

Proceeding Paper

Antimicrobial Resistance: Professional and Public Education, Engagement, and Training Activities 2021–2022 (ESPAUR Report) [†]

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Abstract: This is a summary of initiatives to engage and educate the general public and healthcare professionals about antimicrobial use, stewardship and resistance, as covered in the 2021–2022 English Surveillance Programme for Antimicrobial Utilisation and Resistance (ESPAUR) Report. Activities led by the UK Health Security Agency (UKHSA) and collaborating organisations are highlighted.

Keywords: antimicrobial resistance; antimicrobial stewardship; schools; primary care; community pharmacy; secondary care; general practice; continuing professional development



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1. Introduction

The education and engagement of healthcare professionals (HCPs) and the public are crucial to antimicrobial stewardship (AMS), and are highlighted in the UK 20-year vision for tackling antimicrobial resistance (AMR) and the 5-year National Action Plan (NAP) [1,2]. The COVID-19 pandemic significantly disrupted education and training. However, as social restrictions eased, there was renewed vigour for professional and public education, engagement, and training. This paper summarizes Chapter 6 of the annual English Surveillance Programme for Antimicrobial Utilisation and Resistance (ESPAUR) report, detailing the UKHSA-led education and training activities in England from 2021 to 2022 [3,4]. These findings were presented at the ESPAUR Report webinar on 23 November 2022.

2. Healthcare Professional Training

Remote learning, established during the COVID-19 pandemic, continued across all sectors for the training of HCPs, including online training modules, online conferences, and webinars. Training focused on renewing key AMS messages across the patient pathway, using the TARGET Antibiotic Toolkit resources [5] and discussing antibiotics with patients. There is currently no mandatory training on AMS for HCPs.

3. Public and Professional Engagement

The Antibiotic Guardian (AG) campaign [6] engages professionals and the public to pledge to help keep antibiotics working. Since launching in 2014 to the end of 2021, there were 144,446 pledges on the main AG webpage (Figure 1). A total of 65% of all pledges were made by those identifying as a health/social care professional or leader, and of these, 72% were from pharmacy teams (including primary and secondary care and community pharmacies).

