



*South Yorkshire
and Bassetlaw*
Critical Care Network



West Yorkshire
Critical Care Network

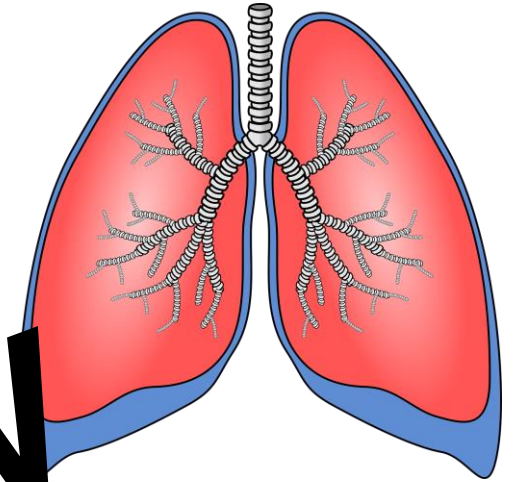
Critical Care Associated Infections

Quality Improvement Project

Is there a problem?

What we know.....

- Critical care is high risk
- Standards and guidelines essential
- Quality assurance processes in place



But.....despite standards and audit of processes, units lacking guidelines and were unable to tell us their infection rates (unless participating in ICCQIP)

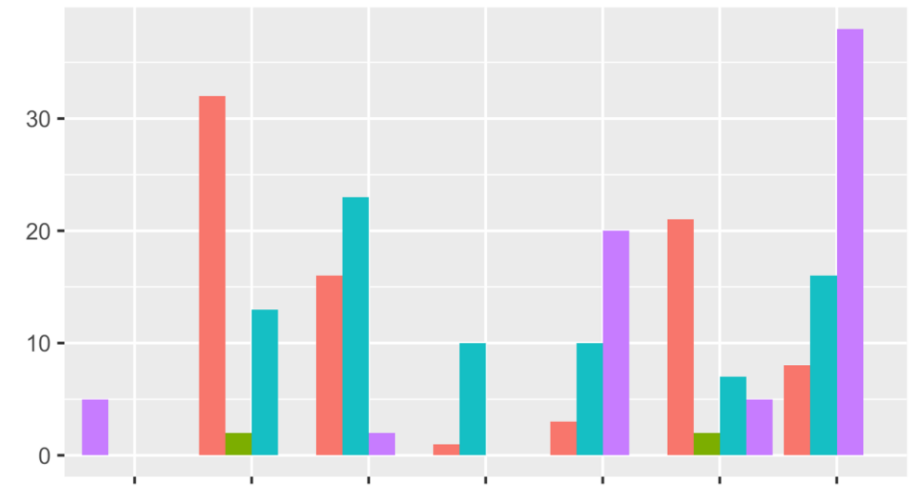
- *Critical care units should participate in a programme of hospital acquired infection surveillance to monitor and benchmark rates of catheter related blood stream infections, antibiotic use and frequency of multi resistant infections e.g. ICCQIP*
- *participate in Public Health England initiative in Critical Care Quality Improvement Programme (ICCQIP)*
- *have effective strategies in place to minimise hospital-acquired infections within Critical Care and publish central venous catheter-related blood stream infection rates.*
- *Units must have evidence-based, written guidelines for VAP*

WE DON'T KNOW

GPICS V3 Patient Safety Standards: Rates of bloodstream, catheter associated, and ventilator associated infections must be monitored as part of a nosocomial infection surveillance system

PLAN

- Identify a goal, formulate a theory, and predict the outcome
 - **Measure infection rates for CVC BSI and VAPs, enable tracking of trends, benchmarking. Identify and share best practice**
- Determine what will be tested, how, and by whom
 - **CVC BSI and VAP rates, individual units determine who, standardise criteria**
- Develop a data collection plan
- **Monthly data to be submitted to the network**



VAP Guideline and Diagnosis



Prevention of Ventilator Associated Pneumonia Guidance

Primary Review (Answer must be yes to all questions)

