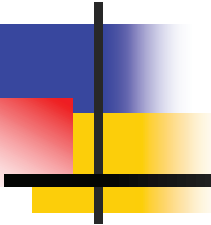# Behavioral Health: Prioritize Protection from Falls and Fall-Related Injuries

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My Goals

- Challenge and Inspire you to add precision to your patient safety practices and redesign fall prevention clinical practices to protect behavioral health patients from Injurious Falls as your organization's Primary Outcome

Objectives

- Raise the level of importance within behavioral health units to protect patients from preventable and injurious falls;

- Utilize tools needed for multifactorial fall risk assessment and individualized care planning;

- Integrate technology to increase surveillance and protect patients from injury when they fall;

- Analyze post fall data needed strategic improvement of patient safety and outcomes;

- Integrate specialized handoff communication for care planning; and,

- Apply implementation science principles to support changing practice

What we know…

- Traditional universal fall precaution strategies or bundled interventions based on a category of fall risk status are ineffective with this population and setting of care.

- Mental Health (MH) patients experience higher fall rates, repeat fall rates and fall-related injuries.

- Older adults with select MH, and substance abuse (SA) problems fall between 1.5-4.5 times more than general elderly population (Quigley, et al, 2014)

In 2006.....

- Larry Rubenstein said:

Fall risk factors in the inpatient psychiatry population are similar to those in long-term care and med-surgical units:

Previous history of falls, generalized weakness, confusion or disorientation, difficulty with mobility or walking, elimination problems and temperature elevation

Raise the Level of Importance

- Inpatient acute mental health setting (IAMHS): 4.5-25 falls per 1,000 patient days (Malik & Patterson, 2012)

- 13-25 per 1,000 patient days (NDNQI, 2006, in Abraham, 2016)

- Psychogeriatric Fall Rates: 17-67 falls per 1,000 OBDs

(two studies: 1997 and 2002, reported in Oliver, et al, 2010)

- Falls while walking predominate (different than med/surg) (Oliver, et al, 2010)

- Mental health units have environmental restrictions to protect patients from harm

- What do these high rates tell you……

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- What do these high rates tell you......**Repeat Fallers!!!**

Reduce Preventable Falls

- Accidental Falls

- Anticipated Physiological Falls

Use Clinical Knowledge:

- Plan for Impulsivity and Safety Awareness Deficits

- Safe Exit Side

- Scheduled Toileting

Definitions... getting to types of falls...

Fall: Loss of upright position that results in landing on the floor, ground, or an object or furniture, or a **sudden, uncontrolled, unintentional, non-purposeful, downward displacement** of the body to the floor/ground or hitting another object like a chair or stair; excluding falls resulting from violent blows or other purposeful actions.

- Types of Fall

<u>Accidental</u> Falls: Falls associated with extrinsic environmental risk factors or hazards: spills on the floor, clutter, tubing / cords on the floor, etc., or errors in judgment, such as not paying attention

*From Morse J. (1997). *Preventing patient falls*. CA: Sage.

Fall Types: Definitions

Anticipated Physiological Falls: Falls associated with known fall risks, such as those indicated on the Morse Fall Scale or other screening scales, that are predictive of a fall occurring: loss of balance, impaired gait or mobility, impaired cognition/confusion, impaired vision. Falls that we anticipate will occur to the patients' existing physiological status, history of falls, and decreased mobility upon assessment.

Unanticipated Physiological Falls: Falls associated with unknown fall risks that were not predicted (cannot be predicted) on a fall risk scale: syncope; extreme hypoglycemia; stroke; heart attack; seizure.

What about Intentional Falls?

Core Interventions to Reduce Accidental Falls

- Maintain constant awareness to environmental safety and risks
- Eliminate sources of slip and trip hazards
- Assure proper height adjustment of beds when a patient is transferring and/or standing, chairs, toilets, safety grab bars
- Proper lighting
- Proper footwear - not just non-skid socks
- If possible, create a safe environment that ensures a safe exist side from furniture with direct view of bathroom

Platform Beds

Wedge to Raise HOB
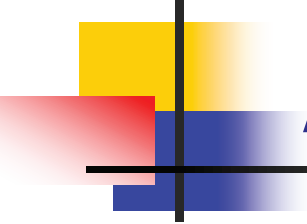
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Reconsider Non Skids Socks

Core Interventions to Reduce Anticipated Physiological Falls

- Modifying medications to reduce fall risks
- Teaching safe mobility skills
- Ensuring use of eye glasses and other prosthetic/orthotic devices
- Strictly adhering to scheduled and assisted toileting and bladder retraining regimes
- Toileting before pain medications
- Assuring continuity and consistency of all patient education to maximize learning
- If possible, place mobility aides within reach

More Nursing Interventions in Mental Health Units

- Don't leave equipment unattended that could be mobilized by the patient. For example, wheelchairs and bedside commodes can be used as weapons to harm patients and staff.

