# Management of Pain, Agitation, and Delirium (PAD) in Abbotsford Regional Hospital Intensive Care Unit

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### Background

- Pain, agitation, and delirium (PAD) are comorbid conditions commonly experienced by critically ill patients
- Uncontrolled pain and excessive use of sedatives can often lead to delirium
- Delirium is associated with increased mortality, neurological dysfunction, prolonged ventilation and length of hospital stay
- PAD Clinical Practice Guidelines provide recommendations for preventing and treating pain, agitation and delirium in critically ill patients

### **Objectives**

### **Primary Objective**

Determine the frequency of patients that received appropriate PAD management as recommended by PAD guidelines

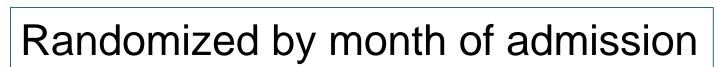
### **Secondary Objective**

Identify areas and reasons not meeting recommendations

Methods	
Study Design	Retrospective Chart Review
Study Period	January 2013 – August 2013
Sample Size	Determined by convenience sampling
Inclusion Criteria	Adult patients (> 19 years old)
	Mechanically ventilated for $\geq$ 12 hours
	Admitted to ARH ICU
	Acute Respiratory Distress Syndrome
Exclusion Criteria	Post cardiac arrest
	Traumatic brain injury
	Death determined to be imminent

Flow Diagram of Patient Selection

304 patients extracted from Fraser Health Regional Critical Care Database





5 patients from each month that met inclusion criteria included in study







### Doculto

Results				
Table 1: Patient Characteristics				
	# (N=40)	%		
Age, mean (SD)	63	(±14)		
Male	26	65		
APACHE II score, mean (SD)	21	(± 8)		
Primary admission diagnosis				
Sepsis	10	25		
Pulmonary	9	23		
Cardiovascular	7	18		
Neurological	6	15		
Risk Factors for PAD				
Hypertension	18	45		
Chronic pain	12	30		
Neuropathic pain	7	18		
Alcohol use	7	18		
Benzodiazepine use prior to admission	3	8		
Psychiatric history	2	5		

Table 2: PAD Management Practices			
	#	%	
Pain			
BPS/VPS recorded per shift	2		
Intermittent opiate doses given	434		
Doses associated with pain score	186	43	
Doses reassessed within 30 minutes	79	18	
Continuous opiate infusions before intermittent doses given	19	48	
Patients given neuropathic pain medications (n=7)	2	28	
Patients given non-opioid analgesia	11	28	

Agitation		
Target RASS of -2 to 0	32	80
RASS recorded per shift	3	
Intermittent sedative doses given	352	
Doses associated with RASS score	81	23
Doses reassessed within 30 minutes	61	17
Doses given with analgesia	71	20
Continuous sedative infusions before intermittent doses given	24	60



Table 2: PAD Management Practices (Con't)				
	#	%		
Delirium				
ICDSC recorded per shift	< 1			
Patients received antipsychotics	12			
Patients that received antipsychotics	3	25		
with documented delirium	3			
Awakening and Breathing Coordination				
SAT Attempts (n=122 infusion days)	37	30		
SBT Attempts (n=180 ventilator days)	62	34		
Patients extubated without SBT (n=40)	20	50		

### Limitations

- Retrospective chart review
- Sample size of convenience

### Conclusions

- No patients were managed appropriately per PAD guidelines
- Monitoring of PAD did not meet recommended frequency
- Not all doses of analgesics, sedatives and antipsychotics were given based on validated score assessments
- Less than 50% patients received non-opioid analgesics
- Patients with neuropathic pain were not adequately treated
- SAT and SBT were not coordinated and performed daily

### Recommendations

- Further education regarding use of validated scales and documentation is required
- Education regarding use of analgesics, sedatives and antipsychotics is required
- Non-opioid analgesics and neuropathic pain medications should be considered
- SAT and SBT should be coordinated when appropriated Documentation tools should be re-evaluated

### Acknowledgement



### Monitoring frequency of PAD should be increased

Thanks to Shermaine Ngo, ARH Staff, and the Critical Care Informatics Team for their contribution in this project

