Covenant Health
Misericordia

“Fighting the Fog”
A Collaborative Approach to Decreasing ICU Delirium

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Disclosure

I have no relationship that could be perceived as placing me in a real or apparent conflict of interest in the context of this presentation.

Delirium

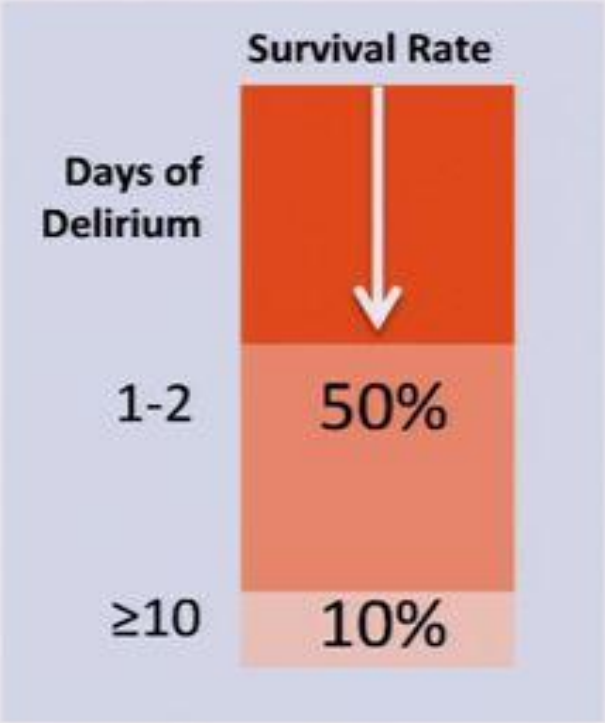
- Delirium is an acute change in LOC accompanied by inattention and either a change in cognition or perceptual disturbance – Hyperactive vs Hypoactive

- Affects up to 80% of ICU patients with increased length of ICU/hospital stay, time on ventilator, mortality, and long term neuropsychological deficits (Ely et al, JAMA, 2004)

AMERICAN ASSOCIATION of CRITICAL-CARE NURSES

Delirium Associated with Mortality

Probability of Survival, 1 year post event



For each day of delirium, 1-year mortality increased by 10%

AACN WebinarSeries™

Pisani MA *et al. Am J Respir Crit Care Med.* 2009;180:1092-97

AMERICAN ASSOCIATION of CRITICAL-CARE NURSES

Long-term Cognitive and Mental Health Impairments Post ICU

Health impairments	Symptoms	Incidence (% survivors)
Cognitive	▪ Memory ▪ Attention ▪ Executive function ▪ Slowed processing	50
Mental	*Post-traumatic stress disorder (PTSD)* ▪ Depression ▪ Anxiety ▪ Impaired sleep *Some have symptoms ≥8 years*	20-25

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Herridge, MS et al. *NEJM.* 2011 ; 364: 1293-1304

Delirium Risk Factors

- Pre-existing dementia
- History of hypertension
- Alcoholism
- High severity of illness at admission

Clinical Practice Guidelines for the Management of Pain, Agitation, and Delirium in Adult Patients in the ICU

(SCCM, 2012)

- Maintaining **light levels of sedation** in adult ICU patients is associated with improved clinical outcomes
- **RASS** and SAS are the most valid and reliable sedation assessment tools for measuring quality and depth of sedation
- Sedation strategies using **non-BZP** sedatives (ie. Propofol/Dexmedetomidine) preferred to improve clinical outcomes in mechanically ventilated patients
- Recommend routine monitoring of delirium utilizing the CAM-ICU or the **ICDSC**
- BZP use may be a risk factor for the development of delirium
- In mechanically ventilated patients at risk of developing delirium, **dexmedetomidine** infusions may be associated with a lower prevalence of delirium
- Recommend performing **early mobilization** when feasible
- No recommendation for using a (non) pharmacologic delirium prevention protocol in adult ICU patients

Clinical Practice Guidelines for the Management of Pain, Agitation, and Delirium in Adult Patients in the ICU
(SCCM, 2012)

- Do not suggest that haloperidol or atypical antipsychotics be administered to prevent delirium
- **Atypical antipsychotics** may reduce the duration of delirium; no evidence that haloperidol reduces the duration of delirium
- Do not suggest using antipsychotics in patients at significant risk for torsades
- Suggest that in adult ICU patients with delirium unrelated to alcohol or BZP withdrawal, continuous IV infusions of **dexmedetomidine** rather than BZP be administered for sedation to reduce duration of delirium
- Recommend daily sedation interruption or a **light target level of sedation** be routinely used in mechanically ventilated adult ICU patients
- Recommend promoting **sleep** by optimizing patients' environments, using strategies to control light and noise, clustering patient care activities, and decreasing stimuli at night to protect patients' sleep cycles
- No recommendation for specific modes of ventilation to promote sleep
- Recommend **interdisciplinary team approach** to facilitate use of guidelines

Collaborative Approach to Decreasing ICU Delirium
Misericordia Hospital Strategy

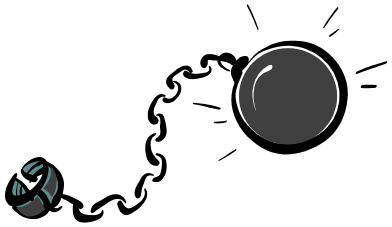
- Aim and Objectives :
- Develop and deliver education and support for staff regarding delirium awareness, prevention, and management within 12 months.
- Determine baseline incidence of delirium within 3-4 months.
- Implement processes to screen 100% of all ICU patients for delirium within 6 months or less.
- Identify and implement standardized delirium prevention interventions in all ICU patients within 12 months or less.
- Implement standardized interventions for the management of delirium within 12 months or less.
- Implement strategies to support families of patients with delirium within 18 months or less.
- Establish ongoing education parameters.

