

WELSH HEALTH CIRCULAR



Llywodraeth Cymru
Welsh Government

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Title: AMR IMPROVEMENT GOALS & HCAI REDUCTION EXPECTATIONS BY MARCH 2019: PRIMARY & SECONDARY CARE ANTIMICROBIAL PRESCRIBING GOALS; *C.DIFFICILE*, *S.AUREUS* BACTERAEMIAS AND GRAM NEGATIVE BACTERAEMIAS.

Date of Expiry/Review: 31 March 2019

For action:

Health Boards/Trusts:

Chief Executives
Medical Directors
Nurse Executive Directors
Infection Control Doctors & Nurses
Directors of Public Health
Hospital Chief Pharmacists

PHW:

HCAI & AMR Programme Leads
CCDCs
Health Protection Teams

NWSSP:

For distribution to GP practices, dental practices and community pharmacists

For information;

Welsh Government:

DG/Chief Executive NHS Wales
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DHSS Digital Team

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Enclosure(s): Link to PPS and HALT-3 reports

INTRODUCTION:

1. Antimicrobial Resistance (AMR) is one of the greatest threats to human and animal health. O'Neill estimated that globally by 2050, 10 million or more deaths may be attributable to AMR if no action is taken, overshadowing other causes of death such as cancer and road traffic accidents.¹ Antimicrobial resistance already imposes a significant burden of morbidity and mortality on the population of Wales through the failure of empiric antibiotic treatment of infections, and the spread of difficult-to-treat multi-drug resistant organisms.
2. Healthcare Associated Infections (HCAI) remain a key patient safety issue and result in a significant burden of disease and financial cost to the NHS in Wales. The burden of HCAI is broader than the indicator organisms of MRSA and *C. difficile*. A Point Prevalence Survey, conducted in June 2017 as part of a European 5 yearly study, showed that within our acute hospitals 1 in 18 patients had a HCAI and that respiratory infections caused the greatest burden of HCAI, closely followed by urinary tract infections (UTI). A further survey of HCAI and antimicrobial usage in care homes (HALT-3) has shown that 1 in 17 residents had one or more HCAI when the survey was undertaken, and 1 in 10 residents were receiving antimicrobials.

Halt 3:

<http://www.wales.nhs.uk/sitesplus/documents/888/Wales%202017%20HALT3%20PPS%20of%20LTCS%20%20Report%20FINAL.pdf>

PPS: <http://www.wales.nhs.uk/sitesplus/documents/888/Wales%202017%20PPS%20Report%20Final%28b%29.pdf>

3. Key drivers of AMR Antimicrobial resistance are antimicrobial usage, burden of disease and transmission of resistance.
4. Key drivers for HCAI are failures in prevention of infection and transmission when providing healthcare, wherever the healthcare is delivered, and antimicrobial usage.
5. Welsh Government is committed to reducing the burden of AMR & HCAI and has collaborated with UK colleagues in the development of the UK antimicrobial strategy² and issued the Antimicrobial Delivery Plan “Together for Health, Tackling Antimicrobial Resistance and Improving Antimicrobial Prescribing” in 2016³. Welsh Government has also committed to improving the quality of patient care in Wales through embedding core Infection Prevention and Control practices and antimicrobial stewardship in everyday activity, including more prudent and

¹ ‘Tackling drug-resistant infections globally: Final report and recommendations’ The Review on Antimicrobial Resistance. Chaired by Jim O’Neill (May 2016)

https://amr-review.org/sites/default/files/160525_Final%20paper_with%20cover.pdf

² UK 5 year Antimicrobial Resistance Strategy 2013 – 2018 <https://www.gov.uk/government/publications/uk-5-year-antimicrobial-resistance-strategy-2013-to-2018>

³ Together for health, Tackling Antimicrobial Resistance and Improving Antimicrobial Prescribing” 2016

<http://www.wales.nhs.uk/sitesplus/documents/888/Antimicrobial%20Resistance%20Delivery%20Plan.pdf>

