

# **The Introduction of Delirium Screening using the Intensive Care Delirium Screening Checklist (ICDSC) into a Teaching Hospital's Critical Care Areas**

## **Our experience**

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# Overview

Background

Detection

STH General Critical Care Approach

Findings

Conclusions



# **Delirium *Hallmarks***

*Acute change in mental status  
or a fluctuating course,  
impaired attention  
and disorganised thinking*

# Predisposing Factors

Chronic renal failure

Old age

Previous delirium

HIV

Chronic hepatic failure

Trauma

Dementia

Inactivity

Malnutrition

Polypharmacy

Metabolic disturbances

Previous stroke

Dehydration

Depression

Hearing impairment

Multiple comorbidities

Severe illness

Alcohol abuse

Visual impairment

Psychoactive medication

# Precipitating Factors

*Patient-ventilator dyssynchrony*

*Opioids*

*Sedatives*

*Anticholinergics*

*Physical restraints*

*Alcohol withdrawal*

*Stroke*

*Intracranial bleed*

*Malnutrition*

*Polypharmacy*

*Bladder catheter*

*Dehydration*

*Infections*

*Drug withdrawal*

*Shock*

*Severe illness*

*Metabolic disturbances*

*Meningitis*

*Surgery*

*Pain*

*Hypoxia*

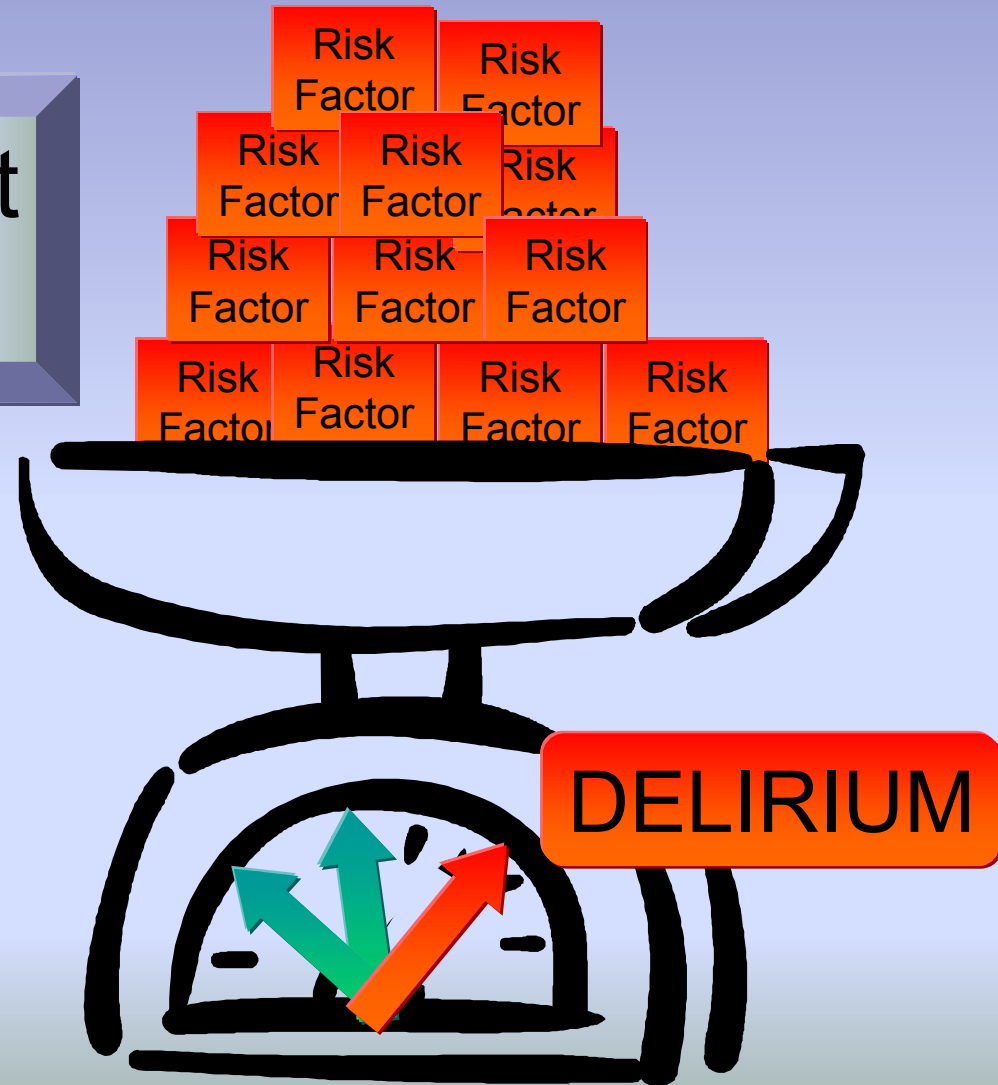
*Dehydration*

*Prolonged sleep deprivation*

*Pyrexia*

# Critical Care Implications

Multicomponent Interventions



# Variable Incidence of Critical Care Delirium

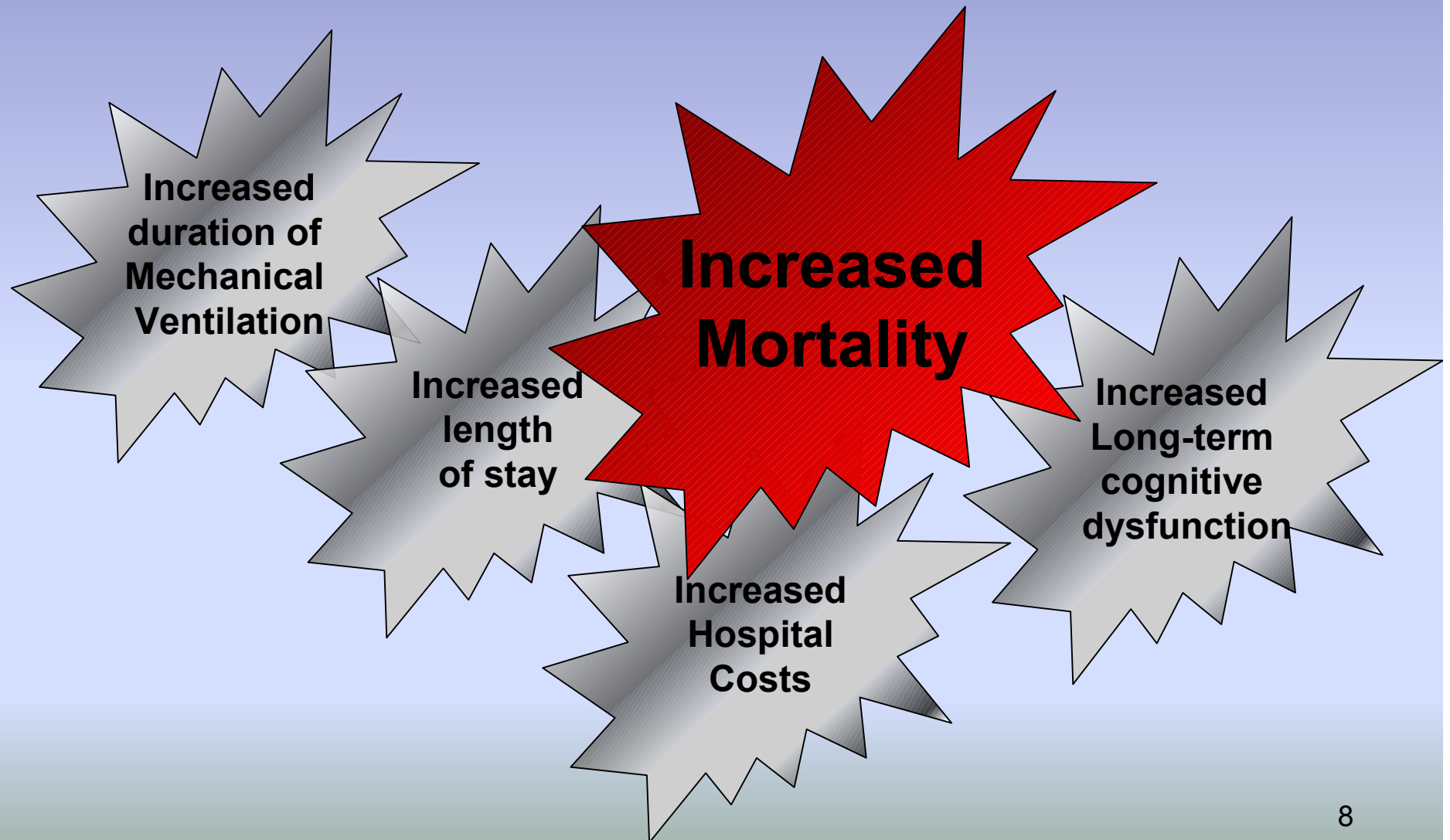
Incidence rates:

Mixed Level 2/3 units: around 45%

Level 3 patients: around 72%

Author (yr)	n	Case mix	Incidence
Girard(2008)	336	MICU	71-74%
Plaschke(2008)	174	SICU	41%
Pisani(2007)	304	MICU	70%
Larsson(2007)	14	Mixed	48%
Peterson(2006)	614	MICU	74% (>65yr) 54% (<65yr)
Roberts(2005)	185	Mixed	45%
Micek(2005)	93	MICU	47%

# Why is delirium important?



# Why delirium screening?

Bedside clinical observation identifies 25-30% patients with delirium

Use of a formalised screening approach improves delirium detection

“Routine” delirium screening recommended

No evidence to date it affects patient outcomes

# ICU Delirium Screening Tools

*Cognitive Test for Delirium (CTD)*

*Abbreviated CTD*

*NEECHAM*

*Delirium Detection Score*

*Confusion Assessment Method  
in the Intensive Care Unit (CAM-ICU)*

*Intensive Care Delirium  
Screening Checklist (ICDSC)*

# STH General Critical Care Approach

# **Delirium Group**

## **Team established to:**

- **Develop resources**
- **Integrate resources into systems**
- **Educate and train nursing staff**
- **Assist staff with assessment and management of delirium**

# **Intensive Care Delirium Screening Checklist**

1. Altered level of consciousness
2. Inattention
3. Disorientation
4. Hallucination, delusion or psychosis
5. Psychomotor agitation or retardation
6. Inappropriate speech or mood
7. Sleep/ Wake cycle disturbance
8. Symptom fluctuation