- Before leaving a patient, be certain that lighting is adequate to prevent tripping.

- Initiate a bowel and bladder program to decrease the patient's attempts to get up without assistance due to urgency.

- Assess and optimally manage pain.

- Assess for orthostatic hypotension and teach the patient to change positions slowly

Measuring Orthostatic Blood Pressure

1. Have the patient lie down for 5 minutes.

2. Measure blood pressure and pulse rate.

3. Have the patient stand.

4. Repeat blood pressure and pulse rate measurements after standing 1 and 3 minutes.

A drop in bp of ≥20 mm Hg, or in diastolic bp of ≥10 mm Hg, or experiencing lightheadedness or dizziness is considered abnormal.

Lying Down		5 Minutes	BP _____ / _____ HR _____	
Standing		1 Minutes	BP _____ / _____ HR _____	
Standing		3 Minutes	BP _____ / _____ HR _____	

For relevant articles, go to: **www.cdc.gov/injury/STEADI**

Sensory Neuropathy

- Determine if can feel pressure when eyes are closed
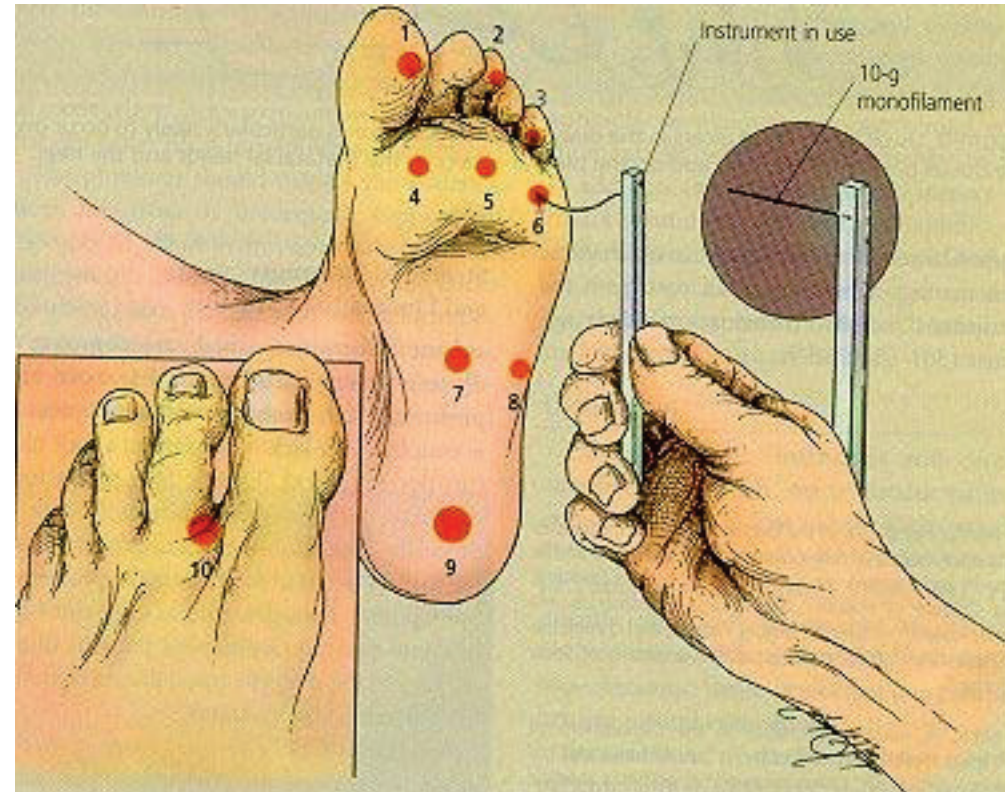
My Work - Behavioral Health has Prioritized Clinical Opportunities

