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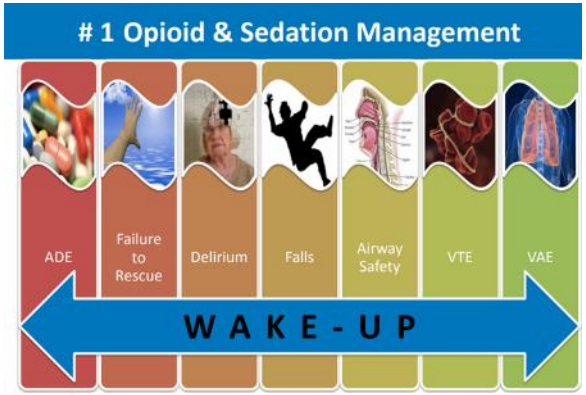

Wake Up to DELIRIUM!

March 20, 2018

IHAconnect.org/Quality-Patient-Safety

Indiana's Bold Aim

Indiana Patient Safety Center
of the Indiana Hospital Association

To make Indiana the safest place to receive health care in the United States…
if not the world

1 Opioid & Sedation Management

Indiana Patient Safety Center
of the Indiana Hospital Association

Wake Up Webinars

Indiana Patient Safety Center
of the Indiana Hospital Association

State of the State: State & National Opioid Stats and Emergency Department Point Program	•January 23, 3-4pm ET: Kaitlyn Boller, MHA & Krista Brucker, MD •**Audience**: Emergency Dept personnel, LCSW, pharmacy, discharge planners, care coordinators, quality, educators
Obstructive Sleep Apnea & STOP BANG Assessment	•February 20, 3-4pm ET: Abhinav Singh, MD & Debby Hentz •**Audience**: Medical Surgical Staff, Respiratory, Educators
Sedation Management and Opioid Practices & the ABCDEF Bundle	•March 6, 3-4pm ET: Opioid & Sedation Management Best Practices & ABCDEF Bundle •Maryanne Whitney, Cynosure Health & Jennifer Hittle, IU Health Arnette •**Audience:** ICU/Medical/Surgical/Procedural Staff & Managers, Pharmacy, Respiratory, Educators
Delirium Assessment, Prevention, & Treatment	•March 20, 3-4pm ET: Malaz Boustani, MD •**Audience**: Quality, ICU/Medical/Surgical Staff & Managers, Pharmacy, Educators

Use the following to join each installment in the series:

Dial in number: (888) 390-3967 **Participant link:** https://join.onstreammedia.com

WAKE UP

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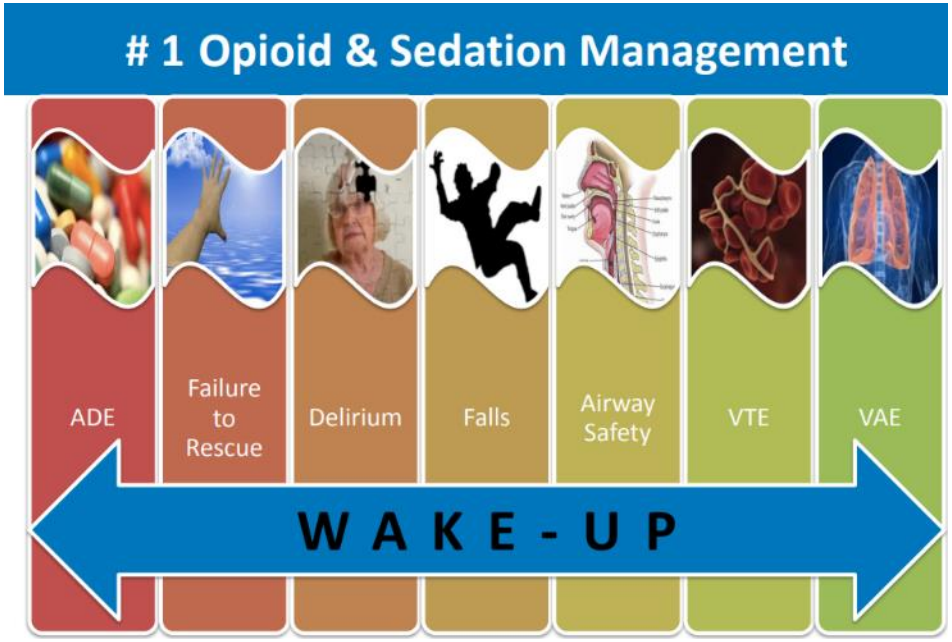
WAKE UP promotes opioid and sedation management to reduce unnecessary sleepiness and sedation.

- Informational State Survey
- Educational Webinars
- Online Resources
  - Webinar recordings, resource sheet, webinar information sheet and pre-written WAKE UP social media are available here on the IHAconnect.org website: https://www.ihaconnect.org/patientsafety/Initiatives/Pages/UP-Campaign.aspx



Wake-Up Resources

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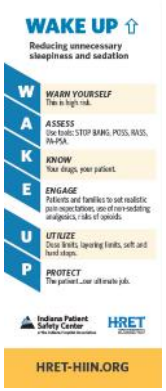

- *Social Media*
- *Resource Sheet*
- *Webinar Information*
  - (click hyperlink above to access—also accessible on IHA website-Patient Safety Up Campaign)
- *HIIN Wake UP Self-Assessment & Monitoring Tool-*

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MULTIMODAL PAIN MANAGEMENT

- *Combination of opioid and one or more other drugs*
  - acetaminophen (Tylenol, others)
  - ibuprofen (Advil, Motrin IB, others)
  - celecoxib (Celebrex)
  - ketamine (Ketalar)
  - gabapentin (Gralise, Neurontin)
- *Non-pharmacological interventions*

www.mayoclinic.org/pain-medications/art-20046452

CAN WE MANAGE PAIN WITH NON-PHARMACOLOGIC METHODS?

