

Our purpose

Working together to achieve the healthiest life possible for everyone in Ayrshire and Arran



Use of Improvement Methodology to Introduce a Sedation Hold (in ventilated patients) Within 4 Hours of Admission to ICU

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Our values

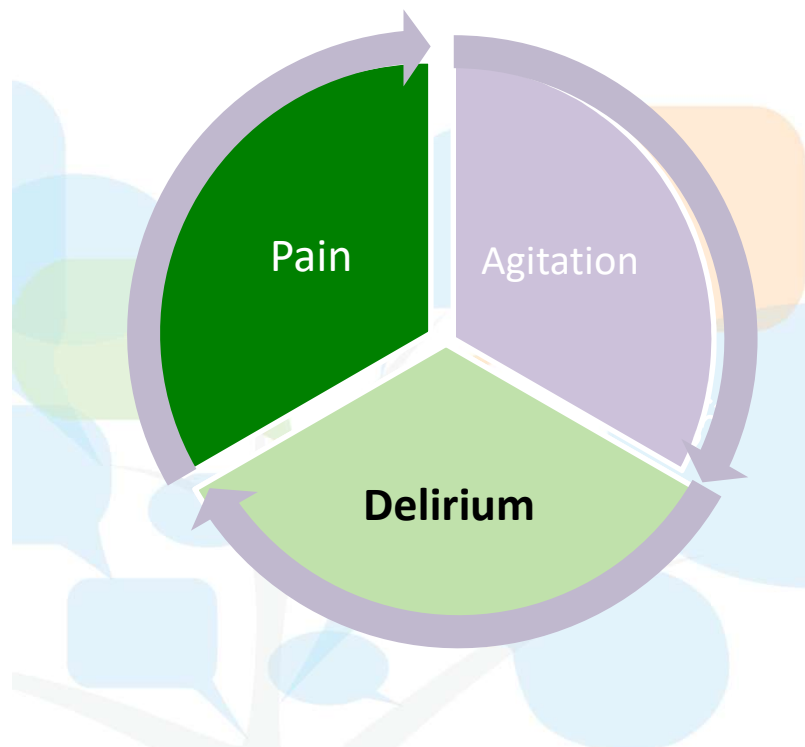
Caring Safe Respectful

Sedation in ICU – Why the Need for Change

- Sedatives cause patient harm and are strongly linked with delirium
- ↑ risk of prolonged mechanical ventilation
- ↑ ICU length of stay
- ↑ hospital mortality (Delaney et al, 2018)



Background




Pain, Agitation and Delirium Scoring Tools

By assessing, treating and preventing all of the above will:
↓ mechanical ventilation duration
↓ ICU and hospital length of stay
↑ ICU throughput (less bed shortages)

