whether your team is working together effectively
  – Modify your objectives when things change

• Ability to do the above was significantly related to:
  – Lower Total and Unassisted Fall Rates
  – Greater perceptions that changes were easy to implement (Reiter-Palmon et al., Good Catch!: Using Interdisciplinary Teams and Team Reflexivity to Improve Patient Safety. Group and Organization Management. 2017; under revision)
**KNOW Falls Debrief**

- Data accuracy—medical record number used to track repeat falls

- Goals:
  1. Learn from each fall
  2. Aggregate fall event data to find patterns, place patterns in context of system, make changes to system

- System designed to facilitate critical thinking as data is entered
Example of Critical Thinking

- 78 y/o male adm. 4/1/17 with primary diagnosis (L) sided weakness [implies (R) CVA]
- Ambulatory with assist of 1, fall risk assessment score unknown, being seen by PT/OT
- 4/2/17 assisted fall in bathroom resulted in no harm
- 4/4/17 pt. amb. to bathroom with assist of 1, gait belt and walker. Pt. asked for privacy; nurse stepped out pt. pulled call light and stood up before nurse could assist and fell to floor.
- Consider context of (R) CVA, then decide
  - Who should be in huddle?
  - What actions should be taken to prevent future fall for this patient and to improve system?
Fall Risk Factor: (R) CVA

- (L) sided weakness, paralysis
- Spatial-perceptual deficits including (L) sided neglect
- Impulsive behavioral style—poor judgment, lacks insight into deficits, emotionally labile
- Memory loss

http://psychologicalrambles.blogspot.com/2014/04/brain-damage-disorders-part-3-visual.html

http://www.strokeassociation.org/STROKEORG/AboutStroke/Effects ofStroke/Effects-of-Stroke_UCM_308534_Sub HomePage.jsp
Fall Risk Factor: (R) CVA

73% of stroke survivors fall within 6 months; risk of fracture in paretic limb is four times greater for stroke survivors than for fallers who are not stroke survivors


Risk Factor: Orthostatic Hypotension

- **Standard Criteria:** Decline of \( \geq 20\) mm Hg systolic or \( \geq 10\) mm Hg diastolic blood pressure within 3 min. of standing


- **American Academy of Neurology (AAN) 2011 Criteria:**
  - If supine hypertension present, then \( \geq 30\) mm Hg decrease in systolic pressure required
  - If BP lowest point occurs within 15 sec. of standing, then decrease of 40 mm Hg systolic and 20 mm Hg diastolic required

Risk Factor: Orthostatic Hypotension (OH)

- AGS Clinical Guideline: Assessment and treatment of postural hypotension should be included as components of multifactorial interventions to prevent falls in older persons. (Evidence Level B)
  

- Prevalence of OH using AAN 2011 criteria
  
  - Present in 25% of a sample of 297 community dwelling older adults ≥ 65 years of age
  
  - Independent predictor of falls (OR 10.3, 95% CI 1.7 – 61.5)
  
  - Fallers more likely to take psychoactive meds, have a previous history of falls and lower supine BP
Procedure for Orthostatic Vital Sign Measurement

- For complete procedure, go to https://www.ahrq.gov/professionals/systems/hospital/fallpxtoolkit/fallpxtk-tool3f.html
- Assess ability to stand (assistive device, gait belt, assistant, chair/bed behind patient)

<table>
<thead>
<tr>
<th>Position</th>
<th>Measure</th>
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</thead>
<tbody>
<tr>
<td>1. Supine for 3 minutes</td>
<td>BP and Pulse</td>
</tr>
<tr>
<td>2. Sit for 1 minute</td>
<td>BP and Pulse</td>
</tr>
<tr>
<td>3. Immediately upon standing*</td>
<td>BP and Pulse</td>
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<tr>
<td>4. After 3 minutes standing</td>
<td>BP and Pulse</td>
</tr>
<tr>
<td>5. Assist patient back to bed in a position of comfort</td>
<td>Subtract values after 3 min. standing from lying values</td>
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*Lowest BP reached within 15 seconds of standing (McDonald et al., Age and Ageing. 2016;0:1-7)
Risk Factor: Orthostatic Hypotension (OH)

- Heart rate increase of $\geq 30$ beats per min. after 3 min. standing may suggest hypovolemia, independent of whether patient meets criteria for orthostatic hypotension.
- Blood pressure drop immediately after standing that resolves at 3 min. does not indicate orthostatic hypotension. However, this finding may confirm complaint of dizziness upon standing and lead to patient education to use caution when arising from lying or sitting.

Who should be screened?

- AHRQ recommends screening patients
  - After a fall
  - Who complain of symptoms that may be due to orthostasis (dizzy, lightheaded)
  - On routine admission to units where patients take medications that cause orthostasis (cardiovascular, geriatric psychiatry)
  - Who take medications that may cause orthostasis and have other fall risk factors
  - Who are at risk for hypovolemia (vomiting, diarrhea, bleeding, surgeries with blood loss),
  - Who have had syncope or near syncope

Who should be screened?