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What do we do at home?

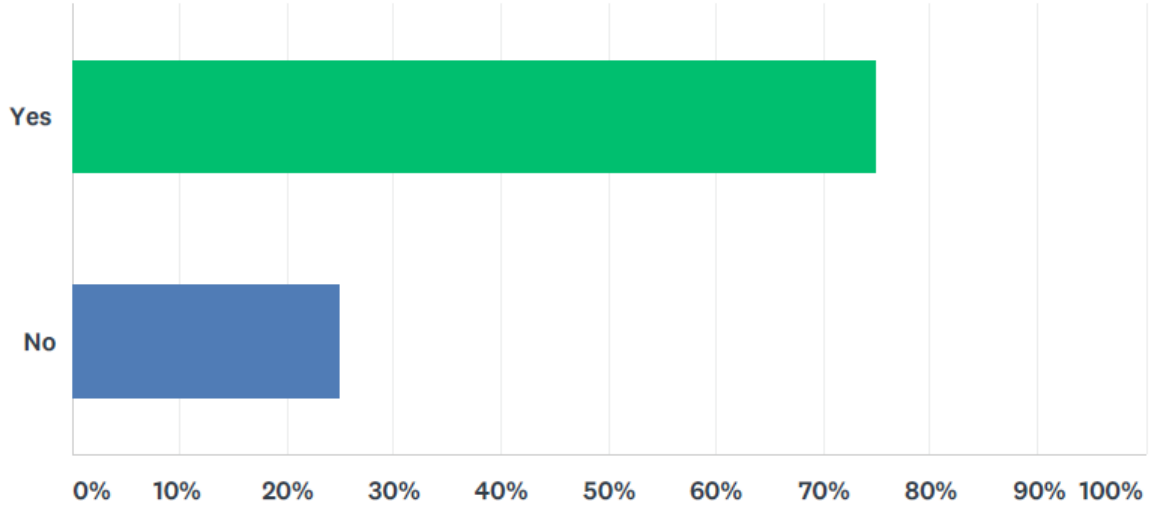
Comfort measures:

- Aromatherapy
- Massage
- Herbal tea
- Stress ball
- Music
- Pet therapy
- Warm compresses, blankets
- Ice packs
- Extra pillows

Indiana Hospital Association (IHA) HIIN WAKE Up Survey

Q2 We use a standardized delirium screening tool for assessing and monitoring delirium or confusion.

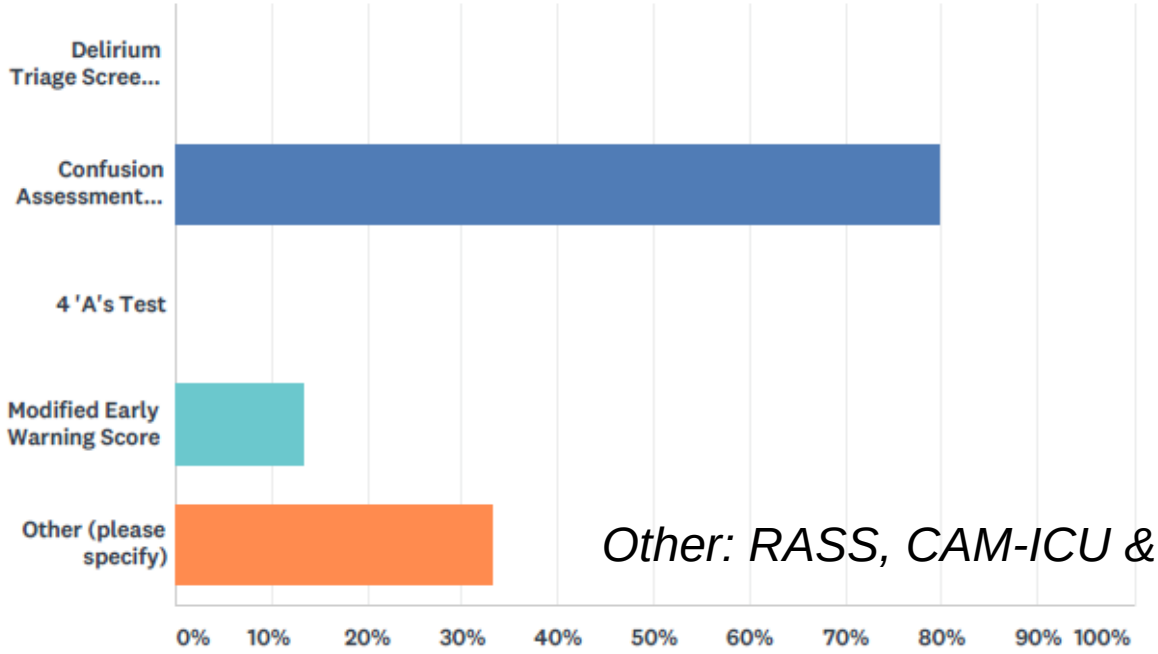
Answered: 20 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	75.00%	15
No	25.00%	5
TOTAL		20

Q3 If yes, please select which of the following tools are in place:

Answered: 15 Skipped: 5



Other: RASS, CAM-ICU & bCam, POSS

ANSWER CHOICES	RESPONSES	
Delirium Triage Screen (DTS)	0.00%	0
Confusion Assessment Method (CAM)	80.00%	12
4 'A's Test	0.00%	0
Modified Early Warning Score	13.33%	2
Other (please specify)	33.33%	5
Total Respondents: 15		

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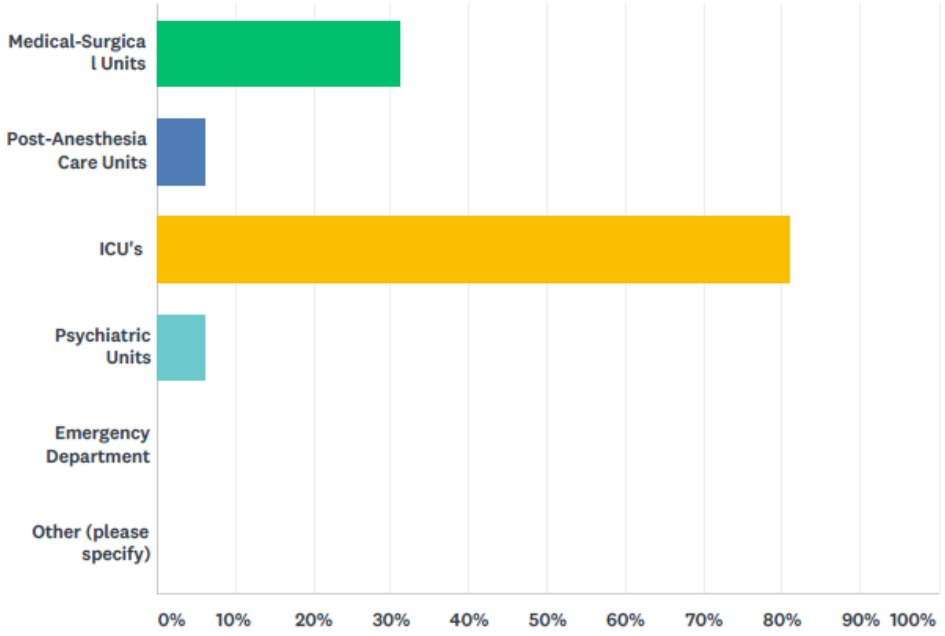
Q4 Do you use a standardized delirium or confusion screening tool in the following areas? (Check all that apply)

Answered: 16 Skipped: 4

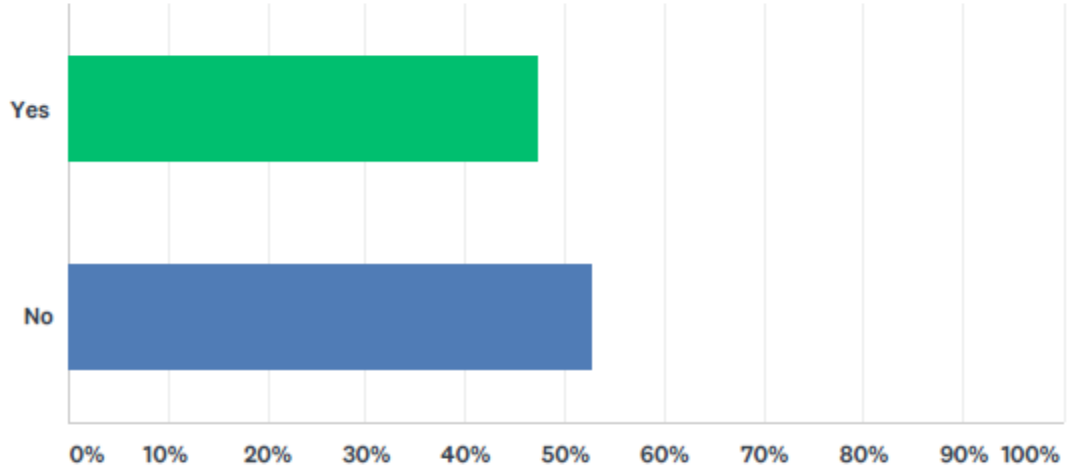


ANSWER CHOICES	RESPONSES	
Medical-Surgical Units	31.25%	5
Post-Anesthesia Care Units	6.25%	1
ICU's	81.25%	13
Psychiatric Units	6.25%	1
Emergency Department	0.00%	0
Other (please specify)	0.00%	0
Total Respondents: 16		

Indiana Hospital Association (IHA) HIIN WAKE Up Survey

Q5 Do you have standard nursing policies for interventions to prevent delirium?

