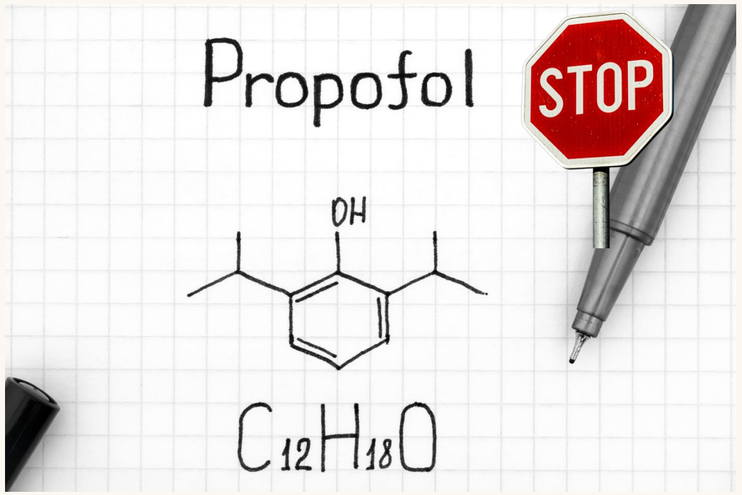
“Wake me up before you go go”

Improving performance with daily sedation holds on ventilated patients

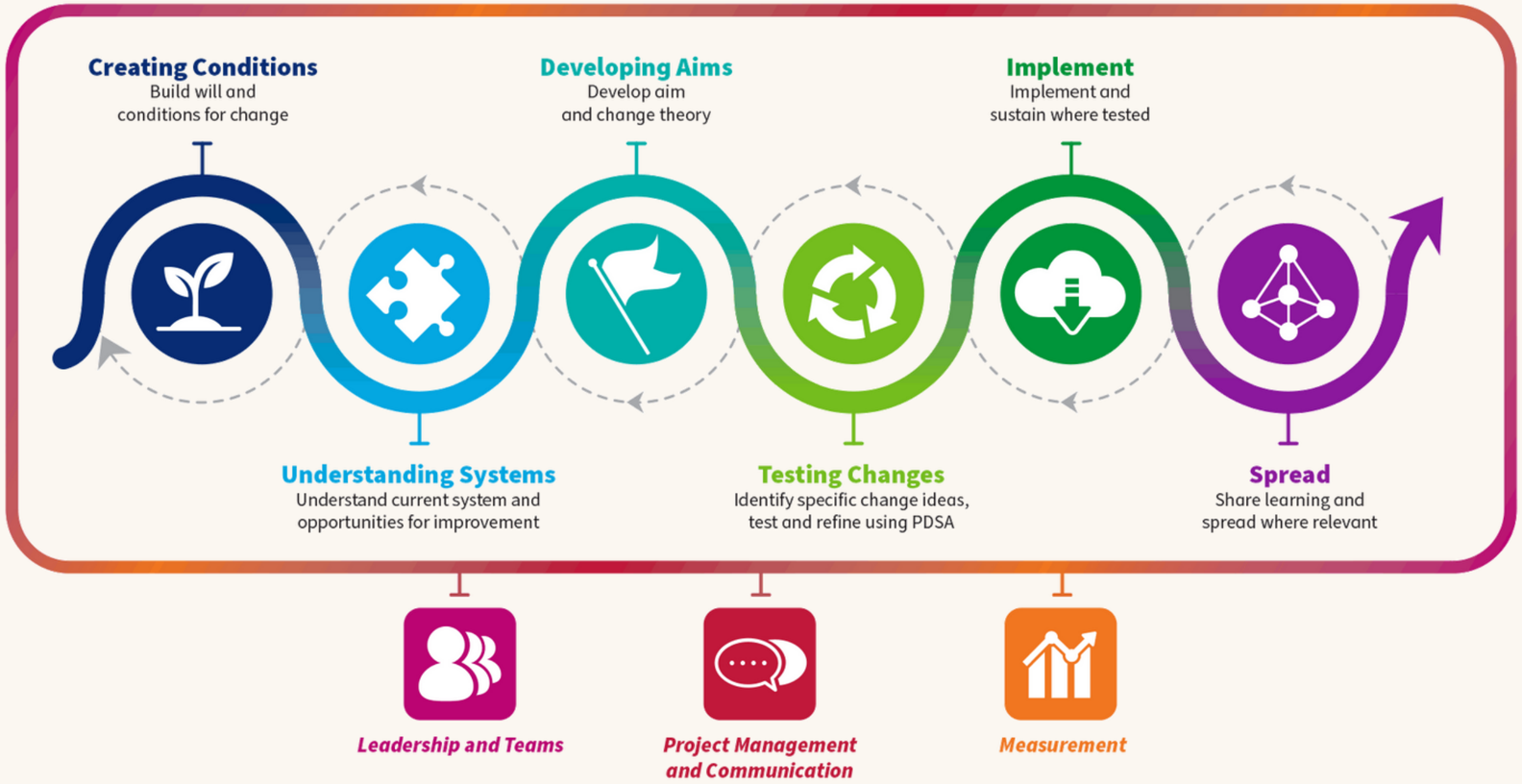


Lynsey Russell SCN ITU – NHS Borders
Scottish Quality & Safety Fellow
RCN Scotland Nurse of the Year 2024

Project

1. Creating conditions
2. Understanding systems
3. Developing Aims
4. Testing Changes
5. Implement
6. Spread

Quality Improvement Journey