Pain, Agitation, and Delirium Are Interrelated



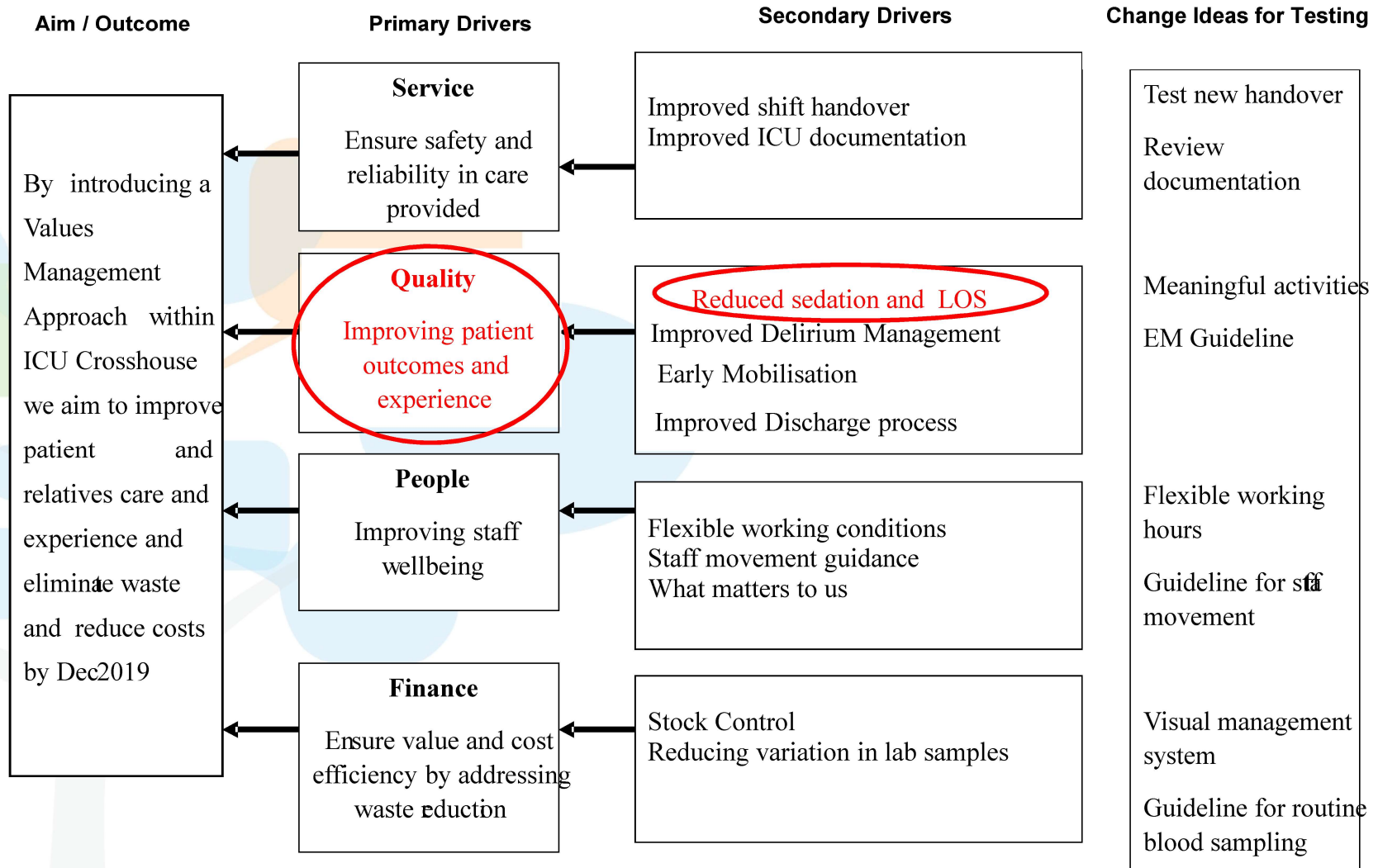
The Values Management Approach



The Values Management approach outlined a plan initially tested by NHS Highland and IHI, which aims to improve both patient and relative outcomes and experience whilst eliminating waste and reduction in efficiency savings

University Hospital Crosshouse ICU

Introduction of a Values Management Approach





Quality

Sedation Hold within 4 hours of Admission

Invested interest

Project already in progress

Positive patient outcomes

Continued improvement work

How We Did It



Measurement Plan

Process Measures:

- % compliance with 4 hour sedation hold on all eligible ventilated patients
- % of patients who required to be restarted on propofol

Outcome Measures:

- To reduce delirium in our patients and reduction in ventilator days and ICU length of stay

Balancing Measure:

- Reduction in Propofol Usage



Phase 1&2 - Education and Awareness Sessions



- Visit to Glasgow Royal Infirmary (Feb 2018)
- Presentation at last ICU Study Day (March 2018)
- Bed side information – formation of admission Crib Sheet
- Design of Whiteboard

CROSSHOUSE ICU ADMISSION CRIB SHEET

Use as a reference when admitting a patient and completing white board

Ayrshire
& Arran

Standard Care

Measure height
Record tidal volume on whiteboard as per IBW
Record targets on white board
MAP
SpO2
Document sedation hold target time
(If no exclusions – see overleaf)

Samples & Investigations

Urinalysis +/- pregnancy test
Bloods (BBV if RRT predicted)
ECG
CXR
MRSA
Sputum and urine culture

Specific Considerations

Septic Shock

Fluid challenge
CVC
Blood cultures
Abx – check time last given
Prescribe vasopressors