# THE MANAGEMENT OF DELIRIUM WITHIN CRITICAL CARE

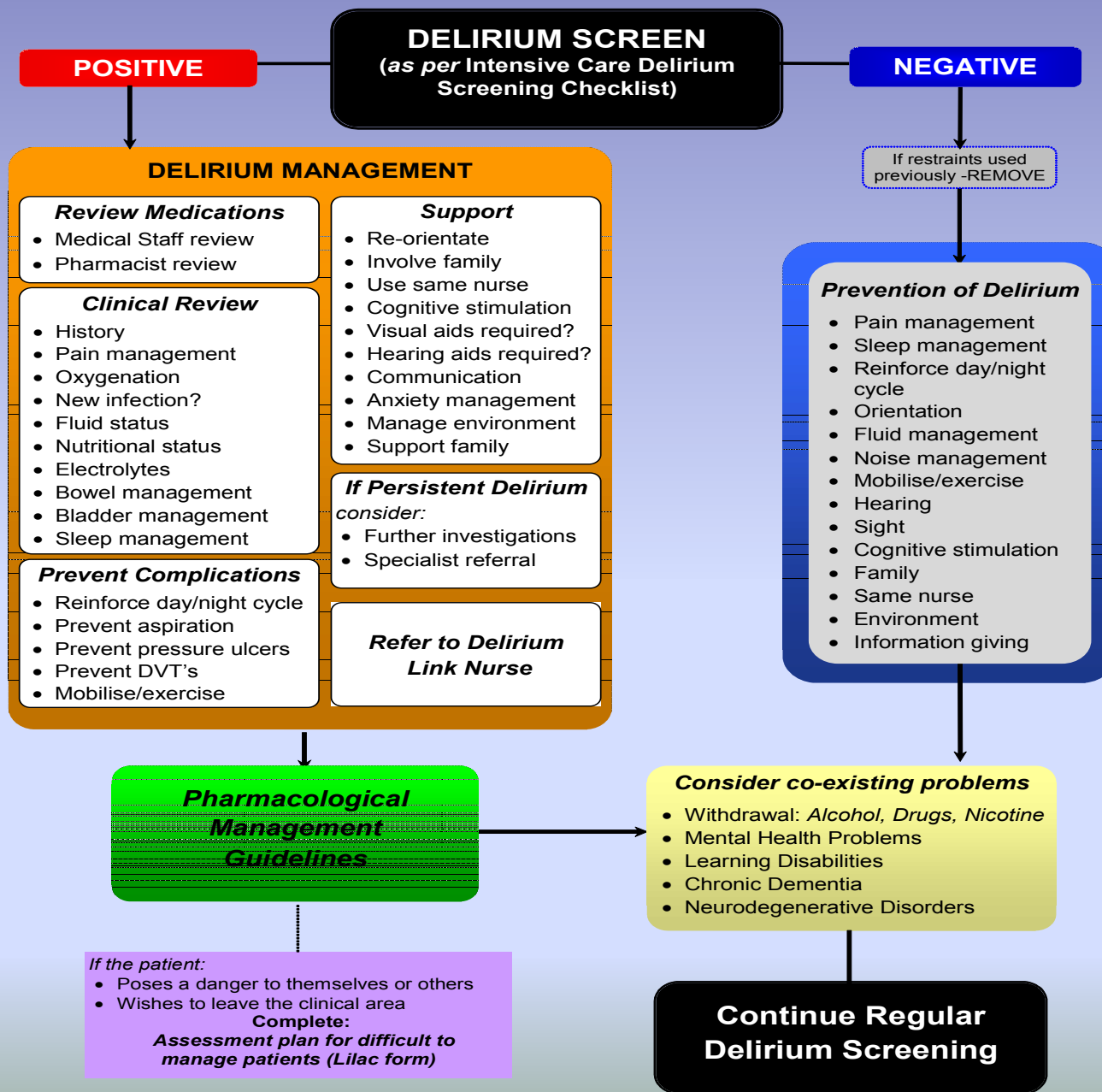


Figure 1: Pharmacological