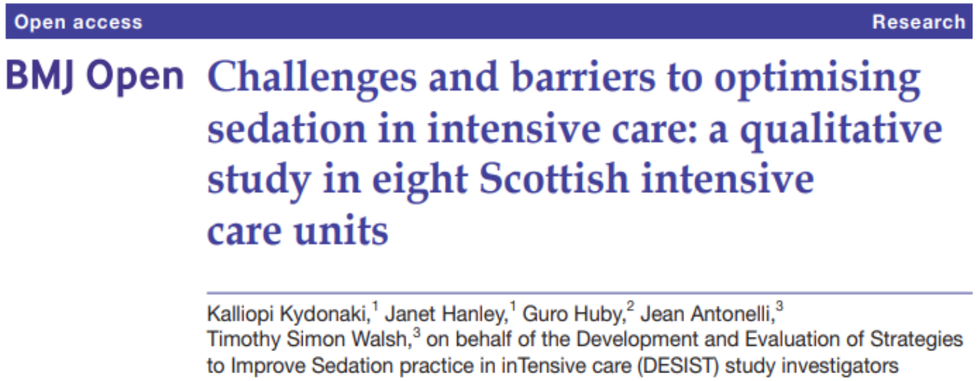


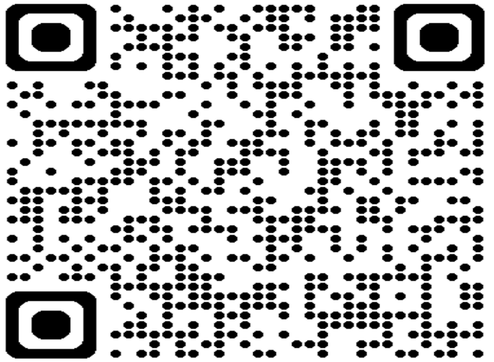
Creating Conditions

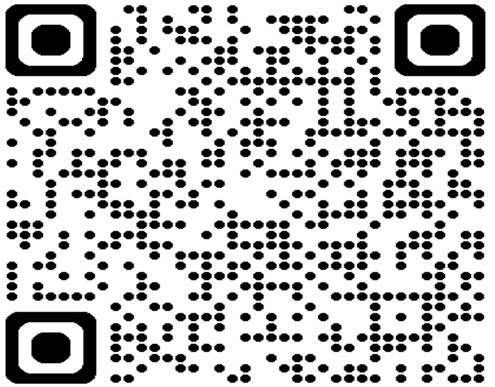
Background

- Deep sedation has significant adverse effects
- Recent data shows multiple benefits of daily sedation holds
- Our ICU had no set sedation hold criteria
- Establish improvement team
- Emphasise **WHY** the change is needed

Research and Improvement studies







Start with WHY?

