Alberta Health Services

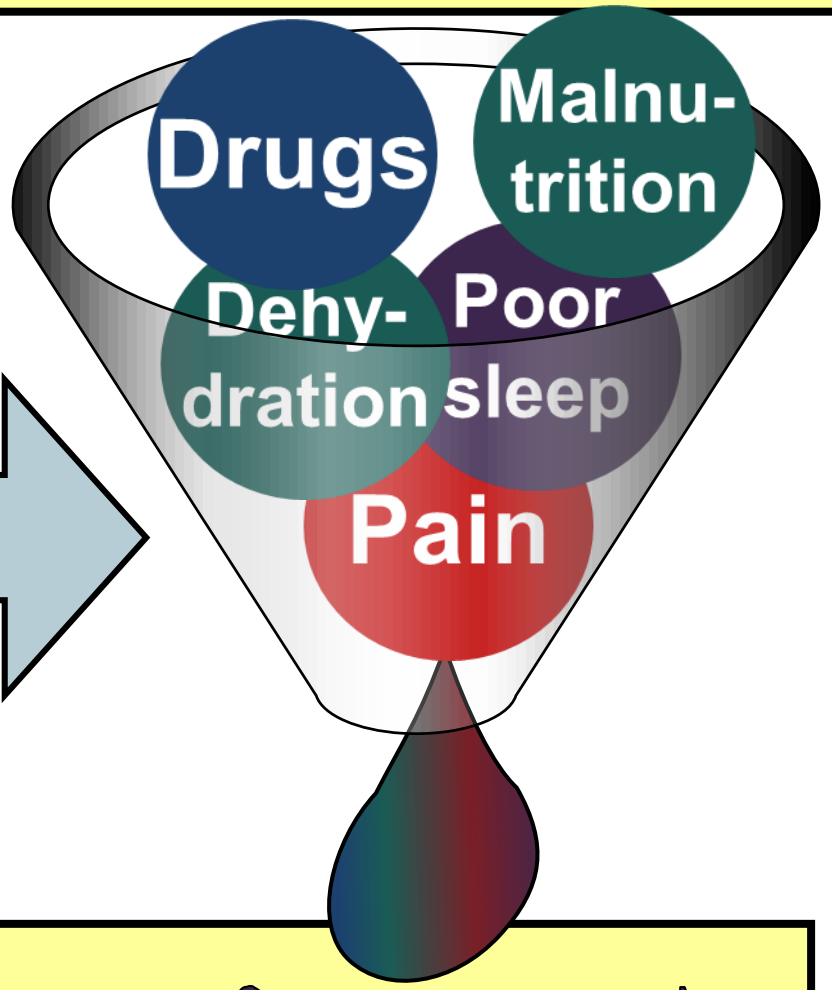
Delirium and Dementia

Elder Friendly Care in Acute Care

Seniors Health Strategic Clinical Network

At-Risk Older Adult

Acute Care Stress Blender



DELIRIUM

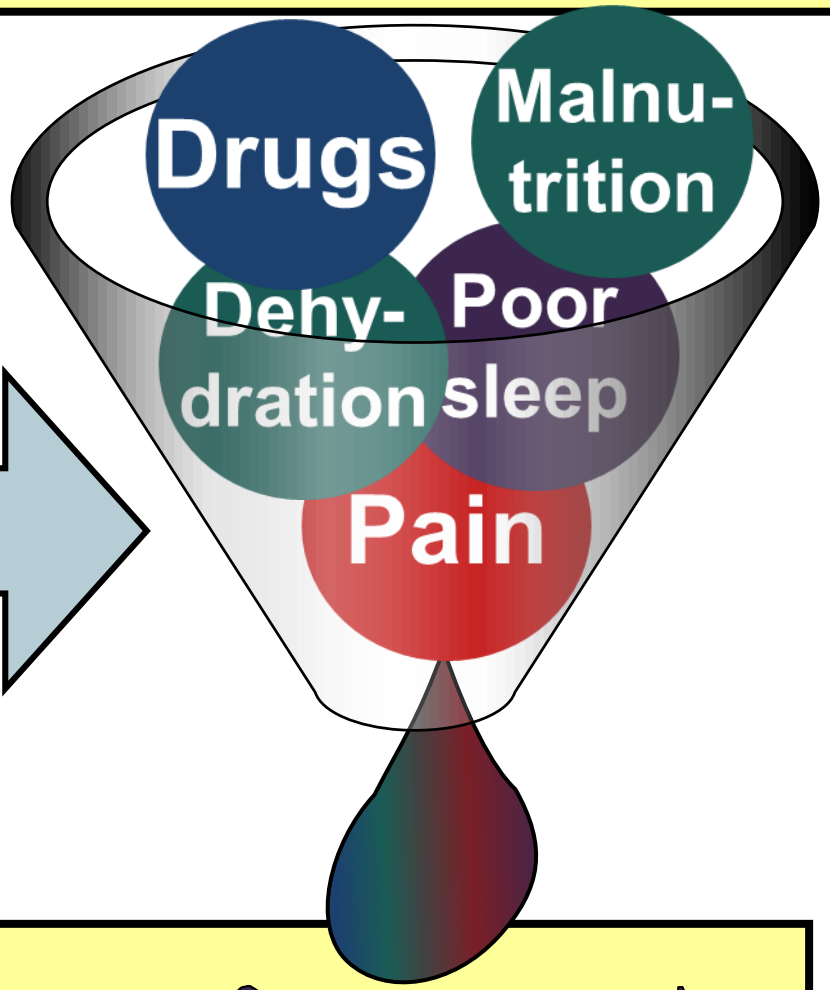
TREAT CAUSE immediately & aggressively.

