

Urinary Tract Infection (UTI) Program

Causes of Delirium and Mental Status Changes

Change is not possible without first getting buy-in and addressing questions that arise about clinical signs and symptoms of a UTI. This resource can be used to support health care providers identify and consider the many potential causes of delirium.

This resource is part of Public Health Ontario's [UTI Program](#). For more information, please visit publichealthontario.ca/UTI or email UTI@oahpp.ca.

A core practice of the Urinary Tract Infection Program is reinforcing the accepted clinical signs and symptoms of a urinary tract infection. Delirium* is no longer an accepted clinical sign.

*Delirium: A new (acute) and fluctuating syndrome of impaired attention and awareness.¹

Causes of Delirium in the Elderly (DELIRIUMS Acronym)

D

- Dehydration
- Depression
- Drugs
- New drug, increased dose or drug interaction. Including, but not limited to:
 - Narcotics/opioids (especially meperidine [Demerol])
 - Benzodiazepines
 - Corticosteroids
 - Drugs with “anticholinergic” properties (effects may be additive), such as antihistamines (e.g., diphenhydramine [Benadryl]); hydroxyzine (Atarax); dimenhydrinate (Gravol); diphenoxylate/atropine (Lomotil); some antidepressants (e.g., amitriptyline, nortriptyline, desipramine, imipramine, doxepin, paroxetine); ranitidine (Zantac); muscle relaxants (e.g., cyclobenzaprine [Flexeril], methocarbamol); antipsychotics (e.g., clozapine, olanzapine, quetiapine); bladder agents (e.g., oxybutynin, tolterodine, darifenacin, solifenacin); benztropine; amantadine; carbamazepine, etc.
 - Anti-seizure medications
 - Digoxin if drug levels are too high
 - Multiple medications; multiple psychoactive drugs
 - Drug withdrawal (e.g., sedatives/benzodiazepines, alcohol, nicotine, some antidepressants)

- E**
- Electrolyte abnormalities (hypo-/hypernatremia (low or high serum sodium), hypo-/hypercalcemia (low or high serum calcium))
 - Endocrine disorders (e.g., thyroid or adrenal dysfunction)
 - ETOH (alcohol) and other drug withdrawal
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- L**
- Liver failure
-
- I**
- Infections (especially respiratory, skin, urinary tract)
 - Impaired oxygenation (e.g., from exacerbations of chronic obstructive pulmonary disease, congestive heart failure, myocardial infarction)
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- R**
- Renal failure
 - Retention of urine or stool (constipation)
 - Recent change in surroundings or emotional stress
-
- I**
- Immobilization (catheters or restraints)
 - Injuries
 - Increased pressure in the brain (intracranial)
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- U**
- Untreated/undertreated pain
-
- M**
- Metabolic disorders (e.g., hypo-/hyperglycemia [low or high blood sugar levels], hypo-/hyperthermia [low or high body temperature])
 - Malnutrition (including thiamine, folate or B12 deficiency)
-
- S**
- Sleep deprivation
 - Sensory impairment (hearing or vision—e.g., lack of/ill-fitting hearing aids or glasses)
 - Stroke

Reference

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