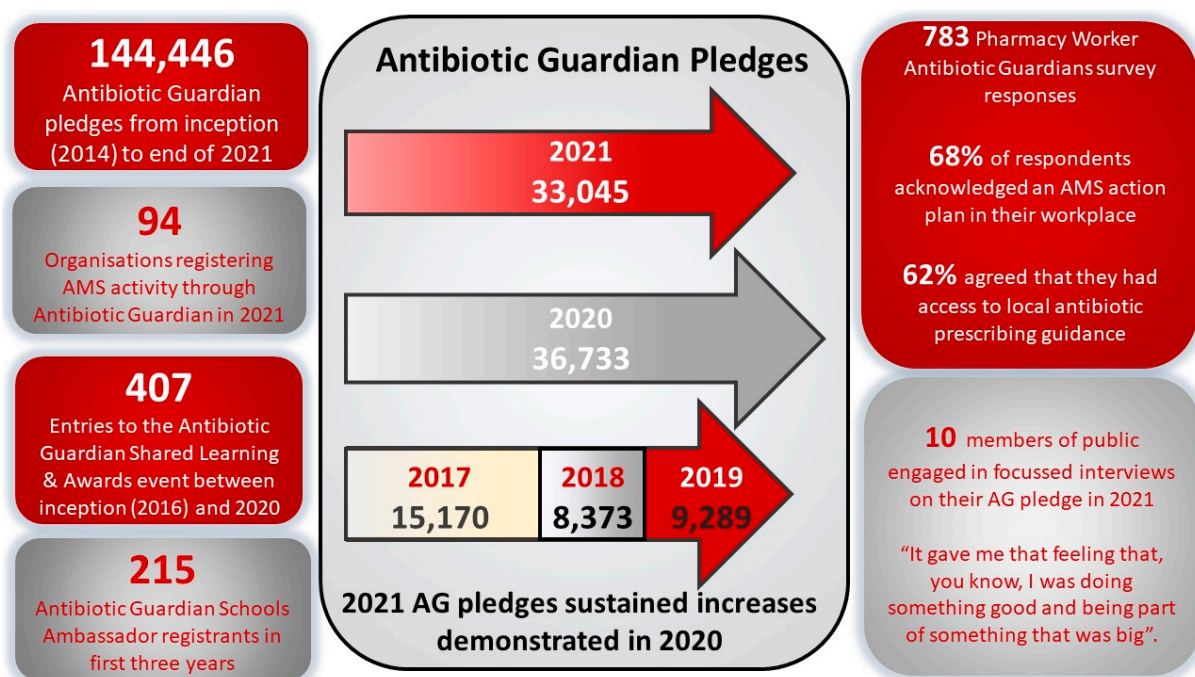


Figure 1. An infographic summarising Antibiotic Guardian pledge activity between 2017 and the end of 2021, alongside information on Antibiotic Guardian-related activity. Infographic adapted with permission from Ref. [4]. Copyright 2022 UK Health Security Agency.

An evaluation of the AG campaign focused on the public and pharmacy workers. A survey of pharmacy workers identified statistically significant differences in the AMS capability of different roles across the pharmacy profession [7]. Qualitative interviews with the public who had pledged to be an Antibiotic Guardian identified motivations based on moral obligation, personal responsibility, and uncertainty about the future.

The Antibiotic Guardian School Ambassadors programme was first piloted in 2019 and connects HCPs with local schools and community groups to educate people about AMR. A total of 110 colleagues registered in 2021, and pharmacists have been accounted for the most volunteers each year. Ambassadors reported the personal and professional benefits of participating.

World Antimicrobial Awareness Week (WAAW) and the European Antimicrobial Awareness Day (EAAD) 2021 aimed to engage HCPs and the public on tackling AMR. Continuing the precedent set during the COVID-19 pandemic, the campaign was mainly digital, focusing on sharing information via social media and digital notes. Twitter activity during WAAW 2021 included 15,452 tweets from 6189 users, and 37,719 retweets from 17,808 users during the week.

4. Public Engagement

The e-Bug programme [8], operated by UKHSA, provides educational resources to support children and young people (aged 3–16 years) in all communities with information on infection prevention and AMR topics (see Figure 2). The e-Bug educational resources underwent a full review and update, and with support from NHS England, they were disseminated to every maintained school and academy across England (over 20,000 schools) in January 2022. See Figure 3 for more detail on e-Bug activities.

Infographic 27. e-Bug achievements



**From 2021 to 22,
the e-Bug programme has:**



Developed educational resources with teachers and scientists for ages 3-16. These are mapped to the National Curriculum and accredited by the Association for Science Education



Disseminated educational resources to **20,318** primary and secondary schools across England



Launched an interim website (www.e-bug.eu) to share the resources, receiving **520,914** page views from **214** countries



Raised awareness amongst the public. Shared **175** tweets creating **156,381** impressions, and presented at **4** conferences to over **6000** attendees



Collaborated with **17** countries to highlight the importance of including education of children and young people in AMR strategies

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Figure 2. Infection prevention and AMR topics covered in the e-Bug educational resources. Infographic adapted with permission from Ref. [4]. Copyright 2022 UK Health Security Agency.

Infographic 28. e-Bug: supporting children and young people



**Across the e-Bug resources,
children and young people
are supported to:**



Embed hygiene practices to prevent the spread of infection



Adopt safe preparation and cooking practices to avoid food-borne illness



Understand what microbes are and that antibiotics only work for bacteria



Adopt self-care methods when appropriate



Only take antimicrobials as and when prescribed



Grow up as antimicrobial stewards

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Figure 3. e-Bug programme activities from 2021 to 2022. Infographic adapted with permission from Ref. [4]. Copyright 2022 UK Health Security Agency.

5. Conclusions

Future work in public and professional education includes plans for a national implementation of TARGET and e-Bug training and resources, aiming for the consistent education of HCPs and the public in the future.

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