Increased impairment

Return to baseline is questionable

At-Risk
Older Adult

Acute Care Stress Blender



DELIRIUM

C Confusion

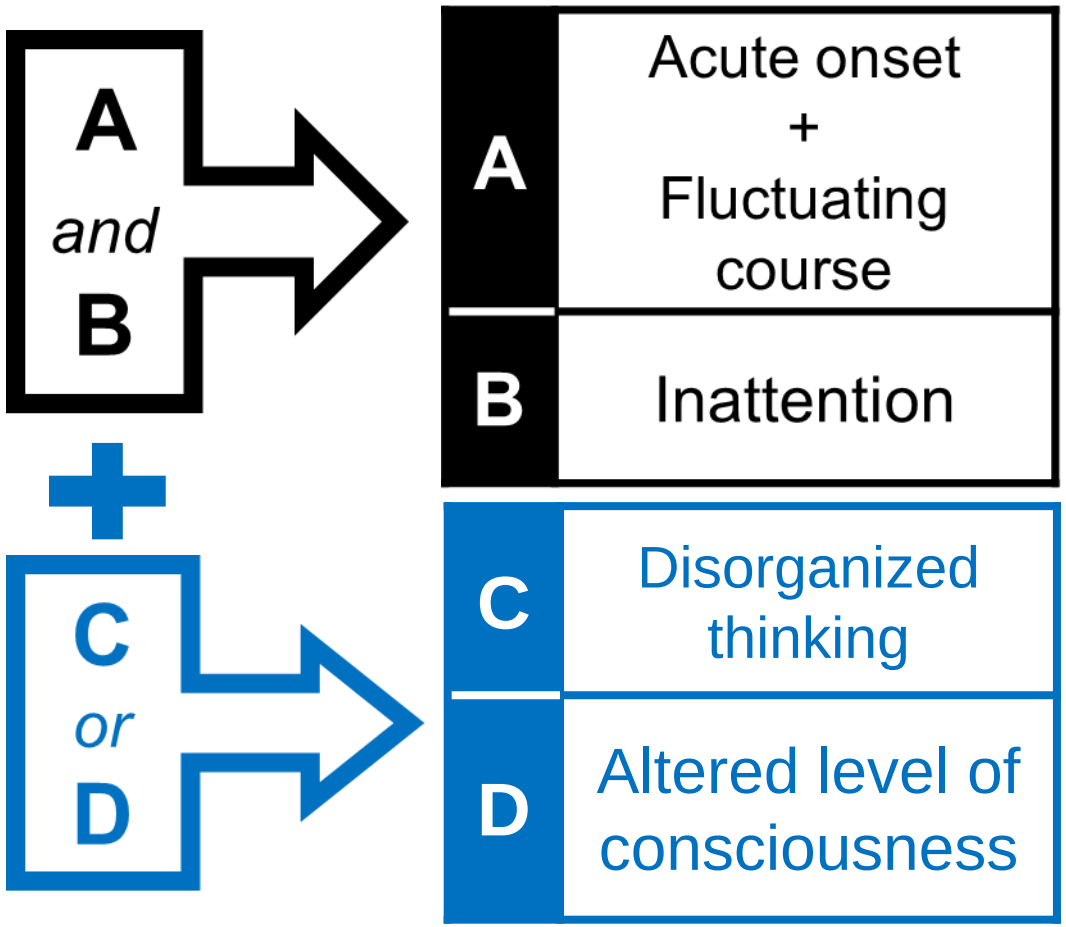
A Assessment

M Method

Early detection
..HOW?

CAM - Confusion Assessment Method

Confusion Assessment Method (CAM)



Delirium is often discounted as the person's "normal"

To detect delirium, we need to know their baseline

“Stop & Watch”

- Early delirium detection
- Supports communication
- Reduces acute care admissions

Complete Stop and Watch Early Warning Tool: available from Med-Pass.com

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Stop and Watch
Early Warning Tool

INTERACT
Version 3.0 Tool

If you have identified a change while caring for or observing a resident, please **circle** the change and notify a nurse. Either give the nurse a copy of this tool or review it with her/him as soon as you can.

S	Seems different than usual
T	Talks or communicates less
O	Overall needs more help
P	Pain – new or worsening; Participated less in activities
a	Ate less
n	No bowel movement in 3 days; or diarrhea
d	Drank less
W	Weight change
A	Agitated or nervous more than usual
T	Tired, weak, confused, or drowsy
C	Change in skin color or condition
H	Help with walking, transferring, toileting more than usual

Delirium Information for Patients and Families

Senior's Health

What is delirium?

Delirium is a sudden, confused state of mind that may come and go over the day. People with delirium may have changes in the way they think. Their personality and behaviour may change quite a lot. They may have trouble paying attention to what's going on around them or doing the things they normally can do.

Delirium is a warning sign that the person needs help right away. Call your family doctor, nurse, healthcare provider, or Health Link at 811.