Goals

To **decrease** the incidence of delirium in the Misericordia ICU by:

a) Reducing the utilization of analgesic and sedation infusions

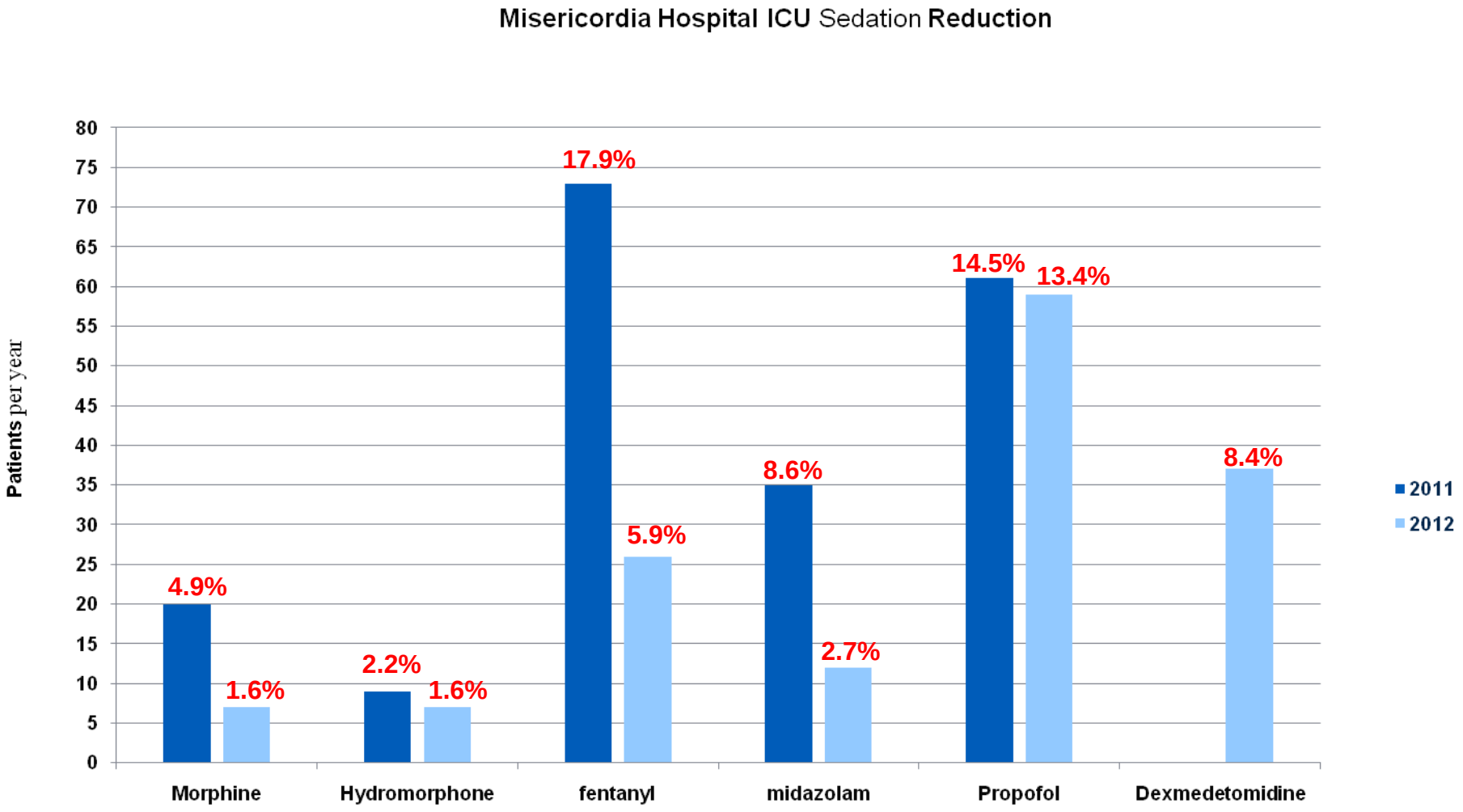
b) Reducing the utilization of restraints