Pneumonia

Atypical screen and sticker
Blood cultures
Sputum culture

Post Cardiac Arrest

Apply criticool – Aim 36.0 °C
Aim pCO2 4.5-5.5
Aim MAP >80

Head Injury

Pupils
Control pCO2 4.5-5kPa
Tape ETT
Head-up 30°

Miscellaneous

Group and save – sample sent?
Blood available? Location?
Update family

Sedation Hold – *Potential Exclusions*

Therapeutic temperature management

Status epilepticus

Difficult ventilation

- Paralysis
- Prone Position

Head injury / ICP management

Airway concerns

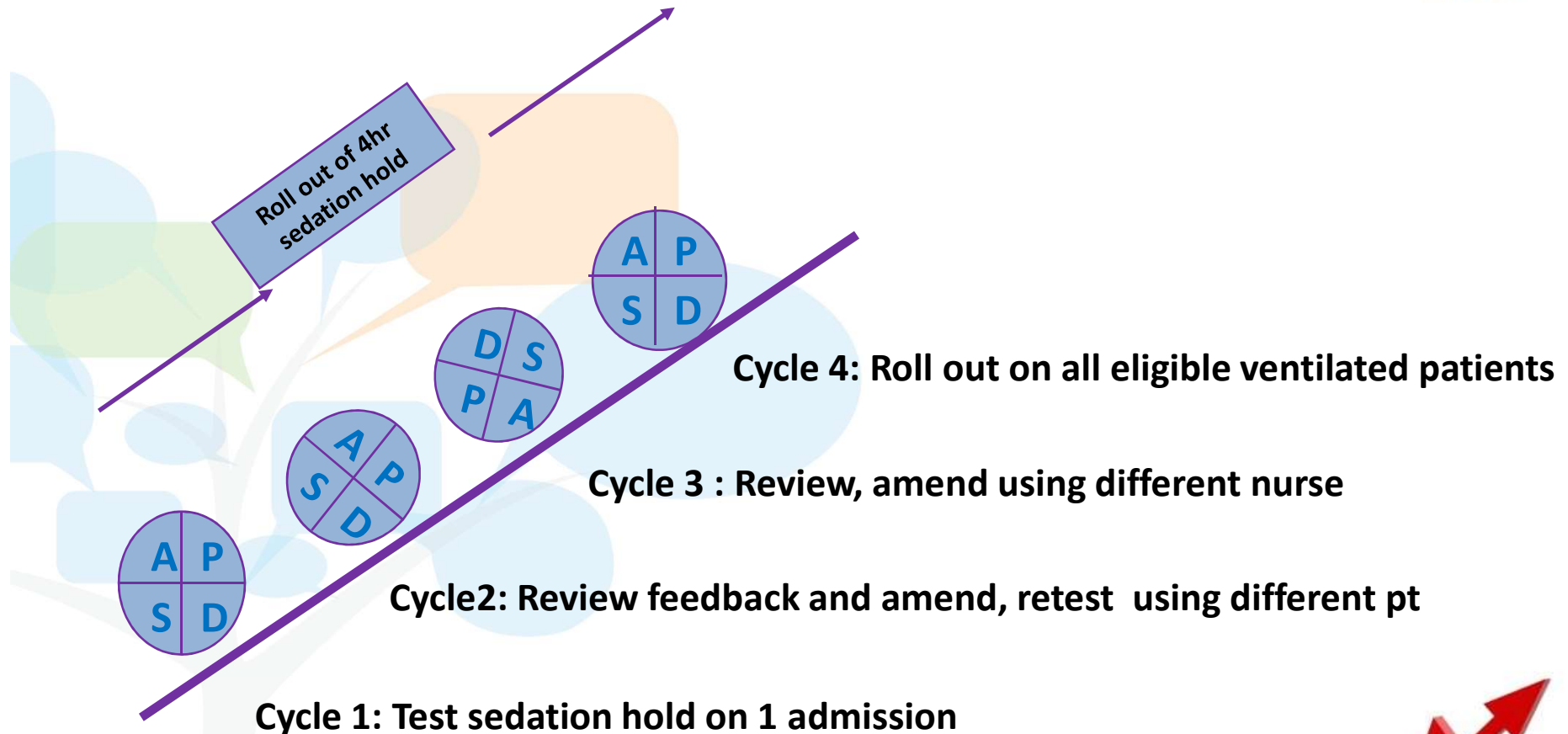
Business\Acuity of the Unit

Use of PDSA for testing change

Aim

Roll out of Sedation Hold

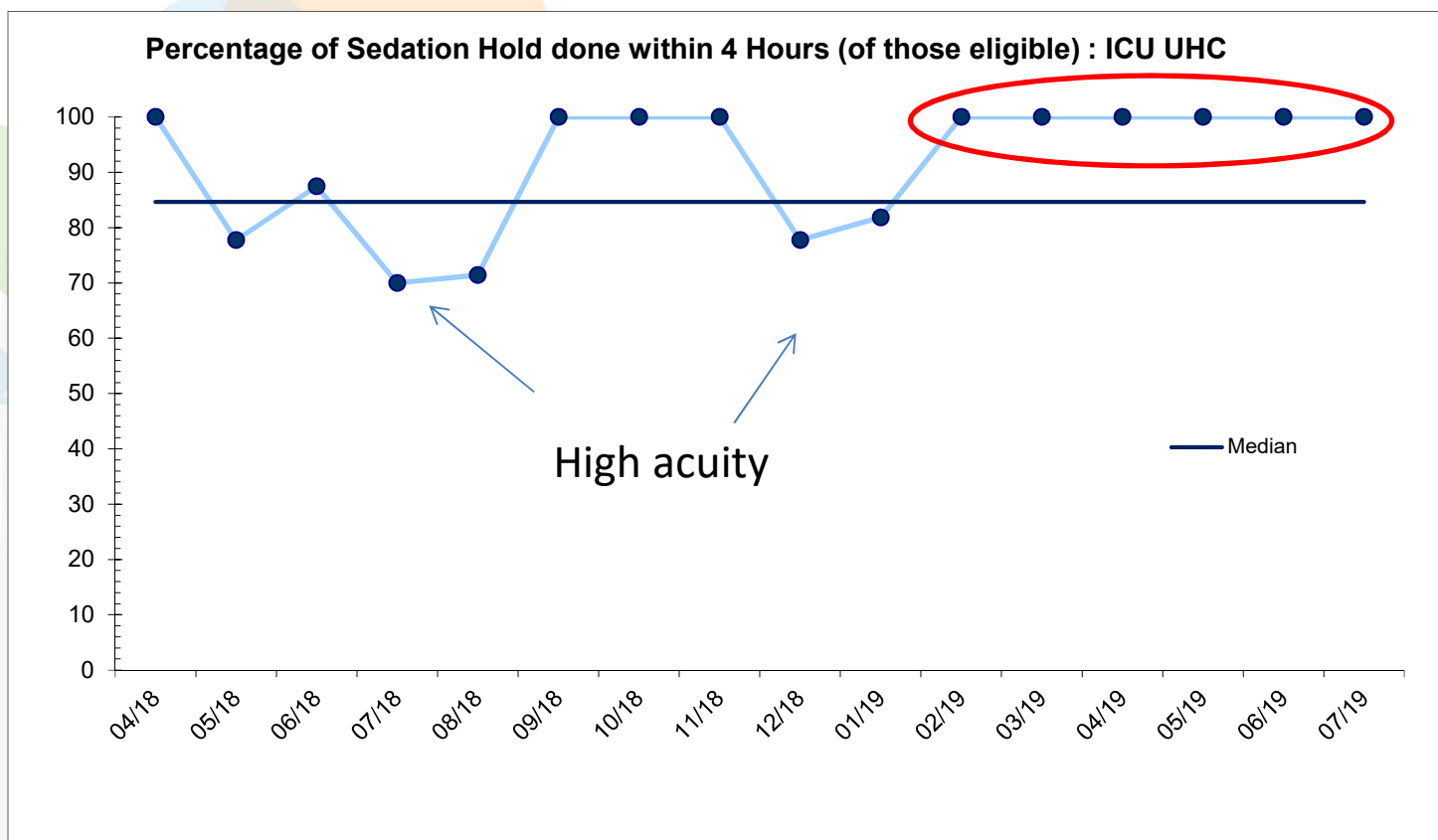
Implement sedation hold





Baseline Data

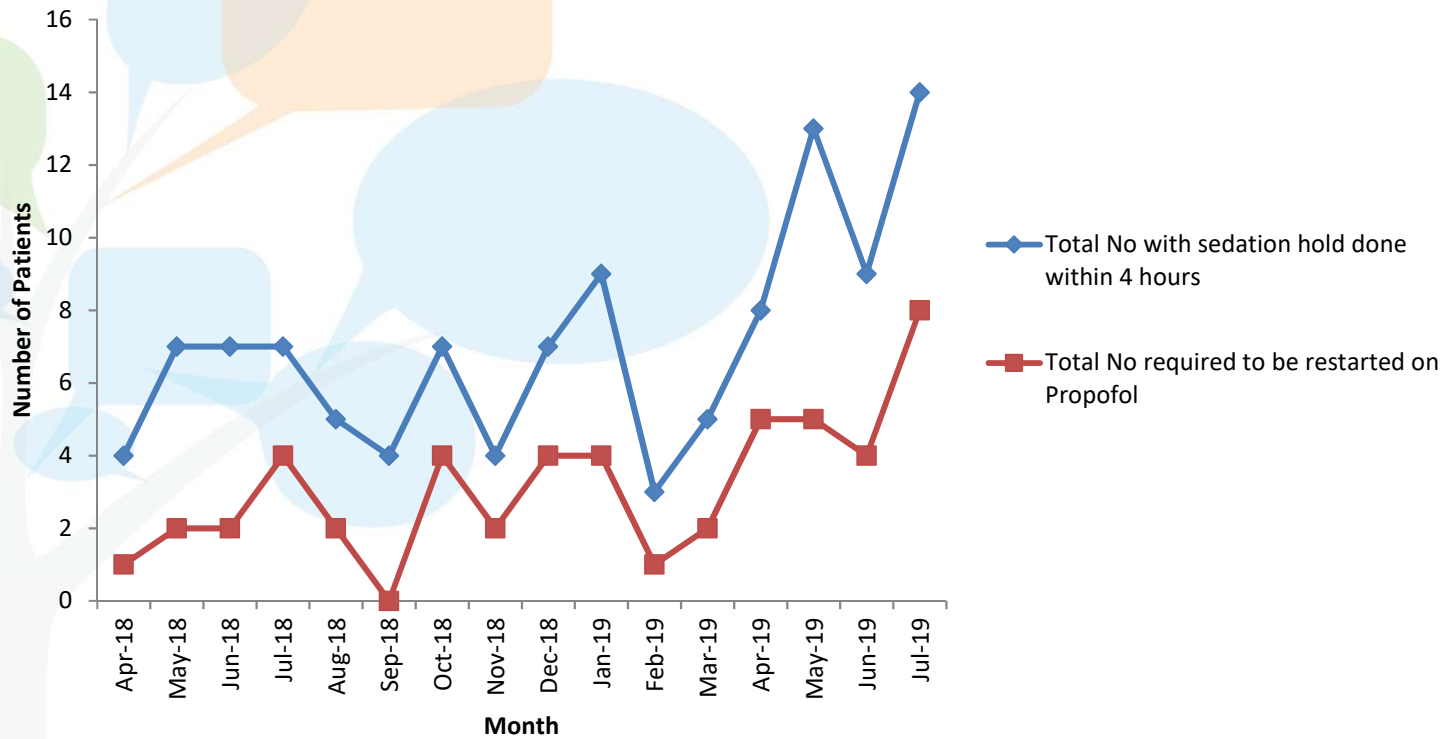
% compliance with 4 hour Sedation Hold





Number of pts restarted on Propofol

Total Number of patients required to be re-started on Propofol following sedation break





Results so far.....