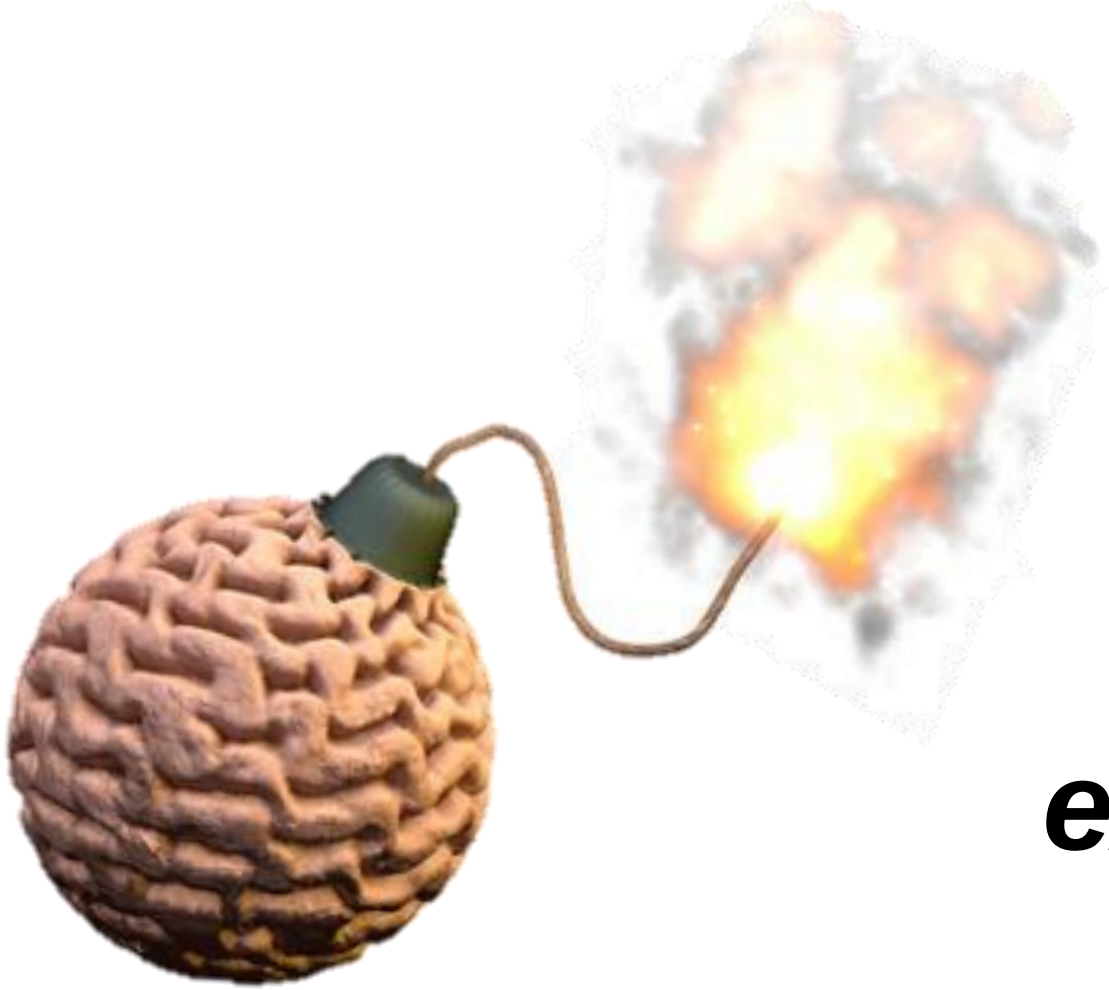
CAUSES >

Related to Delirium

- Confusion, Memory Loss, and Altered Alertness
- Temporary Confusion or Decreased Alertness

MyHealth.Alberta.ca

Delirium Risk Assessment

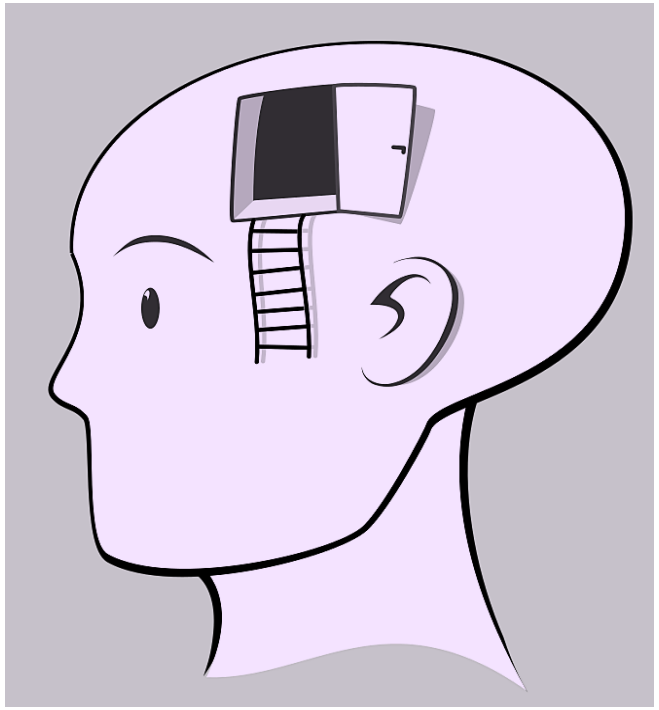


Prevent the explosion!

Delirium and Brain Neurotransmitters

Blocking of neurotransmitters can effect:

- Learning and memory
- REM sleep cycle regulation
- Neuroendocrine function
- Smooth muscle (intestines, bladder, arteries)
- Heart rate and contraction strength
- Movement (muscle contraction)
- Sweat glands



Acetylcholine and Delirium

Acetylcholine “powers up” the brain

Acetylcholine levels are lower in older adults (90% lower in Alzheimer's)