ASSESS NEUROLOGICAL STATUS

REDUCE VAP & VENTILATOR DAYS

AIM FOR RASS 0 to -1

REDUCE ICU WEAKNESS

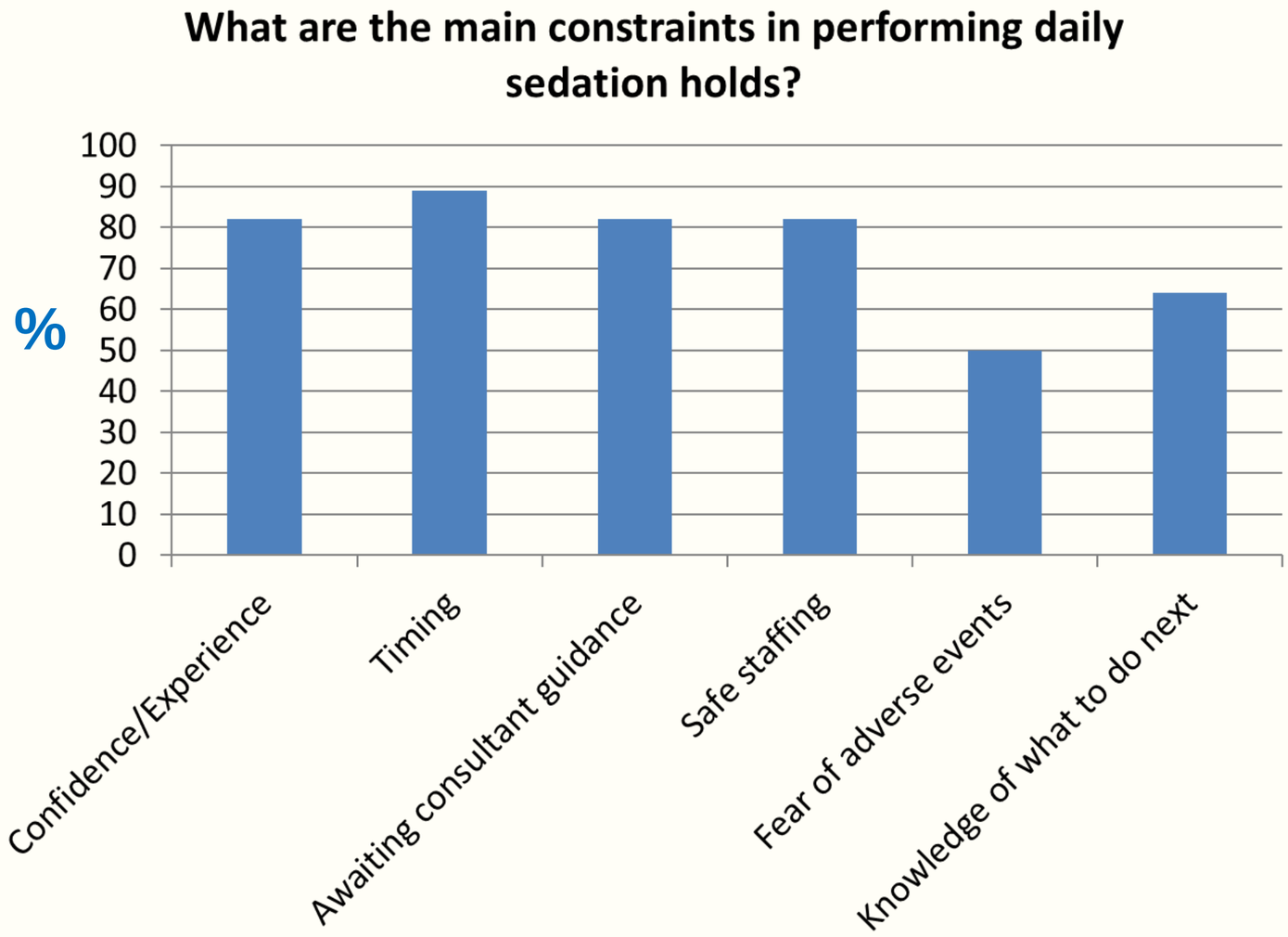
REDUCE DELIRIUM

REDUCE LOS

Understanding Systems

Understanding our system

1. Staff survey on constraints
2. Retrospective data collection from 60 patient case notes to establish baseline data 46%



Aim
In order to achieve this Aim…

Primary Driver
We need to ensure…

Secondary Driver
Which requires…

Change Ideas
Ideas to ensure this happens…

Increase compliance with daily sedation holds to 95% by October 2023

Primary Driver	Secondary Driver	Change Ideas
Safe staffing levels	Maintaining nationally recommended critical care nurse to patient ratio's	• Ensure nurse establishment accurate • Adequate skill mix on shift
Understanding of rationale for change	Providing evidence based knowledge and education to staff	• Regular 5 minute teaching sessions • Education board displaying evidence for change
Appropriately trained and skilled staff	• Training, experience & confidence • Strict criteria for performing sedation hold autonomously	• Training via National competency framework • Development of sedation hold protocol
Change in ward culture	•Empowerment and involvement of staff •Shift from medical decision making to nurse led	• Embedding QI into daily practice • Protocol & check box on 24 hour monitoring chart

