GERIATRICS IN THE ED

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KATREN TYLER, MD

ASSOCIATE PROFESSOR

ASSOCIATE PROGRAM DIRECTOR

GERIATRIC EMERGENCY MEDICINE FELLOWSHIP DIRECTOR

VICE CHAIR FOR FACULTY DEVELOPMENT, WELLNESS AND OUTREACH

DEPARTMENT OF EMERGENCY MEDICINE

UNIVERSITY OF CALIFORNIA, DAVIS

krtyler@ucdavis.edu

NO FINANCIAL DISCLOSURES

DEMENTIA DISCLOSURE

WHAT IS GERIATRIC EM

Optimizing the care of older patients in the ED.

Safe Discharge

Needed Admissions

Starting best practices early that continue through discharge or hospitalization

GERIATRIC EM

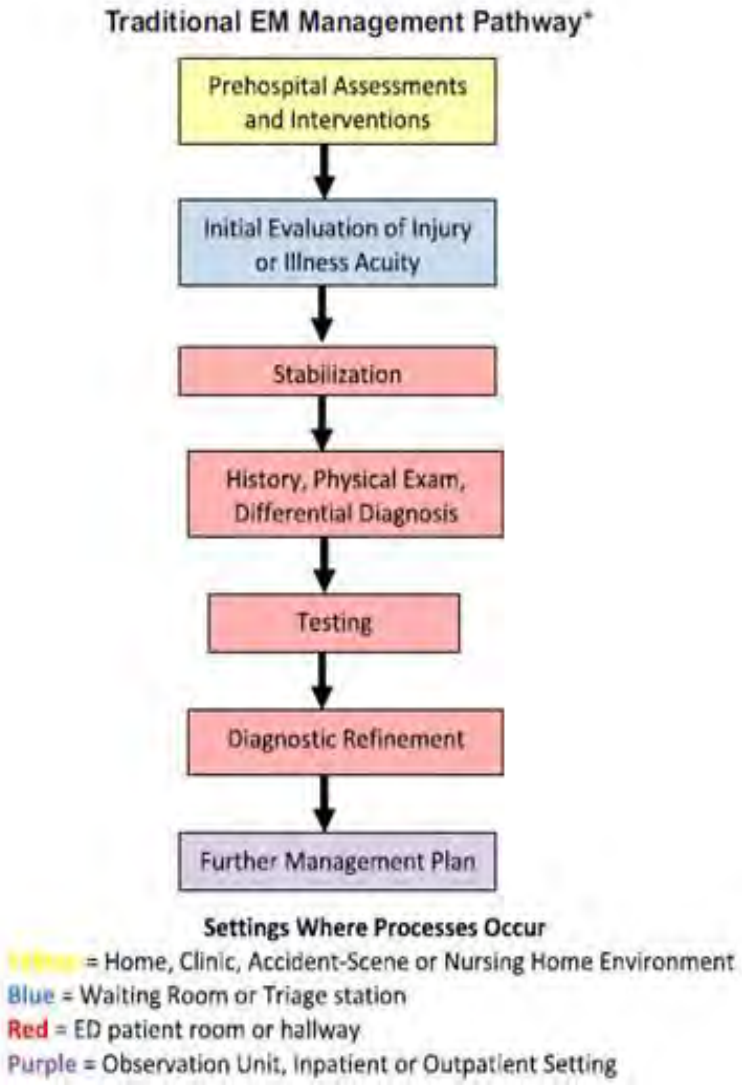
Overview of Geriatric EM

How are Emergency Departments changing for older patients

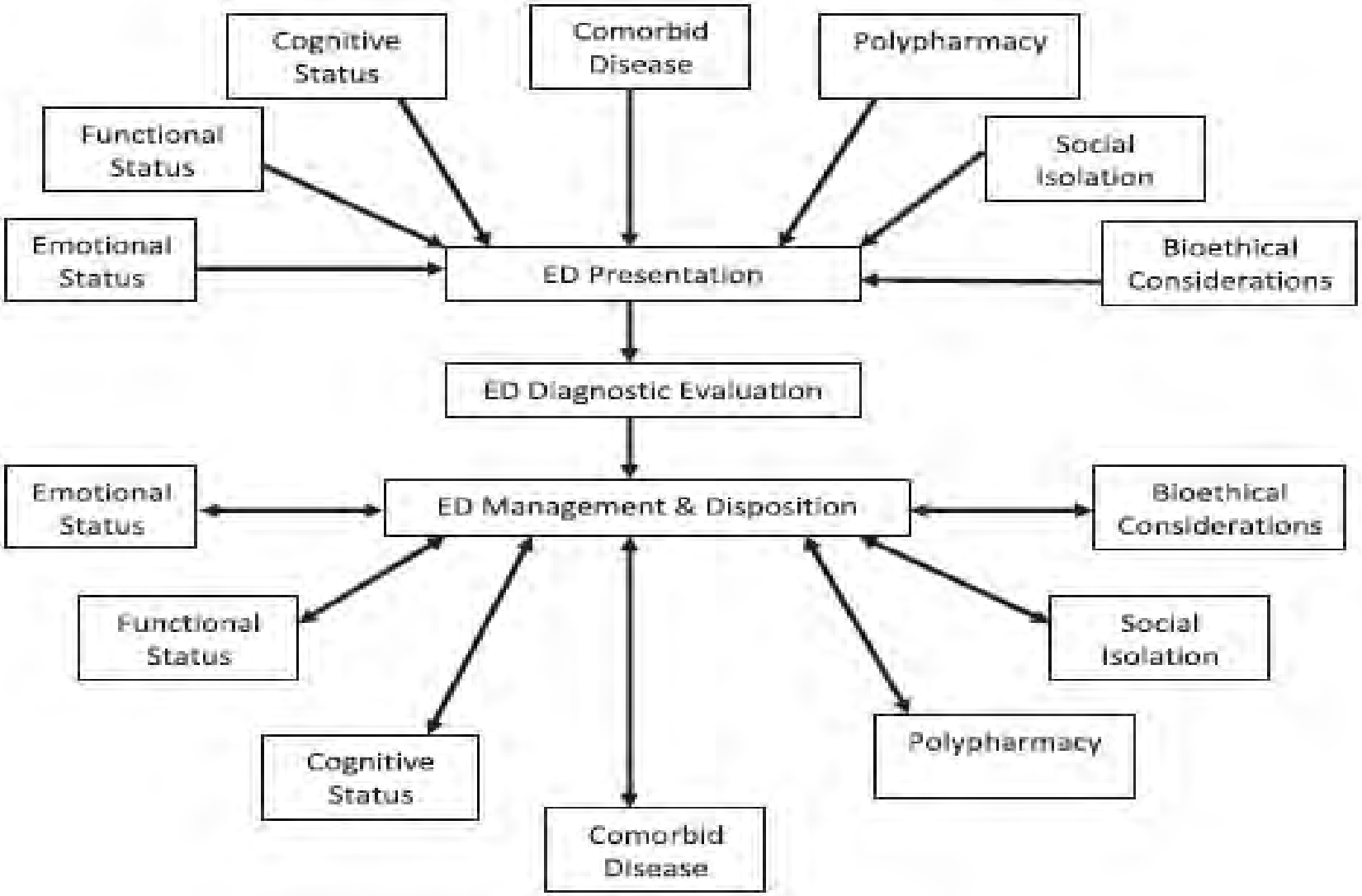
(structures, staff, systems)

Geriatric Syndromes - falls and delirium

EMERGENCY MEDICINE MODEL



Geriatric Emergency Care Model*



http://dx.doi.org/10.1016/j.cger.2012.09.003

WHERE DO PATIENTS GO FROM THE ED?

GERIATRIC SYNDROMES

Delirium*

Dementia

(Depression)

Falls*

Functional decline / Frailty

Pressure ulcers

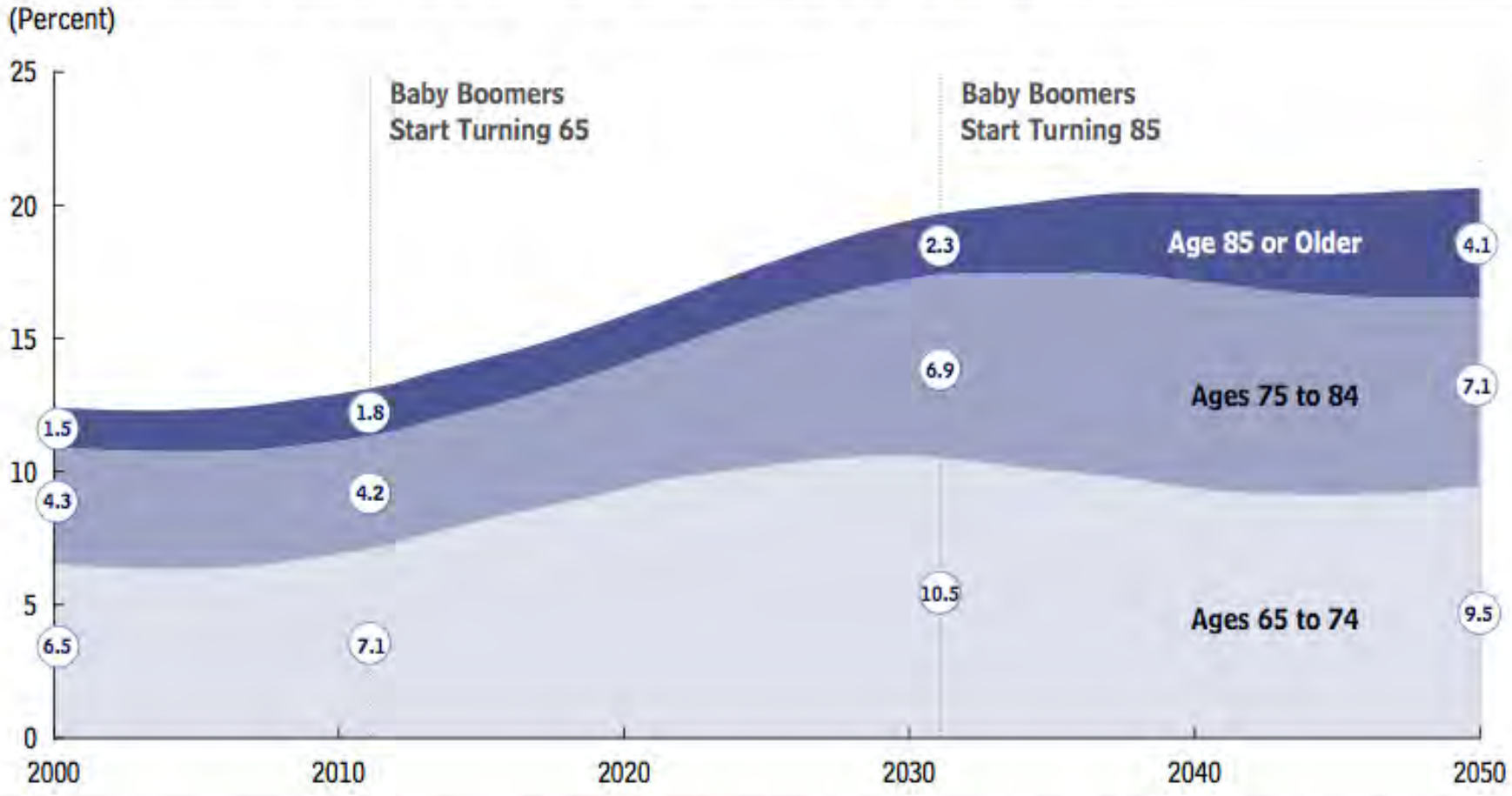
Incontinence

(Obesity)

WHY DID I GET INTERESTED IN GERIATRICS

Exhibit 1.