Stress increases demand for acetylcholine

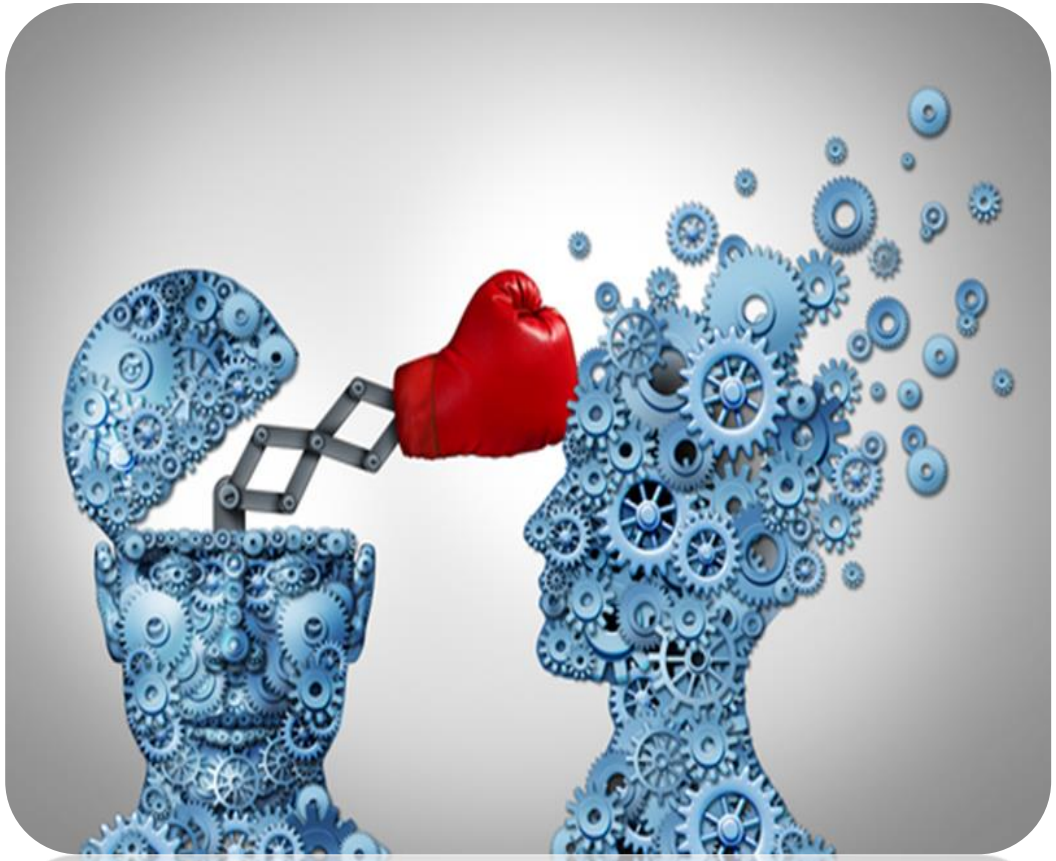
Many medications block acetylcholine

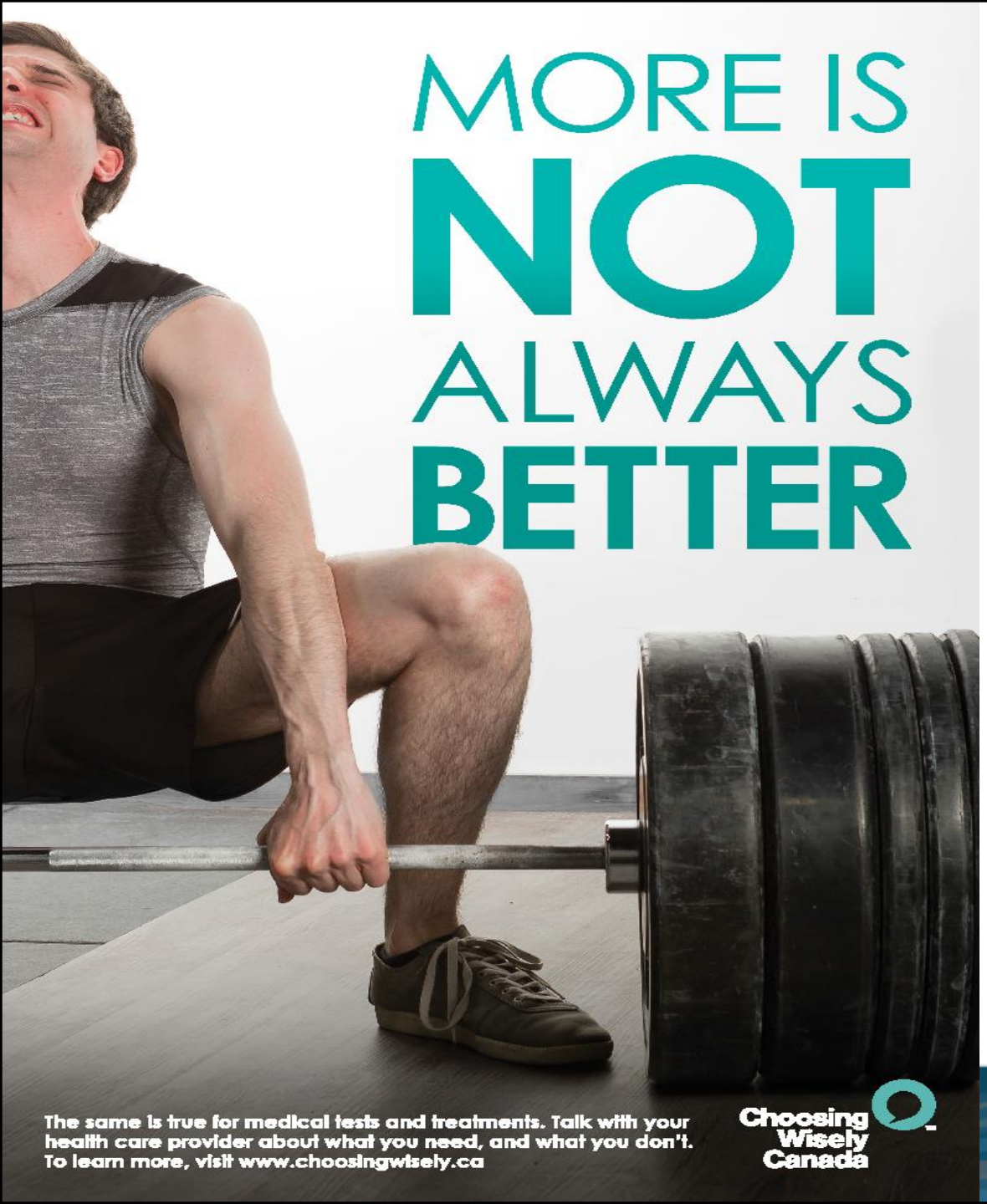
Anticholinergic Cognitive Burden (ACB)

Anticholinergic = medication that blocks acetylcholine

Many commonly prescribed medications have anticholinergic properties (some strong, some weaker)

Taking multiple medications with anticholinergic properties adds up to a higher cognitive burden





Medications and Delirium

5 or more medications = higher risk of delirium and falls

Prescribing Cascade (example)

High Blood Pressure → Treated with **Ca^{2+} channel blocker**

Edema caused by peripheral vasodilation → **Heart failure** treated with **2 diuretics**

Incontinence caused by increased urinary output → **Overactive Bladder** treated with **antimuscarinic** *(very anticholinergic)*

Fracture caused by a **fall** → **Agitation** and **pain** treated with **haloperidol, morphine, dimenhydrinate**