Management of Delirium Flow Chart

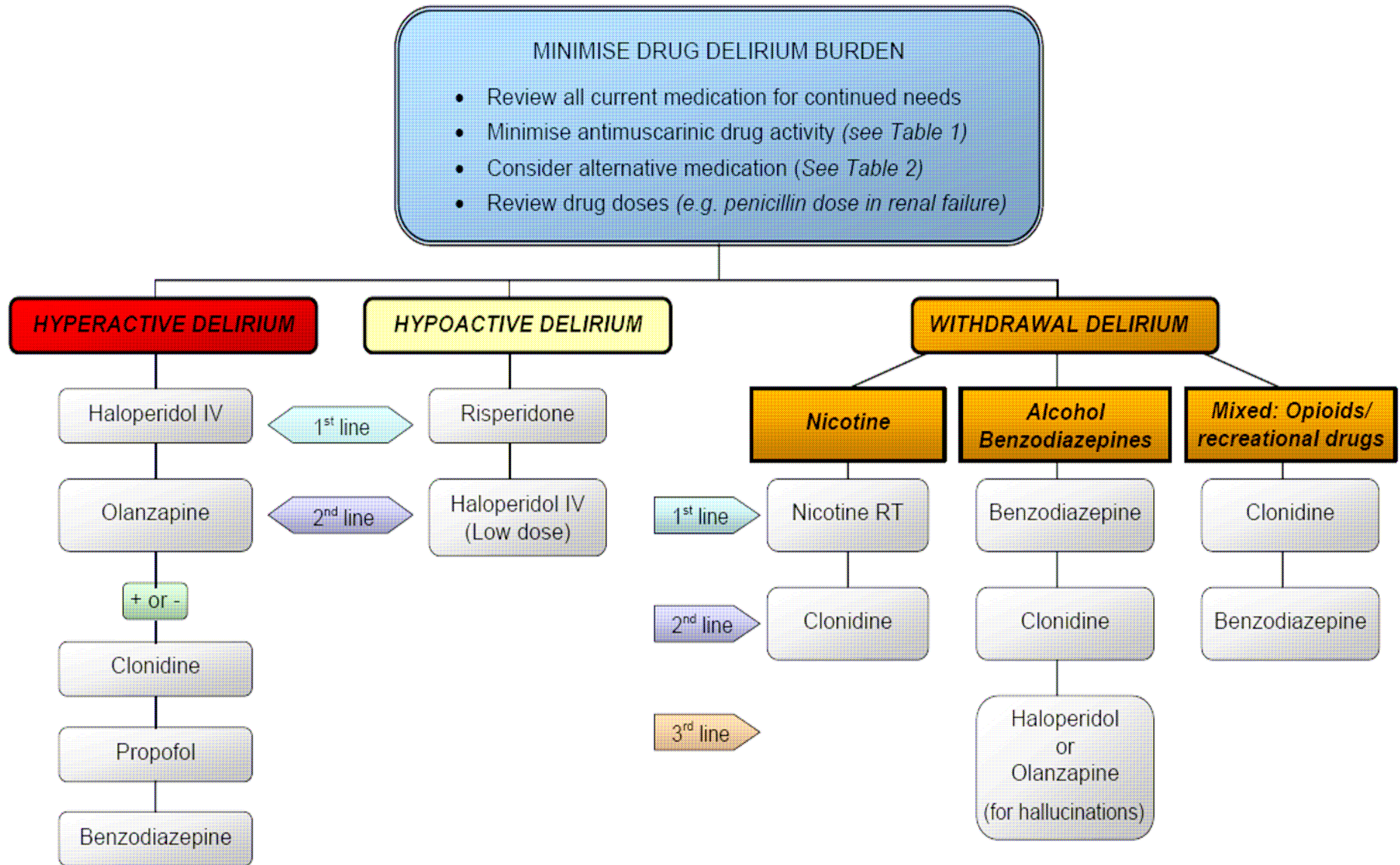
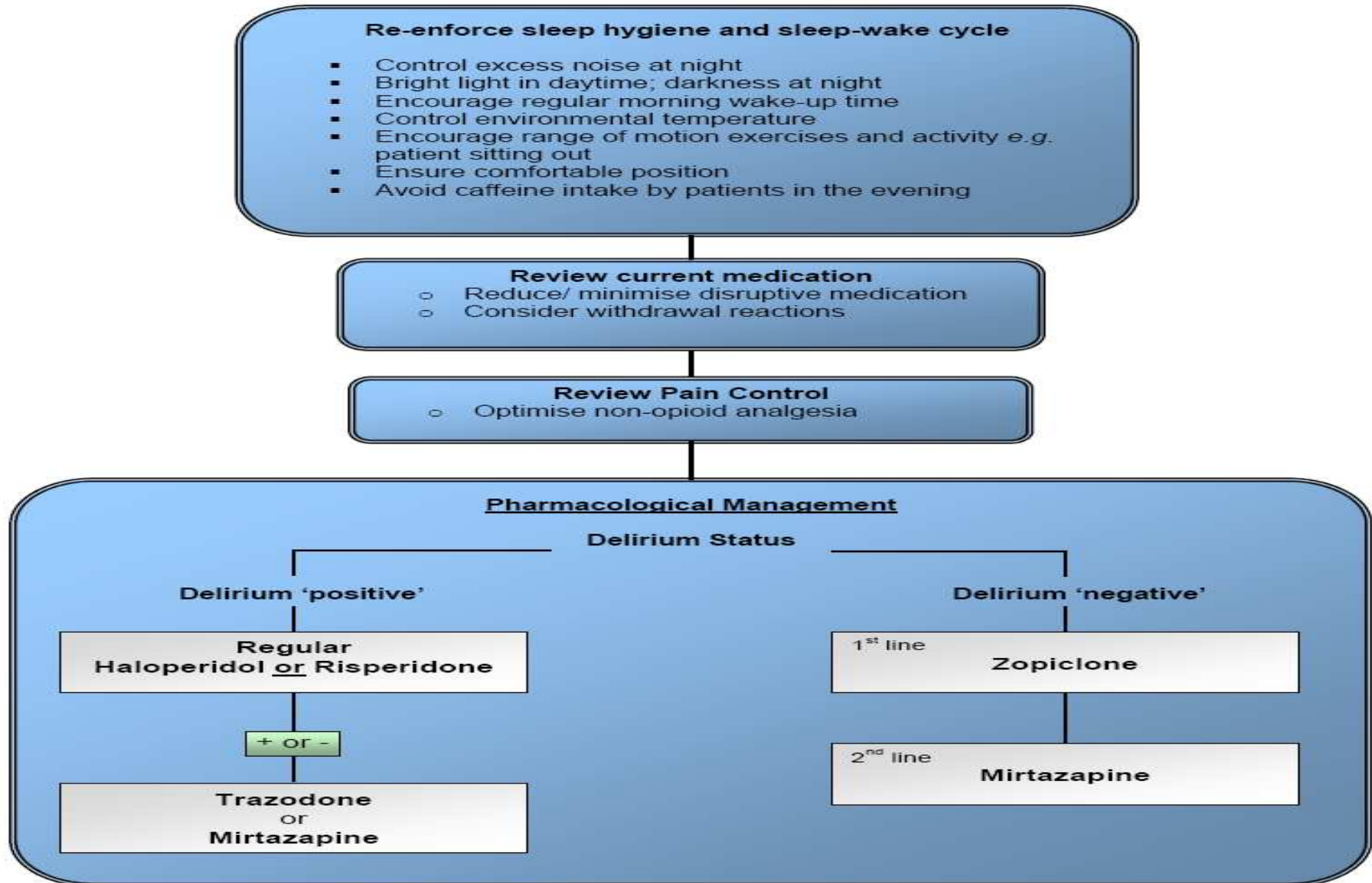


