Sedation Challenge

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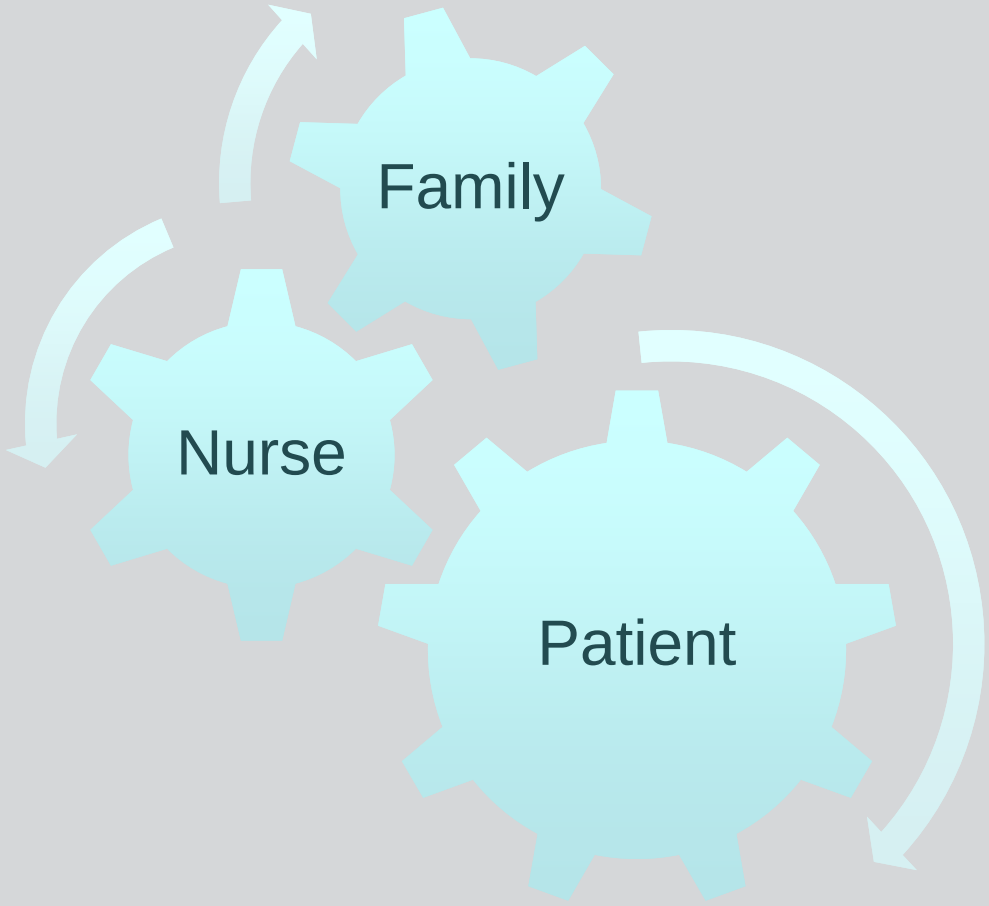
Background

- Evidence-based guidelines: no or light sedation, early mobilisation.
- Delirium independent predictor of worse cognitive outcomes.
- Decrease sedation ↓LOS, ↓ventilator days, ↓cost, ↓mortality & ↓nosocomial infections
- Sedation duration risk factor for PTSD

Complex health care intervention



We Know

- More sedation, more delirium
- More delirium, worse outcomes
- Less sedation, better outcomes

Research questions

- Will a new sedation guidance intervention based on nurses concerns be effective, acceptable and normalised into routine practice?
- What resources will be needed to implement and maintain the use of the sedation intervention?
- Will the use of a sedation guidance intervention reduce the amount of sedative drugs patients receive?
- Does modifying sedation delivery translate to better outcomes that are meaningful to patients and/or their families?

Background

- Surveys and qualitative studies show reluctance by nurses to maintain light sedation
- Barriers identified:
  - Knowledge
  - Rationalisation
  - Emotions
  - Expediency
- Current tools require “intense & sustained education, coordination, & cooperation”.

The proposed study

- Multi-centre
- Step-wise
- Adaptive – intervention changes according to data collected and to decision making rules.
- Normalisation
- Process evaluation

Intervention: Fundamentals

- Daily sedation goal of RASS 0 to -1 (or equivalent) unless explicitly changed on the ward round.
- Daily sedation requirement assessment (SRA) by the bedside nurse +/- doctor.
- All patients to be prescribed medication in order to manage episodes of agitation.
- Timed SRA to take place in the constantly supervised rested patient.
- Review, reassure and reorientate

Intervention: The assessment

- Oversedated at RASS -3 to -5, sedation to be decreased by 50% every 30 minutes until patient at RASS –1.
- RASS 0 to -1, sedation left as set unless plan to extubate.
- Agitated patients, determine cause:

  a) Pain: bolus fentanyl 10 microgms or alfentanil 100 microgms. at 3 minute intervals until pain controlled. If due to physical cause e.g. chest drain or blocked urinary catheter, manage accordingly.

  b) Delirium: haloperidol 2.5mgs, if contraindicated, give olanzapine.

  c) Anxiety, fear: use 1mg midazolam iv, no more than 4 mgs in one 24 hour period.

  If necessary for patient safety resedate patient with sedative infusion, wait for adjunct medication to work, SRA after 1 hr.

Intervention: The follow through

- In patient who cannot be maintained at RASS 0 or -1, doctor to be at bedside for the SRA.
- Consider clonidine infusions, regular antipsychotics, soft restraints in the agitated delirious patient. Review daily.
- Before uncomfortable routine interventions bolus small boluses of analgesia.
- *All patient families to be offered diaries.*
- Would the patient like music or radio?
- *Minimum 2 hour oasis period each shift without a nursing or medical intervention unless it is to provide comfort.*

The proposed study

Inclusions

Identified consultant and nurse lead

Commitment to data collection

Commitment to implementation

Exclusions

Lack of sign-up from core group of permanent staff

The proposed study

- Pilot: 2-4 units, Prospective (6/12) relevant data
- Launch intervention with *Education***
- At 6 month semi-qualitative data collection, evaluate effectiveness
- Review and revise intervention
- Launch version 2 in next 2-4 units & previous
- Repeat.
- Determine ongoing compliance and normalisation

The proposed study

- Primary ***?ADLs.***
- Secondary
  - Delirium days and Coma days
  - Daily highest & lowest RASS
  - Sedation burden
  - Compliance and acceptability
  - Cognitive, functional, health related quality of life
  - Socio economic effect on patient & family
  - Cost effectiveness
  - Mortality/LOS/ventilator days

The proposed sample size

- 20 to 25 ICUs (?2 Canadian)
- Pilot in 2-4 units, step-wise accrual 2-4 units at 6 month intervals
- Expressions of interest – Midlands, Northern and Surrey networks.

Details of study team

- Andrew Teodorczuk: Delirium education
- Bronagh Blackwood: Translation into quality practice
- Yoanna Skrobik: Sedation protocol implementation
- Two Patient representatives
- ICU research fellow and senior sister
- CTU
  - Methodologist
  - Statistician
  - Behavioral Scientist
  - Health Economist

Advisors

- Kirsty Everingham
- Mark Borthwick
- David Wellsted
- Judy Davidson
- Nadine Schofield

Current status

- Stucture and Detail – teleconference
- Awaiting DESIST
- Identifying Clinical Trials Unit
- Grant application

  HS&DR

  Closing date September 17th 2015

Aim of presentation at UKCCRF

- Primary outcome
- Challenging design
- Power
- Qualitative data
- Data analysis
- Translational element
- Follow-up outcomes