Answered: 19 Skipped: 1

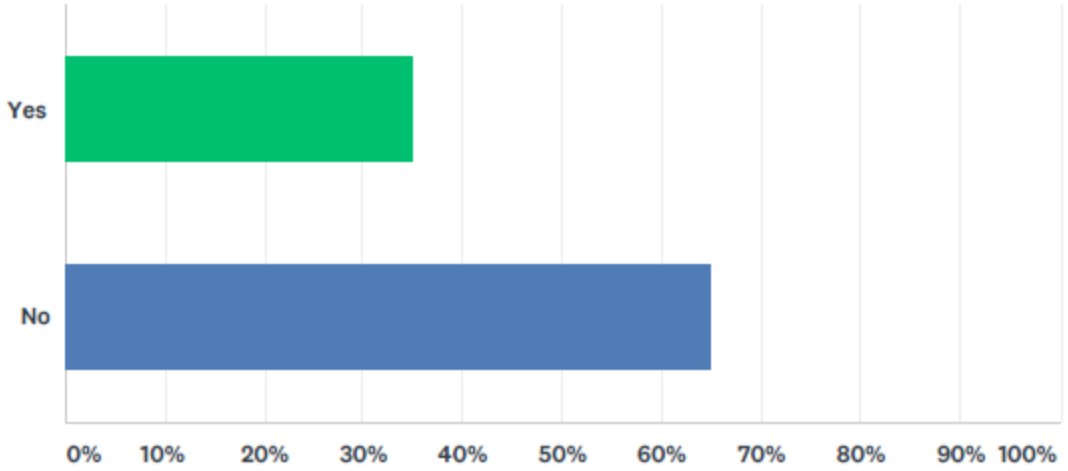


ANSWER CHOICES	RESPONSES	
Yes	47.37%	9
No	52.63%	10
TOTAL		19

Indiana Hospital Association (IHA) HIIN WAKE Up Survey

Q6 Do you have specific standardized physician-ordered interventions to prevent delirium?

Answered: 20 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	35.00%	7
No	65.00%	13
TOTAL		20

Other interventions your organization has implemented related to delirium prevention?

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- *Staff education*
- *PCA Management to monitor respiratory rates and EtCO2*
- *Nursing Care Plan for delirium prevention*
- *ICU processes and geriatrics experts are working*
- *RASS to score ICU patients when sedated*

Polling Question #1

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- What is your primary role within your organization?
  - Infection Prevention
  - Nursing Professional
  - Laboratory Professional
  - Medical Staff
  - Environment Services / Housekeeping
  - Social Worker
  - Mental Health Professional
  - Other

Delirium:
The Brain Reaction to Acute Illnesses

Malaz Boustani, MD, MPH

Richard M Fairbanks Professor of Aging Research,

Chief Innovation & Implementation Officer, Center for Health Innovation and Implementation Science

Indiana University, CTSI, School of Medicine; Regenstrief Institute, Inc

Past President, American Delirium Society

ESKENAZI HEALTH

INDIANA UNIVERSITY

Regenstrief Institute

Funding Sources:

- National Institute on Aging
- National Institute on Mental Health
- John A Hartford Foundation
- American Federation of Aging Research
- The Atlantic Philanthropy.
- Center for Medicare and Medicaid Innovation

Significant Financial Conflict of Interest Disclosure (over the past year)

Equity Ownership in
- PPHM, LLC
- RestUp, LLC

Objectives

- Increase awareness of the negative impact of delirium on cognitive health, hospital acquired complications, and the cost of hospital care of acute illnesses.
- Identify hospitalized patients who are at high risk of developing delirium
- Utilize a standardized delirium detection approach.
- Recognize the efficacy of multicomponent non-pharmacological interventions in preventing delirium.
- Utilize evidence based approach to manage delirium induced agitation.

Cognitive Impairment (CI) During Acute Illness

- Acute Brain Injury:
  - **Delirium**
  - Subsyndromal Delirium
- Chronic Brain Injury:
  - Dementia (Alzheimer, Vascular,…)
  - Mild Cognitive Impairment (MCI)

Khan et al, JHM 2012; Boustani et al, Health & Aging 2008; Campbell et al, JCIA 2009; Boustani et al, JHM 2010

Definition: Delirium

- **Acute onset**,
- Altered level of **consciousness**,
- **Fluctuating** course and
- Disturbances in
  - orientation,
  - memory,
  - **Attention**,
  - **Thinking**,
  - perception and
  - behavior