Figure 2: Pharmacological management of sleep disturbances flow chart



# Education and Training

- 240 Nursing staff
- Resources integrated into systems
- Promotion material disseminated
- Initiative launched

# Delirium Screening



4 General Critical Care Units

Over 2 sites

Level 3 18 beds

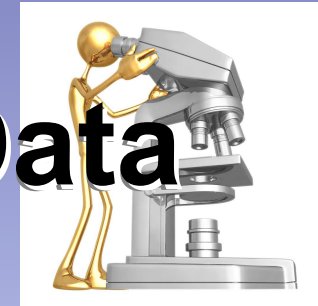
Level 2 25 beds

ICDSC every 8 hour shift

6 month period; n=1,562

**10,451**

# Delirium Screening Data



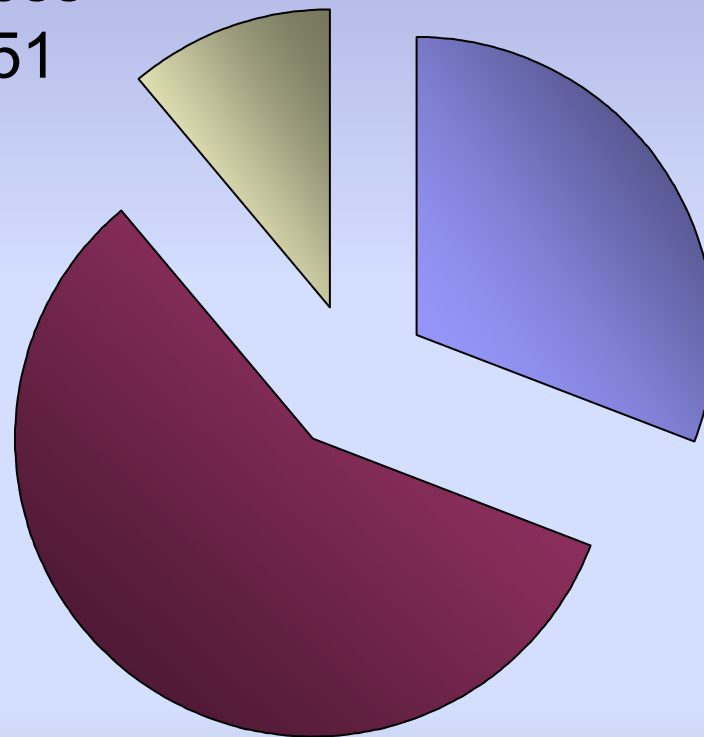
Overall

n=1,562

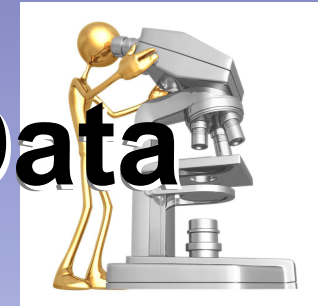
Unable to  
assess  
n=51

Negative  
n=1,224  
(81%)