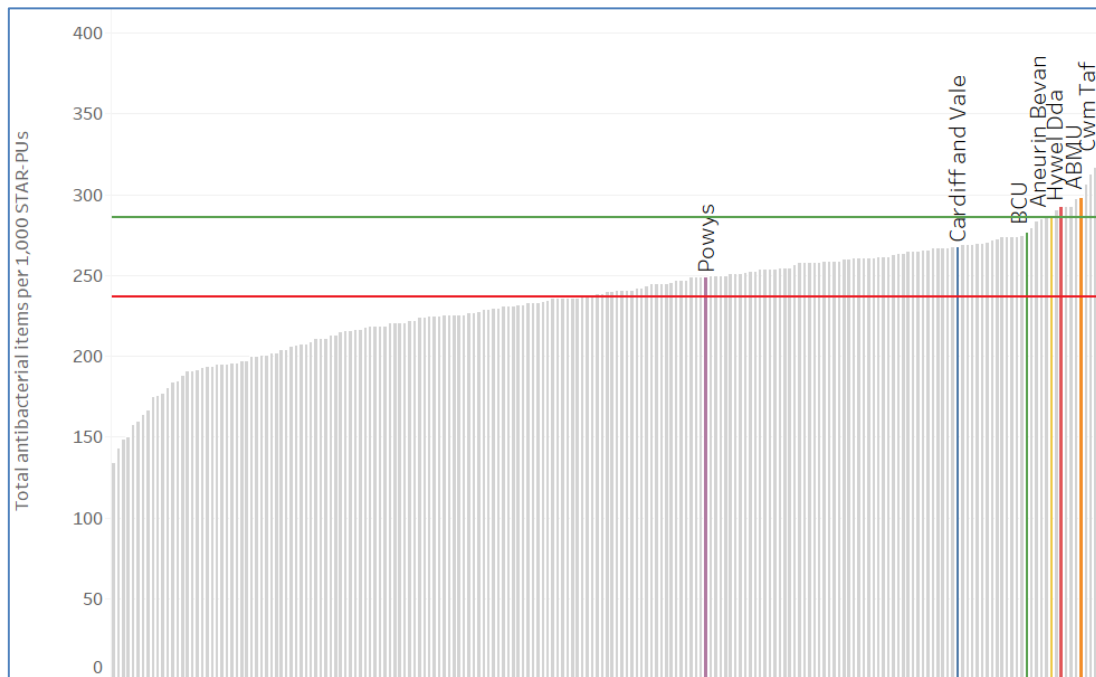
effective antimicrobial prescribing.

6. In 2017/18, Welsh Government introduced a new reduction expectation to reduce *E.coli* blood stream infections (bacteraemia), in direct response to delivering the UK commitment to halve Gram negative bacteraemias by 2020/21. The expected improvement in *E.coli* bacteraemia has not yet been seen and there will therefore be a need for Health Boards and Trusts in Wales to focus more on reducing this burden of infection in 2018/19.
7. In addition to a continued drive to reduce preventable healthcare associated infections and in response to the urgent need to address antimicrobial resistance in 2018/19, Health Boards and Trusts will be required to improve antimicrobial prescribing to meet the improvement goals for antimicrobial prescribing set out in this document.
8. Strong leadership is considered to be critical to achieving the necessary improvements. Health boards will be expected to mirror and feed into the national strategic leadership arrangements in place for HCAI and AMR in Wales, in particular working effectively across the NHS, hospital and communities to better understand the key drivers for infection in their patients and develop and implement a bespoke improvement plan that will deliver quantifiable change.

