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# **CRITICAL CARE ANNUAL REPORT**

## **CENTRAL VENOUS CATHETER AND VENTILATOR ASSOCIATED PNEUMONIA**

2009

**ALL WALES**

**Including  
ANEURIN BEVAN HEALTH BOARD  
SUMMARY REPORT**

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**Version:** 1

## 1. ANEURIN BEVAN HEALTH BOARD RESULTS - Central Venous Catheter (CVC) Surveillance

The time period for this report is based on the insertion date. Therefore only records with the insertion date completed have been included for analysis. Patients that have not been on Critical Care for over 48 hours or have not had a line in situ for over 48 hours have also been excluded.

**Table 1.1 Form returns for Aneurin Bevan Health Board for patients with lines inserted for the period 01/01/2009 - 31/12/2009**

| Number of forms received for critical care patients with lines inserted | Number of valid forms* | Percentage of valid forms |
|---|------------------------|---------------------------|
| 754   | 729                    | 96.7%                     |

\* Valid forms include forms where insertion date, admission to critical care date and (removal or discharge) date are completed

**Table 1.2 Percentage completion of data items on the CVC Surveillance forms for Aneurin Bevan Health Board for the period 01/01/2009 - 31/12/2009**

| Question                              | Number completed | Number expected | Completion rate % |
|---------------------------------------|------------------|-----------------|-------------------|
| Age                                   | 732              | 754             | 97.1%             |
| Sex                                   | 751              | 754             | 99.6%             |
| Date of admission to hospital         | 732              | 754             | 97.1%             |
| Date of admission to critical care    | 745              | 754             | 98.8%             |
| Site of CVC insertion                 | 744              | 754             | 98.7%             |
| Hospital location of CVC insertion    | 712              | 754             | 94.4%             |
| CVC removal date                      | 610              | 754             | 80.9%             |
| Date of discharge from critical care* | 419              | 419             | 100.0%            |

\* Excludes records where the patient has not yet been discharged from critical care

**Table 1.3 Overall HELICS defined CVC infection rate for Aneurin Bevan Health Board for the period 01/01/2009 - 31/12/2009**

Total number of infections recorded\*: 2

Number and percentage of infections that meet the HELICS criteria: 2 (100%)

| Number of HELICS CVC infections | Number of critical care catheter days** | HELICS CVC infection rate*** (per 1000 critical care catheter days) |
|---------------------------------|---|---|
| 2                               | 3604                                    | 0.6   |

\* Where microbiological and clinical signs provided enable an infection to be deemed either as HELICS CVC infection or as a locally defined CVC associated infection

\*\* Only catheter days up to discharge of patient from critical care are included. Number of critical care catheter days calculated = removal date - insertion date + 1 (unless the insertion date precedes the admission to critical care date i.e insertion date is replaced by admission to critical care date, or if the removal date succeeds discharge date from critical care then removal date is replaced by discharge date)

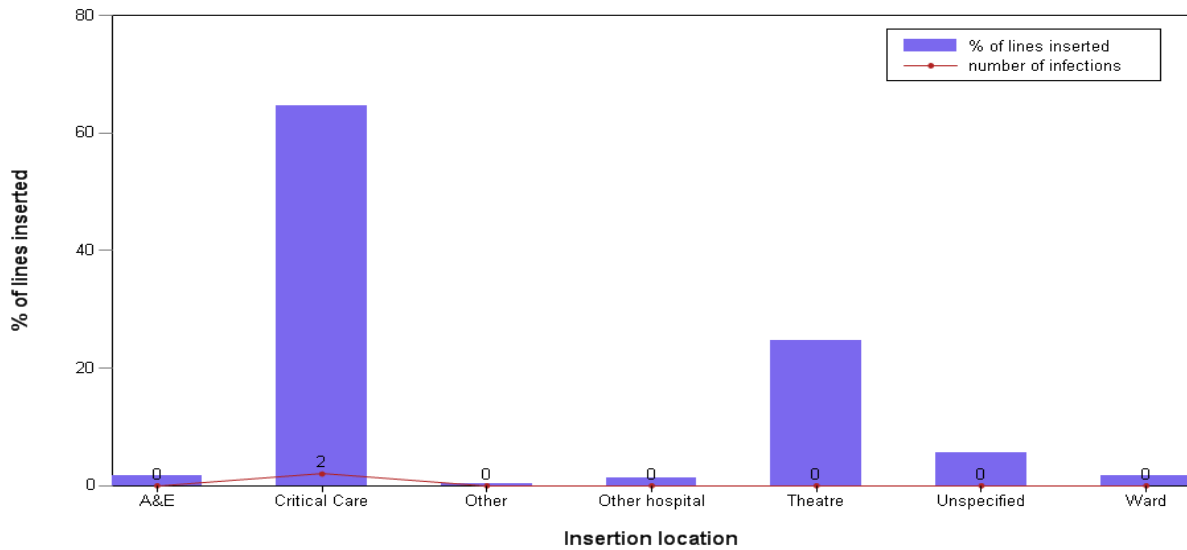
\*\*\* Calculation of HELICS CVC infection rate = total number of HELICS CVC infections / number of critical care catheter days \* 1000