	Yes	No
Invasive Ventilation for greater than 48 hours		
Antimicrobial therapy started for NEW* chest deterioration		
Antimicrobial therapy continued for greater than 48 hours		

*No antibiotics for chest infection in previous 5 days

Secondary Review (Must have ONE of the following:)

	Yes	No
New/Progressive changes on CXR		
Positive Microbiology on respiratory sample		

OR TWO of the following:

	Yes	No
Reduced PF ratio > 4 or FiO ₂ increased by > 0.1		
Fever >38.5 or <36 degrees celsius		
Worsening infection markers		
WCC >11 or increase >2 / PCT >0.25 or any increase		

For positive VAP diagnosis:

1. Must answer YES to ALL 3 questions.
If not = No VAP
If YES to all 3 questions, move to secondary review
2. Either answer YES to one of these questions....OR....
3. answer YES to TWO of these questions

If meet criteria for No.1 PLUS EITHER No. 2 OR No.3 = VAP diagnosis

CVC BSI Guideline and Diagnosis



Benchmarking Central Venous Catheter Blood Stream Infections in Adult Critical Care Network Guidance

1. Evidence of a positive culture taken

- 48 hours post CVC line insertion
- OR within 48 hours of a CVC line removal

2. Has a pathogen cultured from at least one blood culture bottle, OR

- Has a common skin commensal cultured from 2 blood culture bottles drawn on separate occasions and within a 48 hour period
- **AND**
- Patient has at least one symptom of fever $>38^{\circ}\text{C}$, chills or hypotension

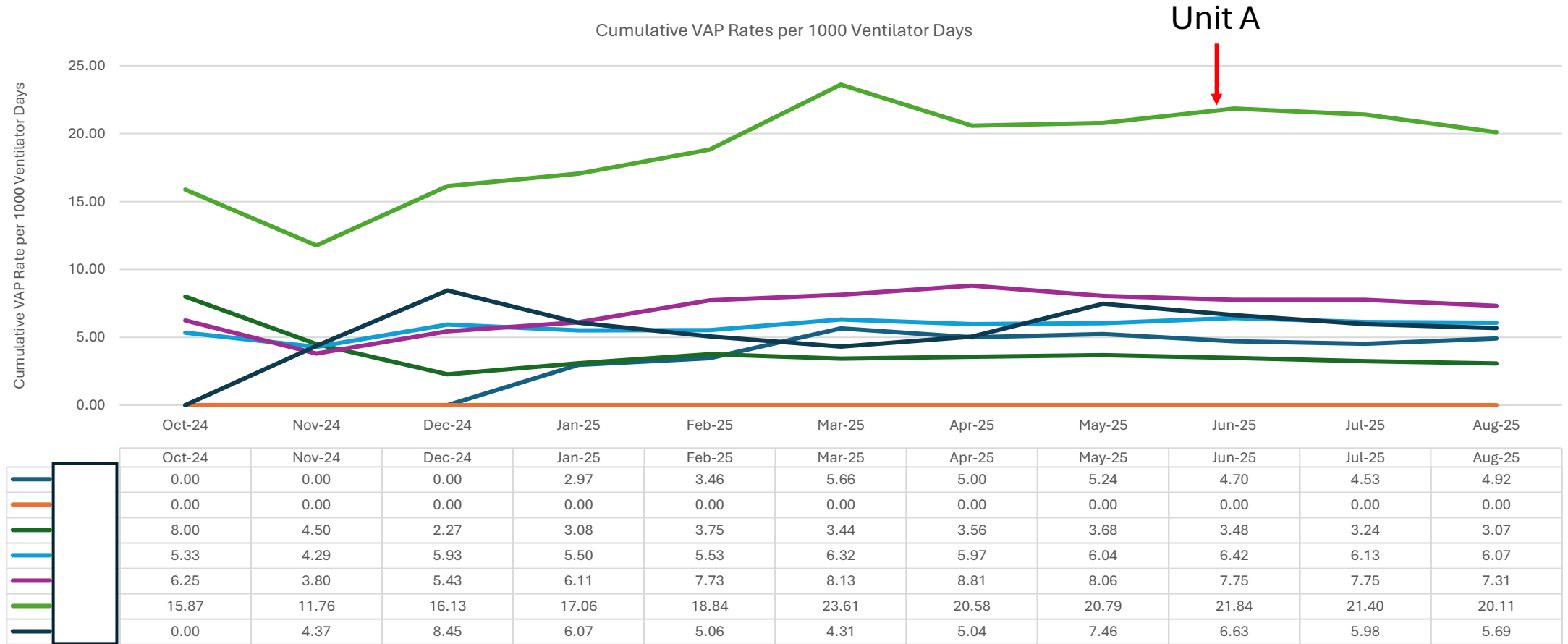
3. Its likely that the patient's signs and symptoms and positive blood results are related to the CVC and NOT an infection from another site.