Delirium

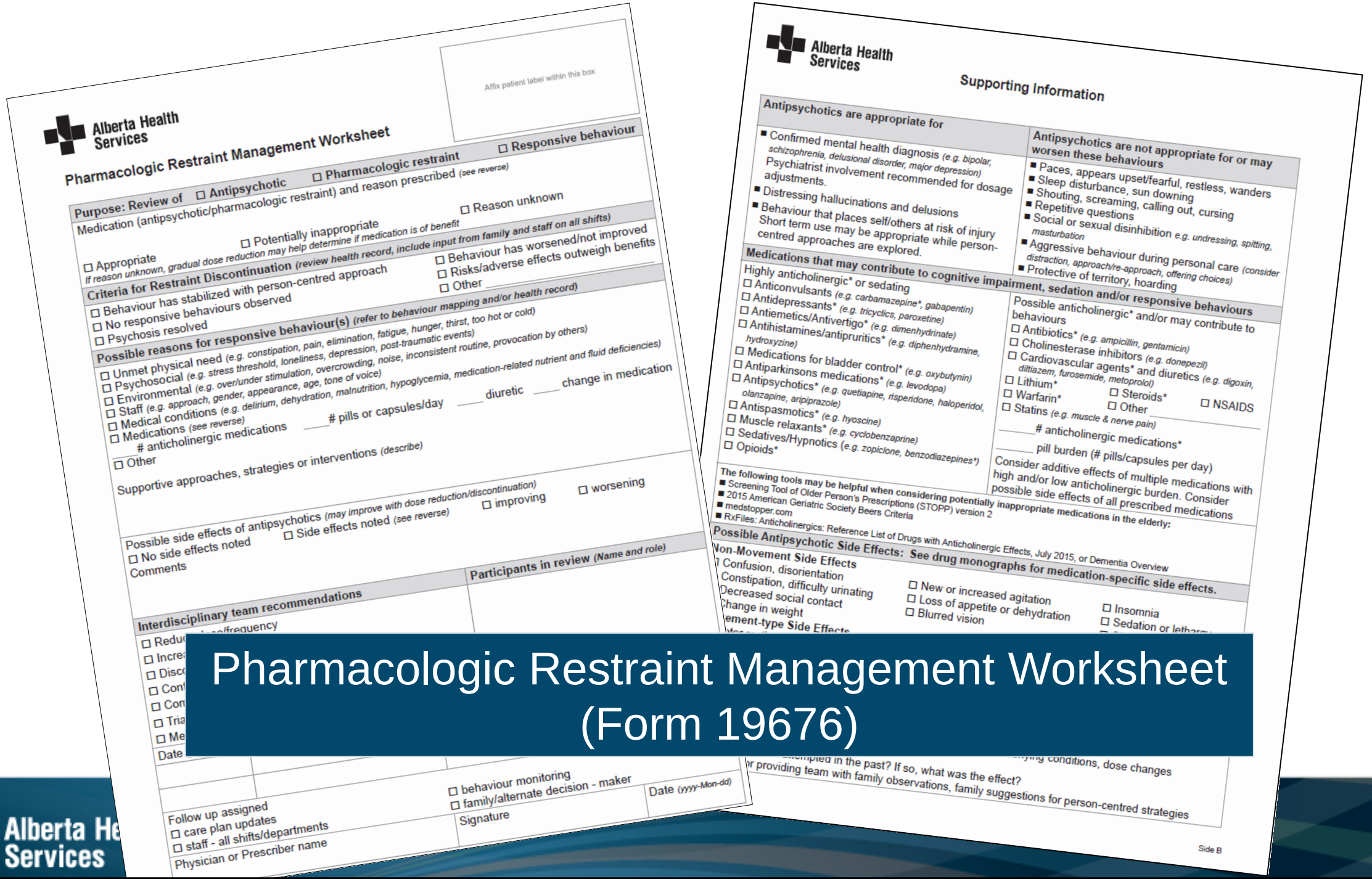
Medication Reconciliation

What kinds of questions do we need to ask about medications?

Whose job is it to evaluate medications?

How/when does your team assess medications e.g. with higher risk than benefit, or prescribing cascades?

How are patients and families involved in conversations around medications?



Pharmacologic Restraint Management Worksheet (Form 19676)

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Dehydration and Delirium

Dehydration:

- Lowers blood pressure
- Increases risk of falls
- Damages brain cells
- Increases risk of urinary tract infections and constipation

Risks for Dehydration with Aging & Dementia

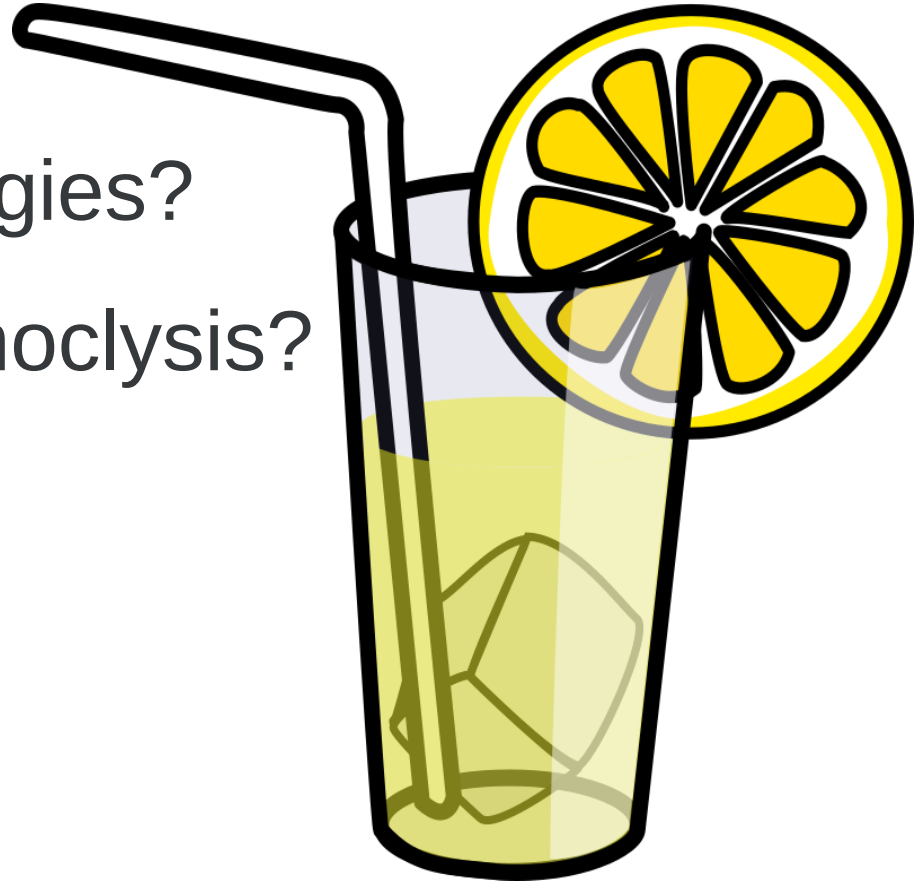
- Decreased thirst, confusion, impaired swallow

Dehydration, Drugs and Delirium

- **Diuretics**
- **Sedatives and antipsychotics**
- **Drug induced diarrhea** e.g. laxatives, acid-blocking drugs, metformin, motility drugs, antibiotics, digoxin (at toxic levels)
- **Drugs for bone density** (Esophageal swelling and ulceration from incomplete swallowing)

Hydration Strategies

- What are some of your hydration strategies?
- What is your experience with hypodermoclysis?
- How do you measure hydration?
- Thickened fluids and dehydration