Developing Aims

Measurement

Outcome

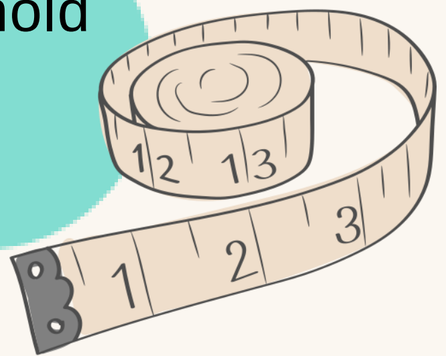
% of ventilator days that patient has eligible sedation hold

Process

- % staff compliance with nurse led protocol
- Documentation of sedation hold

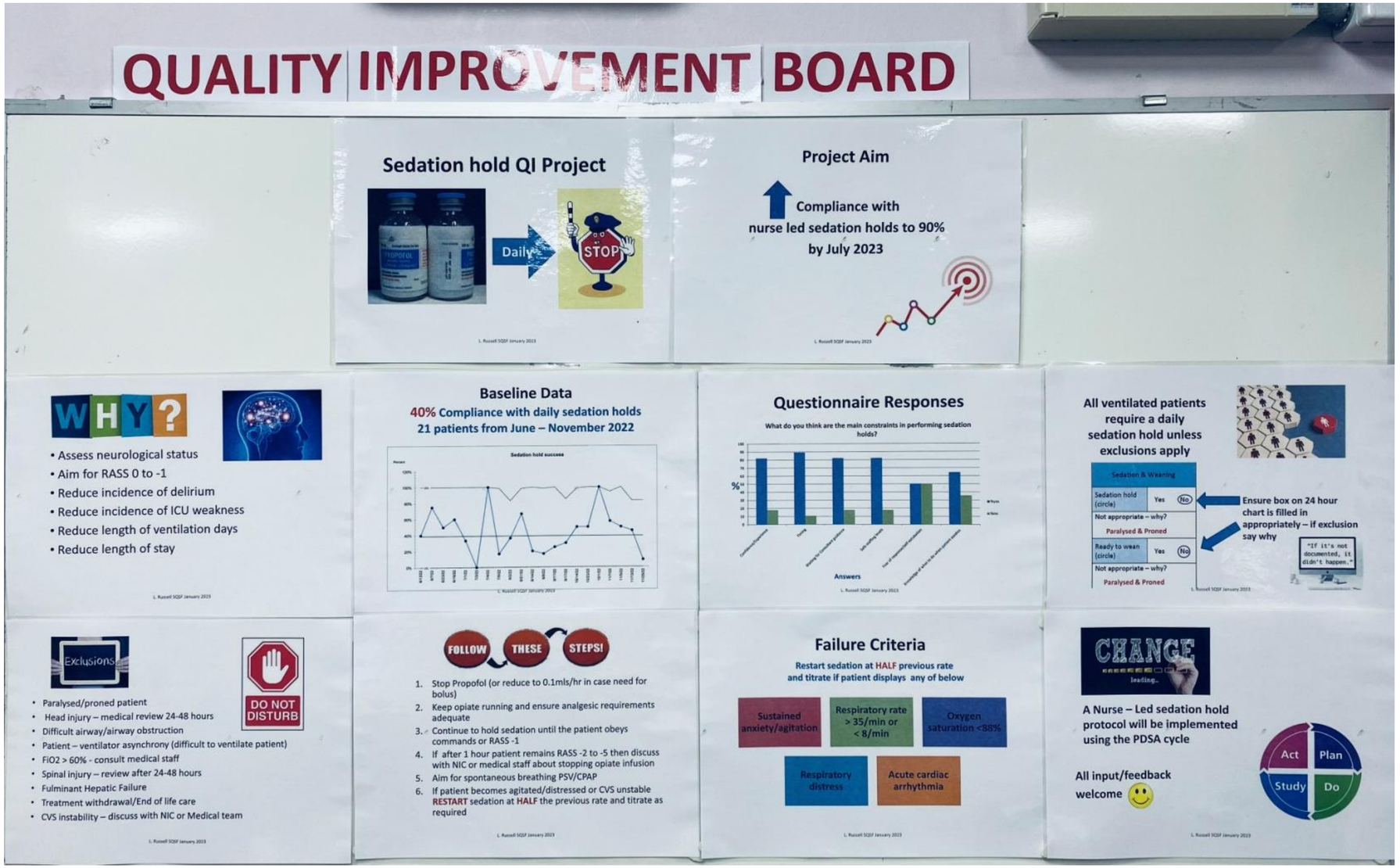
Balancing

- Adverse events reported during sedation hold
- Impact on nursing workload
- Inappropriate use of protocol



