

## **All Wales Antimicrobial Resistance Educator (AWARE) network**

### *Rationale*

Antimicrobial resistance (AMR) is one of the major challenges facing modern healthcare. The World Health Organisation and World Bank cite this as one of the biggest crises facing the world today [1, 2].

Education has a fundamental role to play in combating antimicrobial resistance and promoting antimicrobial stewardship, as outlined in the recently published UK national five-year action plan [3]. Education in AMR concerns not only doctors but other independent prescribers, antimicrobial pharmacists, physician associates, nursing staff and others who are involved in stewardship activities. Public Health England has published antibiotic prescribing and stewardship competencies for UK prescribers [4] and this was later followed by a set of competencies for undergraduate healthcare students [5]. A gap analysis by Health Education England found that the coverage of these principles in the education of various professional groups is suboptimal [6]. In addition, public engagement and awareness is vital to combat this issue. Much of the training which does take place happens on an ad hoc basis carried out by committed healthcare workers working in the field.

AWARE was created in 2019 as a new virtual community supporting and providing resources to healthcare professionals in Wales who are active in education, training and public engagement in the field of AMR & antimicrobial stewardship (AMS).

### *How it was developed*

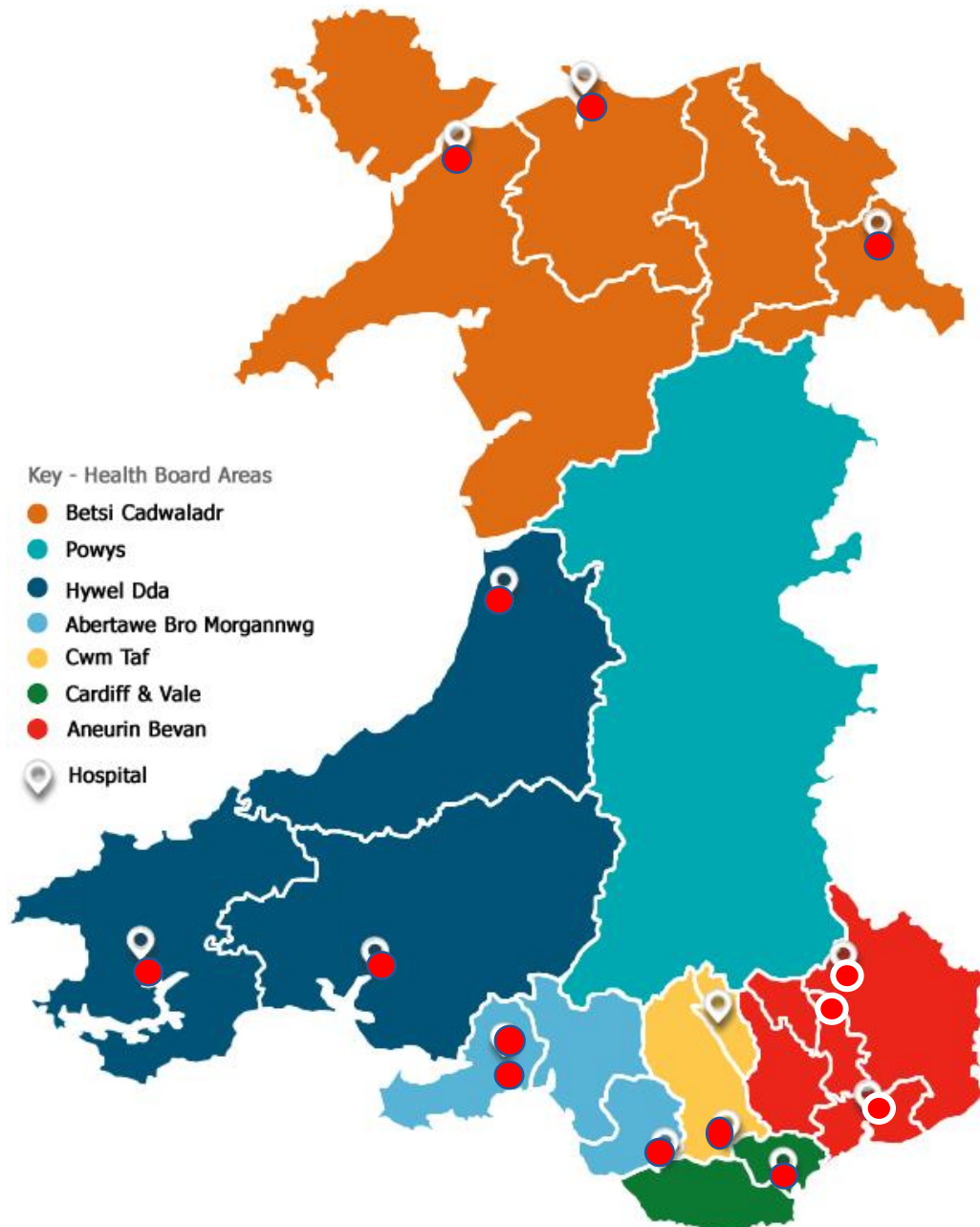
AWARE came about as a result of a specialist postgraduate course run at Swansea University Medical School, 'Clinical Infection Therapy' (CIT). The week-long intensive course was designed for experienced staff working in infection, for example antimicrobial pharmacists and infection prevention and control nurses from across Wales and beyond, with a focus on antimicrobial therapy, resistance and stewardship. Teaching was interactive and inter-professional. Those who had attended the course were highly engaged and were leading practitioners in their own health boards, also providing training to staff locally in AMS. AWARE was established by the CIT course lead as a way to build on the work of the course, after participants had returned to their Health Boards, so that learning acquired on the course could be cascaded to staff in all the Welsh Health Boards.