Elderly Adults As a Share of the U.S. Population, 2000 to 2050



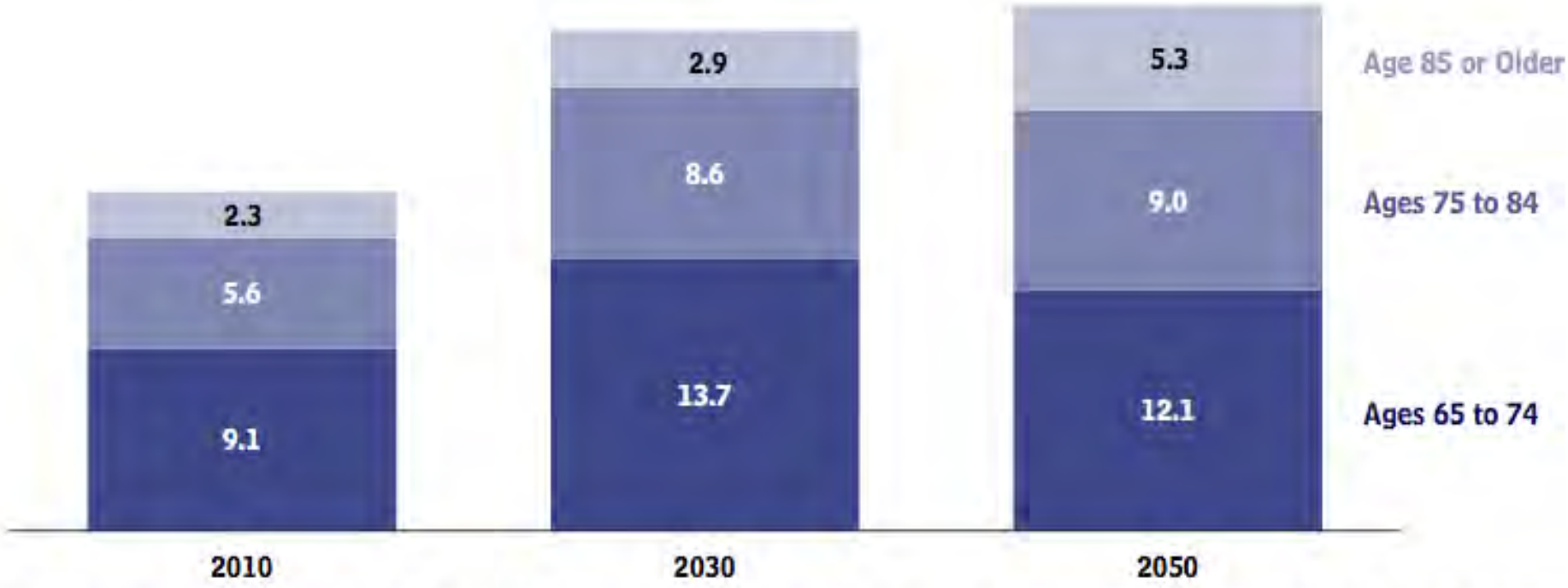
Source: Congressional Budget Office tabulations based on population projections reported in *The 2012 Long-Term Budget Outlook* (June 2012), www.cbo.gov/publication/43288.

Note: Members of the baby-boom generation (people born between 1946 and 1964) started turning 65 in 2011 and will turn 85 beginning in 2031.

Exhibit 2.

Elderly Adults As a Share of All Adults Age 18 or Older, 2010 to 2050

(Percent)

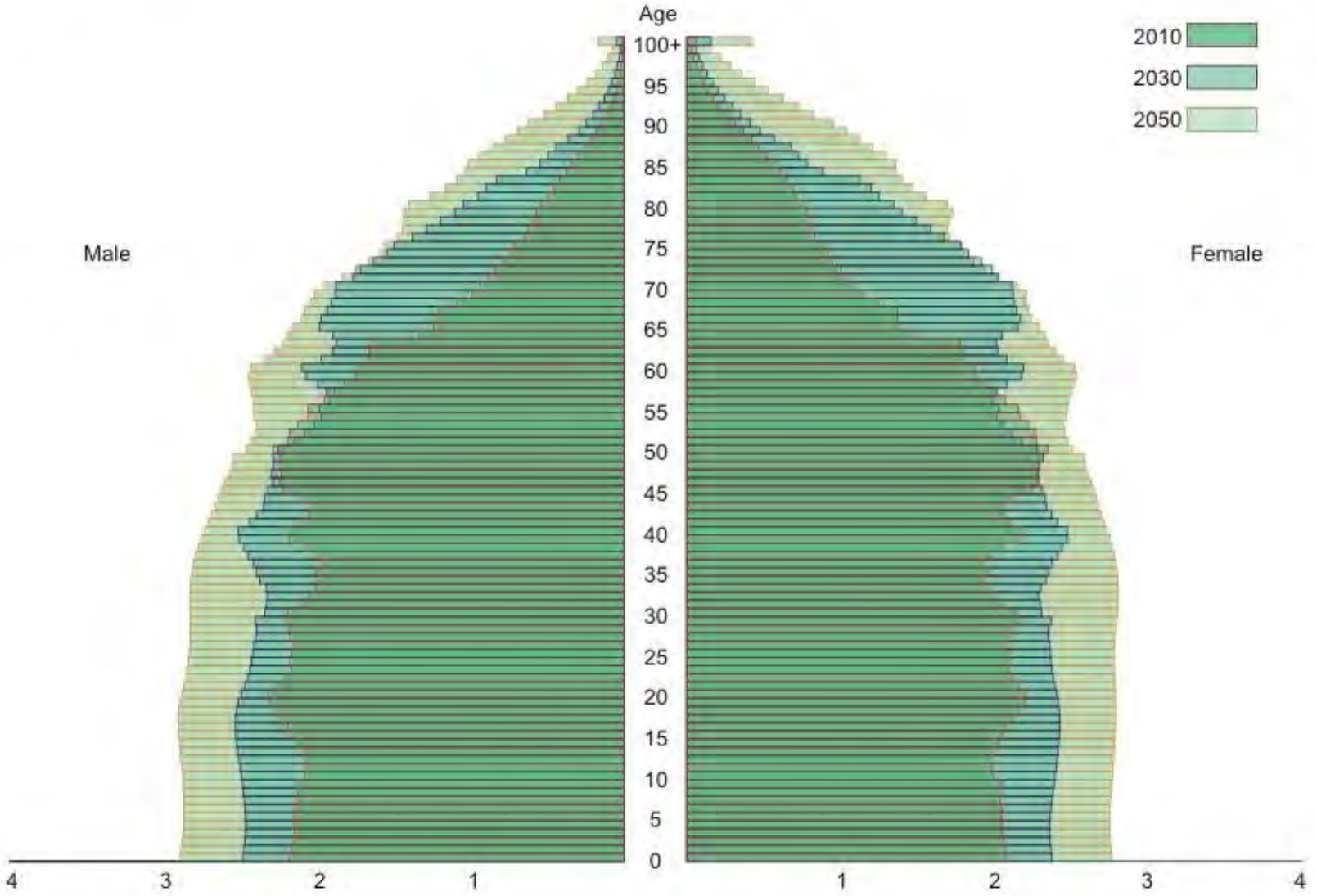


Source: Congressional Budget Office tabulations based on population projections reported in *The 2012 Long-Term Budget Outlook* (June 2012), www.cbo.gov/publication/43288.

Figure 6. Age and Sex Structure of the Population for the United States: 2010, 2030, and 2050

2008 National Projections

(In millions)



Source: U.S. Census Bureau, 2008.

TEAMWORK

You cannot teach a resident how to take great care of an elderly patient when the system is not taking care of the patient.

Ethan Cumbler MD

TEAMS

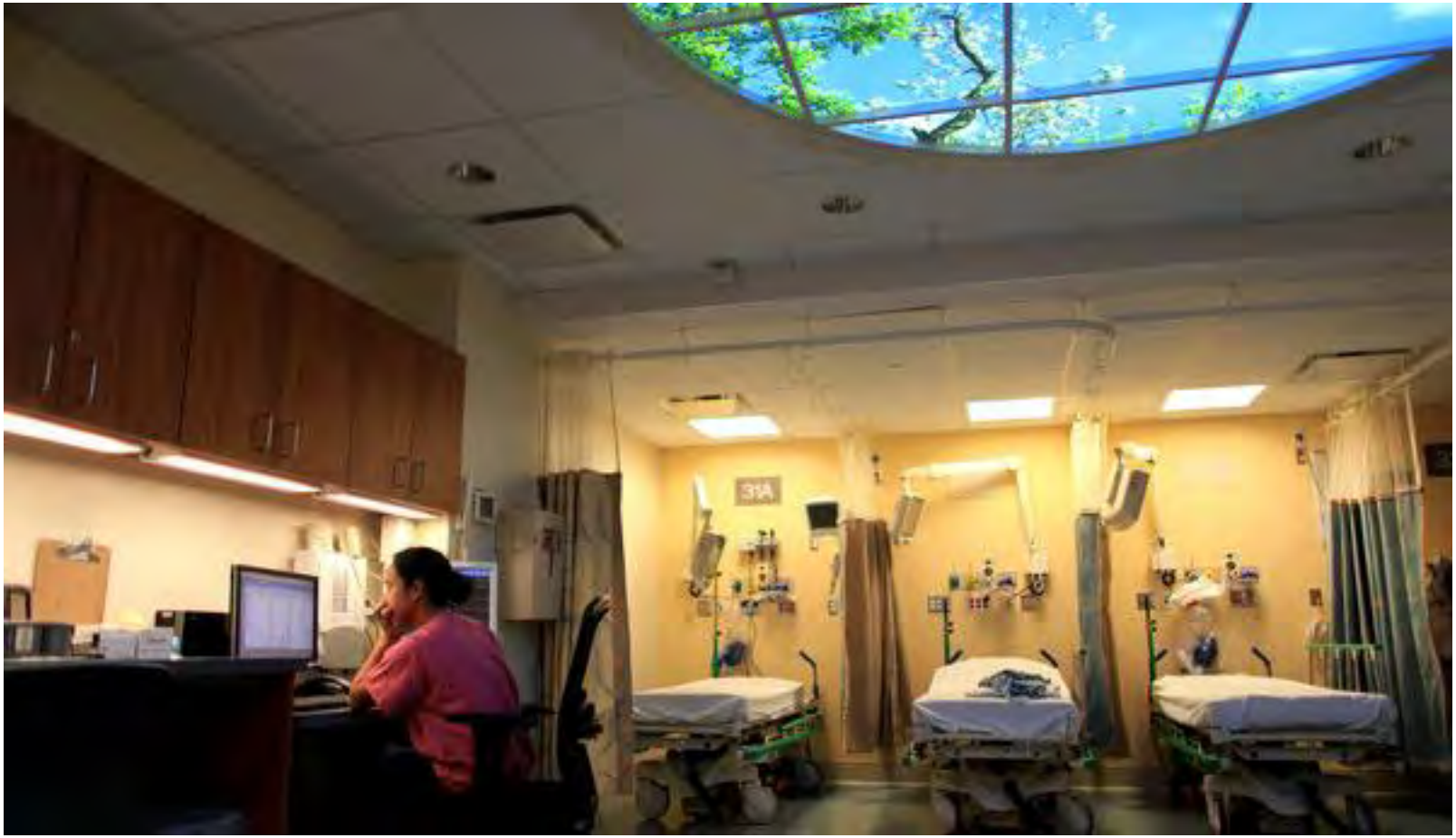
Stable groups united around a long term goal.