- 90.4% compliance with the 4hr sedation hold in all eligible ventilated patients since roll out in April 2018
- Only 44% of those patients required to be restarted on propofol
- Potential cost benefit - £360 per year



Results so far.....

- Difficulty capturing ventilation time as Ward Watcher works in days rather than hours
- Lack of Care View
- GRI reported a drop in 1 whole ventilator day once there 4 hour sedation hold was embedded in practice
- Monitoring CAM-ICU daily to detect presence of delirium

Challenges Along the Way.....

- Staff opinion
- Challenges of a busy ICU
- Is 4 hours long enough?
- Increased Improvement work – ‘big ask of staff’
- Valid exclusions

CHALLENGE

Life's challenges
are not supposed to worry you

they are supposed to help you
discover who you are

and how far you can go

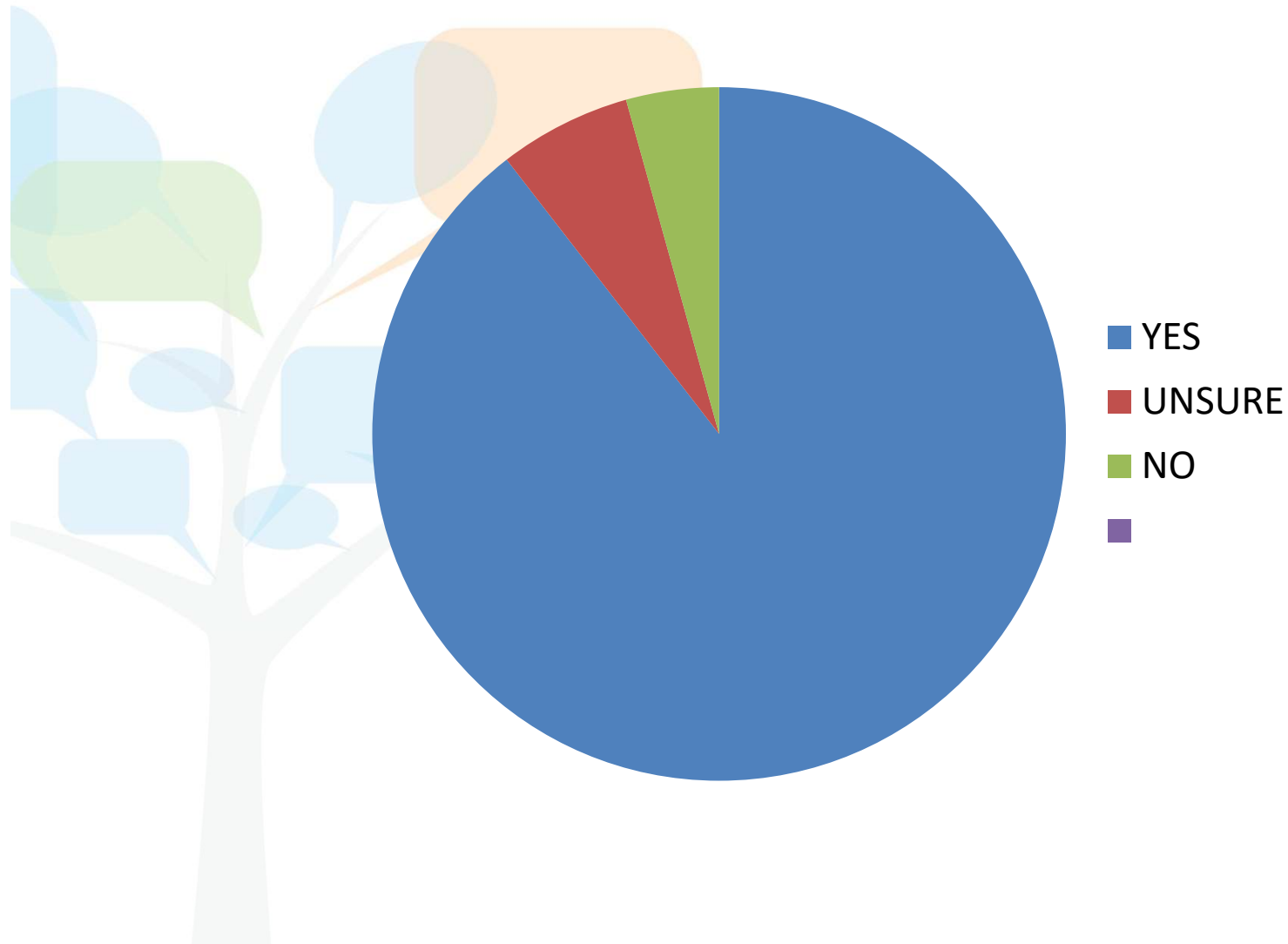


Staff Opinion

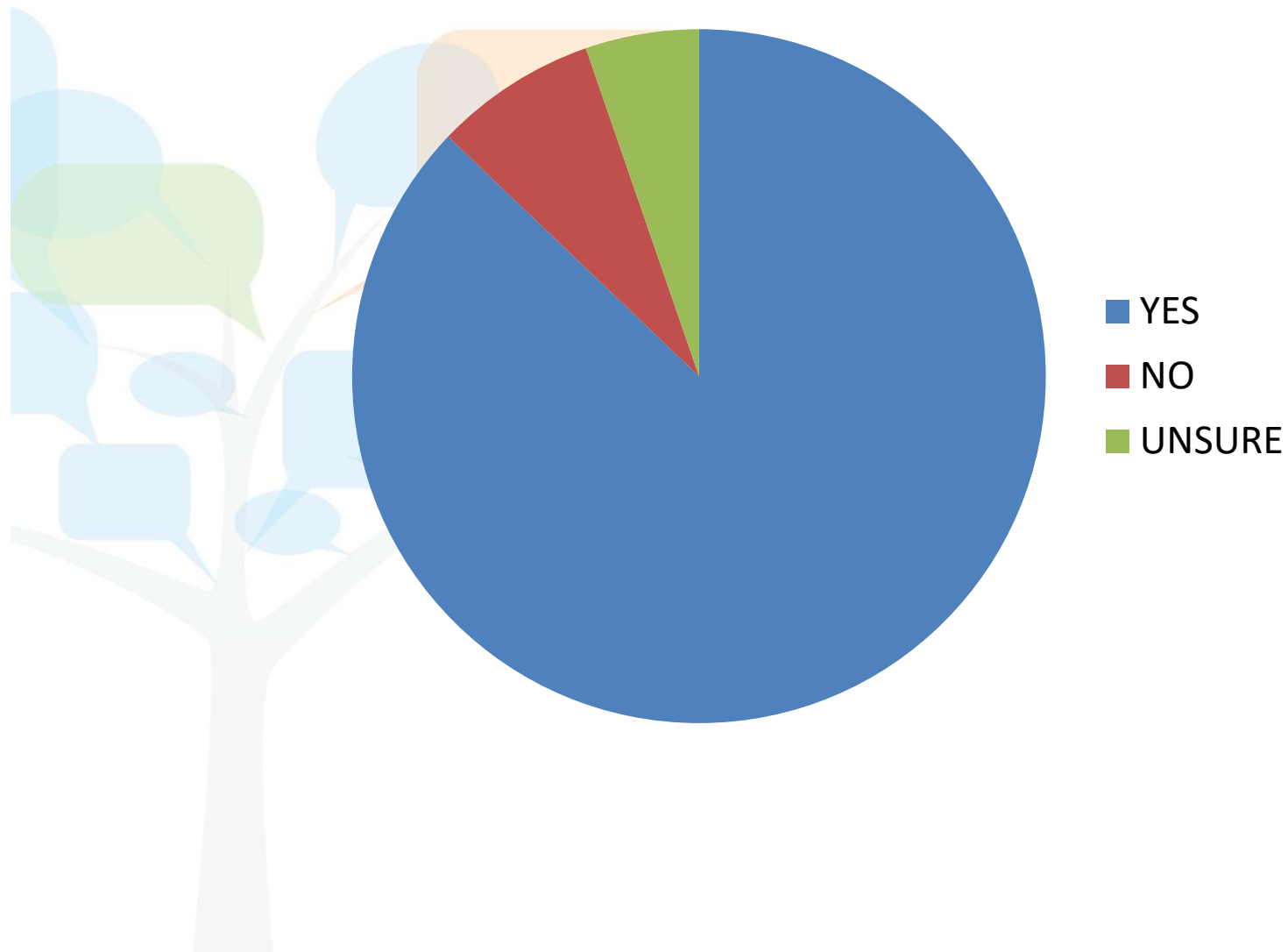
- LNA carried out
 - looked at staff perception/opinion
 - 80% compliance