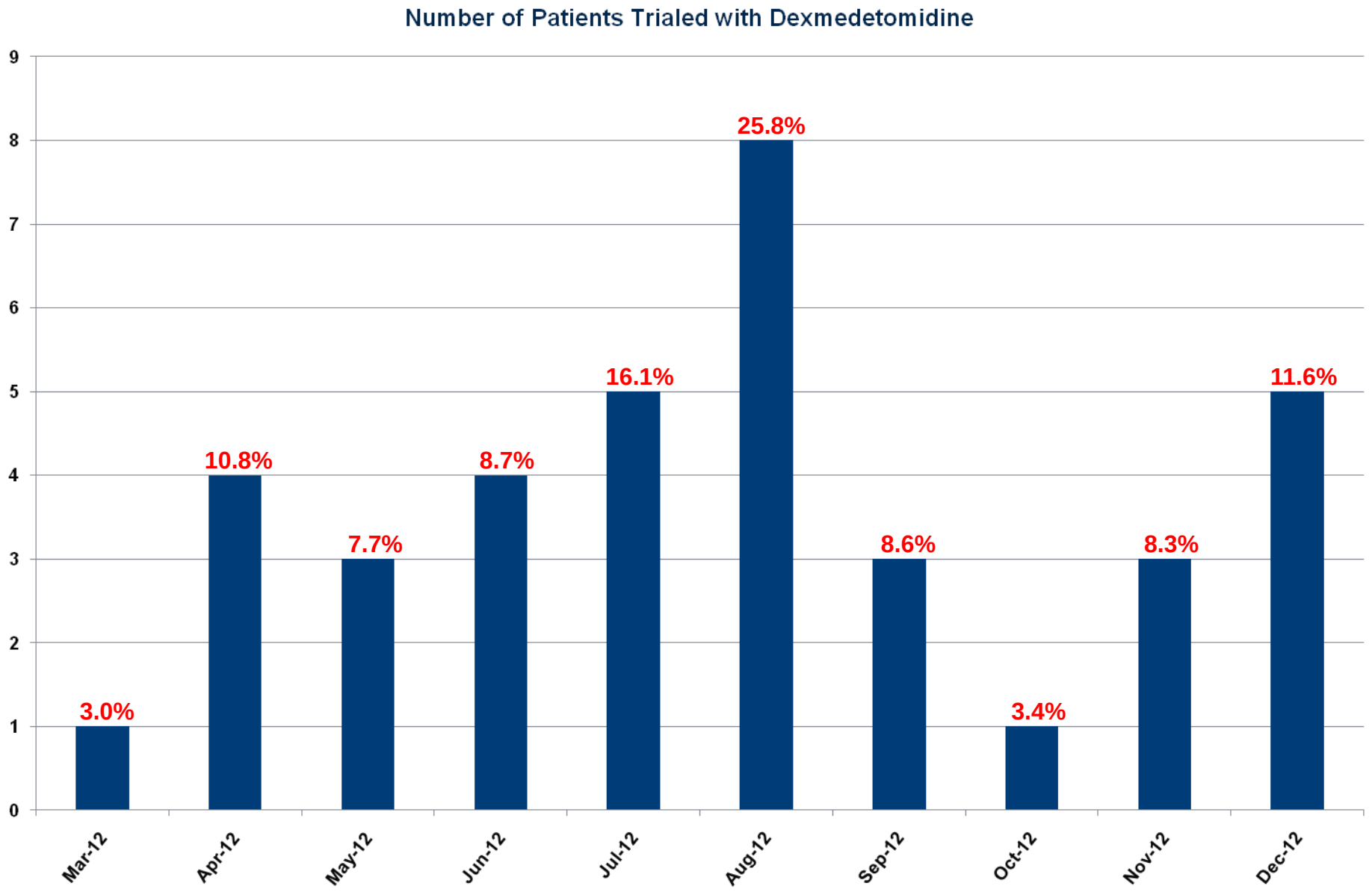
c) Decreasing ventilation days of ICU patients