**Table 1.4 Breakdown of HELICS defined CVC infection rate by infection type for Aneurin Bevan Health Board for the period 01/01/2009 - 31/12/2009**

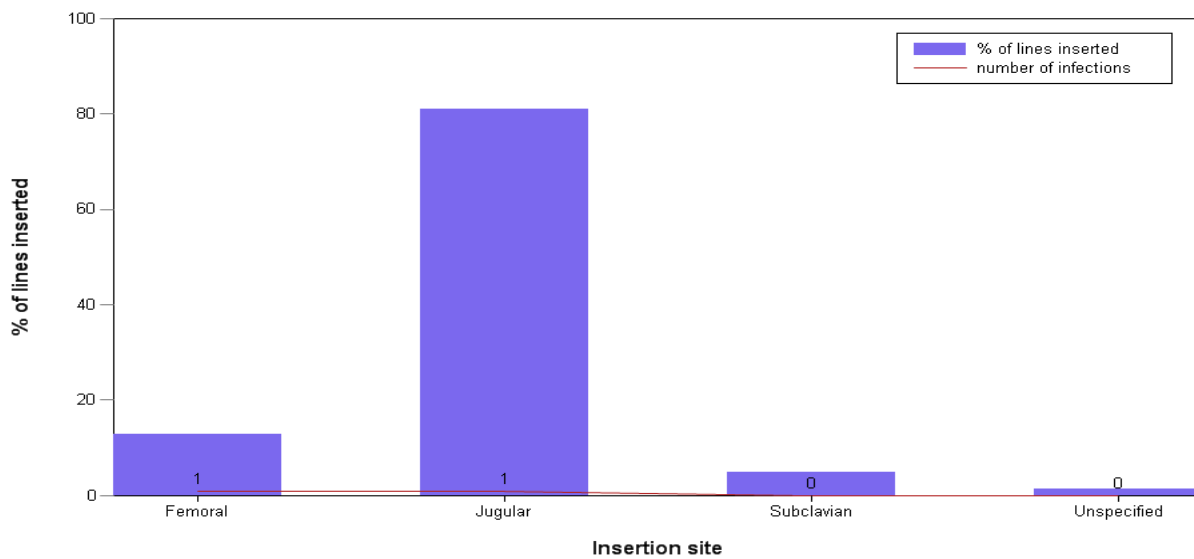
| Infection type | Number of HELICS CVC infections | HELICS CVC infection rate* (per 1000 critical care catheter days) |
|----------------|---------------------------------|---|
| CRI 1          | 2                               | 0.55  |

\* Calculation of HELICS CVC infection rate = total number of HELICS CVC infections / number of critical care catheter days \* 1000

**Figure 1.1 Percentage of CVC insertions and numbers of HELICS defined CVC infections by insertion location for Aneurin Bevan Health Board for the period 01/01/2009 – 31/12/2009**



**Figure 1.2 Percentage of CVC insertions and numbers of HELICS defined CVC infections by insertion site for Aneurin Bevan Health Board for the period 01/01/2009 – 31/12/2009**



**Table 1.5 Numbers of HELICS defined CVC infections by organism for Aneurin Bevan Health Board for the period 01/01/2009 – 31/12/2009**

| Organism                                | Number of HELICS CVC infections |
|---|---------------------------------|
| <i>Candida sp.</i>                      | 1                               |
| Coagulase negative <i>staphylococci</i> | 1                               |
| <b>Total</b>                            | <b>2</b>                        |

## 2. ANEURIN BEVAN HEALTH BOARD RESULTS – Ventilator Associated Pneumonia (VAP) Surveillance

The time period for this report is based on the date of intubation. Therefore only records with the date of intubation completed have been included for analysis. Patients that have not been on Critical Care for over 48 hours have also been excluded.

**Table 2.1 Form returns for Aneurin Bevan Health Board for patients ventilated for the period 01/01/2009 - 31/12/2009**

| Number of forms received for critical care patients with lines inserted | Number of valid forms* | Percentage of valid forms |
|---|------------------------|---------------------------|
| 377   | 371                    | 98.4%                     |

\* Valid forms include forms where intubation date, admission to critical care date and (extubation or discharge date) are completed

**Table 2.2 Percentage completion of data items on the VAP surveillance forms for Aneurin Bevan Health Board for the period 01/01/2009 - 31/12/2009**

| Question                              | Number completed | Number expected | Completion rate % |
|---------------------------------------|------------------|-----------------|-------------------|
| Age                                   | 371              | 377             | 98.4%             |
| Sex                                   | 376              | 377             | 99.7%             |
| Date of admission to hospital         | 372              | 377             | 98.7%             |
| Date of admission to critical care    | 377              | 377             | 100.0%            |
| Risk factors                          | 71               | Not applicable  |                   |
| Type of case                          | 363              | 377             | 96.3%             |
| Date of extubation                    | 329              | 377             | 87.3%             |
| Date of discharge from critical care* | 311              | 311             | 100.0%            |