- Culture of Psychiatry Units
- Lack of assessment/screening for falls
- Unit Peer Leadership Issues
- Medication Risk Factors
- Communication at Handoffs
- Gaps in technology and work with vendors
- Scheduled Toileting
- Physical Barriers/Equipment Limitations

General Barriers

- Competing demands for priority focus:
  - falls vs all other pt needs
- Bias against geriatric syndromes in mental health
- Falls low priority in mental health
- Cultural milieu: primary focus on behavior/mental health; less with physical aspects of care

Tools needed for multifactorial fall risk assessment and individualized care planning – Don't Focus on a Score

- Edmonson Psychiatric Fall Risk Assessment Tool
- Wilson-Sims Fall Risk Assessment Tool
- Baptist Health High-Risk Falls Assessment
- HD Nursing
- Morse Fall Scale

Morse Fall Scale – Anticipated Physiological Falls

- Should incorporate a list of drugs that place IAMHS patients at highest risk for a fall.

- Facilities can modify their tool according to their patient population

Meds – Add to Secondary Dx

- selective serotonin-reuptake inhibitors
- tricyclic antidepressants
- antipsychotic agents
- benzodiazepines
- antiepileptic drugs
- class IA antiarrhythmic agents
- antihypertensives.[1]
- anticoagulants

Medications

- The type of medications used in psychiatry presents a unique fall risk.
- A number of psychotropic drugs are associated with increased risk for falls including antidepressants, antipsychotic, and sedatives or hypnotics
- The mechanisms involved include medication-induced orthostatic hypotension, ataxia, psychomotor slowing and extra-pyramidal symptoms

(Bulat, Castle, Rutledge, & Quigley, 2008a; Bulat, Castle, Rutledge, & Quigley, 2008b)

Partner With Pharmacists

- Inform healthcare providers of changes in a patient's gait, posture, or spasticity.

- Performing medication reconciliation will help the provider and pharmacist prevent duplication of medications and drug interactions that can adversely affect patients.

- Be aware that changes in the medication regimen by providers may lead to adverse reactions associated with polypharmacy and could contribute to a fall.

Integrate Technology to Increase Surveillance and Protect Patients From Injury When They Fall

- Virtual Video Surveillance

- Floor Mats

- Hip Protectors

AvaSure®: EXPANDING THE SAFETY NET: Integration of innovative technology

MONITOR OBSERVER

AVASURE TECHNOLOGY

RESPONDER UNIT STAFF

OUTCOMES

+ ## Protecting Those at Most Risk

  - Reduced Falls
  - Reduced Falls with Injury

+ ## Elopement from Room

+ ## Timeliness of Rescue by Age Group

+ ## Rapid Response by Age Group

+ ## Reducing Patient Aggression/Violence

NEW RESEARCH: Published May, 2019

Quigley, P., Votruba, L., Kaminski, J. (2019). Outcomes of patient engaged video surveillance on falls and other adverse events. *Clinics in Geriatric Medicine.*

NEW RESEARCH:
Who was protected and how?

Age	18-64	65-84	85+	Total
Number of patients	5,173	6,393	3,455	15,021
Hours	359,584	395,392	187,506	942,482
Number of patient days	14,983	16,475	7,813	39,270
Length of surveillance hours/days	69.5/2.9	61.8/2.5	54.3/2.3	62.7/2.6

June 1, 2017 - May 31, 2018
n = 71 hospitals
PEVS: Patient Engaged Video Surveillance

Quigley, P.A., Votruba, L.J., & Kaminski (2019) Outcomes of patient engaged video surveillance on falls and other adverse events. *Clinics in Geriatric Medicine.*

Adverse Events by Age Group

Table 3: Monitoring Staff Reported Adverse Events

Age	18-64	65-84	85+	Total
Total Falls	34	22	3	59
Unassisted Falls	26	16	2	44
Assisted Falls	8	6	1	15
Elopements (from patient room)	14	7	6	27
Line, Tube or Drains Dislodged	40	48	18	106