d) Improving mobilization of ICU patients

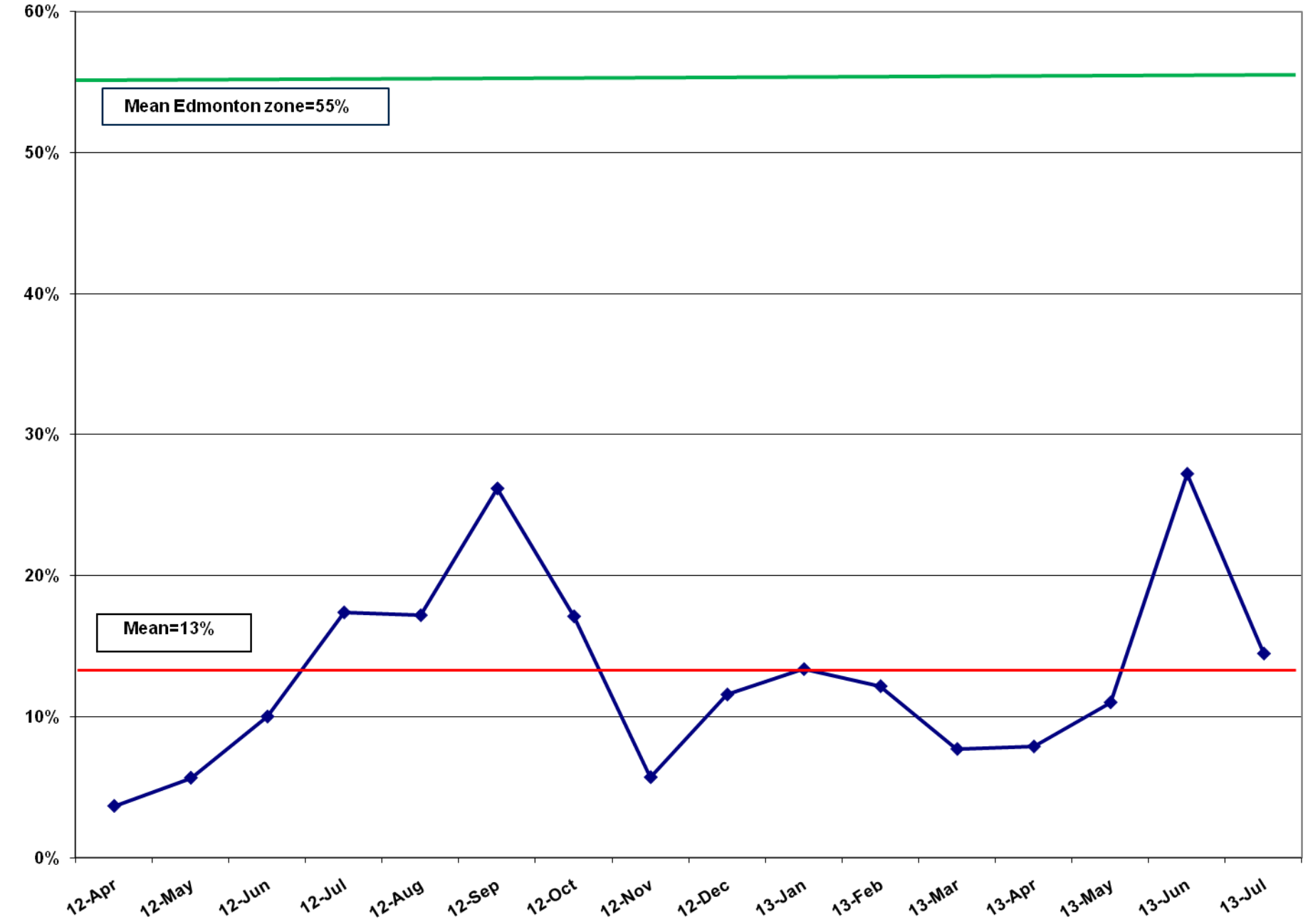
e) Improving consecutive hours of sleep for patients and noise reduction



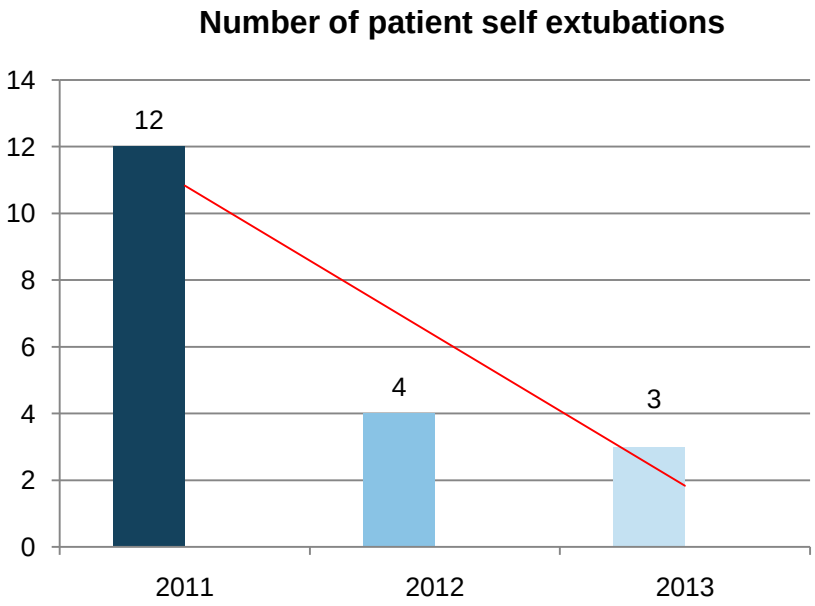
Total # patients (2011) = 408
Total # patients (2012) = 439

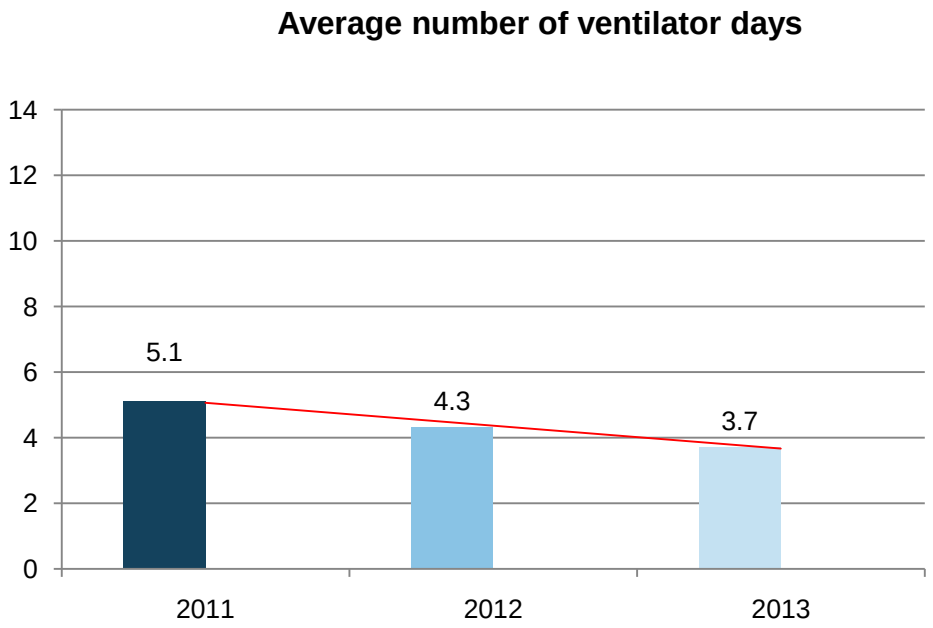

Number of Patients Trialed with Dexmedetomidine
9
8
7
6
5
4
3
2
1
0
3.0%
10.8%
7.7%
8.7%
16.1%
25.8%
8.6%
3.4%
8.3%
11.6%
Mar-12
Apr-12
May-12
Jun-12
Jul-12
Aug-12
Sep-12
Oct-12
Nov-12
Dec-12