ANOTHER DAY IN PARADISE

“EM”

LOTS OF PEOPLE ON GURNEYS (NOT JUST USA)

MT SINAI GERI-ED



HERE'S WHAT A NORMAL ED LOOKS LIKE...

BUT OUR NEW ED…

SINGLE PATIENT ROOMS

EMERGENCY DEPARTMENTS

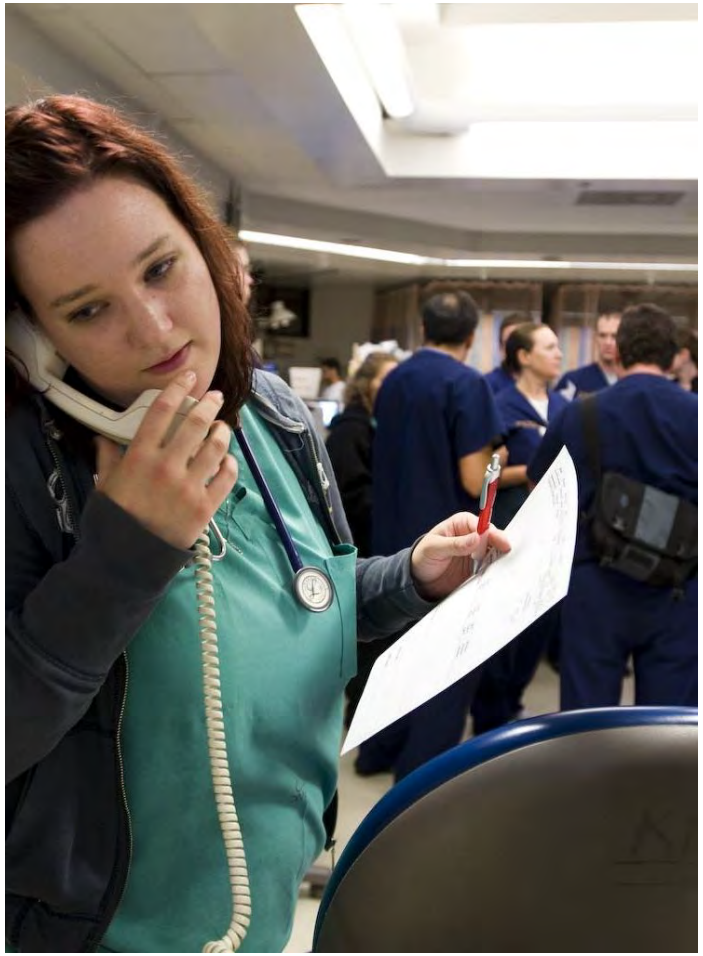
Loud

24/7

Multiple staff

Not comfortable

- **Privacy**
- **Bathrooms**
- **Gurneys**
- **No good distractions**



WHAT ARE WE DOING IN OUR ED?

Improving Care of the Elderly in the Emergency Department (ICEED).

Multidisciplinary Geriatric Journal Club

CVC day

Didactics

Care Plans like the Geriatric Fracture Program

Starting the Geriatric Emergency Medicine Fellowship

GERIATRIC ED GUIDELINES

GERIATRIC EMERGENCY DEPARTMENT GUIDELINES

American College of Emergency Physicians®
ADVANCING EMERGENCY CARE

AGS THE AMERICAN GERIATRICS SOCIETY
Geriatrics Health Professionals.
Leading change. Improving care for older adults.

ENA®
EMERGENCY NURSES ASSOCIATION
SAFE PRACTICE, SAFE CARE

SAEM Society for Academic Emergency Medicine

WHAT'S IN THE GERIATRIC ED GUIDELINES

Structures

Staff

Systems

WHAT'S IN THE GERIATRIC ED GUIDELINES

Structures

- Equipment / Supplies
- Rooms
- Overall environment

Staff

Systems

WHAT'S IN THE GERIATRIC ED GUIDELINES

Structures

Staff

- everyone and perhaps a few you had not thought of – RNs, MD/Dos, Techs, Social Workers, Discharge Planners, Navigators, Allied Health – PT, OT, Speech Therapy, Pharmacists.

Systems

WHAT'S IN THE GERIATRIC ED GUIDELINES

Structures

Staff

Systems

- Policies
- Procedures

10 THINGS WE COULD DO BETTER

1. Don’t lose their stuff
2. Think about withdrawal – alcohol & benzodiazepines
3. Give them their regular medications
4. Check in often (food, water, meds, re-orientation)
5. Don’t lose their records
6. Don’t snow them
7. Be careful with pain med dosing - Goldilocks
8. Get contact numbers for family
9. Not everyone needs a UA
10. Contact the care facility

http://www.aliem.com/transitions-of-care-top-10-things-admitting-providers-wish-older-adults/

GERIATRIC AUDIT

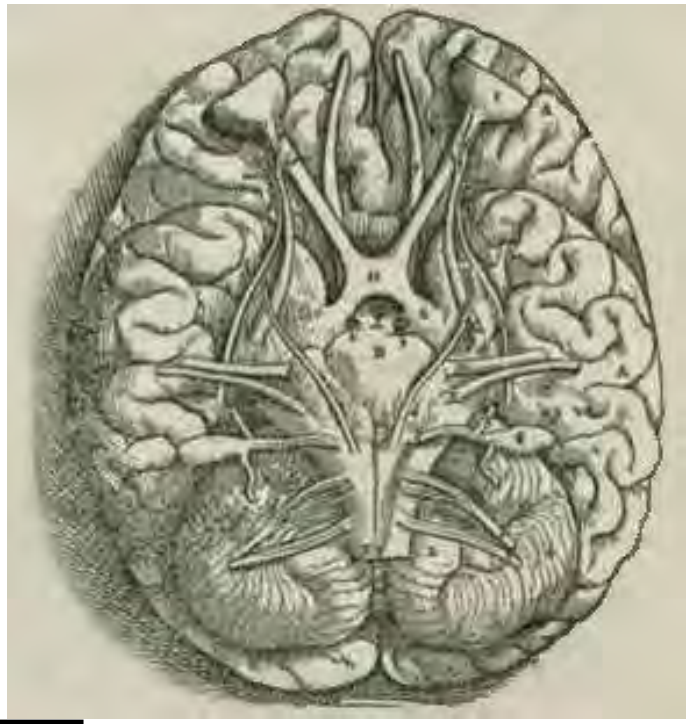
Figure 2. Sample Geriatric ED Quality Assessment Instrument (Dashboard)

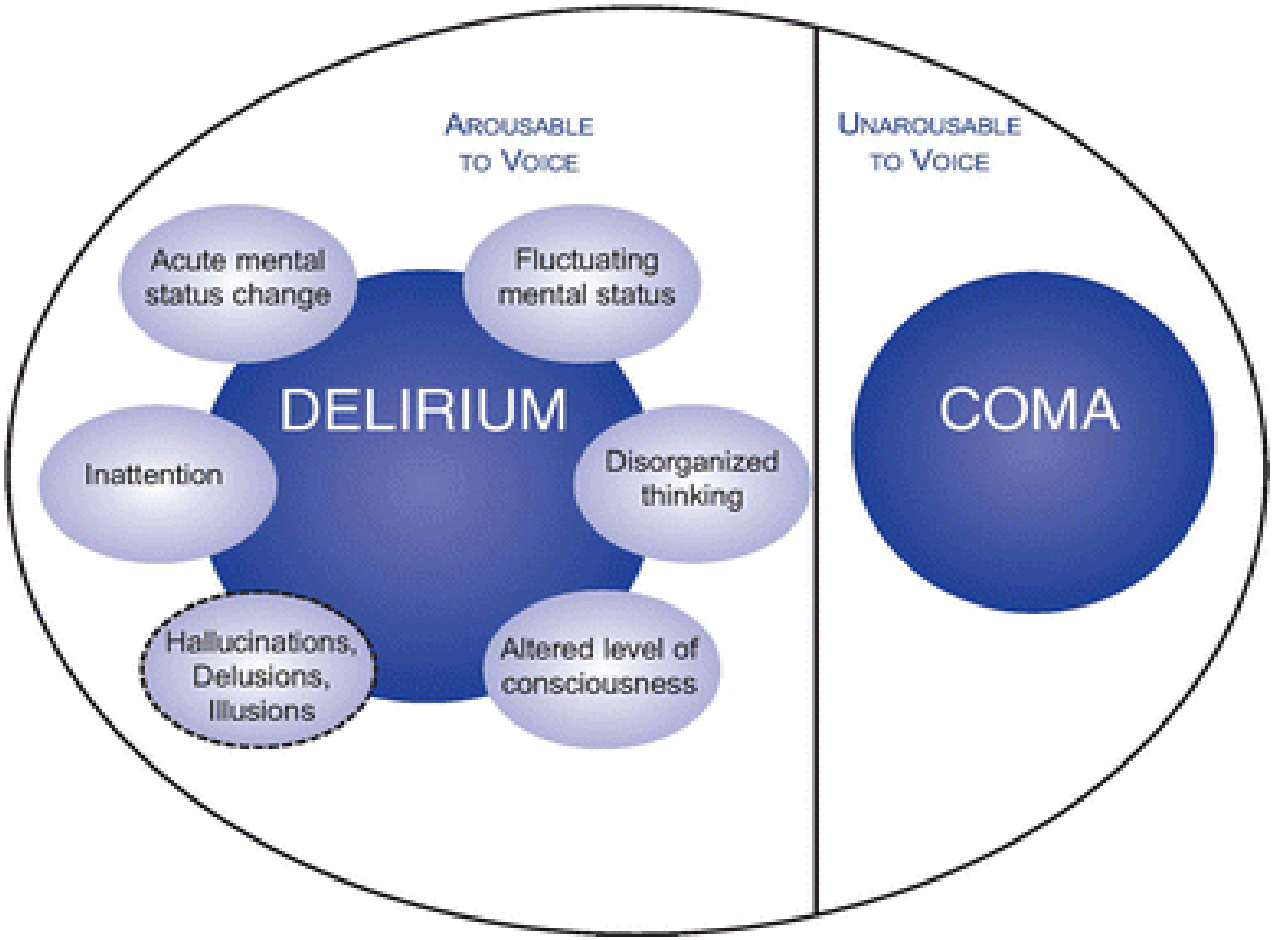
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
GLOBAL MEASURES												
Patient volume >65												
% of total admissions												
Readmissions												
72 hour ED revisits												
24 hour admission upgrades												
Geriatric abuse												
Deaths												
DISEASE SPECIFIC												
FALLS												
Hip Fractures												
Traumatic ICH												
Blunt Abdominal Injury												
Death												
Fall-Risk Assessment												
Physical Therapy Eval												
URINARY CATHETERS												
Check List Used												
Catheter Days												
Automatic Discontinue												
CAUTI Stay Length												
MEDICINE MANAGEMENT												
High Risk Meds Noted												
ED High Risk Meds												
Adverse Reaction Revisit												
Non-compliance Revisit												
DELIRIUM												
Screen Documented												
Restraint Indications												
Chemical Restraint Attempt												
Behavior Physical Restraint Used												

DELIRIUM

WHO COULD IGNORE THAT?