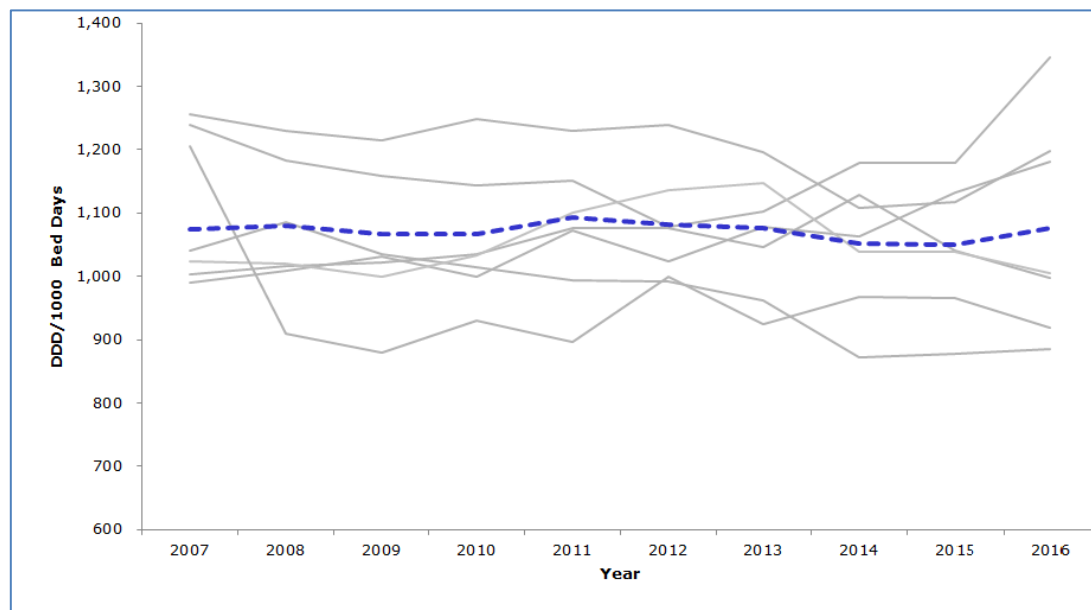
Antimicrobial Resistance:

Improvement goals for antimicrobial prescribing have not previously been set in Wales, although national prescribing indicators have been in place for many years. Health Boards and Trusts are expected to use the prescribing indicators relevant to antimicrobial prescribing to support improvement in prescribing practices.

Current position: antimicrobial prescribing in Wales



Primary Care total antibacterial items per 1,000 STAR-PU for the Welsh mean (green line) and health boards and the English mean (red line) and CCGs, Quarter ending September 2017



Secondary Care total antibacterial Defined Daily Dose per 1000 Occupied Bed Days for the Welsh mean (dotted line) and health boards, 2007 – 2016

The Improvement Goals for Antimicrobial Prescribing 2018-19:

The improvement goals for antimicrobial prescribing for the 2018-19 financial year are as follows:

Primary Care and Secondary Care:

5% reduction against the baseline year of April 2016 – March 2017:

- Primary care reduction in total volume measured as Items / 1000 STAR-PU.
- Secondary care reduction in total volume measured as DDD/1000admissions

Secondary Care:

- Increase the proportion of antibiotic usage within the WHO Access category to $\geq 55\%$ of total antibiotic consumption (as DDD) OR increase by 3% from baseline 2016 calendar year.

This metric is designed to provide a measure of narrow spectrum antimicrobial agent use and to encourage standardisation of antibiotic formularies across Wales to drive down HCAI and AMR.

The Access group includes the following antibiotics: ²

- Phenoxymethylpenicillin
- Nitrofurantoin
- Metronidazole
- Gentamicin
- Flucloxacillin
- Doxycycline
- Co-trimoxazole
- Amoxicillin
- Ampicillin
- Benzylpenicillin
- Benzathine Benzylpenicillin
- Procaine Benzylpenicillin
- Fosfomicin (oral)
- Fusidic Acid (sodium fusidate)
- Pivmecillinam
- Tetracycline
- Trimethoprim

⁴ WHO Model List of Essential Medicines. 20th List (March 2017).
<http://www.who.int/medicines/publications/essentialmedicines/en/>

There is an urgent need to address the increasing threat of antimicrobial resistance, and to this end there is a need to better understand antimicrobial prescribing and to ensure that antimicrobial prescribing is appropriate. To achieve this:

ALL PRESCRIBERS should document indications for all antimicrobial prescriptions, facilitating effective audit and review of antimicrobial prescribing.

In Primary Care, an appropriate Read code should be entered whenever antimicrobials are prescribed.

In primary care, data will be collected at an **all-Wales level** on:

- Total antimicrobial usage by condition
- Antimicrobial usage by 2 common conditions - sore throat and otitis media.
- Trimethoprim usage by age and sex

In Hospital practice indications and course duration must be documented on the prescription chart and a review of antimicrobial prescriptions must be undertaken by a senior clinician at 48 – 72hours. The “Start Smart then Focus” standard.

Health Boards will be expected to embed a scheme of regular audit against the “Start Smart Then Focus” standard, both to better understand, and improve the quality of antimicrobial prescribing.

The annual Point Prevalence Survey of Antimicrobial use in secondary care will continue.