- If unclear additional culture and clinical information can support diagnosis

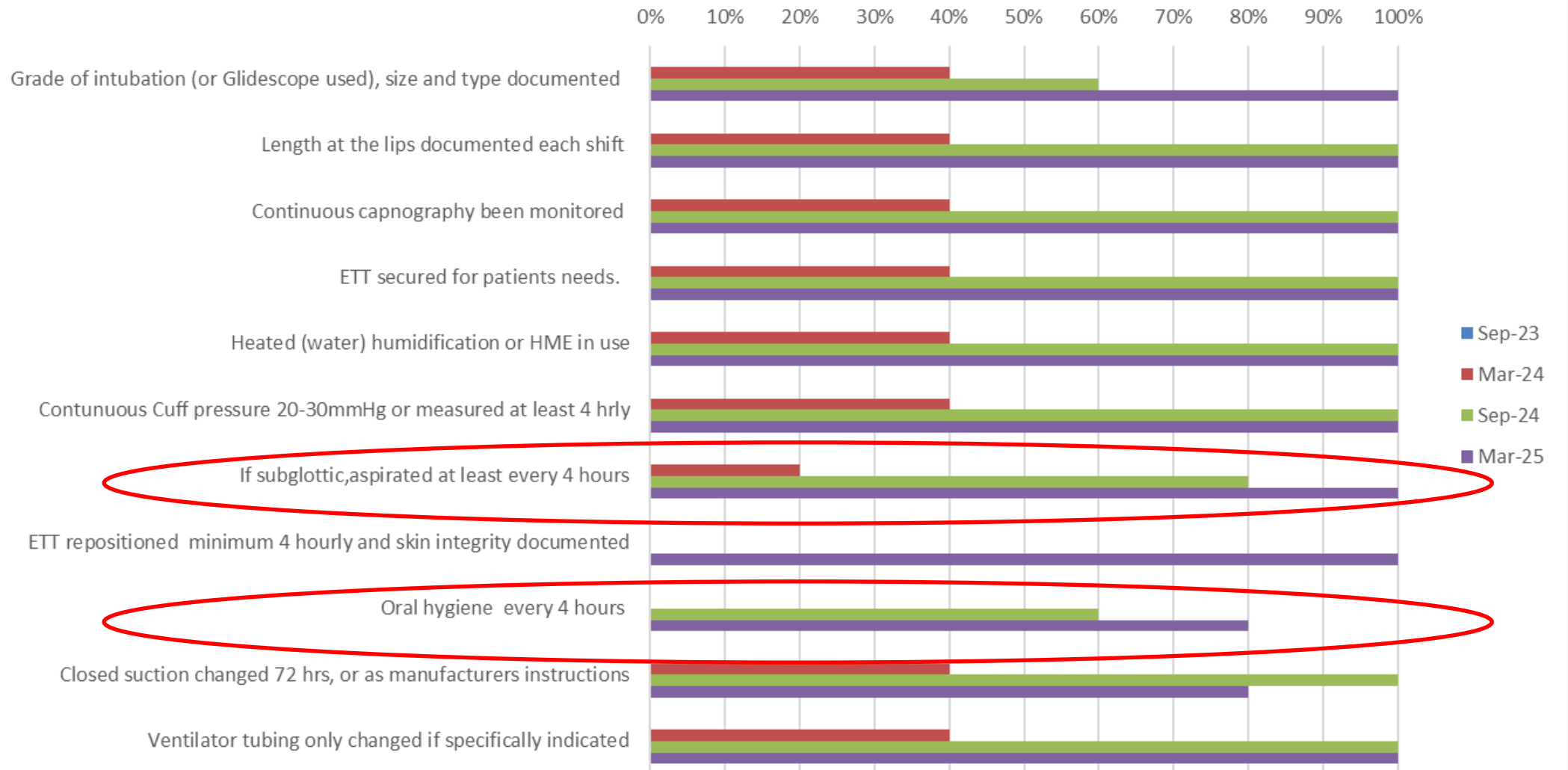
CVAD Benchmark –Unit X



Rates of VAP



ETT Benchmark – Unit A



Act

Based on the learning from the "Study" phase, decide on the next steps.

This could involve adopting the change, adapting the plan for another cycle, or abandoning the idea.

- Share at forums and board meetings
- Spread across both networks and wider to improve benchmarking
- Seek opportunities for sharing best practice
- Consider how to share data e.g. newsletter, and link to benchmark audits
- Consider benchmarking other outcomes e.g. ICU acquired pressure ulcers /skin damage?

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NEWSLETTER

December 2025

Welcome

Welcome to our December newsletter and thank you to those who have contributed to the content for this issue. It's certainly been a busy few months with lots of network activities and events, a few of which are highlighted in this edition.

PPCI Pathway

A new pathway is now live for intubated patients needing transfer for emergency PPCI. Its introduction shows strong collaboration across the network and a more coordinated approach between units.

The previous Treat and Return model was introduced in response to perceived ICU bed pressures in Leeds but led to several practical issues, including delays to transfer teams, slower acceptance for PPCI and occasional patient instability on return. Data review showed this affected very small numbers of patients each year, likely fewer than ten. The new Delayed Repatriation model, with post-PPCI transfer to an LGI ICU bed, is expected to have less impact on bed capacity than previously assumed.