ACUTE BRAIN FAILURE

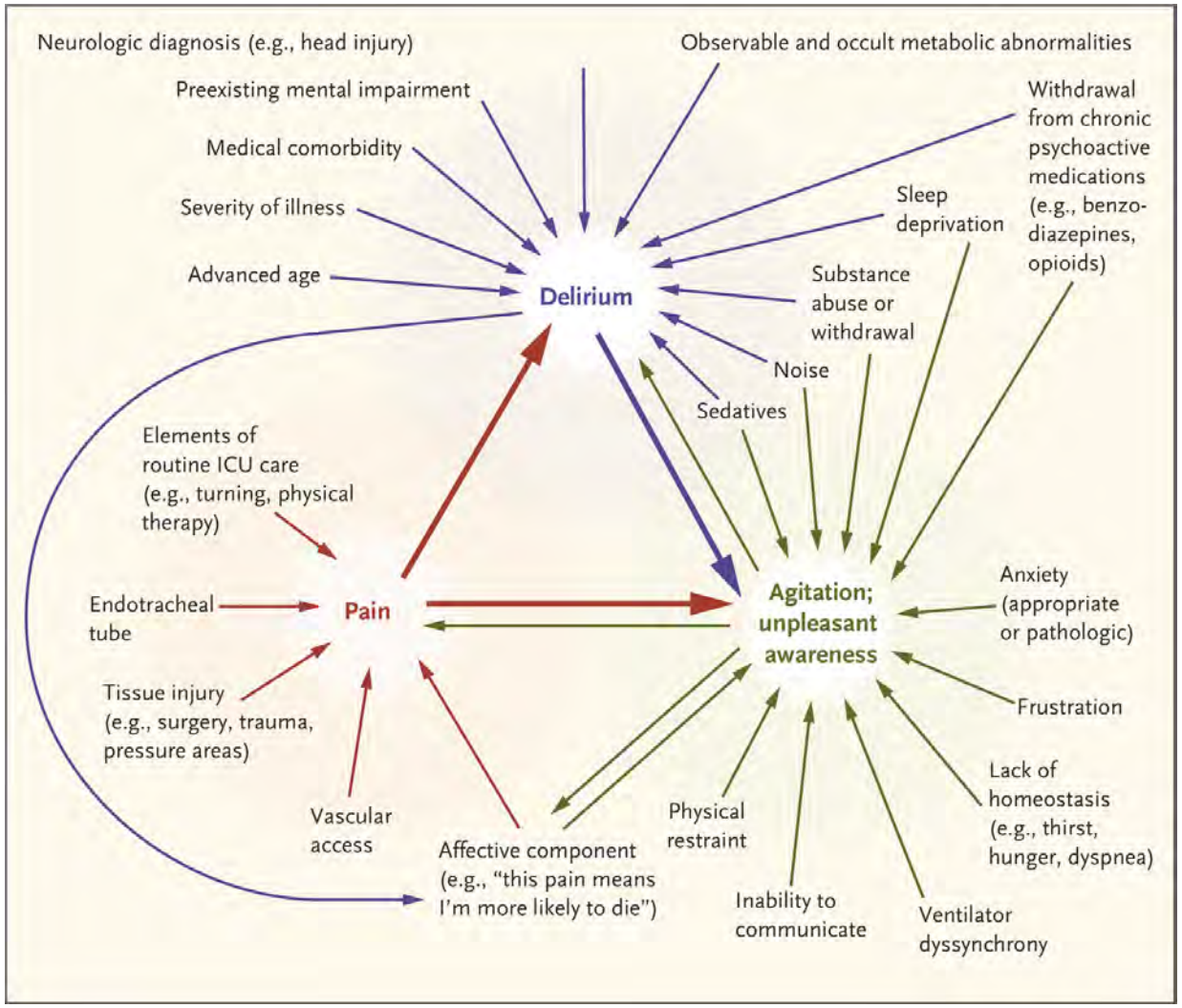




DELINEATION BETWEEN DELIRIUM AND COMA, HIGHLIGHTING THE CARDINAL SYMPTOMS OF DELIRIUM. THE DASHED LINE INDICATES OPTIONAL SYMPTOMS OF DELIRIUM (I.E., THOSE SOMETIMES PRESENT BUT NOT MANDATORY FOR THE DIAGNOSIS OF DELIRIUM AS DEFINED BY THE DSM-IV-TR)

Understanding international differences in terminology for delirium and other types of acute brain dysfunction in critically ill patients. Morandi A et al. Intensive Care Med. 2008 Oct;34(10):1907-15

Causes and Interactions of Pain, Agitation, and Delirium



Review Article: Critical Care Medicine
Sedation and Delirium in the Intensive Care Unit
Michael C. Reade, M.B., B.S., D.Phil., and Simon Finfer, M.D
N Engl J Med 2014; 370:444-454

The NEW ENGLAND JOURNAL of MEDICINE

PAIN CONTROL

- Optimize pain control
- Regular acetaminophen
- Start low and go slow
- Risk of opioids versus risk of pain
- Regional Anesthesia especially for Hip Fractures

DELIRIUM

Very expensive

US health system costs of delirium $150B per year

30-40% of cases of delirium prevented by low cost-high touch interventions

Inouye, S. K., et al. (2014). "Delirium in elderly people." Lancet 383(9920): 911-922.

Eubank, K. J. and K. E. Covinsky (2014). “Delirium Severity in the Hospitalized Patient: Time to Pay Attention." Ann Intern Med 160(8): 574-575.

HOW CAN WE MISS THIS?

We don’t recognize it

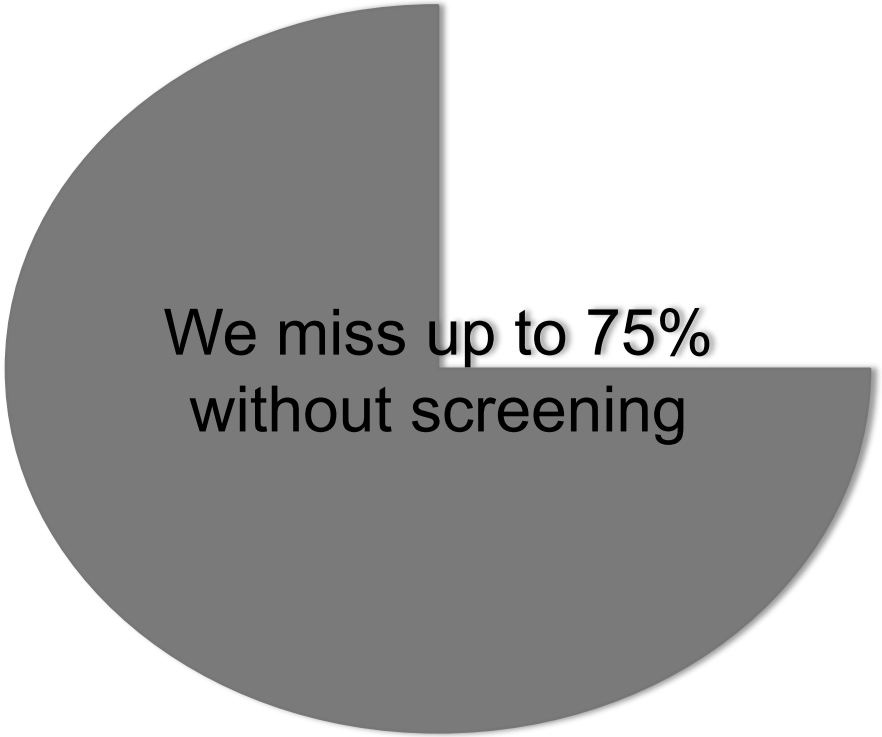
We don’t name it

“It’s just dementia”

“Altered Mental State”

Hidden in plain sight

IF YOU DON'T SCREEN YOU WILL MISS IT…



Occurrence of delirium is severely underestimated in the ICU during daily care. Peter E. Spronk, Bea Riekerk, José Hofhuis, Johannes H. Rommes. Intensive Care Med. 2009 July; 35(7): 1276–1280

Han, J. H., et al. (2009). "Delirium in older emergency department patients: recognition, risk factors, and psychomotor subtypes." Acad Emerg Med 16(3): 193-200.

No diagnostic blood, electrophysiological, or imaging test for delirium

Remains a clinical diagnosis

WHO GETS IT?

Children

Elderly

Community 1-2%

Hospitalized:

ED elderly 8-17%

NH patients in the ED 40%

Gen Med up to 30%

ICU 50-80%

Pre-existing dementia 50%

Inouye, S. K., et al. (2014). "Delirium in elderly people." Lancet 383(9920): 911-922.

OUTCOMES – MORTALITY FROM DELIRIUM

ICU have a 2-4-times ↑ risk of death both in and out of hospital

Inouye, S. K., et al. (2014). "Delirium in elderly people." Lancet 383(9920): 911-922

General medicine or old age medicine wards have a 1.5 x ↑ risk for death in the year after hospital admission

Han, J. H., et al. (2010). "Delirium in the emergency department: an independent predictor of death within 6 months." Ann Emerg Med 56(3): 244-252 e241.

ED pts have a roughly 70% ↑ risk of death during the first 6 months after the visit.

COGNITIVE IMPAIRMENT OUTCOMES FROM DELIRIUM

Common, and lasts beyond initial period

Up to a year

Delirium is more common in patients with dementia

Dementia more likely to subsequently develop in patients who have had delirium

HYPERACTIVE----------HYPOACTIVE

DELIRIUM SUBTYPES

HAN, J. H., ET AL. (2009). "DELIRIUM IN OLDER EMERGENCY DEPARTMENT PATIENTS: RECOGNITION, RISK FACTORS, AND PSYCHOMOTOR SUBTYPES." ACAD EMERG MED 16(3): 193-200.

HYPERACTIVE	HYPOACTIVE
Easy to recognize	Harder to recognize
Agitated	Quieter
Hypervigilent	Easier to care for
Risk to self - agitated, falls**	Perhaps worse outcomes overall
Distressing to families and staff	Not distressing to medical staff or families

POSTOPERATIVE DELIRIUM IN OLDER ADULTS:
BEST PRACTICE STATEMENT AGS

Most common surgical complication in older adults

Occurs in 5% - 50% of older patients after an operation

More than one-third of all inpatient operations in USA on patients 65 years or older.

Episode of delirium can initiate a cascade of deleterious clinical events

- major postoperative complications
- prolonged hospitalization
- loss of functional independence
- reduced cognitive function
- Death

Preventable in up to 40% of patients

Postoperative Delirium in Older Adults: Best Practice Statement American Geriatrics Society

Inouye, Sharon K. et al.

Journal of the American College of Surgeons , Volume 220 , Issue 2 , 136 - 148.e1

POSTOPERATIVE DELIRIUM IN OLDER ADULTS:
BEST PRACTICE STATEMENT AGS

<u>Prevention</u> interventions that should be implemented peri-operatively

- Nonpharmacologic
- Pharmarmacologic

<u>Treatment/Management</u> interventions that should be implemented peri-operatively

- Nonpharmacologic
- Pharmarmacologic

Postoperative Delirium in Older Adults: Best Practice Statement American Geriatrics Society

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Journal of the American College of Surgeons , Volume 220 , Issue 2 , 136 - 148.e1

PREVENTION

Aimed at primary prevention

High risk individuals:

Postoperative Delirium in Older Adults: Best Practice Statement American Geriatrics Society

Inouye, Sharon K. et al.

Journal of the American College of Surgeons , Volume 220 , Issue 2 , 136 - 148.e1

LEADING PREDISPOSING RISK FACTORS

dementia or cognitive impairment

functional impairment,

visual impairment

history of alcohol misuse

advanced age (>70 years).