Useful tools to support improved prescribing:

- An Antimicrobial Web Portal will be launched in April 2018. This will provide access to antimicrobial usage and resistance data across primary and secondary care.
- A “Start Smart then Focus” audit tool will be made available to support Health Boards and Trusts to audit their practice in prescribing in secondary care and reviewing antimicrobial prescriptions appropriately.
- The RCGP TARGET toolkit <http://www.rcgp.org.uk/clinical-and-research/toolkits/target-antibiotic-toolkit.aspx>
- The All-Wales Therapeutics and Toxicology Centre National Prescribing Audits focusing on Antibiotics: <https://www.awttc.org/focus-antibiotic-prescribing>

Public Health Wales have a role in supporting Health Boards and Trusts to reduce antimicrobial resistance and will:

- Issue more detail on the antibiotic usage within the WHO Access category of antimicrobials by Health Board in April 2018.
- Facilitate access to antimicrobial usage data in support of improving antimicrobial prescribing via a web-portal.
- Develop and make available a “Start Smart then Focus” Audit Tool

- Detect, describe and monitor Antimicrobial Resistance in Wales
- Develop and implement enhanced surveillance of Carbapenemase producing organisms.
- Support the collection of antimicrobial usage data through a point prevalence survey and collation and analysis of pharmacy data.
- Provide expert advice on antimicrobial prescribing and antimicrobial resistance.
- Develop antimicrobial guidance for primary and secondary care.
- Host and support the work of the antimicrobial resistance delivery plan for Wales.
- Support quality improvement programmes in this area through the 1000 Lives HCAI & AMR collaborative.
- Continue to deliver the Antimicrobial Stewardship Forum

Healthcare Associated Infections (HCAI):

Since 2011, the Welsh Government and NHS Wales have been committed to zero tolerance of all preventable HCAs. However the current position is not acceptable. Health Boards are currently not on target to deliver the reduction expectations set for 2017-18. There has been little or no improvement in the reduction of *C. difficile*, despite previous success; *Staph aureus* bacteraemia rates including MRSA have not reduced and rates of *E.coli* bacteraemia continue to increase.

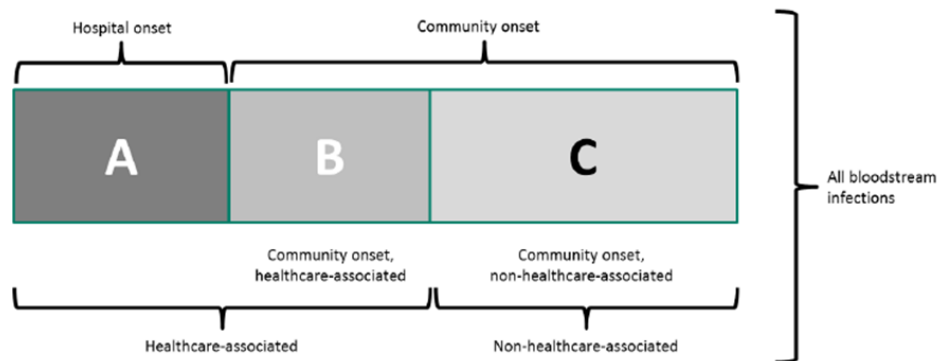
Important changes to the surveillance and diagnosis of HCAI 2018-19

1. ICNet Case Management System for Infection Prevention & Control.

Welsh Government has funded the purchase of a case management system for infection prevention and control teams in Wales. ICNet brings together data from laboratories, patient administration and theatre systems into a single database. The primary purpose is to improve patient management, but its use across Wales will also allow access to a broader range of data for national surveillance. Going forward, this will allow us to classify the onset and likely location of acquisition of organisms, helping healthcare organisations to focus their interventions.

During 2018/19, PHW intend to add organism classification to routine feedback of HCAI data, with a view to supporting Health Boards and Trusts in Wales to identify where interventions and resources need to be focused.

