

# Ventilator-associated pneumonia: Cardiac ICUs vs General ICUs.

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## Introduction

Ventilator associated pneumonia (VAP) is defined as a pneumonia in a mechanically ventilated patient that develops 48 hours or more after intubation with an endotracheal or tracheostomy tube, and that was not present before intubation<sup>1</sup>. A lack of robust diagnostic criteria has resulted in significant variation in the reported incidence (9–28%)<sup>2-3</sup> in General Intensive Care Units (GICUs).

There is considerable variation in UK practice for diagnosing and managing VAP. Data on Cardiac ICUs (CICUs) is even less robust. A single, prospective study of VAP undergoing major heart surgery quoted an incidence rate of 7.8% or 34.5 per 1000 ventilated days, associated with an increased mortality<sup>4</sup>.

We surveyed all GICUs and CICUs in the UK to establish and compare current practice in diagnosing VAP with the aim of developing a national set of criteria for diagnosing VAP.

## Methods

Thirty-eight CICUs were identified in the UK and an electronic survey was produced and distributed by the Association of Cardiac Anaesthetist (ACTA) linkmen.

246 adult GICUs were identified in the UK. An electronic and postal survey (endorsed by the Intensive Care Society (ICS)) was produced and available for all department infection control leads to complete.

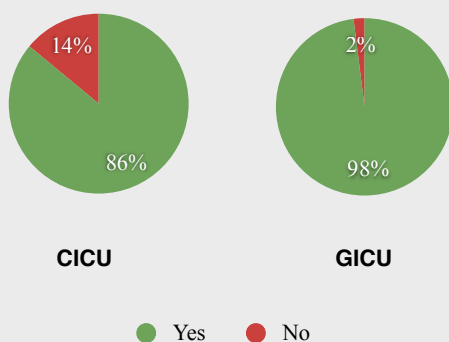
The surveys comprised of questions covering the units' current practice in diagnosing VAP as well as measures used to reduce the incidence of VAP.

## Results

### RESPONSE RATE

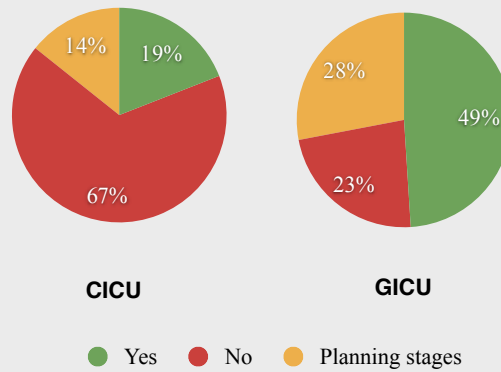
A total of 22 CICU responses was analysed giving a response rate of 57.9%. 39% of GICUs surveyed responded.

### VENTILATOR CARE BUNDLE?

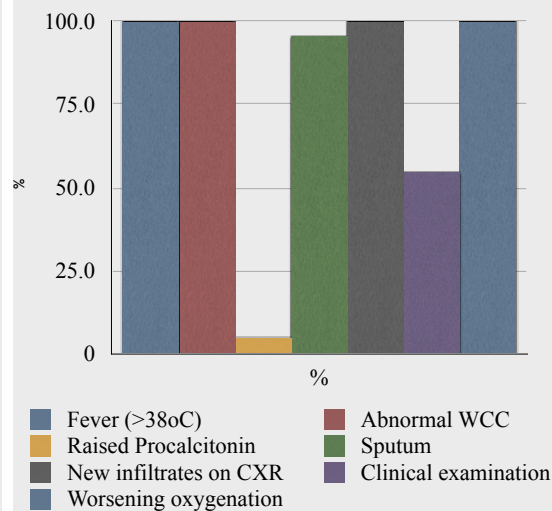


## Results

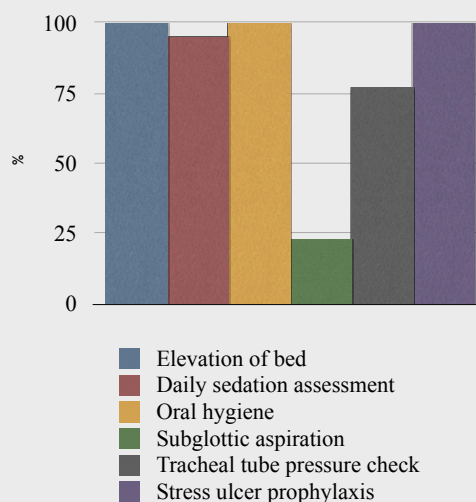
### FORMALLY TRACK INCIDENCE OF VAP



### CLINICAL AND LABORATORY CRITERIA FOR VAP



### DoH HIGH IMPACT INTERVENTION 5 IN CURRENT PRACTICE



## Conclusion

There are significant differences in GICU and CICU practice with regards to the management and diagnosis of VAP.

VAP rates have been suggested as a marker of quality within ICUs. And yet, the vast majority of units do not measuring their VAP rates despite implementing the DoH guidelines.

It is our hope that this is the first step in establishing a national or indeed an international set of criteria for diagnosing VAP. With an agreed definition, uniform and meaningful comparison between ICUs would be possible, allowing the efficacy of clinical interventions to be appropriately assessed. This would ultimately lead to direct improvement in patient care.

## Developments

At a local level, the information from these surveys has been instrumental in guiding practice.

In one hospital, VAP rates are now measured and tracked through the development of a unique multidisciplinary team led process. In a second hospital, the decision to adopt or reject measures that were thought to reduce VAP rates was also influenced by the survey findings.

## Future plans

- Propagating the results of our survey at regional ICM meetings to promote discussion and collaboration across Wessex.
- VAP diagnostic pathway currently being developed at another Wessex hospital.

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## References

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