PDSA 1 - Education

Testing Changes



PDSA 2 - Protocol

Implement

NURSE LED SEDATION HOLD PROTOCOL

L.Russell Version 1.0 February 2023

NHS Borders

Nurse Led Sedation Hold Protocol

Sedation is used in the Intensive Care Unit to improve patient comfort, decrease anxiety, permit mechanical ventilation and facilitate interventions. Evidence suggests that deep sedation of ICU patients has significant adverse effects with guidelines advising that unless absolutely necessary it should be avoided.

Excessive sedation can be avoided with the use of planned sedation holds, and by titrating sedation to the optimum level of patient comfort.

Exclusions

- Paralysed/Proned
- Head injury – medical review 24-48 hours
- Difficult airway/airway obstruction
- Patient/ventilator asynchrony (difficult to ventilate patient)
- FiO2 > 60% - consult medical staff
- Spinal injury – medical review 24-48 hours
- Fulminant hepatic failure
- Treatment withdrawal/End of life care
- CVS instability – discuss with NIC or medical team

Directions for Weaning

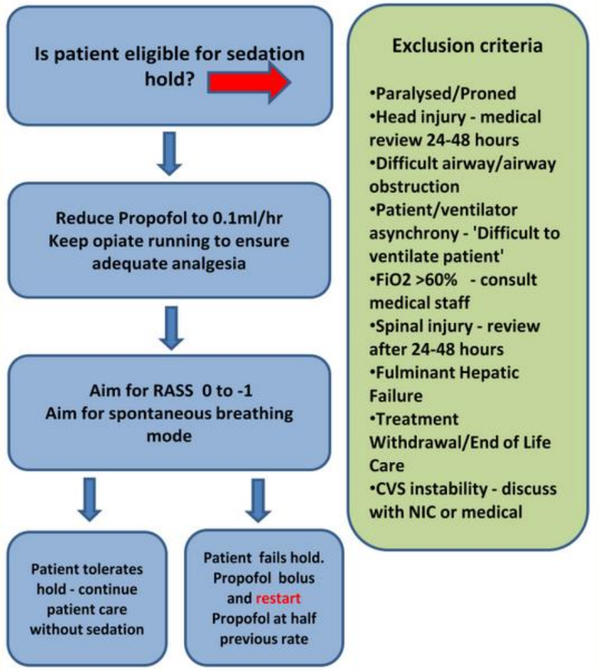
- Reduce mandatory breaths by half and assess after 5 minutes
- If patient breathes sufficiently change to SPN-CPAP with a Pressure Support (PS) of 10cm H2O
- If RR <25 and TV within patient targeted parameters then reduce PS by 2cm H2O every 2 hours
- Consider reducing FiO2 if SaO2 above patient target
- When FiO2 <50% consider reducing PEEP (unless already at 5cm H2O)

Consult Medical Staff if unsure

Procedure for stopping sedation:

1. Stop Propofol – reduce to 0.1mls/hr in case of need for emergency bolus
2. Keep opiate running and ensure analgesic requirements are met
3. Continue to hold sedation until the patient obeys commands or RASS 0 to -1 is recorded
4. If after 1 hour the patient remains RASS -2 to -5 then discuss with NIC or medical staff about stopping opiate infusion
5. Aim for spontaneous breathing mode PSV/CPAP and weaning – see below
6. If patient becomes agitated/distressed and displays any failure criteria (see overleaf) administer small bolus and **RESTART** sedation at **HALF** the previous rate and titrate as required

FLOWCHART



Failure criteria

- Sustained anxiety/agitation
- Respiratory rate >35/min or <8/min for 5 minutes
- Oxygen saturation <88%
- Respiratory distress
- Acute cardiac arrhythmia