Positive  
n=287  
(19%)



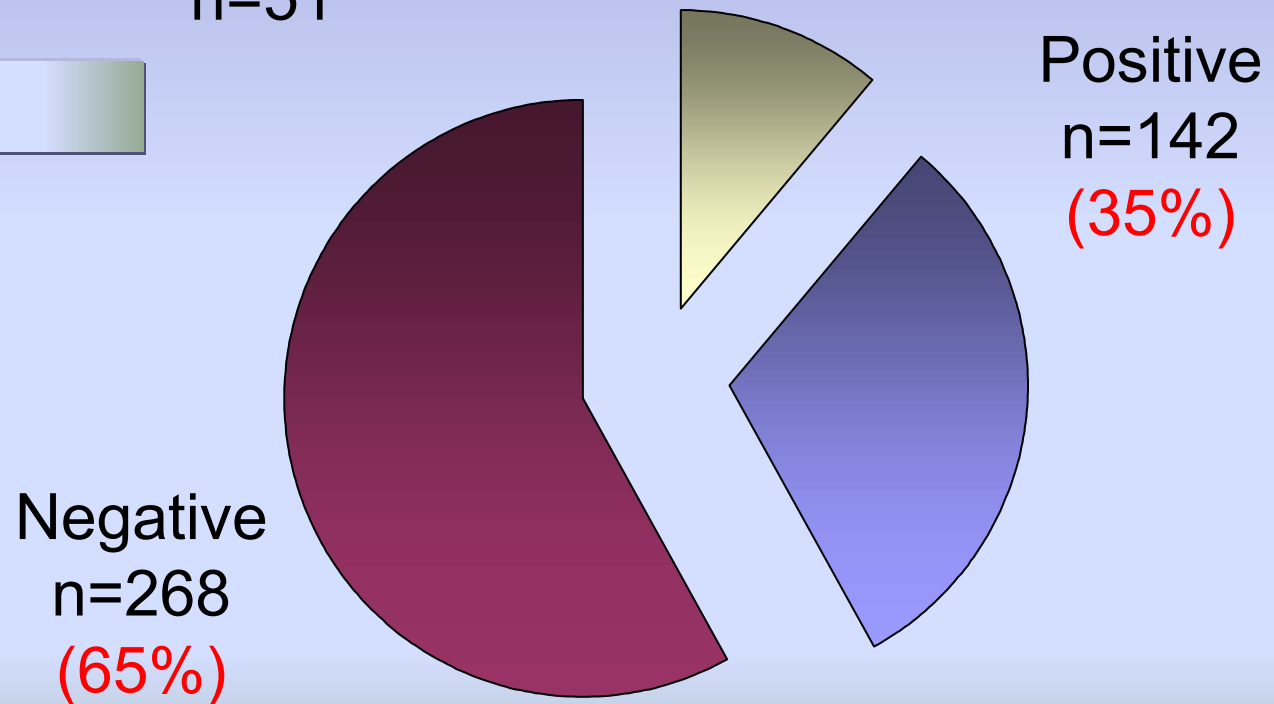
# Delirium Screening Data



**Level 3**

Unable to  
assess  
n=51

n=461



# Ongoing Developments



Improve compliance

Further education

Inter-rater validation

Nurse questionnaire

Further evaluations of incidence rates, patient groups and the effects of subsyndromal delirium

# Conclusions



Delirium – a sign of “organ failure”

Key role in delirium management

Educate ALL critical care staff

Implement screening in ALL critical care units

Have a management plan

Systematic approach

- Thank you

Any Questions

**We would like to gratefully acknowledge the contributions of Mr Philip Murch (Lecturer Practitioner, STH Critical Care) and Dr Richard Bourne (Consultant Pharmacist, STH Critical Care).**