NICE GUIDELINES – DELIRIUM RISK FACTORS

Age > 65yo

Cognitive impairment

- Past or present
- Hx dementia

Current hip fracture

Severe acute illness

NICE Guidelines

Published 2012, updated 2014

RESTRAINTS

Restraints includes single tethers

Oxygen tubing

Foley catheters 2.4RR

IVs

INFECTION

- Pneumonia
- Urinary tract infections
- Skin
- CNS uncommon

Reuben DB, Herr KA, Pacala JT, et al. Geriatrics at your Fingertips:2014 , 16th edition. AGS

MEDICATIONS

Anticholinergics

Anti-inflammatory including steroids

Cardiovascular drugs esp digoxin, anti-HTN, diuretics

Lithium

Toxicity or withdrawal

- Alcohol
- Benzodiazepines
- Opiates

Reuben DB, Herr KA, Pacala JT, et al. Geriatrics at your Fingertips:2014, 16th edition. AGS

OTHER CLINICAL CONDITIONS

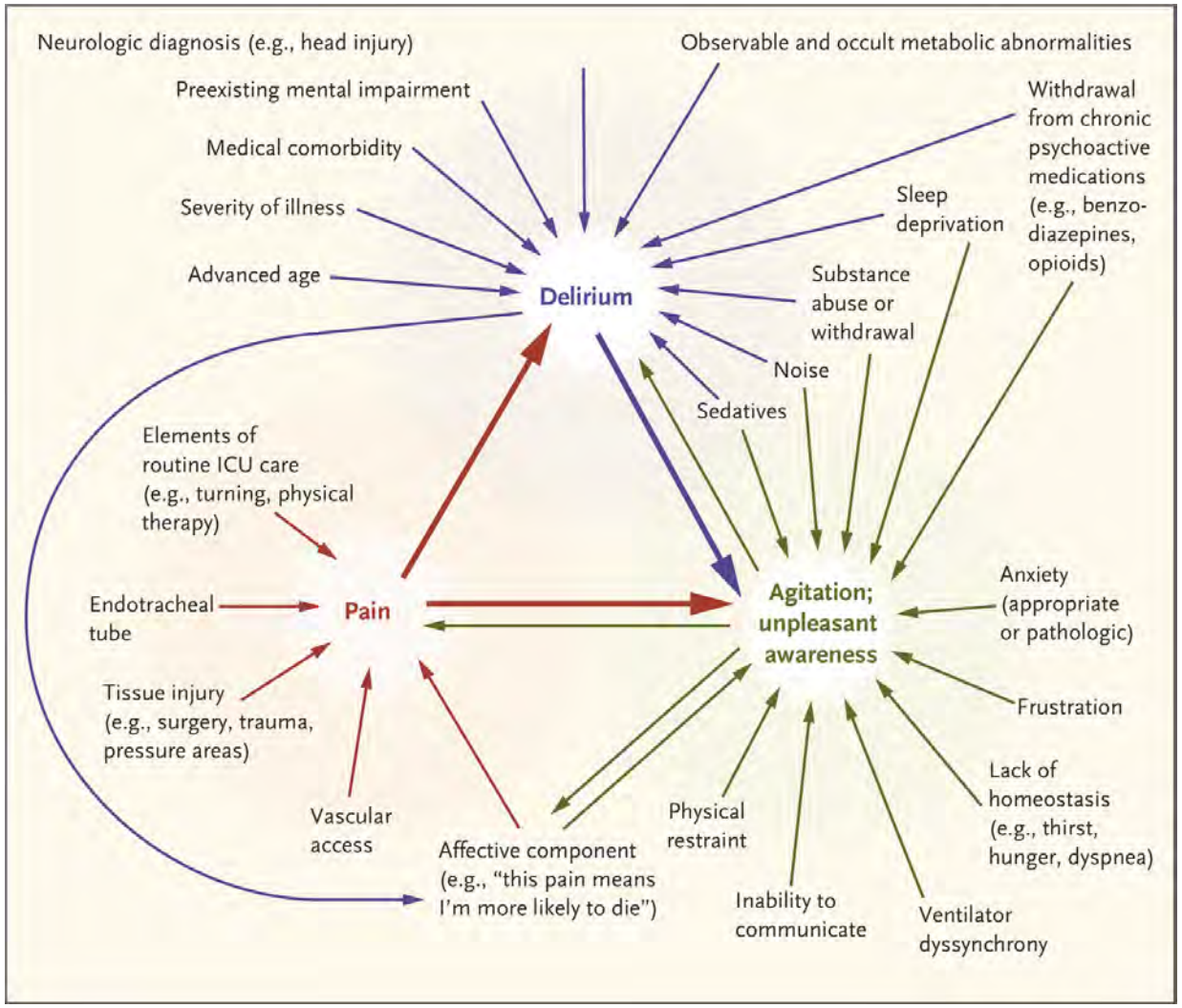
Metabolic – hypo/hyperglycemia, dehydration, electrolyte imbalance, end-organ failure, hypercapnia, hypoxia

CVS – arrhythmia, HF, MI

CNS – stroke/TIA, seizures, SDH, tumors

Reuben DB, Herr KA, Pacala JT, et al. Geriatrics at your Fingertips:2014 , 16th edition. AGS

Causes and Interactions of Pain, Agitation, and Delirium



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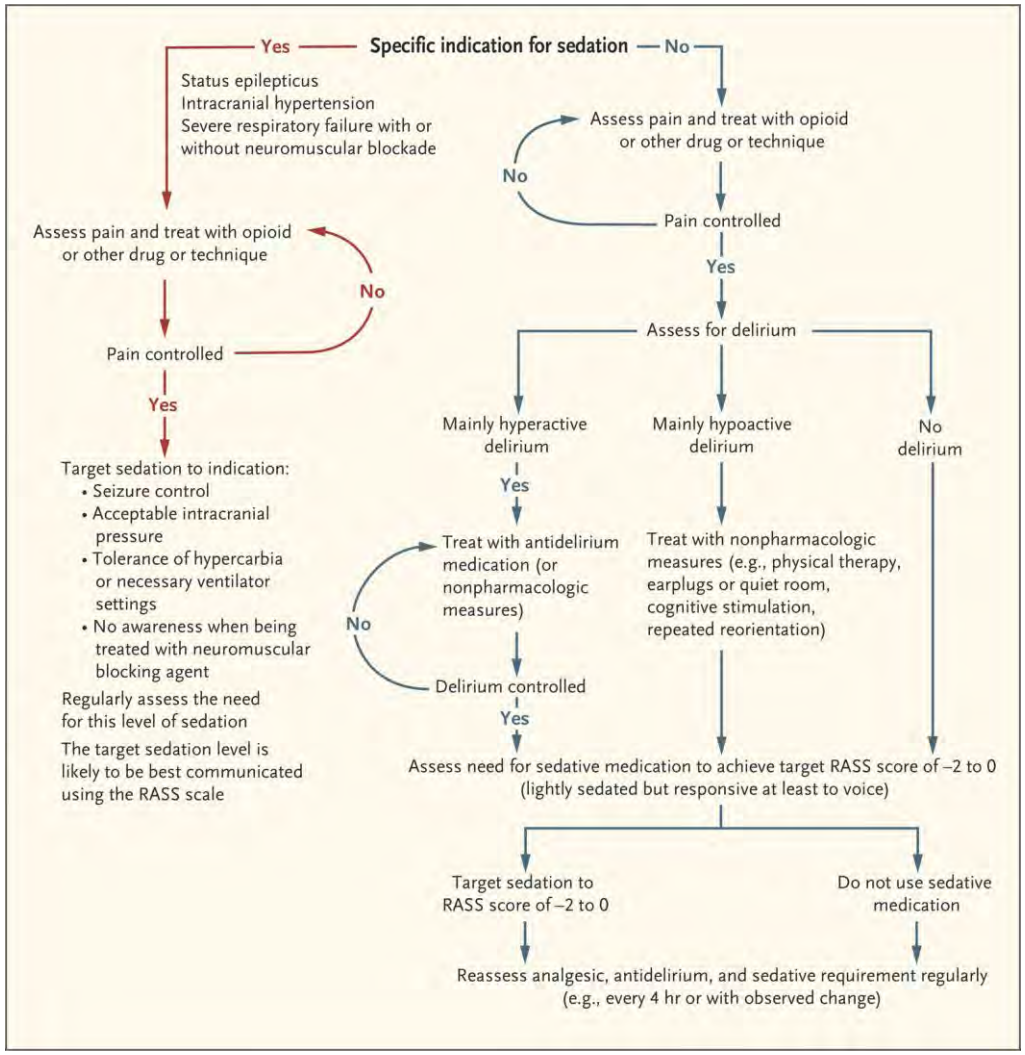
IN THE ED:

FIDGETS

PAIN MANAGEMENT

Algorithm for the Coordinated Management of Pain, Agitation, and Delirium.



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DELIRIUM MANAGEMENT

FALLS

One out of three older adults (those aged 65 or older) falls each year

Among older adults, falls are the leading cause of both fatal and nonfatal injuries.

CDC STEADI - stopping elderly accidents deaths and injuries

FALLS - OUTCOMES

Injury - fractures, lacerations

Fragility fractures: distal radius, vertebral body, pelvis, hip fractures**

Falls are the most common cause of traumatic brain injury

Fear of Falling

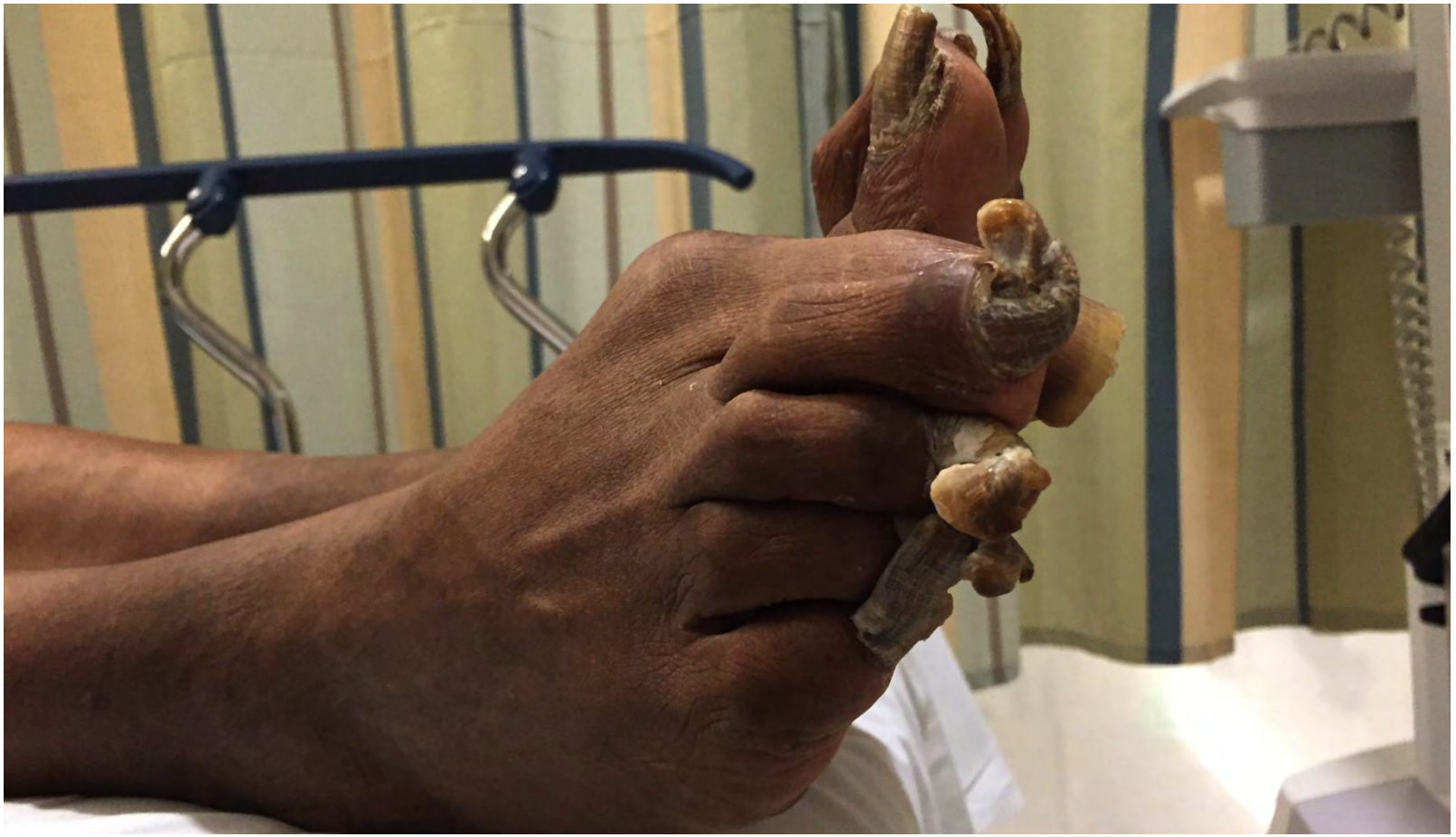
CDC STEADI - stopping elderly accidents deaths and injuries