Failure Criteria

Sustained anxiety/agitation

Respiratory rate > 35/min or < 8/min

Oxygen saturation <88%

Respiratory distress

Acute cardiac arrhythmia

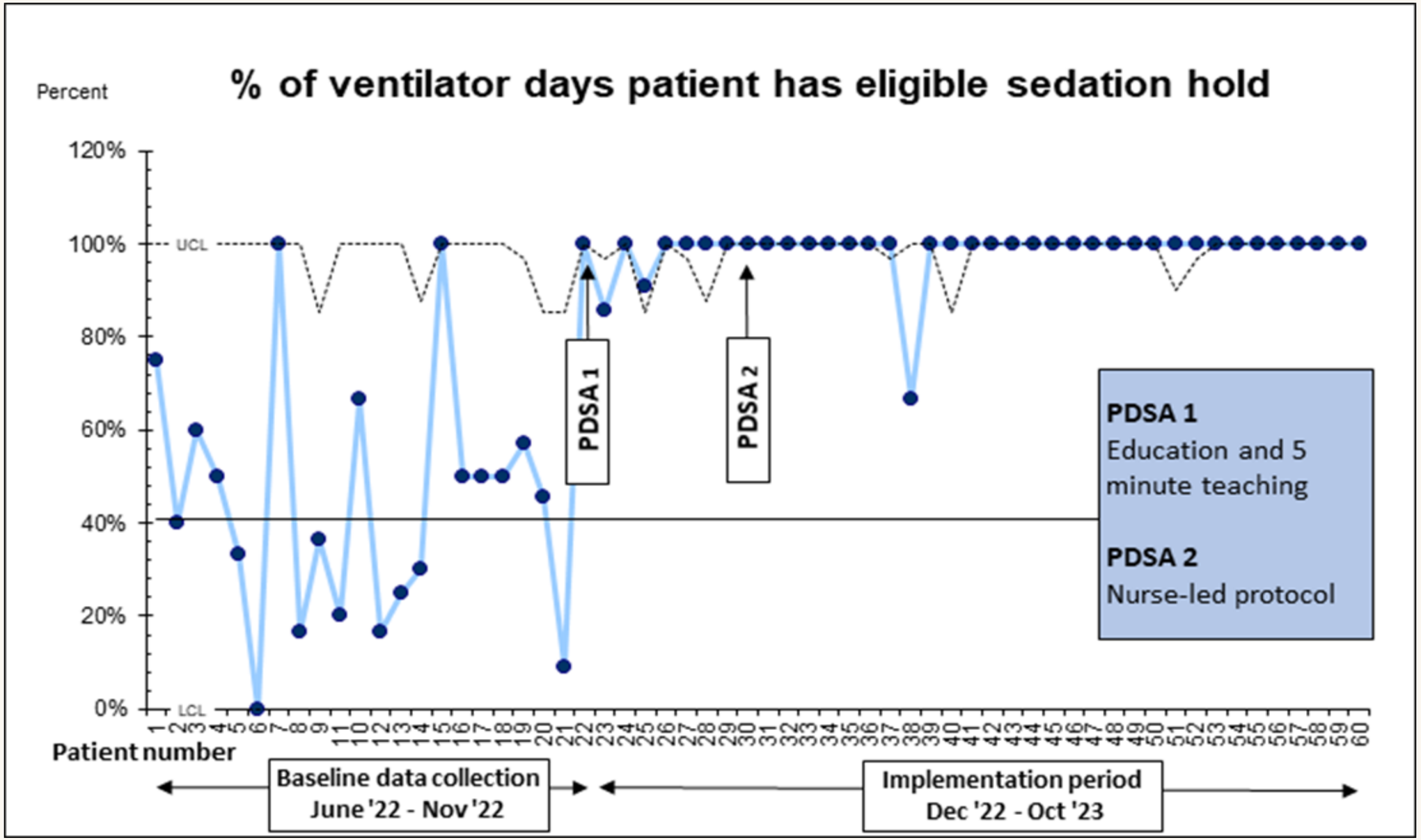
Restart sedation at HALF previous rate

Project Management and Communication

- Clear communication
- Effective planning
- Learning lessons

Testing Changes

Results



Results and Key Learning

- Communication and staff engagement pivotal for implementing change
- Improved from 46% baseline to 100%
- Qualitative and quantitative are equally effective
- Culture change daunting
- No adverse events occurred during sedation holds
- Protocol and check box ensures sustainability

Sedation & Weaning	
Sedation hold (circle)	Yes **No**
Not appropriate – why? **Paralysed & Proned**	
Ready to wean (circle)	Yes **No**
Not appropriate – why? **ARDS & O2 >70%**	

NHS Lanarkshire

NHS Ayrshire & Arran

NHS Greater Glasgow and Clyde

Spread

BACCN British Association of Critical Care Nurses

Any Questions?

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