The aims of the AWARE project are:

1. To be a supportive community of practice where ideas, good practice and resources can be shared.
2. To build up an accurate, comprehensive picture of the AMR/AMS education and public engagement currently taking place across Wales and potentially identify gaps in provision, relating to particular professional groups, to certain levels of training (basic or specialist) or to certain geographical areas.

The eventual goals are a Welsh health workforce in which all staff are educated appropriately in AMR and AMS, and an engaged Welsh public with awareness of the importance of these issues.

The group is interprofessional and Wales-wide. It now has 26 members including antimicrobial pharmacists, pharmacy technicians, infection prevention and control nurses and consultant medical microbiologists, with every Welsh Health Board represented.



● - AWARE members(s)

## *Implementation*

AWARE was initially set up as an online user group, with those requesting membership added so that they can access the files of resources which are available in the online document share.

Teaching resources developed by the AWARE lead and other members can be shared in the AWARE User Group document file; there is signposting to useful online links; and information-sharing on forthcoming events.

Examples of resources available to the group, developed by the AWARE lead, include:

- Lecture slides on clinical microbiology
- 'Bug Bingo' game at different levels for use with different healthcare professional groups
- Antibiotic puzzle/grid game at different levels, for interactive teaching
- Quiz question sheet suitable for use with nursing staff
- Emoji puzzles based on antibiotic names
- A resource on the AWARE pages which generated particular interest was a game developed for use by the group, 'Antibiotic Top Trumps'. This was originally available as a resource to print out. It was formally evaluated in practice with medical students and proved such a popular resource that funding was obtained from the Microbiology Society to produce multiple sets of this game professionally, for distribution to all members of the group to use in their Health Boards. The development and evaluation of this resource has been published in *Medical Science Educator* [7].

Group members can log all their teaching/educational activities in the dedicated log on the AWARE User Group website. The aim here is to understand what training/public engagement is happening at a local level, to inform the All Wales Antimicrobial Resistance Delivery Programme. Annual summaries of logged activity for each individual are issued, and certificates for portfolio/CPD purposes.

Termly newsletters are sent out signposting members to information of interest such as online teaching resources and courses. The group has an active Twitter account.

AWARE's next activity will be an antimicrobial educator's study day, funded by a learned society, at which there will be a guest speaker and group members will have an opportunity to present examples of their educational and public engagement work, share ideas and network.

## *Impact & evaluation*

The online resources provided have proved very popular and have been used widely by members, finding their way into NHS practice 'on the ground' across Wales in a clinical setting. Some specific examples include:

- Use of the 'Bug Bingo' by Infection Prevention and Control Nurses in Hywel Dda Health Board's 'Jabs and Tabs' staff training initiative on intravenous to oral switch of antibiotics.
- Use and further development of the 'Pragmatic guide to antibiotic spectra' by Cwm Taf Health Board's antimicrobial pharmacists and microbiologists for use by junior medical staff.
- Use of the antibiotic grid game at Aneurin Bevan Health Board to teach a group of prescribing leads ('it went down really well and a nice break from PowerPoint!')
- The 'Antibiotic Top Trumps' translated into Welsh for use in public engagement at the National Eisteddfod (festival) 2020.

Data collected in AWARE group members' logs showed that across Wales, members of the AWARE group provided well over 200 hours of teaching/public engagement to at least 1390 individuals (healthcare workers, students and members of the public) in 2019. These included around 356 medical doctors, 240 nurses, 174 pharmacists, 132 medical students, 60 physician associate students, 120 medical science undergraduates, 46 pharmacy students and 262 members of the public/patients.

The All Wales Antimicrobial Resistance Delivery Group is currently planning the shape of future AMR/ADS education and training provision across Wales. Data from AWARE can help inform these discussions and provide information on current capacity and training needs.

#### *Lessons learned*

Experienced practising healthcare professionals are committed to providing education and training at a local level but lack the time to plan sessions in detail or create innovative resources. They welcome engagement with a network to support their educational work and share good practice, ideas and regionally relevant, tailored resources.

There is a huge amount of educational activity happening across Wales which is not captured. Recording this activity will allow new provision to be better targeted and focused where it is needed.

#### *References*

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