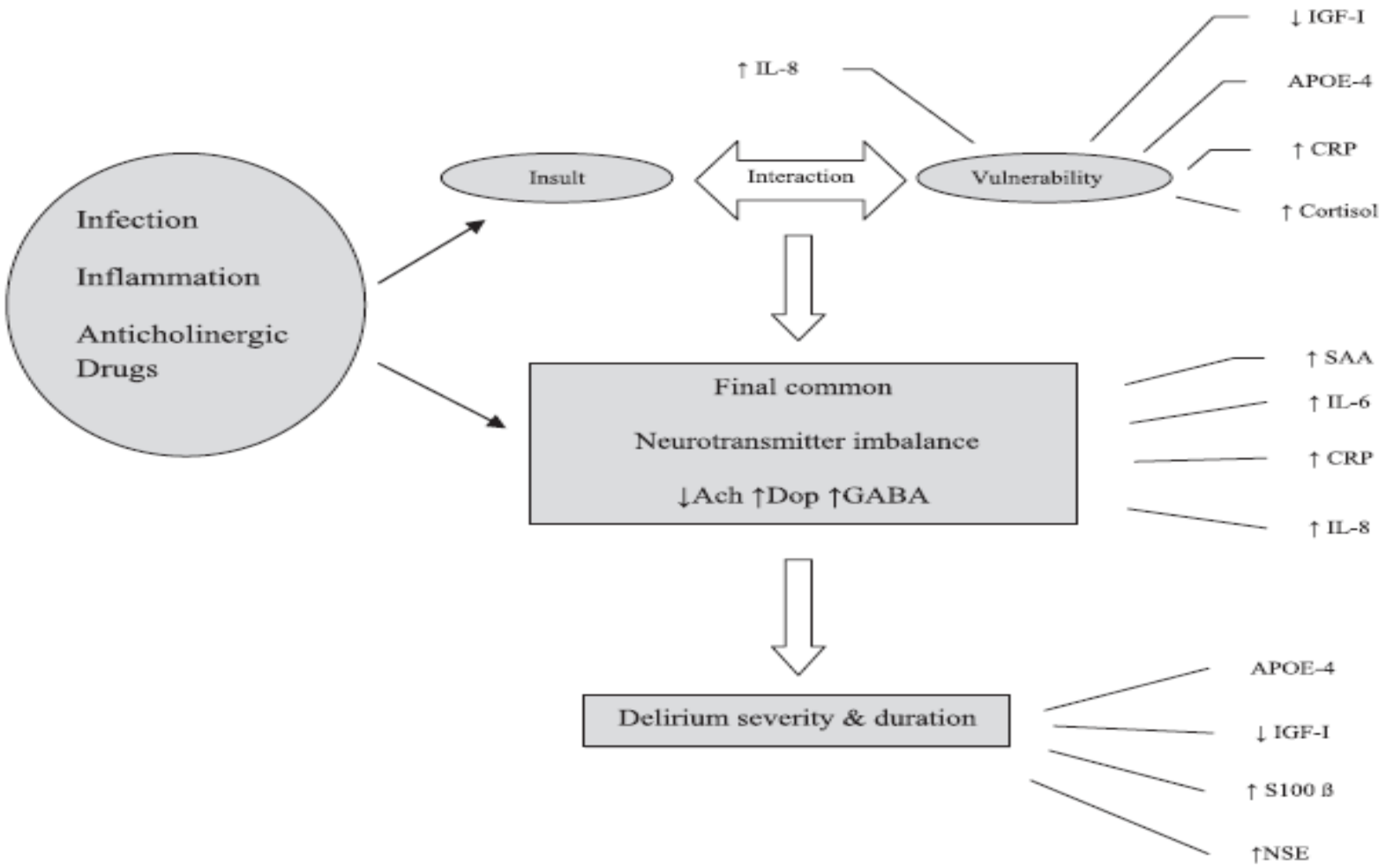
Hyper-Active

Hypo-Active

Mixed

Inouye 1990; APA 1994

Delirium Pathogenesis



Khan et al, JAGS 2011

Do you need to care?

Prevalence and Recognition in the 21st Century! Emergency Department

Delirium (CAM +)	7% to 10%
Recognized Delirium	16% to 35%

LaMantia M et al, Ann Emerg Med 2014

Prevalence and Recognition in the 21st Century! Hospital

Cognitive Impairment within 48 hrs of Hospital Admission of Elderly (SPMSQ ≤ 8)	43%
Recognized Cognitive Impairment	39%
Delirium within 48 hrs of Admission (CAM +)	16%
Recognized Delirium	44%

SPMSQ: Short Portable Mental Status Questionnaire; CAM: Confusion Assessment Method

Boustani et al JHM 2010

Delirium Impact in the 21st Century Hospital

	Delirium+*	Delirium−	*P* value
n (%)	163 (38)	261 (62)	n/a
Age, mean (SD)	78.4 (8.5)	76.5 (7.8)	0.02
Female (%)	60.1	69.7	0.05
African American (%)	64.4	56.3	0.10
Charlson comorbidity index, mean (SD)	1.8 (1.9)	2.3 (2.1)	0.01
Length of hospital stay, mean (SD)	9.2 (7.9)	5.9 (4.9)	<0.001
Survived at 30-day postdischarge (%)	91.4	95.8	0.09
Discharged home (%)	24.5	49.4	<0.001
Readmission within 30 days after discharge home (%)	22.5	17.8	0.50
Observed with Foley catheter (%)	51.5	22.6	<0.001
Observed with physical restraint (%)	4.3	0.0	<0.01
Observed with tethers (%)	89.0	69.4	<0.001

Boustani et al JHM 2010

ICU Delirium in the 21st Century

	Mechanically Ventilated > 17 yr
Delirium Prevalence	59%
Delirium Incidence	21%
Prevalence of Acute Brain Dysfunction (Coma or Delirium)	87%

Khan et al, CCM 2014;

21st Century ICU Delirium Care

	Discharged Dead	Discharged to non Home setting	P-value
No Delirium	6%	18%	<0.001
Any Delirium	**25%**	**40%**	
No Intubation	4%	17%	<0.001
Any Intubation	**24%**	**33%**	

Khan et al, ADS conference 2011

Delirium Simple Facts

- **7 million hospitalized Americans suffer from delirium.**
  - 27% of ICU patients ≥ 18 years
  - 49% of ICU patients ≥ 60 years
  - Recognition Rate < 40%
- **High mortality rates at**
  - One month (14% vs. 5%)
  - 6 months (22% vs. 11%)
  - 23 Month (38% vs. 28%)
- **$152 billion in health care cost**
  - Double the length of Hospital Stay
  - Double the odds of institutionalization
  - Double the odds of developing dementia