June 1, 2017 - May 31, 2018
n = 71 hospitals

NEW RESEARCH: Falls and other adverse events

Table 4: Adverse Event Rates per 1,000 Days of Surveillance

Age	18-64	65-84	85+	Total
Total Falls per 1,000 Days of Surveillance	2.27	1.34	0.38	1.50
Assisted Falls per 1,000 Days of Surveillance	0.53	0.36	0.13	0.38
Unassisted Falls per 1,000 Days of Surveillance	1.74	0.97	0.26	1.12
Elopements (from patient room) per 1,000 Days of Surveillance	0.93	0.42	0.77	0.69
Line, Tube or Drains Dislodged per 1,000 Days of Surveillance	2.67	2.91	2.30	2.70

June 1, 2017 - May 31, 2018
n = 71 hospitals

Quigley, P.A., Votruba, L.J., & Kaminski (2019) Outcomes of patient engaged video surveillance on falls and other adverse events. *Clinics in Geriatric Medicine.*

Bedside Mats – Fall Cushions

bedside fall cushion

Floor Mat

Floor Cushion

Tri-fold bedside mat

Roll-on bedside mat

Soft Fall bedside mat

Hip Protectors

Hip Protectors – Examples

Risk factors for osteoporosis or increased fracture risk

- hx of low-trauma fracture
- men treated with androgen deprivation therapy (ADT) for prostate cancer
- smoking
- ETOH abuse (3 or more drinks/day)
- malabsorption
- hyperthyroidism or on thyroid replacement with suppressed TSH
- hyperparathyroidism
- COPD
- Medications: e.g. prolonged use of steroids (>6 months), antiepileptics, TZDs, SSRIs
- diabetes
- hypogonadism or premature menopause
- female sex, age > 50

- family history (i.e., diagnosis of hip fracture or osteoporosis in a parent)
- BMI<21
- chronic liver disease
- immunosupressants
- sedentary lifestyle
- lack of weight-bearing exercise, etc.
- rheumatoid arthritis
- vitamin D deficiency
- race/ethnicity (Northern European, Asian)
- prolonged illness/bedrest
- depression

Moderate to Serious Injury:
A, B, C, S

- Those that limit function, independence, survival
- Age
- Bones (fractures)
- Bleeds / AntiCoagulation (hemorrhagic injury)
- Surgery (post operative)

Universal Injury Prevention

- Educates patients / families / staff
  - Remember 60% of falls happen at home, 30% in the community, and 10% as inpts.
  - Take opportunity to teach
- Remove sources of potential laceration
  - Sharp edges (furniture)
- Reduce potential trauma impact
  - Use protective barriers (hip protectors, floor mats)
- Use multifactorial approach: COMBINE Interventions
- Hourly Patient Rounds (comfort, safety, pain)
- Examine Environment (safe exit side)

Falls Management in the Acute Care Setting

Best Practice Approach in Hospitals:

- Implementation of safer environment of care
- Identification of specific modifiable fall risk factors
- Implementation of interventions targeting those risk factors so as to prevent falls
- Interventions to reduce risk of injury to those people who do fall

(Oliver, et al., 2010, Nov., Clinics in Geriatric Medicine)

Targeted Interventions: Prevention + Protection + Surveillance

Prevention

- The act of preventing, forestalling, or hindering.

Plus Protection

- Shield from exposure, injury or destruction (death).
- Mitigate or make less severe the exposure, injury or destruction.