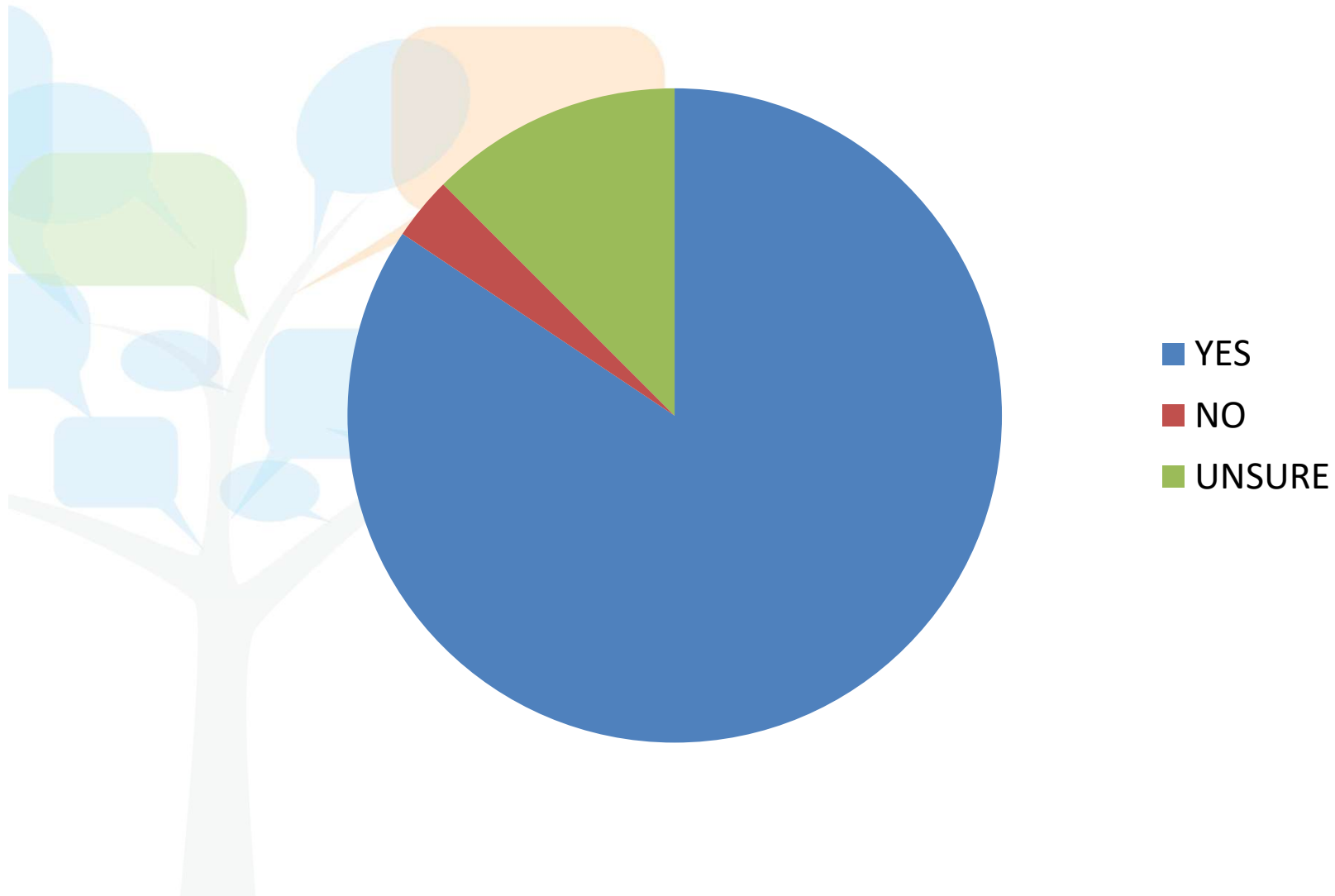
Do you think the 4 hour sedation hold is effective?