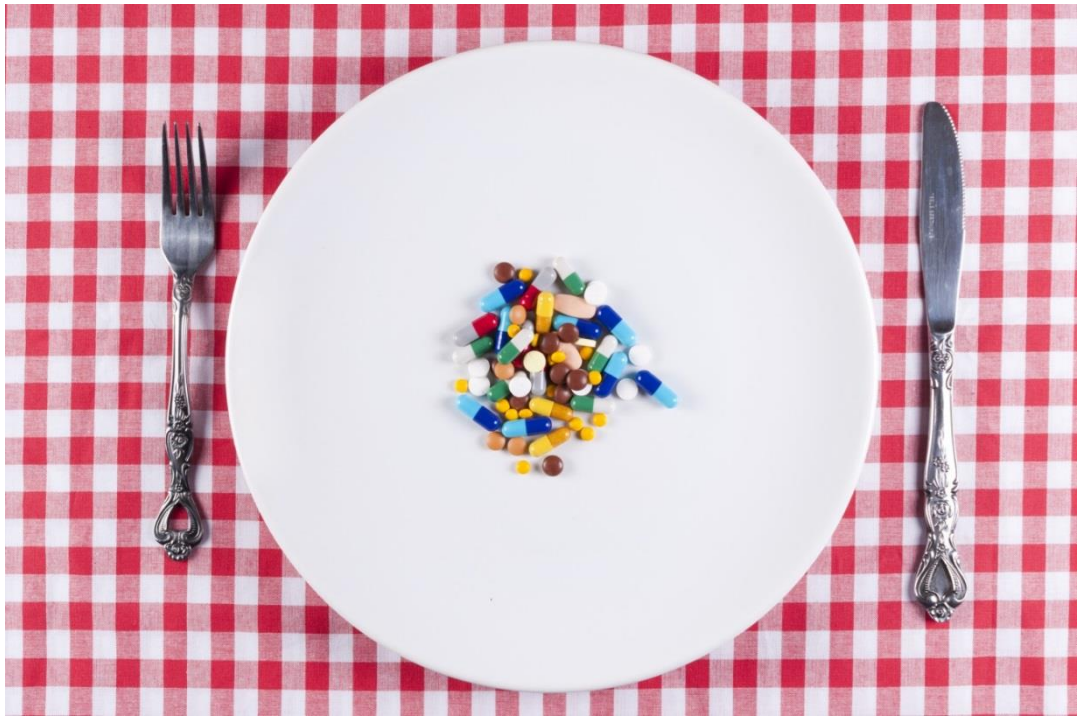
Nutrition and Delirium

Healthy brain function requires many essential nutrients

Acetylcholine production requires choline, found in eggs, meat, fish, cruciferous vegetables (e.g. broccoli), milk

Delirium risk increases with malnutrition:
e.g. lower levels of Vitamin B 12,
iron, proteins

Malnutrition, Drugs and Delirium



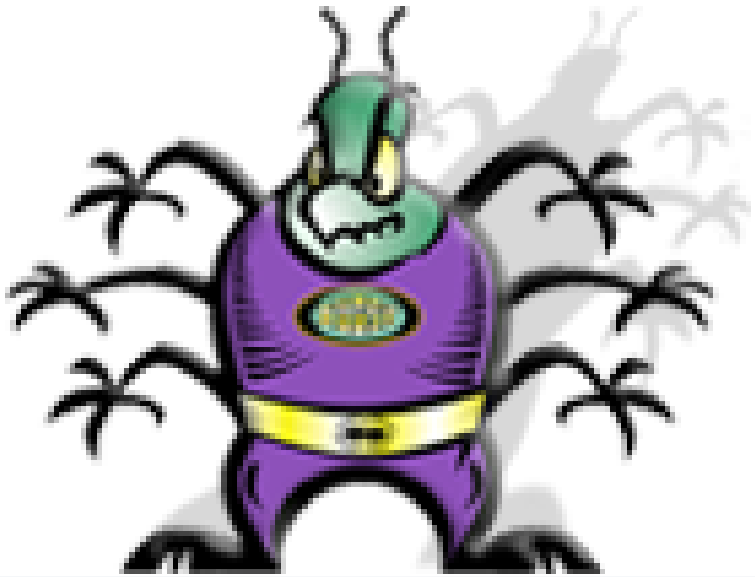
Pill Burden: nausea, loss of appetite, feel full, agitation

Anticholinergic burden: sedation, decreased gastrointestinal motility

Olfactory disturbances with many common medications

Impaired nutrient absorption

For information and resources see www.dobugsneeddrugs.org



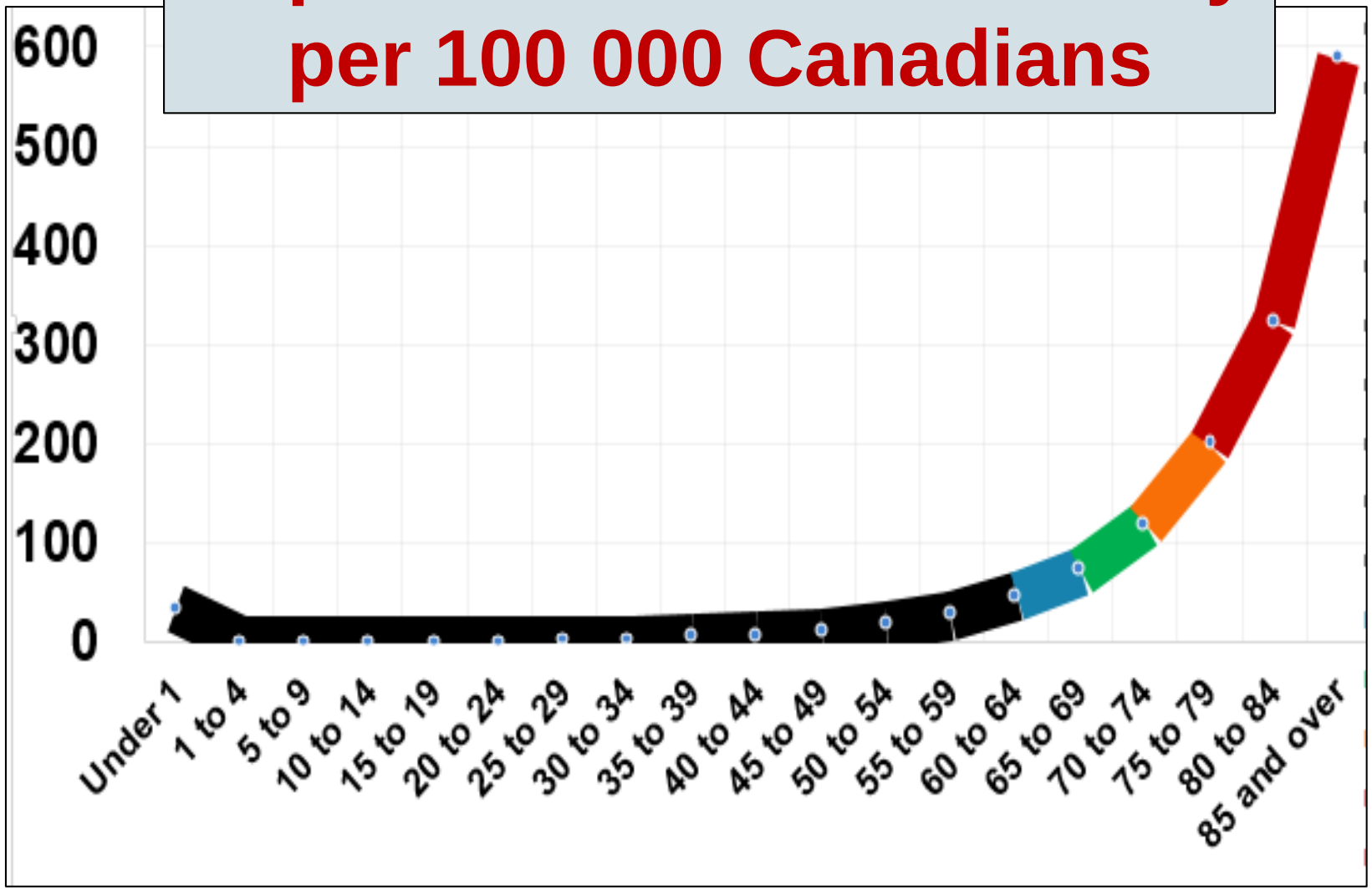
Urinary tract infections are frequently misdiagnosed in the elderly