Plus Surveillance

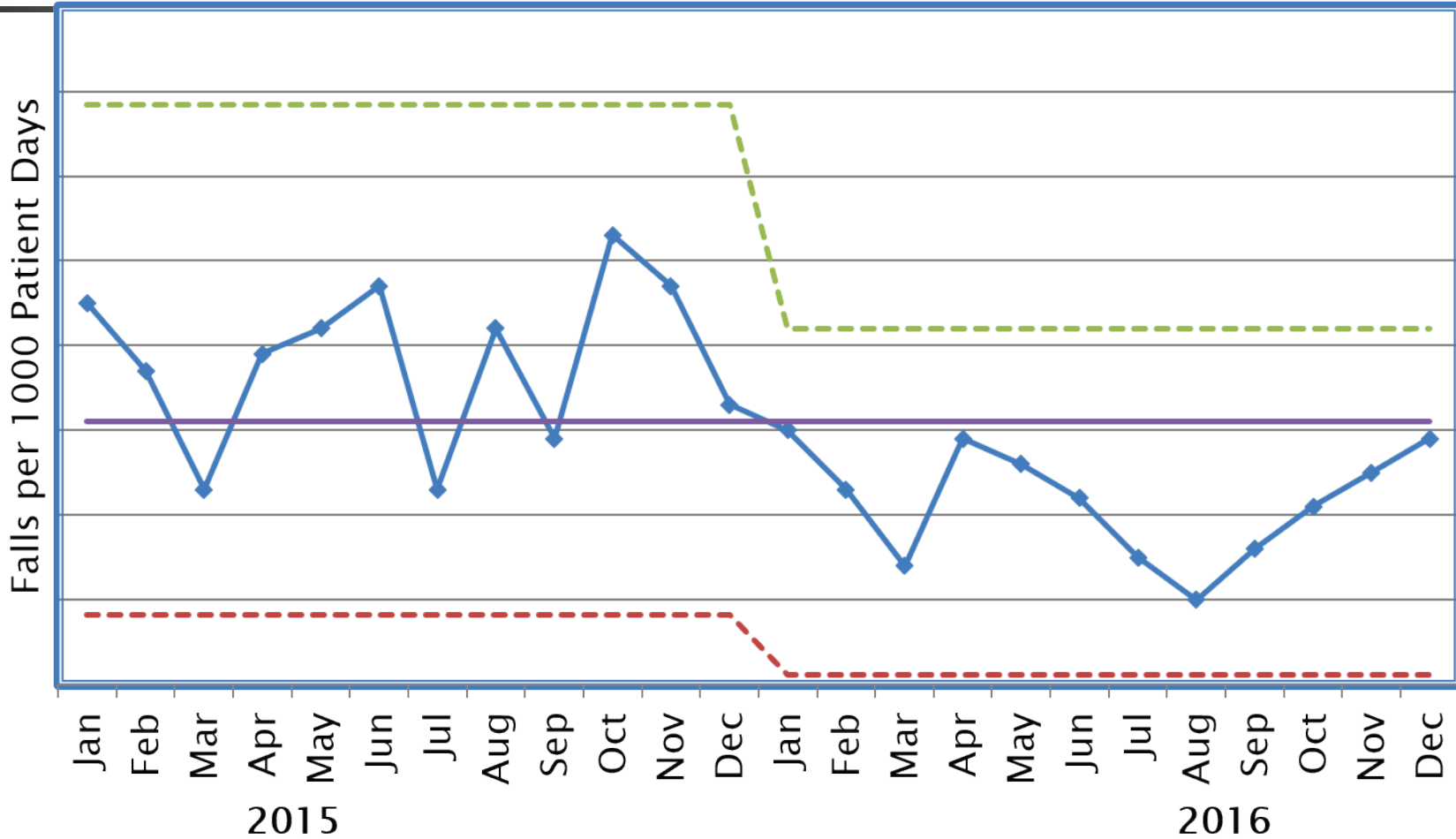- Detection, interaction, response - supports both prevention and protection.