Misericordia Hospital ICU Restraint Usage

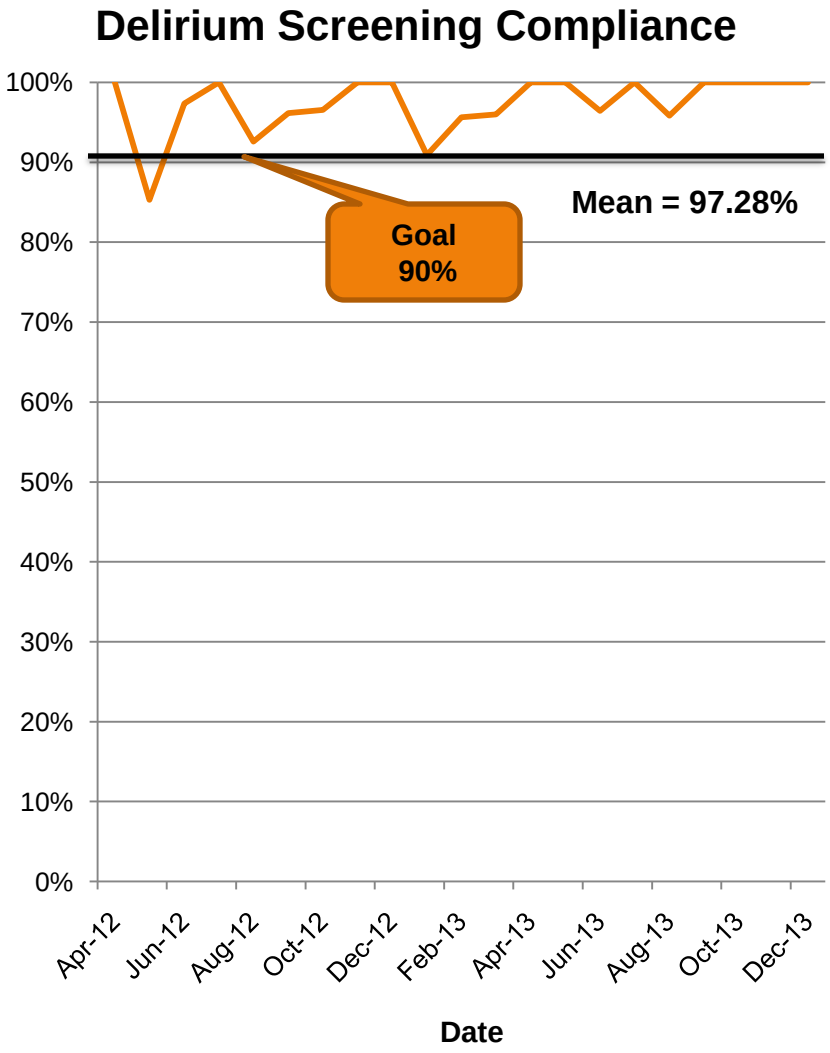


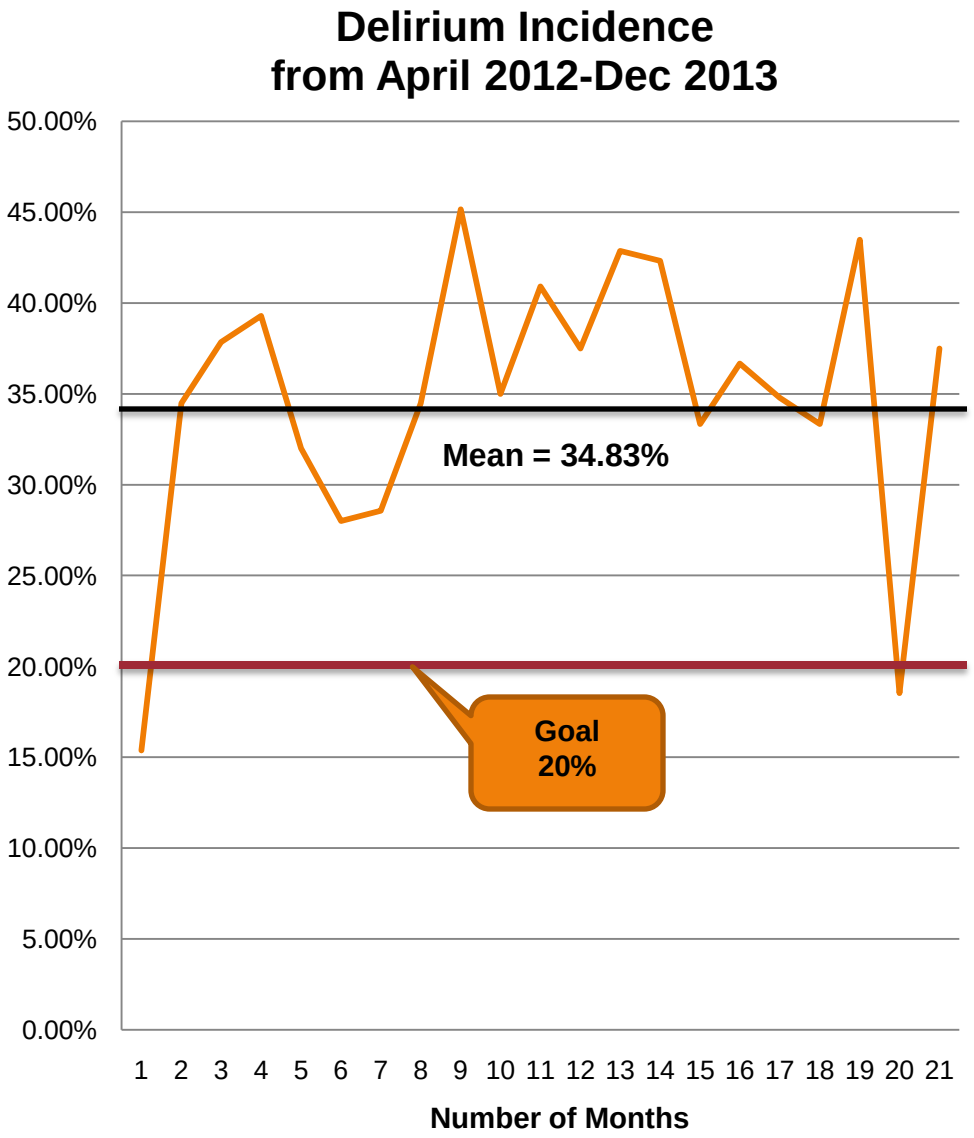
Misericordia Hospital ICU Ventilator Days