Figure 1. Definitions of different categories of bloodstream infections



Public Health England guidance on the definition of healthcare associated Gram negative blood stream infections (2017)

https://improvement.nhs.uk/uploads/documents/HCA_BSI_definitions_guidance.pdf

2. Changes in the diagnostic pathway for *C. difficile*.

From April 2018 changes are planned to the diagnostic tests used in Public Health Wales Microbiology laboratories for the routine diagnosis of *C. difficile* disease. Implementation will be sequential across the PHW Microbiology network of laboratories. The change in diagnostic test will improve the sensitivity of the test, allowing identification of more cases so that appropriate treatment and control interventions can be instituted. The change in the diagnostic test will however

mean that direct comparison of data between 2018/19 and preceding years in those laboratories implementing this change will not be possible.

The Improvement Goals for Healthcare Associated Infections 2018-19:

All Health Boards and Trusts are expected to implement ICNet as their tool for IP&C case management, which in turn will contribute to the improvements in surveillance data collection and feedback required to assist HBs & Trusts to focus their improvement work. ICNet should also be used to report incidents and outbreaks.

C. difficile

The NHS in Wales as a whole has not been able to improve on its *C. difficile* case numbers during 2017-18. For 18/19 there is an expectation that further work will be undertaken by health boards and Trusts to reverse the increase in cases seen and re-invigorate interventions to reduce the burden of *C. difficile* disease across our health services. Data to end December 2017 shows significant variation in progress between and within our University Health Boards, it is expected that improvement work will be undertaken to reduce this variation, learning from those that have demonstrated improvements. The reduction expectation for *C. difficile* for 18-19 is as follows:

It is expected that in 2018/19 the University Health Boards will achieve at least the reduction expectations set for 2017/18 i.e. no more than 26 cases per 100,000 population for all University Health Boards other than Aneurin Bevan (25 cases per 100,000 population) and Cwm Taf (20 cases per 100,000 population) and should work towards an additional 10% reduction in rate. Further details will follow in April 2018. Due to the expected changes in the diagnostic pathway for *C. difficile*, data will be monitored closely during the year and the diagnostic change taken into account in data interpretation.

***Staph. aureus* Bacteraemia**

University Health Boards will be given more time to reduce to the rates set for 2017-18. The overall rate for 2018/19 should be no more than 20 cases per 100,000 population for all UHBs other than Aneurin Bevan who have been set a reduction expectation to 19 cases per 100,000 population.

University Health Boards should be working to reduce their total *Staph. aureus* bacteraemia burden, including implementing interventions to reduce community onset, healthcare associated MSSA bacteraemia. There should be zero tolerance of MRSA bacteraemias.

Gram negative Bacteraemia

Little progress has been made to date in the 2017/18 *E. coli* bacteraemia reduction expectations. If we are to meet the Gram-negative bacteraemia target by 2020/21, we need to make more progress in reducing *E. coli* bacteraemia in 2018-19 and introduce other Gram-negative bacteraemias into the surveillance and improvement goals.

University Health Boards will be given more time to reduce to the *E.coli* bacteraemia rates set for 2017/18. The overall rate for 2018/19 should be no more than 67 cases per 100,000 population for all except Aneurin Bevan UHB (61 cases per 100,000 population) and Cardiff and Vale UHB (60 cases per 100,000 population).

***Klebsiella* sp. and *Pseudomonas aeruginosa* bacteraemia will be added to the reporting dashboards, and a reduction of 10% in numbers of cases in 2018-19 compared to 2017/ 2018 cases is expected.**

Implementation of interventions to reduce community onset healthcare associated Gram negative bacteraemia will be key. More detailed figures will be sent out by the HCAI & AMR Programme team in Public Health Wales in April 2018.

Public Health Wales have a role in supporting Health Boards and Trusts to reduce healthcare associated infections and will:

- Issue more details regarding the feedback of data using ICNet in April 2018.
- Support the implementation of ICNet and the enhanced surveillance (Enterprise Monitor) modules made available as part of the ICNet product.
- Feedback HCAI surveillance data and dashboards on a monthly basis to Health Boards and Trusts in Wales.
- Provide on-line access to the Infection Prevention and Control Manual for use in Wales.
- Continue to deliver the Infection Prevention and Control Forum.
- Develop all Wales guidance for IP&C including Multi-Drug Resistant Organism guidance.
- Provide expert advice on Infection Prevention and Control and outbreak management.
- Support quality improvement programmes in this area through the 1000 Lives HCAI & AMR collaborative

Monitoring of the Improvement Goals:

Welsh Government will expect that Health Boards and Trusts report on progress against these improvement goals at the Quality and Delivery Meetings.