Analyze Fall Data

- Post Fall Huddle
- Root Causes of Falls and Injuries
- Fall and Injury Rates
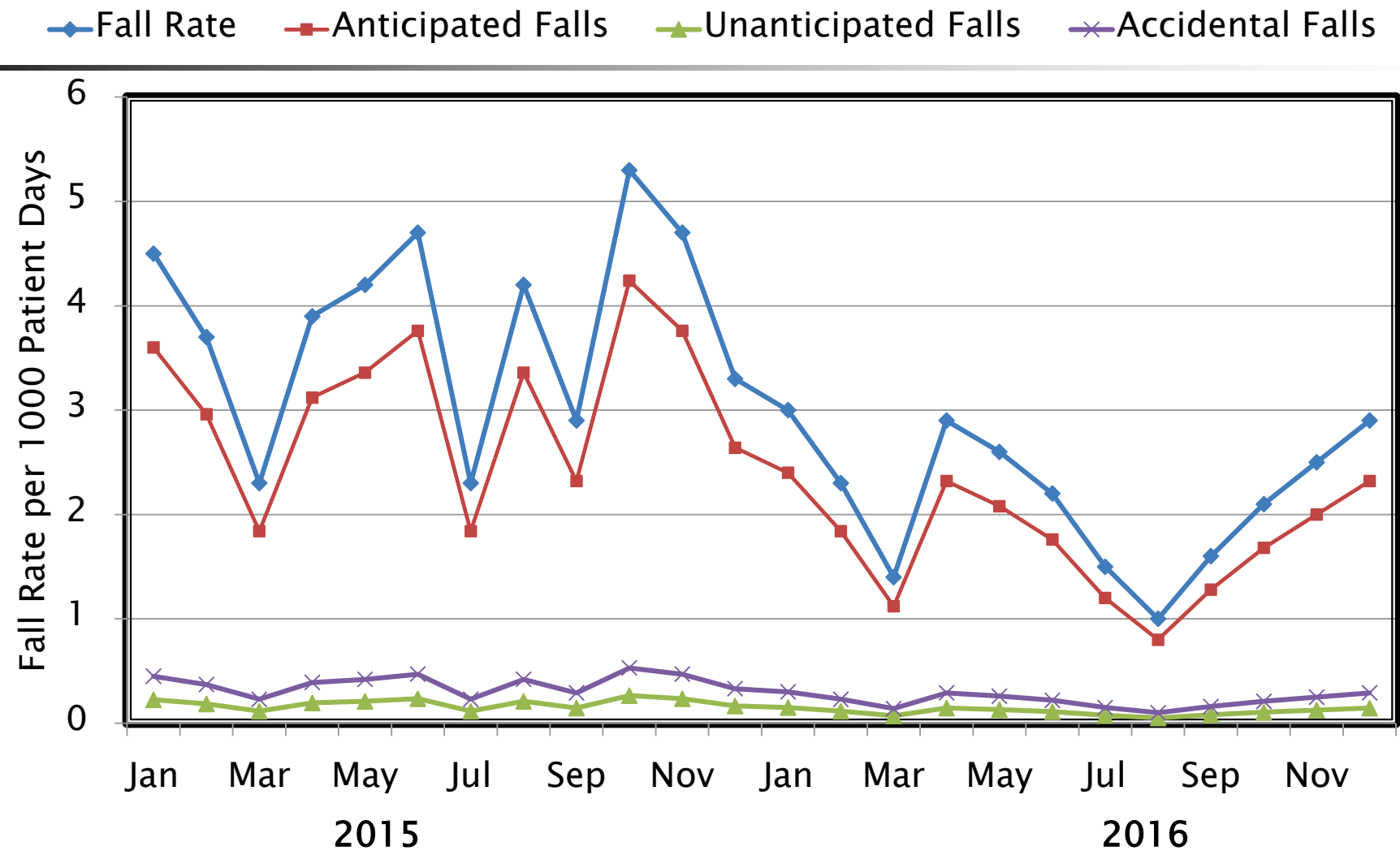- Track Innovation