\* Excludes records where the patient has not yet been discharged from critical care

**Table 2.3 Overall HELICS defined VAP rate for Aneurin Bevan Health Board for the period 01/01/2009 - 31/12/2009**

| Number of HELICS VAP | Number of critical care ventilator days* | HELICS VAP rate** (per 1000 critical care ventilator days) |
|----------------------|--|--|
| 10                   | 2803                                     | 3.6  |

\* Only ventilator days up to discharge of patient from Critical Care are included. Number of Critical Care ventilator days calculated = extubation date - intubation date + 1 (unless the intubation date precedes the admission to critical care date i.e intubation date is replaced by admission to critical care date, or if the extubation date succeeds discharge date from Critical Care then extubation date is replaced by discharge date)

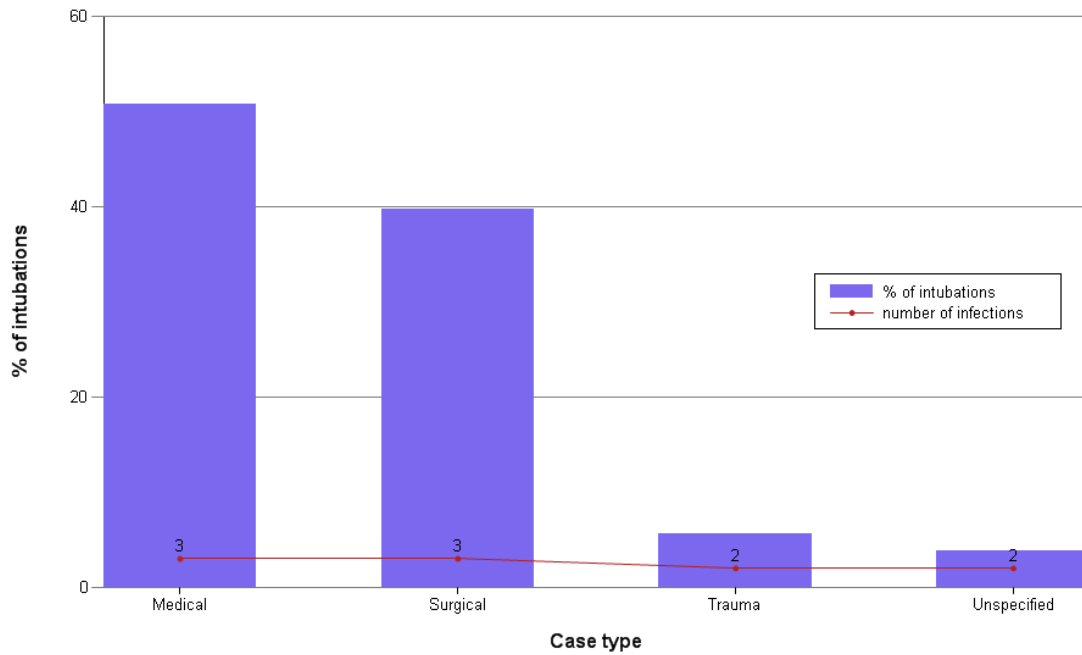
\*\* Calculation of HELICS VAP rate = total number of HELICS VAP / number of critical care ventilator days \* 1000

**Table 2.4 Breakdown of HELICS defined VAP rate by VAP type for Aneurin Bevan Health Board for the period 01/01/2009 - 31/12/2009**

| VAP type | Number of HELICS VAP | HELICS VAP rate* (per 1000 critical care ventilator days) |
|----------|----------------------|---|
| PN1      | 5                    | 1.78  |
| PN2      | 4                    | 1.43  |
| PN4      | 1                    | 0.36  |

\* Calculation of HELICS VAP rate = total number of HELICS VAP / number of critical care ventilator days \* 1000

**Figure 2.1 Percentage of intubations and HELICS defined VAP numbers by case type for Aneurin Bevan Health Board for the period 01/01/2009 – 31/12/2009**



**Table 2.5 Numbers of HELICS defined VAP by organism for Aneurin Bevan Health Board for the period 01/01/2009 – 31/12/2009**

| Organism                     | Number of HELICS VAP* |
|------------------------------|-----------------------|
| <i>Candida sp.</i>           | 4                     |
| <i>Escherichia coli</i>      | 2                     |
| Other Gram negative organism | 3                     |
| Other Gram positive organism | 1                     |
| <i>Pseudomonas sp.</i>       | 1                     |
| <b>Total</b>                 | <b>11</b>             |

\* The VAP may include more than 1 result organism. Microbiological diagnosis allows for up to 3 positive organisms to be noted. The number of VAP may therefore not correspond to the number of organisms