Treatment with antibiotics has many unwanted side-effects

Misdiagnosis means underlying cause of delirium is missed

PUSH FLUIDS for 24 hours

Sepsis-associated mortality per 100 000 Canadians



Older adult age ranges

- 65 to 69
- 70 to 74
- 75 to 79
- 80 to 84
- 85 and over

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Urgent Care

SUSPECTED SEPTIC PATIENT
BEDSIDE SCREENING TOOL

patient label

A. Known or Suspected Infection

- ☐ Pneumonia, emphysema
- ☐ Urinary tract infection
- ☐ Acute Abdominal infection
- ☐ Meningitis
- ☐ Skin/soft tissue infection
- ☐ Bone/joint infection
- ☐ Wound infection
- ☐ Infection from Catheter
- ☐ Endocarditis
- ☐ Implantable device infection
- ☐ No known source other than clinical suspicion
- ☐ Other
- ☐ **Severe pain associated with known or suspected source of infection**

High Risk Patients:

- Post operative
- Diabetic
- Splenectomy
- Chemotherapy
- Elderly
- Neonates
- Immunocompromised
- Chronic Illness ex. COPD, Substance Abuse, Renal Failure
- Postpartum

B. S.I.R.S. (Systemic Inflammatory Response Syndrome) criteria

- ☐ Hyperthermia > 38° C
- ☐ Hypothermia < 36° C
- ☐ Tachycardia > 90 bpm
- ☐ Tachypnea > 20 rpm
- ☐ Acutely altered mental status (GCS <15) prior to sedation
- ☐ Leukocytosis (WBC count >12.0 X 10E9/L)
- ☐ Presence of any bands

C. Primary RN: If patient has a Known or Suspected Infection from Section A, and ≥ 2 S.I.R.S. criteria from Section B , then:

- ☐ Immediately notify charge nurse of patient.
- ☐ Confirm patient's priority number and if required, have it changed. Ensure patients are seen quickly
- ☐ Place Sepsis Package with patient's chart
- ☐ Refer Suspected Septic Patient Nursing Guideline on back of form

At anytime throughout a patient stay screening for suspected sepsis may occur.

Draft dated March 2011

MD Notified at: _____

A. Known or Suspected Infection

- ❑ Pneumonia, emphysema
- ❑ Urinary tract infection
- ❑ Acute abdominal infection
- ❑ Meningitis
- ❑ Skin/soft tissue infection
- ❑ Bone/joint infection
- ❑ Wound infection
- ❑ Infection from catheter
- ❑ Endocarditis
- ❑ Implantable device infection
- ❑ No known source other than clinical suspicion
- ❑ Other
- ❑ Severe pain associated with known or suspected source of infection

High Risk Patients

- **Post-Operative**
- **Diabetic**
  - Splenectomy
  - Chemotherapy
- **Elderly**
  - Neonates
- **Immunocompromised**
- **Chronic Illness (e.g. COPD, Substance Abuse, Renal Failure)**
  - Postpartum

B. SIRS CRITERIA
(Systemic Inflammatory Response Syndrome)

- ❑ Hyperthermia > 38^{O}C
- ❑ Hypothermia < 36^{O}C
- ❑ Tachycardia > 90 bpm
- ❑ Tachypnea >20 / min
- ❑ Acutely altered mental status (GCS <15) prior to sedation
- ❑ Leukocytosis (WBC count >12 X 10E9/L0
- ❑ Presence of any bands

SIRS - *Considerations for Older Adults*

Hyperthermia > 38°C Hypothermia < 36°C	**1.3°C change from baseline** (consider Normal Aging Changes, Medications)
Tachycardia >90 bpm	**Heart Rate – change from baseline** (consider Normal Aging Changes and Medication effects)
Tachypnea >20 min	**Respiratory Rate – change from baseline**
GCS <15	**Delirium detection (e.g. CAM)**
Leukocytosis (WBC>12)	**Leukocytosis**
Presence of any bands	**Bands**

Stress Prevention Strategies

- Assess for discomfort e.g. pain, urine retention
- Avoid physical restraints
- Support sleep
- Reduce noise and overstimulation
- Consistent caregivers
- Meaningful activities
- Therapeutic napping

Surgery and Delirium Prevention

Pre-Op

- Nutrition
- Limited fasting!
- Patient education
- Carbohydrate loading
- Appropriate analgesia
- Medication review

Operative

- Appropriate analgesia
- Minimal access surgery
- Normal temperature
- Minimal anaesthesia (“freezing” & epidurals vs “going under”)
- Minimize fluid replacement