The updated pathway should support clearer decision making around PPCI acceptance and post-procedure care, while reducing pressure on transfer teams. A key requirement is prompt repatriation after a short period of observation, usually around 24 hours, provided the patient is physiologically stable. Repatriation should not be delayed by step-down patients and may, when necessary, take priority over elective surgery following discussion between the responsible intensivists.

The pathway will be reviewed after 12 months and the findings shared with the network.

[WYCCN PPCI Pathway](#)

Ventilator Associated Pneumonia (VAP)

A VAP guideline has now been agreed across West Yorkshire and this includes criteria for diagnosing VAP. Units are now starting to collect information about how many VAPs they have each month. It is hoped that this information will lead to improvements in practice which will ultimately result in better outcomes for ventilated patients.

[WYCCN VAP Guideline](#)

Central Venous Catheter Bloodstream Infections

Since April this year, all units in WY have been monitoring the numbers of unit acquired central line infections. The infection rates overall are low with only 10 reported line infections for over 11,000 CVC line days!

[WYCCN CVC BSI Guideline](#)



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Website WYCCN: <https://www.wyccn.org/>

Website SYBCCN: <https://www.sybccn.org/>

- References:

- NHSE (2022) Adult Critical Care Service Specification:

<https://www.england.nhs.uk/wp-content/uploads/2019/05/220502S-adult-critical-care-service-specification.pdf>

- FICM /ICS (2026) Guidelines for the Provision of Intensive Care Services:
[Intensive Care Society | GPICS](#)