FEAR OF FALLING

Negative spiral of reduced activity

Fear limits activities, which leads to reduced mobility and loss of physical fitness, and in turn increases their actual risk of falling

SIMPLE WAYS TO INCORPORATE FALL SCREENING



FALL SCREENING

Three Questions to Ask Your Older Adult Patients

1. Have you fallen in the past year?

2. Do you feel unsteady when standing or walking?

3. Do you worry about falling?

STEADI

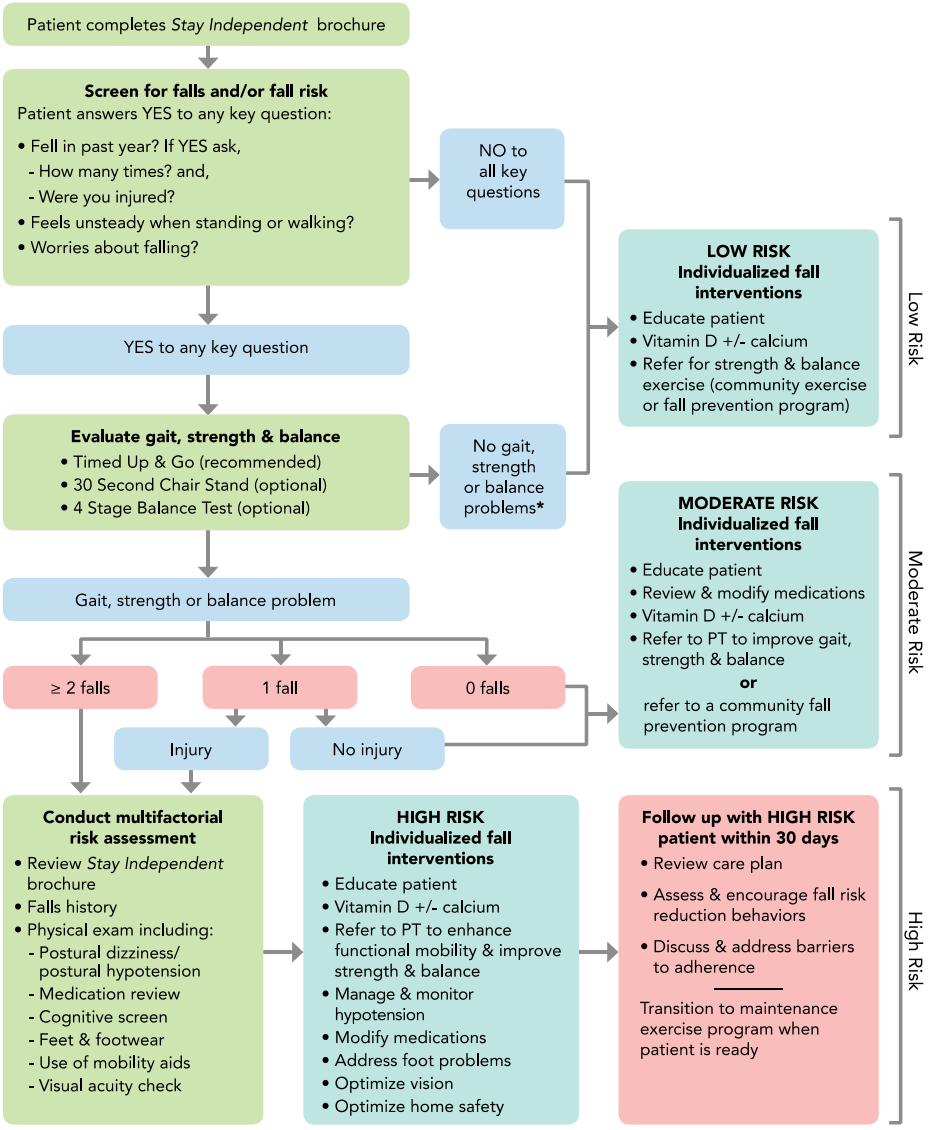
ASK patients if they've fallen in the past year, feel unsteady, or worry about falling.

REVIEW medications and stop, switch, or reduce the dosage of drugs that increase fall risk.

RECOMMEND Vitamin D supplements of at least 800 IU/day with calcium.

CDC STEADI - stopping elderly accidents deaths and injuries

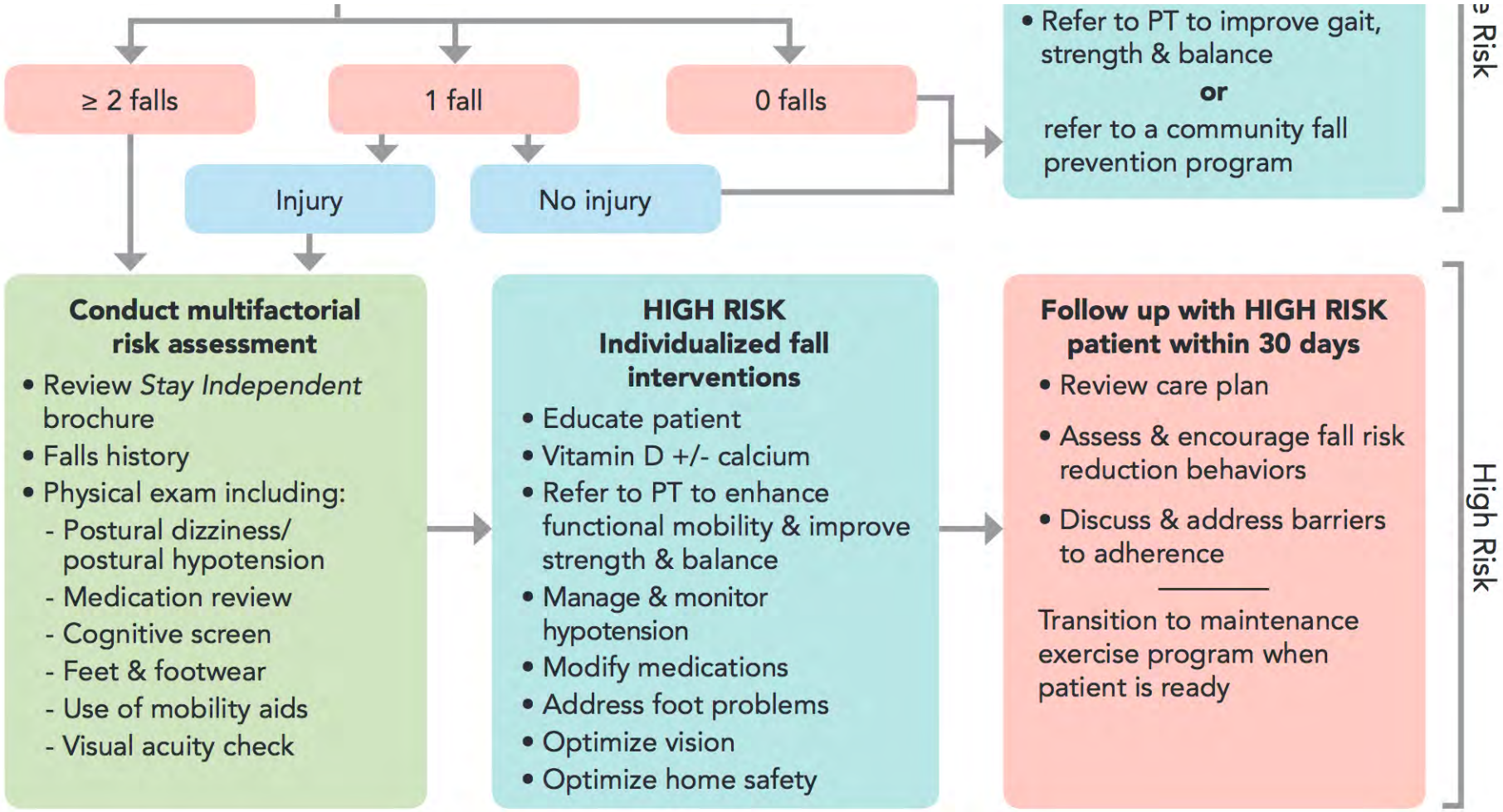
Algorithm for Fall Risk Assessment & Interventions



*For these patients, consider additional risk assessment (e.g., medication review, cognitive screen, syncope)

Centers for Disease Control and Prevention
National Center for Injury Prevention and Control

STEADI Stopping Elderly Accidents, Deaths & Injuries


≥ 2 falls
1 fall
0 falls
Injury
No injury
• Refer to PT to improve gait, strength & balance
or
refer to a community fall prevention program
Conduct multifactorial risk assessment
• Review Stay Independent brochure
• Falls history
• Physical exam including:
- Postural dizziness/ postural hypotension
- Medication review
- Cognitive screen
- Feet & footwear
- Use of mobility aids
- Visual acuity check
HIGH RISK Individualized fall interventions
• Educate patient
• Vitamin D +/- calcium
• Refer to PT to enhance functional mobility & improve strength & balance
• Manage & monitor hypotension
• Modify medications
• Address foot problems
• Optimize vision
• Optimize home safety
Follow up with HIGH RISK patient within 30 days
• Review care plan
• Assess & encourage fall risk reduction behaviors
• Discuss & address barriers to adherence
Transition to maintenance exercise program when patient is ready
High Risk

Fall Risk Checklist

Patient: Date: Time: AM/PM

Fall Risk Factor Identified	Factor Present?	Notes
Falls History		
Any falls in past year?	☐ Yes ☐ No	
Worries about falling or feels unsteady when standing or walking?	☐ Yes ☐ No	
Medical Conditions		
Problems with heart rate and/or rhythm	☐ Yes ☐ No	
Cognitive impairment	☐ Yes ☐ No	
Incontinence	☐ Yes ☐ No	
Depression	☐ Yes ☐ No	
Foot problems	☐ Yes ☐ No	
Other medical conditions (Specify)	☐ Yes ☐ No	
Medications		
Any psychoactive medications, medications with anticholinergic side effects, and/or sedating OTCs? (e.g., Benadryl, Tylenol PM)	☐ Yes ☐ No	
Gait, Strength & Balance		
Timed Up and Go (TUG) Test ≥12 seconds	☐ Yes ☐ No	
30-Second Chair Stand Test Below average score (See table on back)	☐ Yes ☐ No	
4-Stage Balance Test Full tandem stance <10 seconds	☐ Yes ☐ No	
Vision		
Acuity <20/40 OR no eye exam in >1 year	☐ Yes ☐ No	
Postural Hypotension		
A decrease in systolic BP ≥20 mm Hg or a diastolic bp of ≥10 mm Hg or lightheadedness or dizziness from lying to standing?	☐ Yes ☐ No	
Other Risk Factors (Specify)		
	☐ Yes ☐ No	
	☐ Yes ☐ No	

Centers for Disease Control and Prevention
National Center for Injury Prevention and Control

STEADI Stopping Elderly Accidents, Deaths & Injuries

STEADI Materials for Health Care Providers

Make Fall Prevention Part of Your Practice

Triage Your Patients Based on Fall Risk

This tool walks health care providers through assessing a patient's fall risk, educating patients, selecting interventions, and following up.

