

Critical Care Surveillance: Ventilator Associated Pneumonia

2017 Annual Report: All Wales

Includes data from 01/01/2017 – 31/12/2017

Version 1
Issued 01/03/2018



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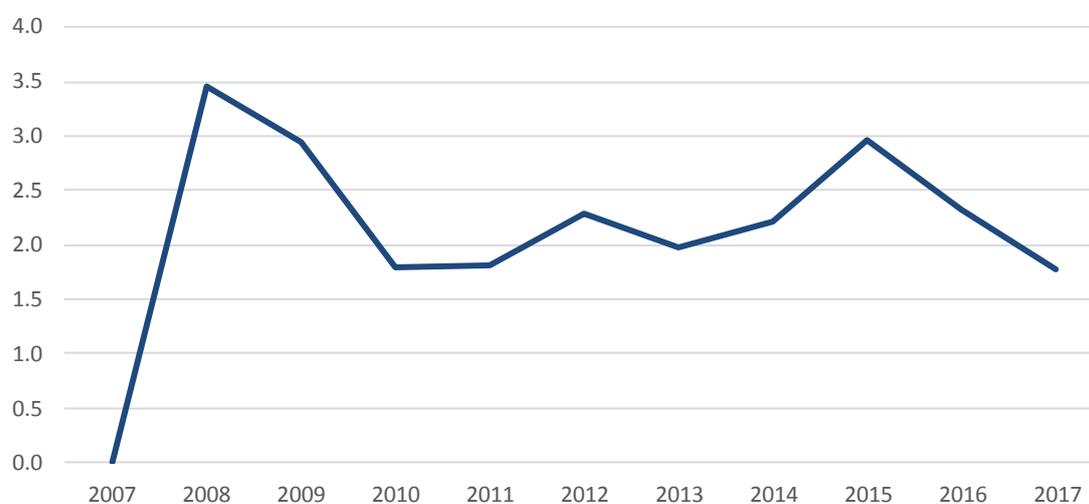
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2017 Monthly VAP Rates

	Ventilator Days	No. of VAP	VAP Rate (per 1000 ventilator days)	VAP (ECDC)*	VAP Rate (ECDC)*
Jan	2362	3	1.27	3	1.27
Feb	1952	9	4.61	9	4.61
Mar	1980	3	1.52	0	0.00
Apr	1675	2	1.19	2	1.19
May	1788	4	2.24	2	1.12
Jun	2027	9	4.44	8	3.95
Jul	1968	5	2.54	2	1.02
Aug	1996	5	2.51	2	1.00
Sep	1941	4	2.06	4	2.06
Oct	1954	5	2.56	2	1.02
Nov	2228	9	4.04	5	2.24
Dec	2338	4	1.71	4	1.71
Total	24209	62	2.56	43	1.78

*Excludes VAPs categorised as PNx (or PN0), which are being monitored in Wales only and, as a result, the VAP rate in Wales may be higher than in other countries. The ECDC rate can be used for direct comparison between Wales and other countries.

Annual VAP Rates



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Ventilator days	78	8373	17310	18380	18705	21849	22264	12648	10496	23625	24209
VAP	0	29	51	33	34	50	44	28	31	55	43
Rate	0.00	3.46	2.95	1.80	1.82	2.29	1.98	2.21	2.95	2.33	1.78

*Does not include VAPs categorised as PNx (or PN0) as these have not been historically reported. Rates shown as number of VAP reported per 1,000 ventilator days. For ease of visibility, rates higher than the Wales average VAP rate are shown in red, while rates equal to or lower are shown in green.

Microbiology data

	Number of VAP
Total VAP	62
Candida	13
C. albicans	7
C. glabrata	1
spp.	5
Haemophilus	3
H. influenzae	3
Pseudomonadaceae	1
spp.	1
Staphylococcus	11
S. aureus (MRSA - methicillin resistant)	6
S. aureus (MSSA - methicillin sensitive)	1
spp.	4
Stenotrophomonas	3
S. maltophilia	3
Streptococcus	7
S. agalactiae	2
S. pneumoniae	1
spp.	4

*We receive multiple microbiology results per reported case of VAP infection, therefore, the number of microorganisms reported in this table may exceed the number of infections. Only includes organisms reported in 2017.

VAP types

	Number of VAP
Total VAP	62
ECDC reportable	43
➔ PN1	22
➔ PN2	3
➔ PN3	0
➔ PN4	16
➔ PN5	2
Wales only	19
➔ PNx (PN0)	19

VAP definitions

The below details are a rough guide only, and should not be used to determine infection status. For a more detailed breakdown of the criteria, please see the HELICS definitions for ICU-acquired pneumonia.

To be classified as a ventilator-associated pneumonia, an invasive respiratory device must have been present (even intermittently) in the 48 hours preceding the onset of infection; there must be two or more serial chest X-rays (CXR) or CT scans with a suggestive image of pneumonia (only one definitive CXR or CT scan is sufficient if there is no underlying cardiac or pulmonary disease). Additionally, there will be a combination of symptoms which include fever, leucopenia, leucocytosis, purulent sputum (or a change in sputum), cough, dyspnoea, tachypnoea, suggestive auscultation, ronchi, wheezing, and/or worsening gas exchange.

In addition to the clinical criteria, the following criteria determine which category the infection falls under:

PN1 – Protected sample + quantitative culture (10^4 CFU/ml BAL/ 10^3 PB, DPA).

PN2 – Non-protected sample (ETA) + quantitative culture (10^6 CFU/ml).

PN3 – Alternative microbiological criteria.

PN4 – Sputum bacteriology or non-quantitative ETA.

PN5 – No microbiological criterion met (only clinical criteria).

PNX – Meets all requirements for PN1-4, but no CXR or CT scans have been done. Does not meet ECDC HELICS definition.