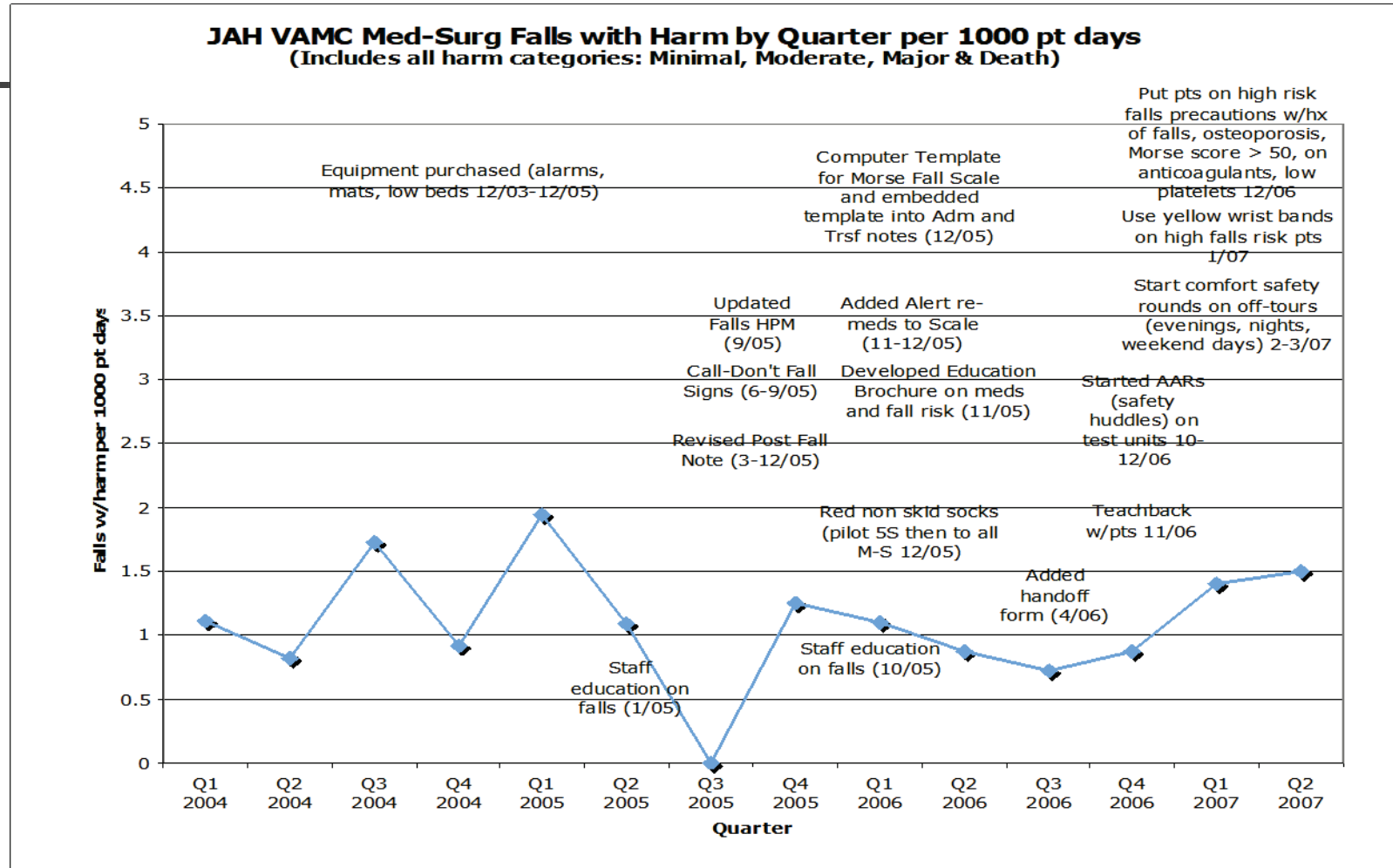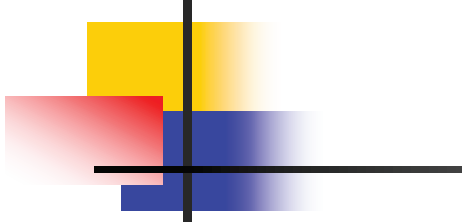- Story Board – Does yours look like mine?