Stay Independent

Mantenga su independencia

This brochure offers a checklist that providers and patients can use to check for risk of falling. (Available in both English and Spanish.)

Order: English version

Prevent Falls in Older Patients, Provider Pocket Guide

This small, easy-to-use tool walks health care providers through key points of fall prevention.

See Your Patient's Risk at a Glance

This checklist allows health care providers to summarize an older patient's fall risk.

Integrate Fall Prevention into Your Practice

This wall chart helps health care providers determine who in their practice will be responsible for conducting fall risk assessments, delivering interventions, and providing education to older patients.

Talk about Fall Prevention with Your Patients

This document can help health care providers comfortably talk about fall prevention with patients.

Get Background Information about Falls

Falls Are a Major Threat for Your Patients

Learn how serious a problem falls are for older adults.

Risk Factors for Falls

Learn which modifiable risk factors you should focus on first to prevent falls among your patients.

Medications Linked to Falls

Learn how medication management can reduce falls.

WHO SHOULD EXERCISE?

EVERYONE, UP TO AND INCLUDING PEOPLE ON VENTILATORS

WHAT KIND OF EXERCISE SHOULD I DO?

The kind you keep doing…

TYPES OF EXERCISE

Strength

Balance

Cardiovascular (cardio) or Endurance

Stretching or flexibility

IF EXERCISE IS NEW TO YOU…

Check with your doctor first.

Start slow and go slow.

Persistence is key

Start simple

Make it fun

Technology can help

HOW MUCH?

A summary of the WHO recommendations for exercise for people aged 65 years and older

At least 150 min of moderate-intensity **aerobic activity**, or at least 75 min of vigorous-intensity aerobic activity, or an equivalent combination.

Aerobic activity should be performed in bouts of at least 10 min duration.

People with poor mobility should do **balance exercise** to prevent falls on 3 or more days.

Muscle-strengthening activities should be done on two or more days.

If older adults are unable to do the recommended amounts of physical activity due to health conditions, **they should be as physically active as they are able**

MAKE IT FUN AND FUNCTIONAL

TYPES OF EXERCISE

Strength

Balance

Cardiovascular (cardio) or Endurance

Stretching or flexibility

BALANCE EXERCISES TO PREVENT FALLS

Prevent falls

Prevent injuries caused by falling.

- **especially fractures.**

Tai Chi is the best studied.

IF EXERCISE IS NEW TO YOU…

Check with your doctor first.

Start slow and go slow.

Persistence is key

Start simple

Make it fun

Technology can help

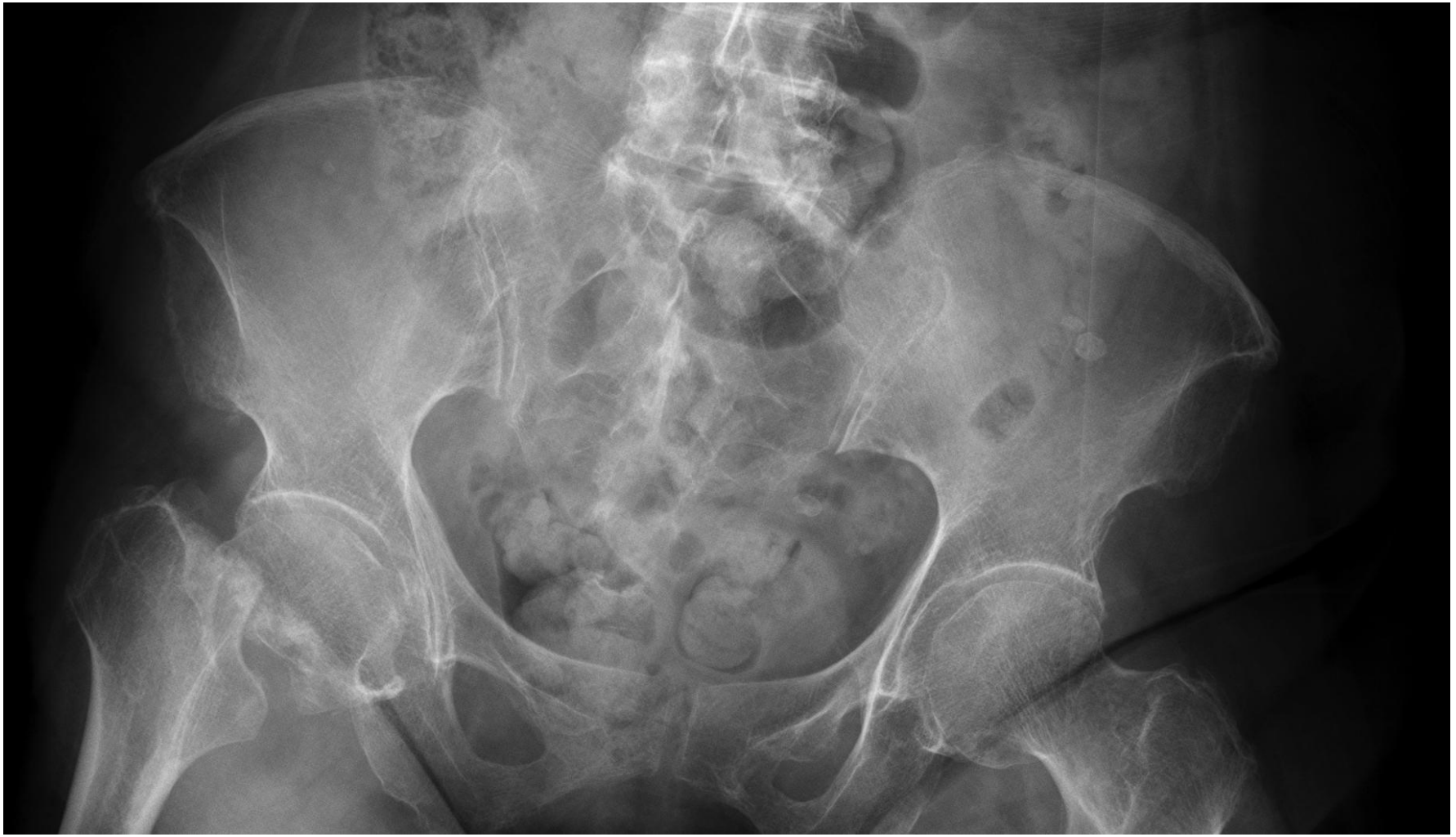
EXERCISE

Older people tend to honor appointments with others.

Outpatient rehab, physical therapy.

HARRIETTE THOMPSON

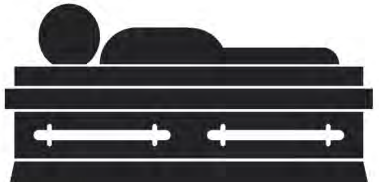
HIP FRACTURES



BONE ATTACK

OUTCOMES FROM HIP FRACTURE

5% die in hospital



10% dead within one month

20-30% dead within one year

75% in women

Men have higher mortality

50% from community live in NH at one year

GERIATRIC FRACTURE PROGRAM

Replicates programs in other centers

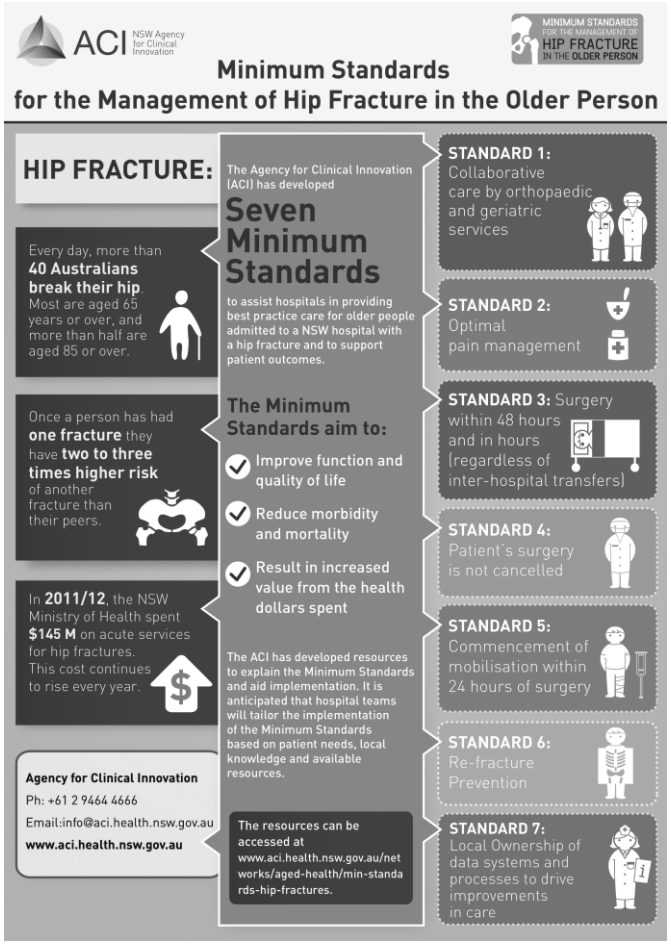
Our LOS for Hip fractures > 8 days

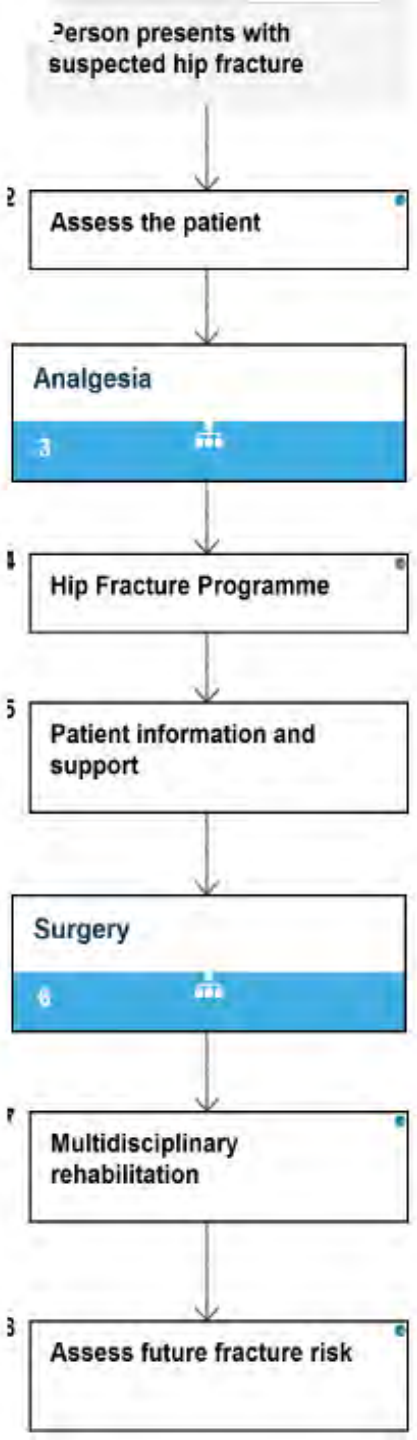
ICU admissions >20%

National average <6 days

GFP <5 days

GERIATRIC FRACTURE PROGRAM





GERIATRIC FRACTURE PROGRAMS

Co-managed / collaborative model – orthopedics & geriatrics

Multidisciplinary model – especially case management & PT

Optimize pain management

Early operative fixation

- within 48 hours
- during regular hours
- not cancelled

Early mobilization - 24 hours post operative.