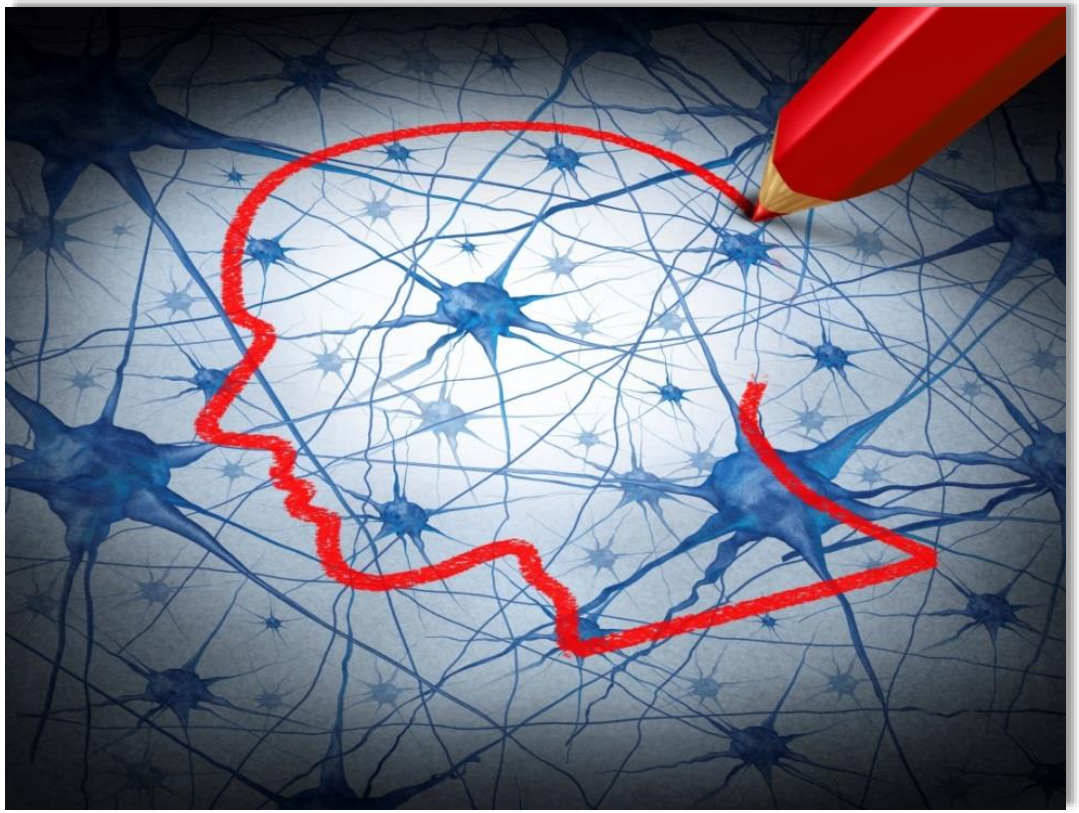
Post-Op

- Early removal of tubes and drains
- Early nutrition
- Early ambulation
- Nausea and vomiting prophylaxis (cautious)
- Appropriate (and pre-emptive) analgesia
- F/U after discharge

Acetylcholine and Parkinson's Disease

Parkinson's disease and the resulting medications increase risk of delirium

Best treatment is to reduce Parkinson's medications.



End of Life Delirium

Current practice supports antipsychotics at end of life

Evidence is unfolding to suggest supportive nursing care and gentle hydration (e.g. hypodermoclysis) may be more effective.

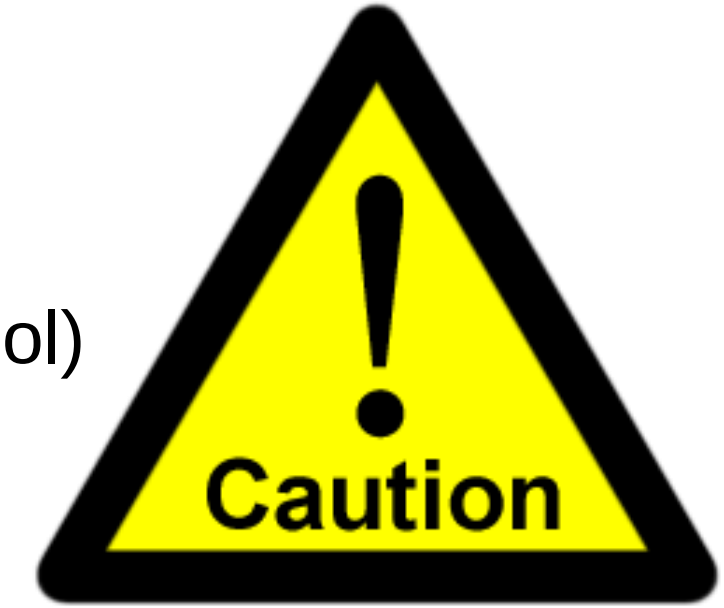
(Agar et al, 2016)

Do antipsychotics treat delirium?

Antipsychotic may cause or worsen delirium

Antipsychotics are a <u>last resort</u> when:

- Distressing/dangerous psychosis *and* non-pharmacologic strategies are ineffective
- Psychosis is an obstacle to crucial treatment
- Short term (e.g. one dose) while treating underlying causes
- Low dose: e.g. 0.25 to 0.5 mg haloperidol (Haldol)



Antipsychotics do not treat delirium.

Summary

Those with dementia are already at increased risk of delirium

Delirium has many causes, including:

- Too many medications
- Dehydration
- Malnutrition
- Stress
- Infection
- Surgery
- Parkinsons Disease

While delirium is a multifactorial process, it is estimated that medications alone may account for 12%-39% of all cases of delirium.

Alagiakrishnan and Wiens 2004

DELIRIUM is a MEDICAL EMERGENCY

Like chest pain

Like anaphylaxis

Like stroke

Intervene IMMEDIATELY

Site Assessment

What are you already doing well?

Where do you have room for improvement?

What are your priorities and next steps?

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Team Action Plan for Delirium Prevention

How is your unit/facility doing in the following areas?	Needs Improvement	Average	Great
Medication review to reduce pill and anticholinergic burden, antipsychotics, sedatives			
Support sleep			
Appropriate use of Drugs for Bugs			
Reduce stress: pain			
Reduce stress: overstimulation (e.g. call bells, bed alarms, overhead paging)			
Reduce stress: person-centred care plan			
Reduce stress: minimal use of physical restraints			
Support of hydration			
Support of nutrition			
Early delirium detection			
Rapid delirium response			
Other:			

1. Place a check mark to indicate how you think your team is doing in each area listed.
2. Compare results as a team: what areas are you doing well? Celebrate!
3. Compare results as a team: where is improvement most needed?
4. Select at least 1 Quality Improvement Focus.
5. Determine next steps. (see reverse)

Seniors Health Strategic Clinical Network
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Alberta Health Services