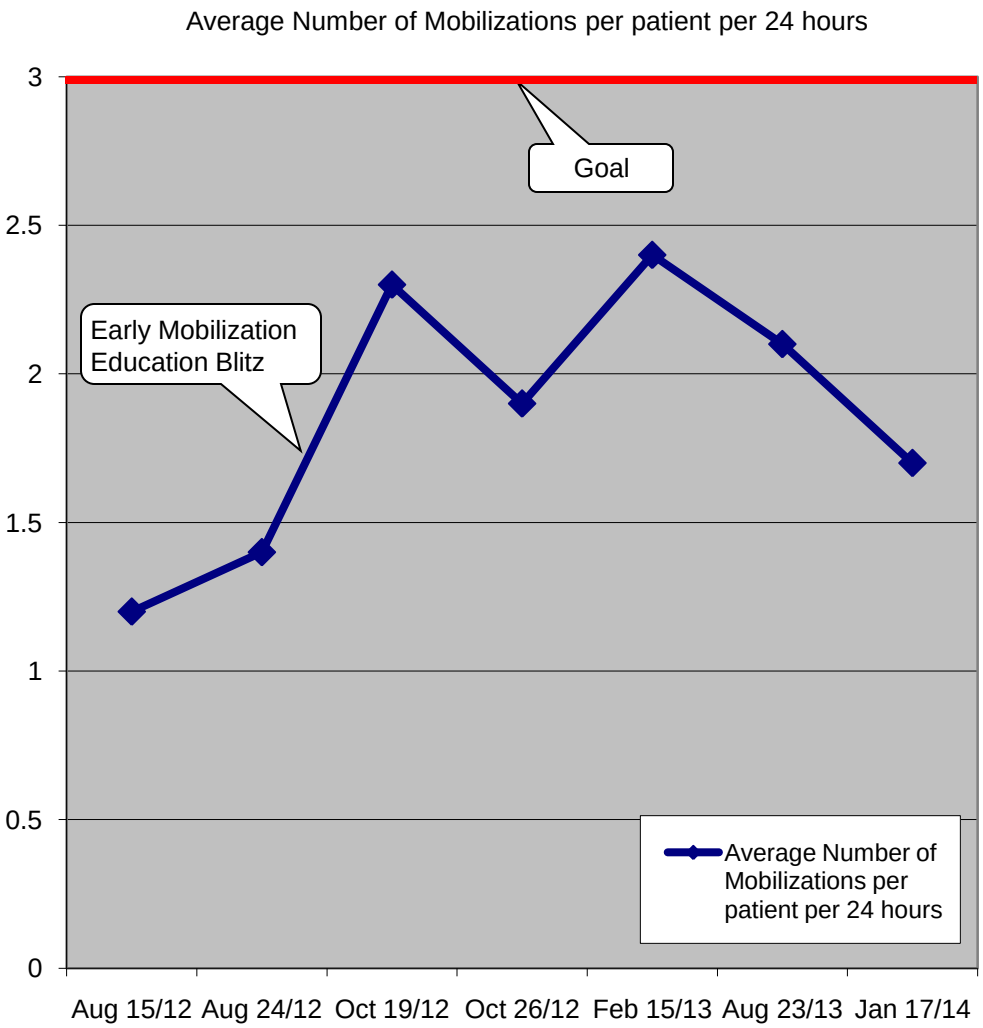


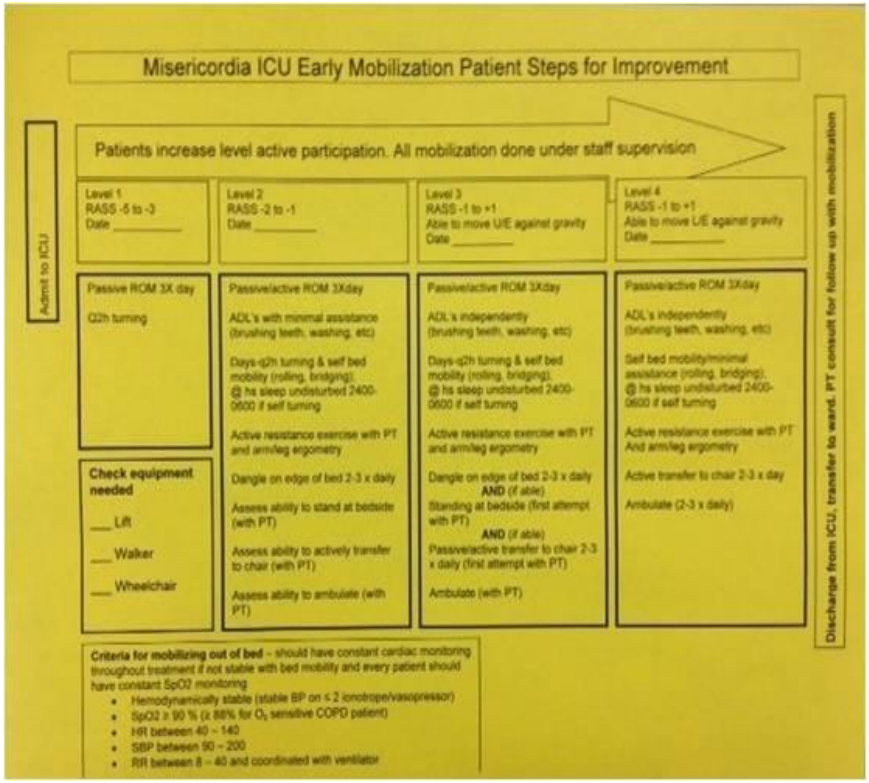
Misericordia Hospital ICU Delirium Outcomes





Misericordia Hospital ICU Early Mobilization Strategy





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Adult ICU Admission Orders
(Misericordia Community Hospital)

1. All orders must be completed and signed by the physician.
2. All co-signatures must be timed and dated within **24 hours**.
3. Orders may be deleted by stroking the order out and initialing the entry or by leaving prompts blank (boxes and/or lines).

(Patient ID Label)

Date/Time	
	Ht:(cm)_____ Wt:(kg)_____
	Admit to ICU under Dr. _____ Admitting Diagnosis: _____
	Comorbid conditions: _____
	Vital Signs:
	1. Vital Signs ☐ q1hr **OR** ☐ _____
	2. Neuro Vital Signs ☐ q4hr **OR** ☐ _____
	3. Intake and output ☐ q1hr **OR** ☐ _____
	4. ☐ Arterial line insertion ☐ Central line insertion
	Resuscitation Status: Refer to goals of care documents
	Ventilator-Associated Pneumonia Prevention:
	1. Head of bed elevated to 30 degrees at all times
	2. Oral care protocol q2-3hr and PRN while awake
	Delirium Prevention:
	1. Perform Richmond Agitation and Sedation Scale (RASS) and Intensive Care Delirium Screening Checklist (ICDSC) q shift and PRN with change in level of consciousness
	2. Orientate patient q 4 hrs and PRN while awake
	3. Visibly display date, day, time and staff members' names to the patient
	4. Place hearing aids and glasses on patients who are awake if applicable
	5. Consult physiotherapy a. Document Mobility Level qshift b. Implement early mobilization protocol c. ☐ Activity as tolerated **OR** ☐ _____
	6. Ensure that patient has an uninterrupted sleep (2200hrs to 0600hrs) if possible a. Minimize noise during sleep time b. Turn down lighting as much as possible c. Minimize nursing and medical interventions if possible d. Provide ear plugs if desired
	7. **Minimize sedation**; avoid use of continuous sedation infusions if possible
	Prescriber Signature: _____
	Prescriber's Printed Name: _____

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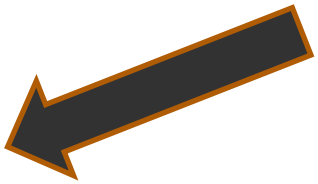
Misericordia ICU Admission Orders



Accomplishments

- We have developed and implemented a delirium screening tool in our ICU with > 90% compliance with screening. Our delirium incidence is 15-40% with a goal of < 20%.

- We have significantly reduced our utilization of narcotic and benzodiazepine infusions, while increasing our use of dexmedetomine.