PAIN MANAGEMENT BUNDLE

Early and often

Goldilocks – not too little and not too much

Pain meds before imaging

If need more than TWO doses of opioids, consider regional anesthesia.

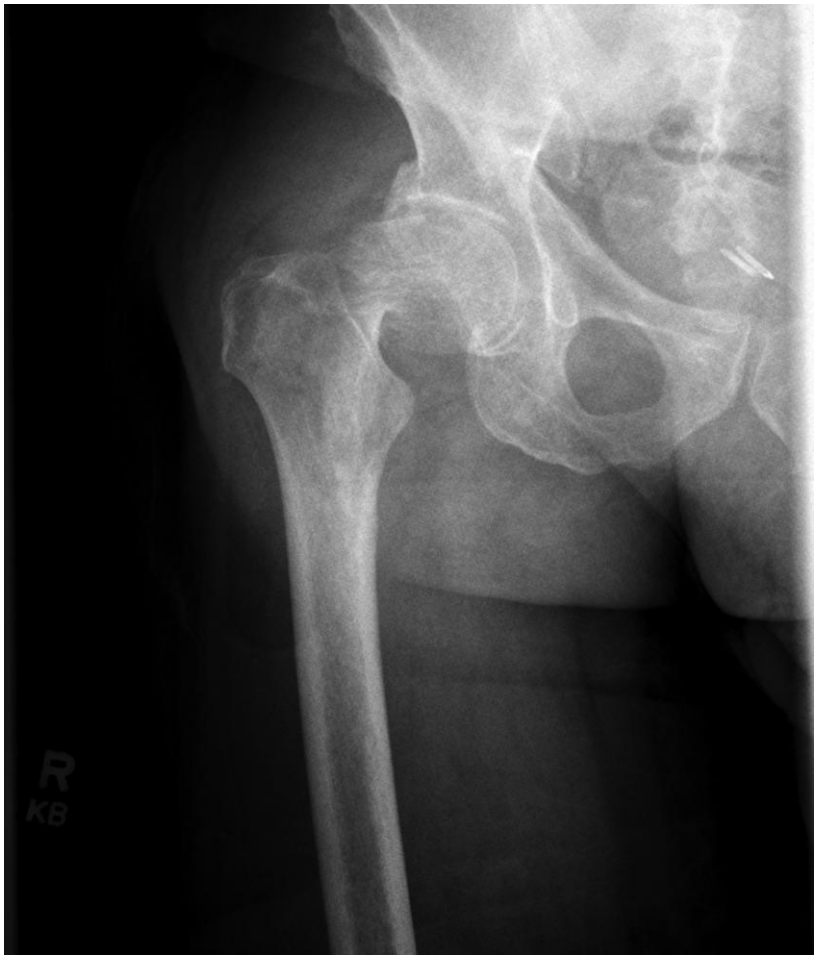
At UC Davis – we perform the Fascia Iliaca Compartment Block

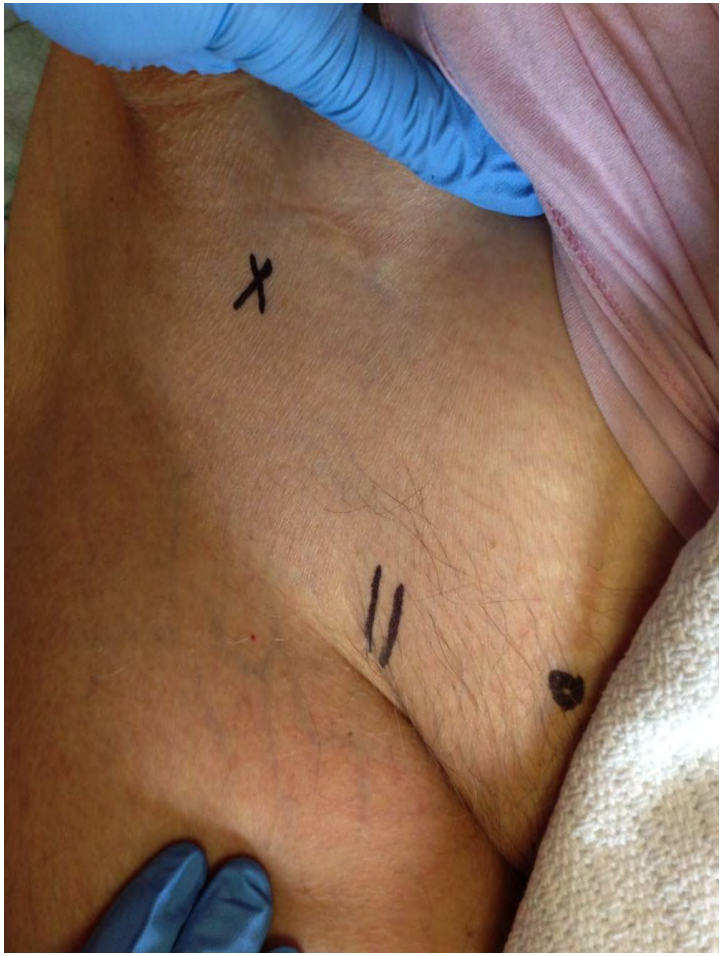
PAIN MANAGEMENT BUNDLE

1. Compassionate
2. Reduces delirium

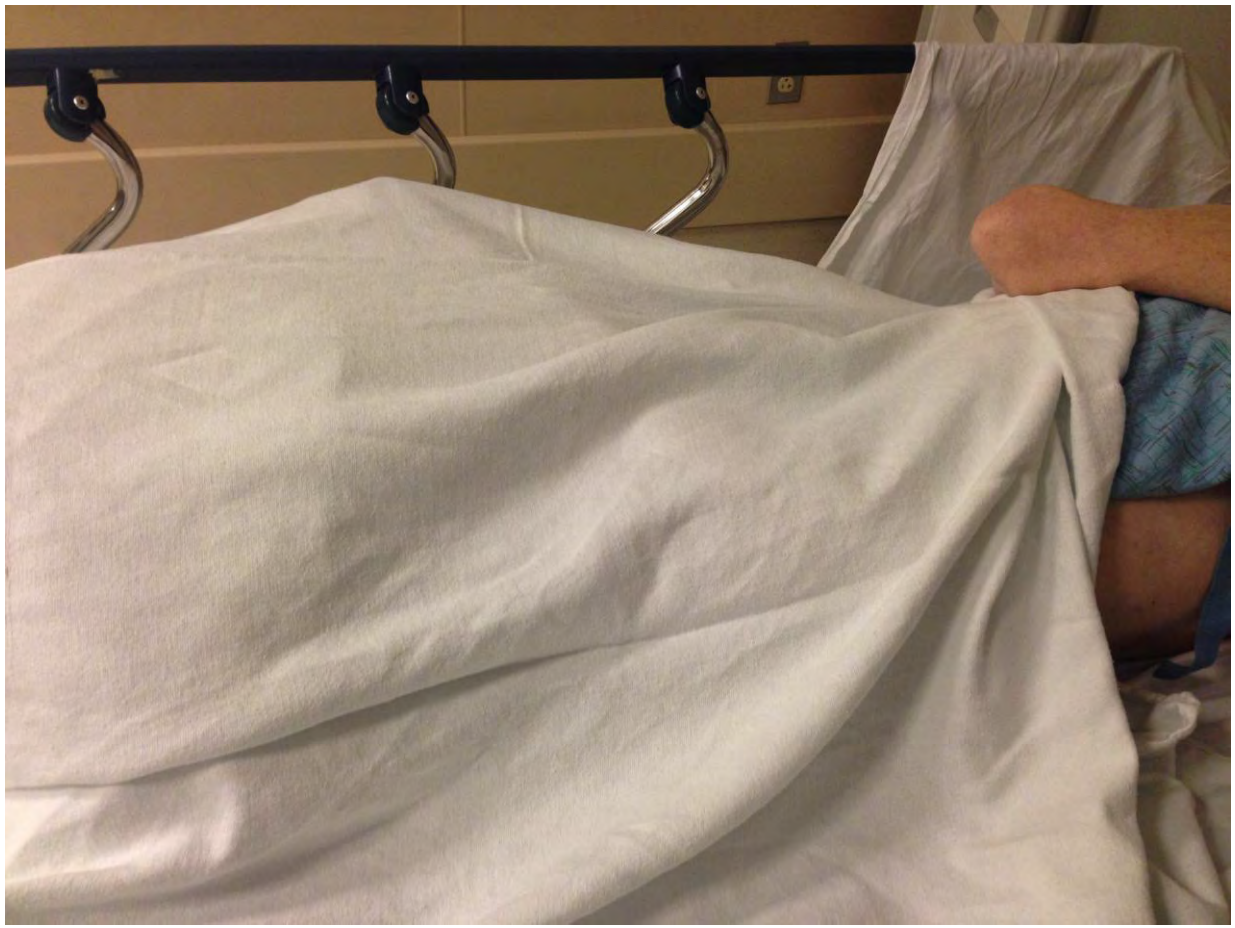
Fascia Iliaca Compartment block is easy and has low risk of complications.

SIMPLE LANDMARK BASED TECHNIQUE +/- ULTRASOUND

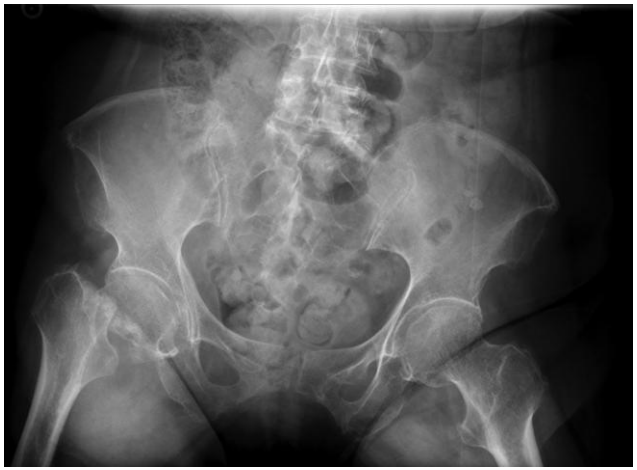




FICB



SUMMARY



THANK YOU

USEFUL RESOURCES

CDC STEADI

http://www.cdc.gov/homeandrecreationalsafety/Falls/steadi/materials.html

Geriatric ED Guidelines:

http://www.acep.org/geriEDguidelines/

Delirium:

Inouye, S. K., et al. (2014). "Delirium in elderly people." Lancet 383(9920): 911-922. A very good summary article.