- Methodist Health System
  - Patients at severe risk for falls for first 48 hours (include orthostatic BP and HR)
  - Post-op surgical patients for the first 24 hours to identify intravascular hypovolemia
  - Assessing orthostatic vital signs is within the scope of practice of therapies and nursing
Who should NOT be screened?

• AHRQ recommends NOT screening patients who have...
  – Supine hypotension
  – Sitting blood pressure ≤90/60
  – Acute deep vein thrombosis
  – Clinical syndrome of shock
  – Severely altered mental status
  – Possible spinal injuries
  – Lower extremity or pelvic fractures
  – Limited mobility and can’t get out of bed

Need to Increase Screening

Because dizziness and OH reported more often in assisted falls, it is likely that OH is more prevalent than reported.

![Bar Chart]

Reported Prevalence of Dizziness and Orthostatic Hypotension in Fall Events (n=353)*

*From CAPTURE Falls Phase 1 Hospitals 2012-2014

- Dizzy/Lightheaded: Assisted Fall (n=90) = 14.4%, Unassisted Fall (n=263) = 7.6%
- Orthostatic Hypotension: Assisted Fall (n=90) = 6.7%, Unassisted Fall (n=263) = 4.6%

p = 0.061
## Linking Risk Factors to Interventions

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Suggested Targeted Interventions</th>
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| Age (65-79) and 80+                      | • Hourly rounding  
• Be aware—potential increased risk for injury due to frailty (skin tears, osteoporosis)                                                                 |
| History Previous Fall                    | • Refer for PT evaluation (automatic standing order if patient admitted due to a fall)  
• Evaluate any assistive device for appropriateness/fit                                                                                                       |
| Impaired Cognition/Orientation           | • Hourly rounding  
• Bed/chair pressure alarms (Tabs alarms too easily removed)  
• Toileting schedule  
• Do not leave alone in bathroom  
• Low-low bed  
• Move close to nurse’s station  
• Educate family members about patient’s specific risk factors  
• Encourage family members to stay with patient  
• Family/visitors inform nursing when they leave                                                                               |
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<tr>
<td>Altered Elimination</td>
<td>• Toileting schedule&lt;br&gt;• Commode with drop arm next to bed</td>
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<tr>
<td>Sensory Impairment</td>
<td>• Unclutter environment&lt;br&gt;• Orient patient to environment&lt;br&gt;• Ensure adequate lighting&lt;br&gt;• Wear glasses, hearing aids as appropriate</td>
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<tr>
<td>Impaired Activity (i.e. needs assist with gait and transfers)</td>
<td>• Refer for PT and OT evaluation as appropriate&lt;br&gt;• Assess for appropriate footwear&lt;br&gt;• Keep assistive devices within reach (even if patient is not to get up without assist)&lt;br&gt;• Assess patient’s posture when seated in bedside chair (i.e. are they prone to slide out because feet don’t reach floor, is it too difficult to put foot rest down)&lt;br&gt;• Document transfer/gait assistance on whiteboard</td>
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<tr>
<td>Medications</td>
<td>• Request medication review by pharmacist to determine appropriateness of opioids/sedatives&lt;br&gt;• Monitor for orthostatic hypotension as appropriate</td>
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<td>Orthostatic hypotension</td>
<td>• Medication review&lt;br&gt;• Standard high fall risk precautions including toileting schedule, assist all transfers and mobility with gait belt and appropriate assistive device, do not leave alone while toileting</td>
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Discussion

Assistance is an email away!

• General implementation and best practices (including RCA) …Katherine (kjonesj@unmc.edu)

• KNOW Falls and Online Learning (RedCAP) … Anne (askinner@unmc.edu)

• Interpreting Teamwork Perceptions Questionnaire, Leadership, Team Learning and Functioning … Vicki (victoria.kennel@unmc.edu)

• If in doubt contact all of us!

http://news.discovery.com/tech/virtual-moderator-helps-discussions-130506.htm
References

Team Reflection Reference

Data References
Rowley J. Where is the wisdom that we have lost in knowledge? Journal of Documentation. 2006;62:251-270.
Quarterly Collaborative Calls:

- Tuesday July 25, 2017 14:00 CST
- Tuesday Oct. 24, 2017 14:00 CST
- Tuesday Jan. 23, 2018 14:00 CST
- Tuesday April 17, 2018 14:00 CST

Review the tools created with your assistance

http://www.unmc.edu/patient-safety/capturefalls/tool-inventory.html
CAPTURE Falls
Collaboration and Proactive Teamwork Used to Reduce

Enter “capture falls” in google
http://www.unmc.edu/patient-safety/capturefalls/