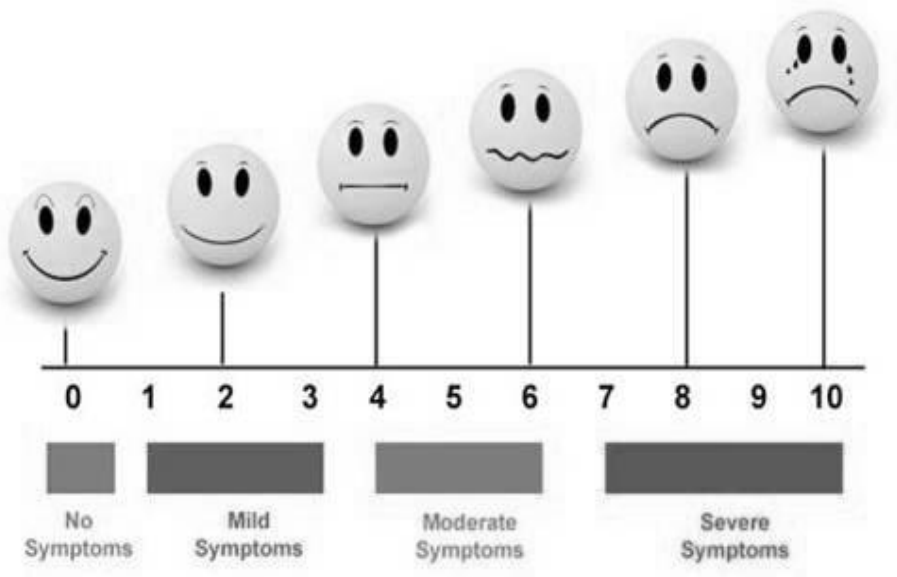
- We have significantly reduced the use of restraints.

- Mobility has improved from an average of 1.2 to 2.3 mobilization episodes per patient/day.

- We have developed a current set of ICU Admission Orders which reflect our ICU delirium strategy.

Accomplishments

- Development/incorporation of standardized pain assessment tool (CPOT/VAS)

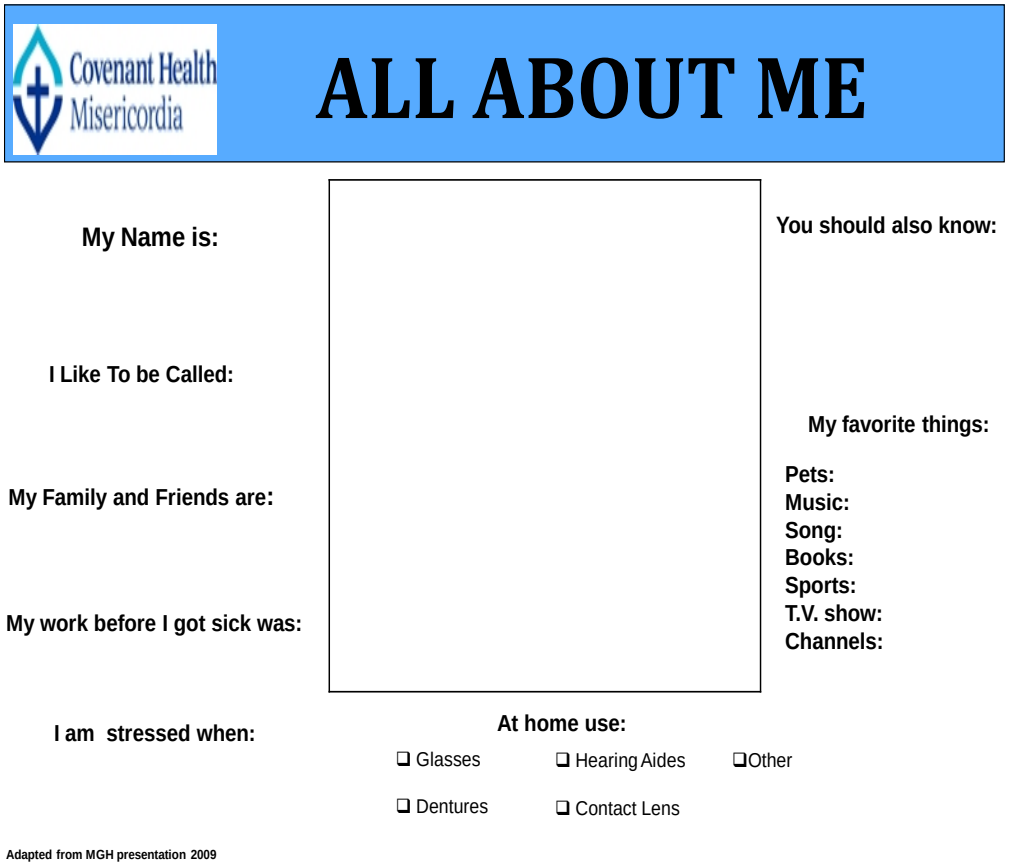


- Trial of noise monitor to determine the noise level in high traffic areas in the ICU

Next Steps

- Distribution of ICU Family Satisfaction Survey to all patients & families

- Use of “All About Me” tool to learn more about each individual’s unique needs



Covenant Health Misericordia

ALL ABOUT ME

My Name is:

I Like To be Called:

My Family and Friends are:

My work before I got sick was:

I am stressed when:

You should also know:

My favorite things:

Pets:
Music:
Song:
Books:
Sports:
T.V. show:
Channels:

At home use:

❑ Glasses ❑ Hearing Aides ❑Other

❑ Dentures ❑ Contact Lens

Adapted from MGH presentation 2009


are we there yet?
here
almost