Short report

The drugs don’t work: evaluation of educational theatre to gauge and influence public opinion on antimicrobial resistance

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SUMMARY

Increased public awareness of antimicrobial resistance (AMR) is a key component of effective antimicrobial stewardship strategies. Educational theatre combined with an expert panel was used to engage the public about AMR through delivery of a play entitled 'The drugs don’t work'. Audience knowledge and understanding of AMR were measured by pre- and post-play questionnaires. Performance of the play and discussion with the expert panel significantly improved audience knowledge and understanding of AMR, including antibiotic misuse and prescribing. Educational theatre provides a positive learning experience and is an innovative method of public engagement to disseminate important public health messages.

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Introduction

Antimicrobial resistance (AMR) is a global problem in the 21st Century. Equipping the public with a better comprehension of AMR, correct antibiotic use and problems associated with antibiotic misuse – for example, how and when to take antibiotics – could play an important role in effective antimicrobial stewardship [1–3]. Antibiotic awareness campaigns conducted at national, European and global levels have promoted better public awareness of AMR through communication using factsheets, posters, videos, social media and interactive games. The ‘active ingredients’ of interventions targeting the public’s engagement with AMR and how they might work have been analysed by McParland et al. [4]. They reported that only 15% of behaviour change techniques have been applied in AMR interventions, thus providing a clear opportunity for the development of novel interventions in this context. Theatre performance is an alternative educational campaign for increasing public awareness of health issues such as human immunodeficiency virus/acquired immunodeficiency syndrome...
located within the museum complex is a theatre which hosts a variety of educational theatre and interactive science events. The Cheltenham Science Festival is an annual 5-day event held in Cheltenham, UK which incorporates a wide range of interactive science and engineering activities (https://www.cheltenhamfestivals.com/science). Audience knowledge, attitudes and opinions on AMR were recorded using paper questionnaires before and after the play. The pre- and post-event questionnaires were assigned with a unique code identifier to ensure that pre- and post-event questionnaires were correctly aligned to the participating individual. The pre-event questionnaire was issued to all individuals upon entry to the events and collected, with responses, prior to commencement of the play. Post-event questionnaires were issued following the performances. The questionnaires were collected following audience responses and aligned to the pre-event responses based on the unique participant code identifier.

The audience members scored their responses to Questions 1–8 before and after the performance of the play using a Likert scale (1 = 'strongly disagree' and 5 = 'strongly agree').

Two links to 'The drugs don’t work – a tale of resistance', and a copy of the script, are provided as online supplementary material.

Results

The Cheltenham Science Festival presentation was attended by 105 people (mean age 47 years, range 17–94 years), whilst the combined Think Tank presentation was attended by 137 people (mean age 23 years, range 6–67 years). Table 1 presents a summary of audience knowledge, attitudes and opinions on AMR obtained using self-administered questionnaires before and after the play.

Mean self-assessed responses to the eight questions asked pre- and post-performance of the play by the Cheltenham and combined Think Tank audiences are shown in Figure 1. Significantly altered scores for Questions 1, 2, 3, 4 and 7 ($P<0.05$) were recorded for both audiences after presentation of the play. Significant changes in scores for Questions 5, 6 and 8 were apparent only in the Think Tank audiences. This difference in audience response most likely reflects the mean scores for the Science Festival audience that were low for Question 5 and high for Questions 6 and 8 before performance of the play, allowing little scope for significant change. Scores for Questions 1 and 2 indicate that the play had a positive effect on increasing knowledge in the areas of microbiology and antibiotics, and awareness of the importance of AMR for all audiences. Scores for Question 3 indicate that the play improved appreciation of the lack of tests available to distinguish between viral and antibiograms.
Antimicrobial resistance is a very serious problem. My GP can establish if a sore throat is bacterial or viral. When I am suffering from a sore throat and seek medical attention, I should expect my GP to give antibiotic medication. When I am suffering from a sore throat and seek medical attention, if my GP does not prescribe antibiotic medication, they are not doing their job. Even if I feel better, I will complete a full course of antibiotics. I only use antibiotics prescribed to me. I never use antibiotics prescribed to me from a previous prescription.
study focused on AMR, the authors believe that use of this platform for raising awareness of other key public health issues is a significant step in the right direction. However, it is beyond the scope of this study to ascertain if this shift in knowledge and understanding is retained over time, and whether it has an impact upon individual behaviours post event.

Ethical approval and consent to participate
An application was submitted to the University Research & Ethics Committee and considered by the Life & Health Sciences Ethics Committee under Application #1107. As an evaluation of a public engagement event, the requirement for ethical approval was waived by the Chair of the LHS Committee.

Conflict of interest statement
None declared.

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Appendix A. Supplementary data
Supplementary data to this article can be found online at https://doi.org/10.1016/j.jhin.2019.10.011.

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