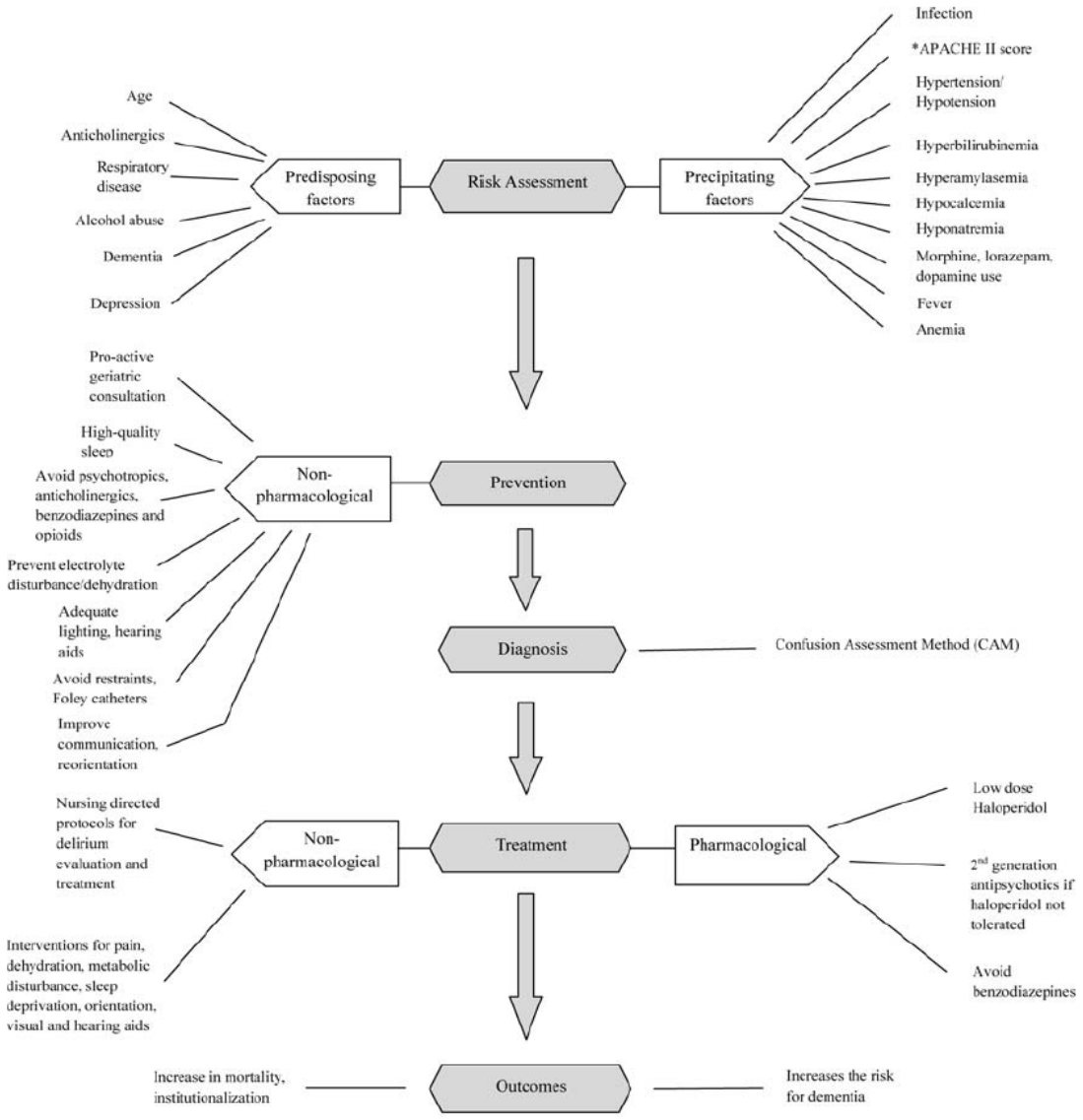
Boustani et al JHM 2010; Khan et al, JHM 2012; Witlox et al, JAMA 2010; Rudolph et al, JAGS 2011; Ely ICM 2001;Milbrandt E, CCM 2004; Ely JAMA 2004; Lin SM CCM 2004; Jackson Neuropsychology Review 2004.

Delirium Prevention & Management

- Three Systematic Evidence Reviews (SER)
  - Campbell et al, Pharmacological Management of Delirium in Hospitalized Adults, JGIM 2009
  - Khan et al, Delirium In Hospitalized Patients, JHM 2012
  - AGS Expert Panel on Post Operative Delirium Guidelines, JAGS 2015

