An evaluation of an educational debate kit for schools on Antibiotic Resistance

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BACKGROUND INFORMATION
- e-Bug is a European project that aims to educate children and young people around the globe on the spread, treatment and prevention of infection.
- The e-Bug teaching resources include debate kits which centre around vaccinations and antibiotic resistance.
- There had been no prior evaluation of the effectiveness of these debate kits.

AIMS
Evaluate the ability of the antibiotic debate kit to improve student knowledge on antibiotics and antibiotic resistance.
Assess whether the type of school or region had an effect on how the debate kit was received by students.

THE DEBATE KIT
- The debate kit revolves around the question; ‘Should the NHS tell GPs to give back-up prescriptions instead of immediate antibiotics wherever possible?’
- It consists of eight different character cards, each with their own views regarding antibiotic resistance and back-up prescriptions. Each card ends with a question for debate.
- Students split into groups of 6-8 and discuss each character card.

QUALITATIVE RESULTS
- Student feedback overall was very positive.
- Staff were pleased with how it was run and the students’ responses to it.
- Suggested improvements from staff and students included reducing the amount of text on the cards and developing an accompanying PowerPoint.

CONCLUSIONS
- Most questions saw an increase in the number of correct answers which indicates that the debate kit is able to improve knowledge.
- The success of the debate kit was not effected by region or school type.
- Both students and staff responded well to the debate kit.
- Improvements will be made to the debate kit based on the feedback received.

METHOD
- Seven schools from three counties in Southern England took part in the study. In total, 235 students from years 9-10 were involved.
- Before each session students answered a pre-questionnaire. This established a record of the students’ initial understanding and baseline knowledge of the subject prior to the session.
- The session began with a brief introduction about antibiotics and antibiotic resistance. This was followed by group discussions and debates using the kit.
- The students then answered a post-questionnaire and completed a feedback form. The results of the questionnaires were compared to determine if there had been any improvement in the students’ level of understanding.
- Staff were briefly interviewed for their opinions on the debate kit and its effectiveness.

QUANTITATIVE RESULTS
- The post-questionnaire showed an improvement in knowledge for most questions (18 out of 19).
- Rates of improvement were constant across both region and school type.
- Questions which saw highest improvement percentages were regarding common misconceptions such as antibiotics working as painkillers and whether only certain types of bacteria can become resistant to antibiotics.
- Some questions with lower levels of improvement included what antibiotics actually did and whether someone could die from an antibiotic resistant infection. However the students’ initial level of knowledge in these areas was already very high so any improvement would be limited.

Figure 1: Comparison of the two questionnaires.
Figure 2: Comparison of different school types.