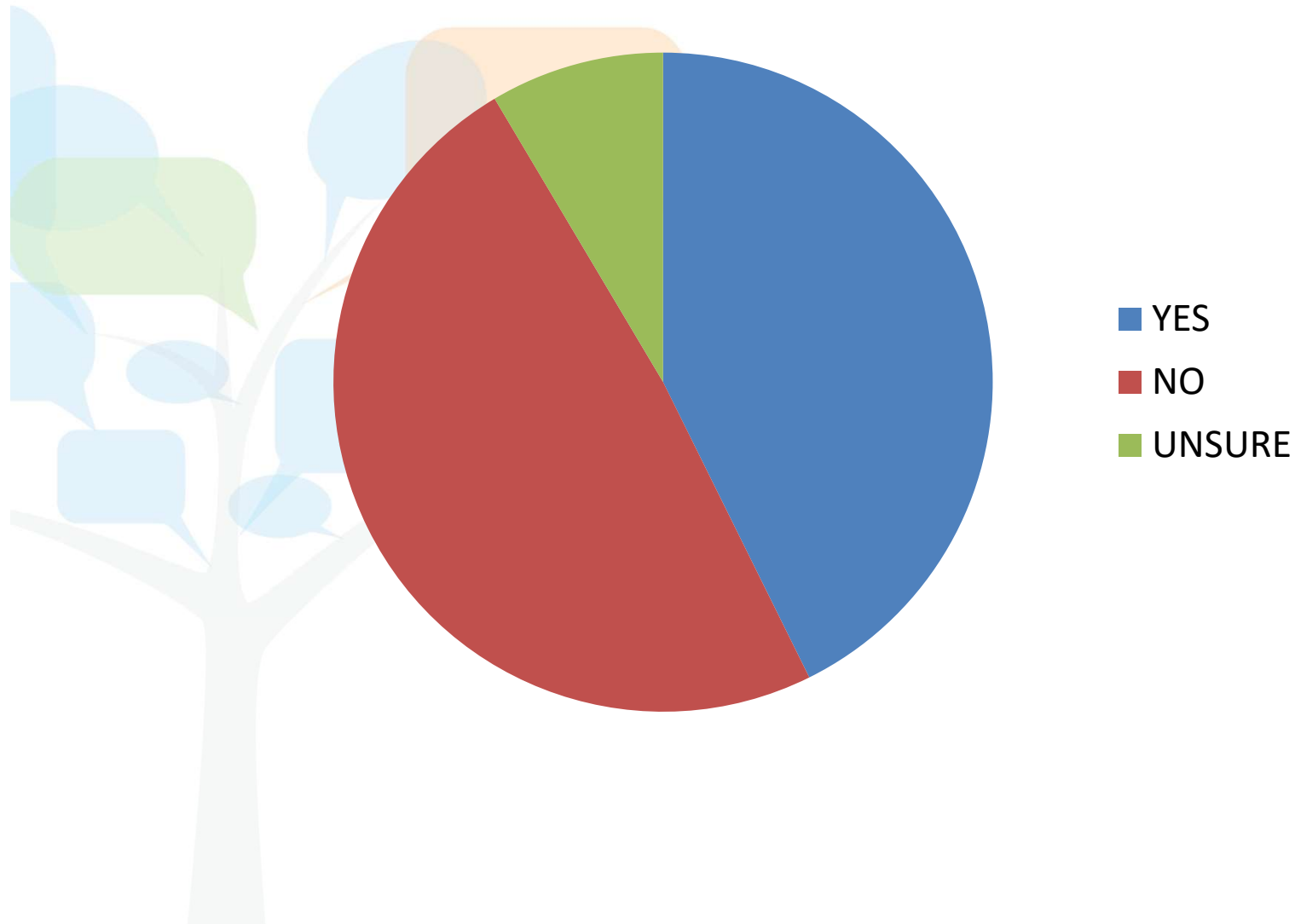
Are we extubating our patients quicker?




Are we using less Propofol?



Do you see less delirium in our patients?



Staff Reservations



“Will the unit be safe?”

Will everyone buy in to it?

“patient’s too agitated and unmanageable”

“too many patients awake at the same time”

“will 4 hours be long enough “

“4 hour hold felt to be most effective in post-op and over dose pts

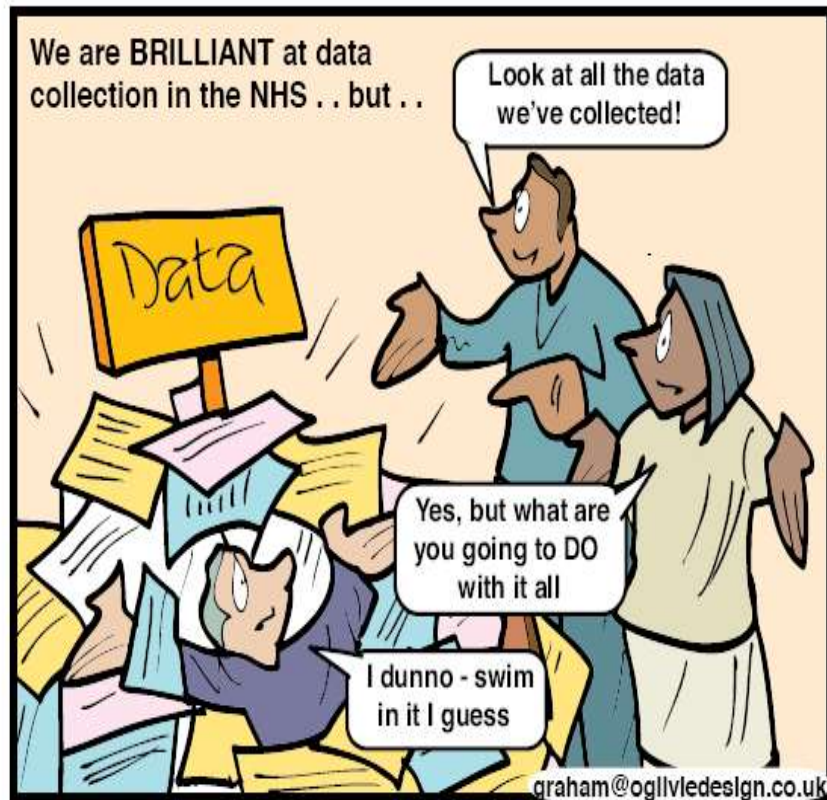
Next steps



- Link with CAM ICU project
- Continue with data collection
- **Occupied bed days, ventilator days and length of ventilation**
- CAM-ICU data



Closing Thoughts



Any Questions?

“Change is possible if we have the desire and commitment to make it happen.”

Mohandas Gandhi