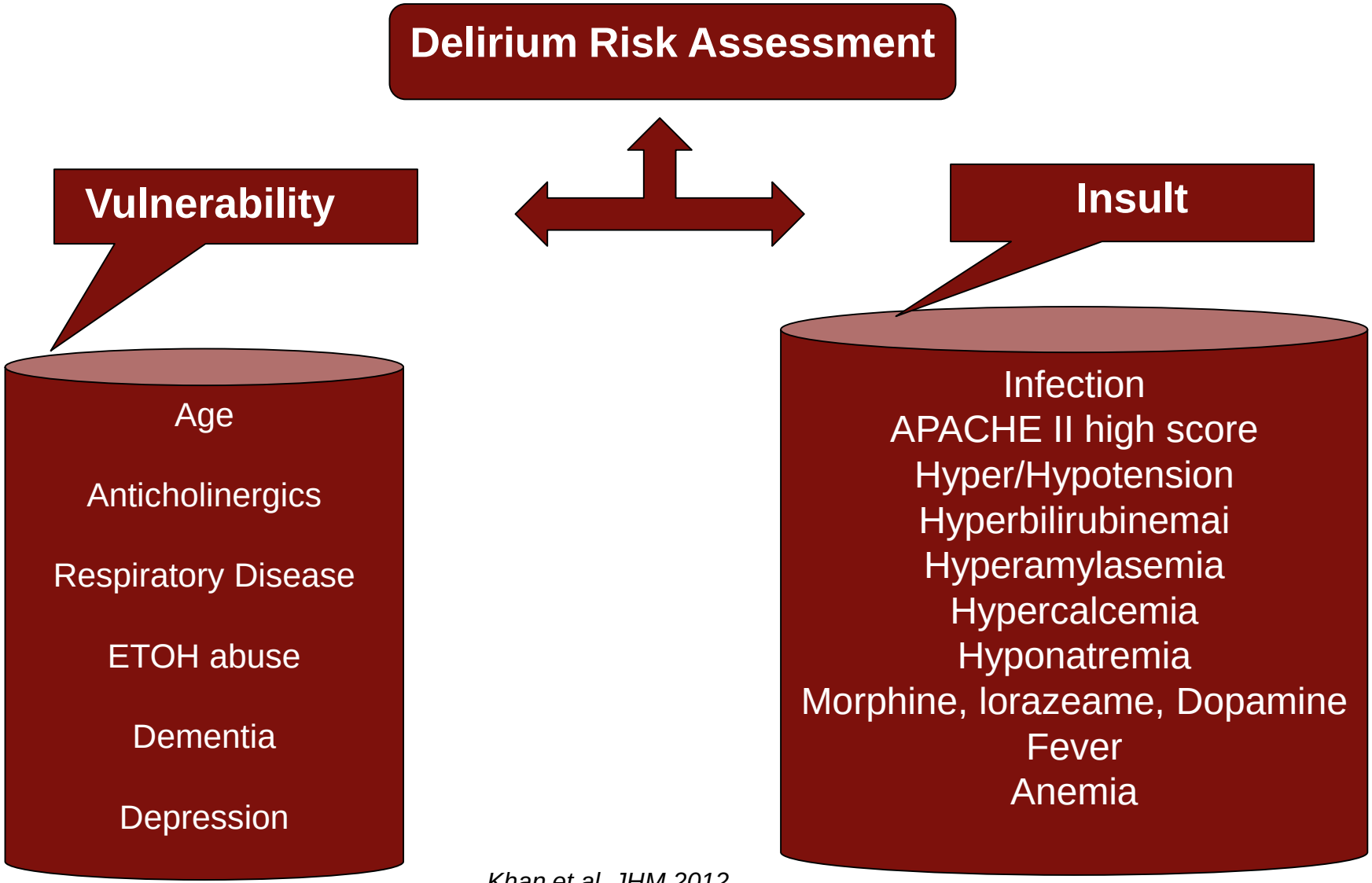
Campbell et al, JGIM 2009; Khan et al, JHM 2012; AGS Expert Panel for POD 2015

Delirium Management Algorithm



*APACHE: Acute Physiology and Chronic Health Evaluation.

Khan et al, JHM 2012



Khan et al, JHM 2012

Preventing Delirium

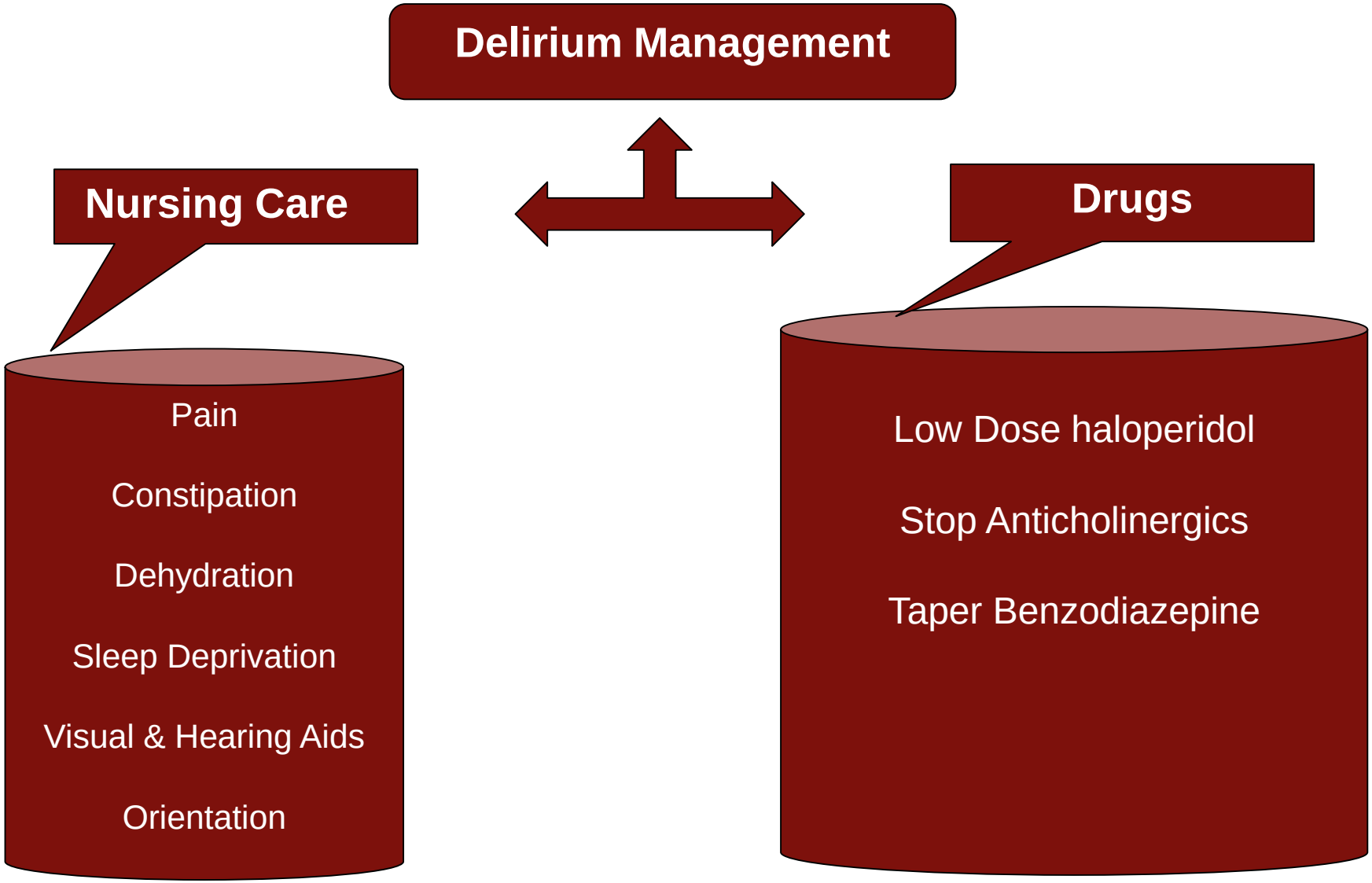
- *Pro-active Geriatric Consult*
- *High Quality Sleep*
- *Avoid psychotropics, Anticholinergics, Benzodiazepine & Opioids*
- *Prevent Electrolytes disturbance and dehydration*
- *Adequate lightning and hearing aids*
- *Avoid restraints and Foley catheterization*
- *Improve communication and orientation*
- *Low dose Risperidone preoperatively?*