Falls per 1000 Patient Days

Fall Rate by Type of Fall per 1000 Pt Days

Annotated Text-Run Chart

JAH VAMC Med-Surg Falls with Harm by Quarter per 1000 pt days
(Includes all harm categories: Minimal, Moderate, Major & Death)

Equipment purchased (alarms, mats, low beds 12/03-12/05)

Computer Template for Morse Fall Scale and embedded template into Adm and Trsf notes (12/05)

Put pts on high risk falls precautions w/hx of falls, osteoporosis, Morse score > 50, on anticoagulants, low platelets 12/06

Use yellow wrist bands on high falls risk pts 1/07

Updated Falls HPM (9/05)

Added Alert re-meds to Scale (11-12/05)

Start comfort safety rounds on off-tours (evenings, nights, weekend days) 2-3/07

Call-Don't Fall Signs (6-9/05)

Developed Education Brochure on meds and fall risk (11/05)

Started AARs (safety huddles) on test units 10-12/06

Revised Post Fall Note (3-12/05)

Red non skid socks (pilot 5S then to all M-S 12/05)

Teachback w/pts 11/06

Added handoff form (4/06)

Staff education on falls (1/05)

Staff education on falls (10/05)

Y-axis: Falls w/harm per 1000 pt days

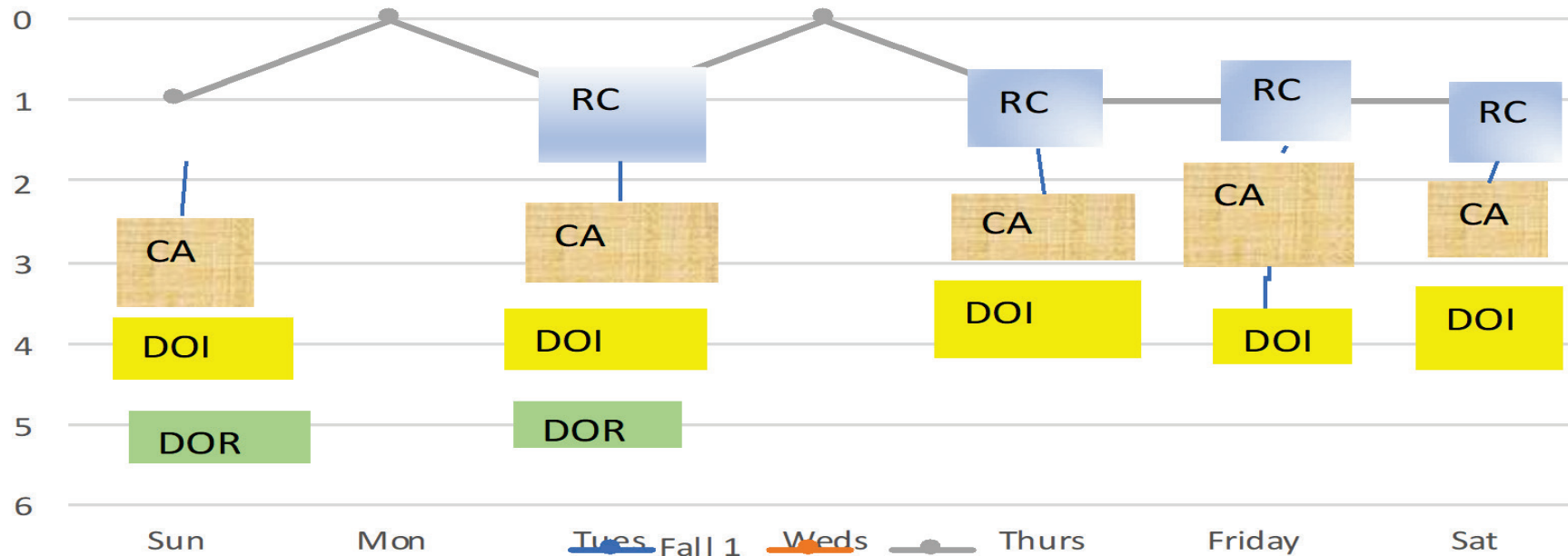X-axis: Quarter — Q1 2004, Q2 2004, Q3 2004, Q4 2004, Q1 2005, Q2 2005, Q3 2005, Q4 2005, Q1 2006, Q2 2006, Q3 2006, Q4 2006, Q1 2007, Q2 2007

Create a Story Board and ...

Annotated Story Board Fallers 5So Med Surg

Create a Story Book: Tell Your Story

- Plan Implementation

- PDSA Cycle

- Track results of PDSA Cycle

- Measure Structure and Process Changes – expand data specific to your safety net!

Tools to Share

Mental Health Unit Peer Leader Toolkit

Inpatient Psychiatry Hand-off Communication Tool

Visit VISN 8 PSCI Website:

Valerie.Kelleher@va.gov

Cautions with the evidence….
You are experts!

- What works in controlled research environment….
- Doesn't tell you what will translate to *"real life"*
- *"Real life"* service leaders/clinicians, aren't so wedded to controlled trials as *"real life"*"results"
- Or demonstrating that "something" is being "done"
- Absence of evidence is not evidence of absence. Some interventions and settings poorly studied
- **You know risk factors for your patients – you don't need a tool to tell you what they are**

Behavioral Health: Special Focus of Mine

- Powell-Cope, G., Quigley, P., Besterman-Dahan, K., Smith, M., Stewart, J., Melillo, C., Haun, J., & Friedman, Y. (2014). A qualitative understanding of patient falls in inpatient mental health units. *Journal of the American Psychiatric Nurses Association, 20*(5), 328-39.

- Quigley, P.A., Barnett, S., Bulat, T., & Friedman, Y.   (2014). Reducing Falls and Fall-Related Injuries in Mental Health: A One - Year Multi-hospital Falls Collaborative. *Journal of Nursing Care Quality,* 29(1): 1-9.

You Can Always Reach Me!

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