

# Delirium

A Brief Introduction for the Braidwood Inquiry



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# Delirium Definition and Presentations



- **Delirium is also known as**
  - Acute confusional state
  - Acute organic brain syndrome
  - Acute mental agitation
  - Acute brain syndrome
  - Acute brain failure
  - Toxic encephalopathy

# Delirium Definition and Presentations



- **DSM-IV-TR Criteria**

- Disturbance of the consciousness with reduced ability to focus or sustain attention
- A change in cognition or the development of a perceptual disturbance that is not better accounted for by a pre-existing dementia
- The disturbance develops over a short time and tends to fluctuate during the course of the day

# Delirium Definition and Presentations



- **Generalized Cognitive and Brain Dysfunction**
- **Impaired Level of Consciousness**
  - Drowsiness, agitation, disrupted sleep-wake cycle
- **Attentional Deficits**
  - Disorientation
  - Poor attention and concentration
- **Language Deficits**
  - Impaired comprehension and speech
- **Memory Deficits**
  - Impaired short term and working memory

# Delirium Definition and Presentations



- **Executive Cognitive Function Impairments**
  - Decreased ability to plan, organize and execute tasks
  - General disorganization
  - Impaired insight
- **Thought Disturbances**
  - Delusional thinking or illogical thought process
  - Potentials for bizarre behaviours
- **Disturbed Affects**
  - Labile emotional expression
  - Anxiety
  - Irritability

# Delirium Definition and Presentations



- **Perceptual Disturbances**
  - Misinterpretation of external and internal stimuli
  - Hallucination (visual, auditory or tactile)
- **Psychomotor Changes**
  - Agitation and restlessness
  - Defensive aggression
  - (Excited delirium: extreme agitation during delirium)
- **Autonomic Instability**
  - Sweating, rapid breathing, increased heart rate and unstable blood pressure

# Delirium Definition and Presentations



- Often acute onset
- Fluctuating course
- A medical syndrome
- Generally multi-etiology

# Predisposing and Risk Factors



- **Advanced age**
- **Dementia**
- **Medical comorbidity**
- **History of alcohol abuse**
- **Male sex**
- **Sensory impairments especially hearing and vision**
- **Unfamiliar settings**
- **Language barrier**
- **Dehydration**

# Potential Precipitating Factors



- **Environmental Changes**
- **Pain**
- **Emotional stress or social isolation**
- **Prolonged sleep deprivation**
- **Prolonged sensory deprivation**
- **Prolonged sensory stimulation**
- **Metabolic disturbance**

# Potential Precipitating Factors



- **Neurological conditions**
- **Surgery**
- **Severe medical illness or trauma**
- **Anaesthetic exposure**
- **Infections**
- **Hypoxia**
- **Fever or hypothermia**

# Potential Precipitating Factors



- **Drugs and Medications**
  - Sedating hypnotics
  - Narcotics (Opiates)
  - Anticholinergic drugs
  - Cocaine and psychostimulants
  - Alcohol withdrawal
  - Sedative withdrawal

# Vulnerability Liability Model

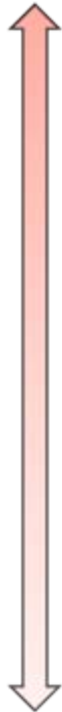


## Predisposing factors and vulnerabilities

### High Vulnerability

- Severe Dementia
- Post- Surgery
- Alcoholism
- Dehydration
- Elderly

• Young & Health

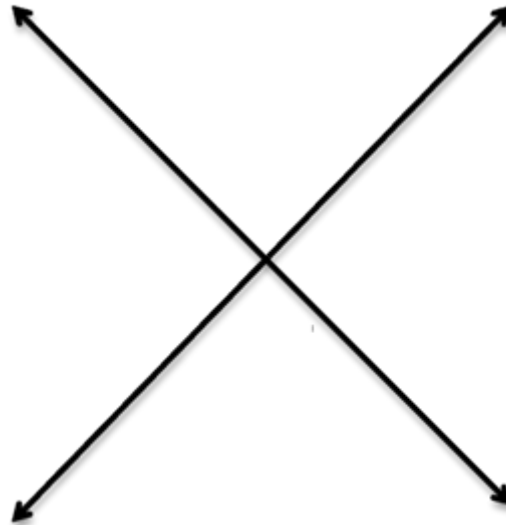


## Precipitating Events

### High Noxious Insults

- Multi-trauma
- Alcohol withdrawal
- Dehydration
- Medications
- Sleep Deprivation

• Environment Change



# Vulnerability Liability Model



- High morbidity
- Increases mortality
- Difficult to diagnose even in medical settings
- In severe to extreme cases: a medical emergency
- In otherwise health individuals sudden onset delirium may be warning signs of potentially life threatening metabolic changes
- Additional insults can lead to cardiac arrest or sudden death

# Managements of Delirium



- **Social restraint**
  - Familiar and low stimuli environment
  - Orienting stimuli
- **Rehydration**
- **Normalization of sleep-wake cycle**
- **Correct underlying medical conditions**
- **If restrained, pharmacological treatment should be initiated ASAP except in rare situations**
  - Benzodiazepines
  - Antipsychotic

# Suggestions for First Responders



- Education, training and recognition
- Use containment whenever possible
- Medical/paramedic backup as soon as possible
- Awareness of the risks of restraints, energy weapons
- Frequent monitor of basic vitals
  - Heart rate, breathing and level of consciousness
- In “excited delirium”
  - Sedation, oxygen, IV fluid, cooling measures, low stimuli environment as soon as possible
- Available defibrillators?