Campbell et al, JGIM 2009; Khan et al, JHM 2012; AGS Expert Panel for POD 2015

Delirium Diagnosis

Acute and fluctuating changes in mental status	**Attention deficit**	**Disorganized thinking**	**Hypo-alert or hyper-alert status**
As demonstrated by one of the following: • family member interview • nurse interview • chart review • ≥ 2 points acute drops in MMSE score during the hospitalization • discrepancy between different examiners regarding patient's mental status	As demonstrated by one of the following: • nurse interview • patient inability to spell first name backward • patients inability to repeat a phone number • patient inability to count backward from 20 to 1	As demonstrated by one of the following: • nurse interview • patient incoherent speech • patient illogical speech	As demonstrated by one of the following: • nurse interview • chart review • patient sleepiness • patient restlessness
Yes or No	Yes or No	Yes or No	Yes or No

Delirium is present if patient has:
Acute and fluctuating changes in mental status and attention deficit +
One of the following: Disorganized thinking or Hypo/ hyper alert status



Campbell et al, JGIM 2009; Khan et al, JHM 2012

Manage Delirium-Induced Agitation

- *√ Vital signs, Pulse O2, Chemistry, and CBC*
- *Focus on Aggression towards others*
- *Focus on non-aggressive physical agitation that **seriously** interferes with the management of underlying medical conditions*
- *Hospital based CNA/RN Delirium management skills development program*
- *Use of*
  - *Sitter*
  - *Delirium room*
  - *Pharmacological restraint for refractory aggression PRN*
- *No Benz except for ETOH related delirium*

Khan et al, 2012; Campbell et al, JGIM 2009; Boustani &Buttar, Chapter 15, Primary Care Geriatrics 2007

Delirium's room

- ***Reassurance.***

-Decorate the room with familiar items

-Short but frequent professional and family visits

-Provide eyeglasses and hearing aids if needed

- ***Reorientation:***

-calendar,

-clock, and

-frequently remind the pt of the day and the date

- ***Maintaining Circadian Rhythm:***

-Adequate use of lights, especially at night

-Appropriate stimulation

Boustani &Buttar, Chapter 15, Primary Care Geriatrics 2007

When to use Medications

- Safety and medical care are in jeopardy
- D/C all Anticholinergic medications

- Crisis time:
  - Haloperidol (B evidence): 0.25-0.5 mg PO 5-15 minutes for max dose of 2-3 mg in 24 hours.

Khan et al, 2012; Wang et al, Crit Care med 2012; Campbell et al, JGIM 2009; Boustani &Buttar, Chapter 15, Primary Care Geriatrics 2007

Questions & Answers?

Contact & Resources

- www.americandeliriumsociety.org
  - June 2018, San Francisco, Annual Conference
- mboustan@iupui.edu

Know your patient's baseline…

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- *The single biggest problem with communication is the illusion that it has taken place –George Bernard Shaw*

IHA Quality & Patient Safety Team

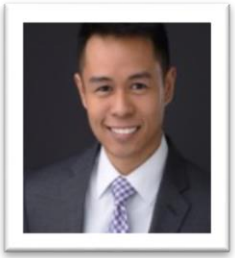
Indiana Patient Safety Center
of the Indiana Hospital Association

Becky Hancock
Quality & Patient Safety Advisor
317-423-7799
rhancock@IHAconnect.org

Annette Handy
Clinical Director, Quality & Patient Safety
317-423-7795
ahandy@IHAconnect.org

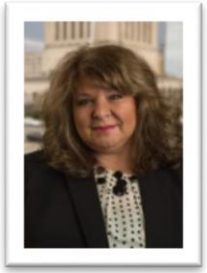
Karin Kennedy
Vice President, Quality & Patient Safety
317-423-7737
kkennedy@IHAconnect.org

Patrick Nielsen
Patient Safety Data Analyst
317-423-7740
pnielsen@IHAconnect.org



Matt Relano
Patient Safety Intern
317-974-1420
mrelano@IHAconnect.org

Cynthia Roush
Patient Safety Project Coordinator
317-423-7798
croush@IHAconnect.org



Madeline Wilson
Quality & Patient Safety Advisor
317-974-1407
mwilson@IHAconnect.org