School Education in Europe
What are children being taught about antibiotic use and hygiene?

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INTRODUCTION

- Antimicrobial resistance is a serious global issue of increasing concern
- In the UK alone, the number of deaths associated with MRSA has risen from 51 in 1993 to 1,628 in 2005
- Increasing antibiotic use has been attributed to the increase in bacterial resistance
- Antibiotic use across Europe is extremely variable with sales shifting more than 4-fold between countries
- A recent UK survey showed that 30% of adults wrongly believed that antibiotics can be used to successfully treat the flu and common cold
- In many European countries, antibiotic prescription rates are highest in children
- Respiratory and gastrointestinal infections being the major cause of childhood illness in schools.
- Research has shown that the implementation of proper hand hygiene practices has reduced absenteeism within the school environment.
- The e-Bug project is a European-wide DG SANCO funded antibiotic and hygiene teaching resource.

Aims

1. To examine the educational structure across each associate partner country
   - Belgium (BE) Greece (EL)
   - Czech Republic (CZ) Italy (IT)
   - Denmark (DE) Poland (PL)
   - France (FR) Portugal (PT)
   - Great Britain (GB) Spain (ES)

2. To assess what children are being taught in school with regards to
   - good and bad microbes
   - hand hygiene
   - respiratory hygiene
   - antibiotic use

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References


RESULTS

The structure of the education systems from pre-primary through upper secondary school

Curriculum content in relation to antibiotics
- Antibiotics kill bacteria
- Antibiotics do not kill viruses
- Antibiotics also kill the good bacteria
- Antibiotics do not cure the cough/flue
- How antibiotics are produced
- Who prescribes antibiotics
- The importance of finishing a course of antibiotics
- Bacteria are becoming resistant to antibiotics
- How bacteria become resistant to antibiotics
- Antibiotic resistant bacteria are becoming a problem in hospitals
- Resistant bacteria are not exclusive to hospitals
- Resistant bacteria can infect you and/or your family
- If taken too often, antibiotics are less likely to be effective in the future

Curriculum content in relation to micro-organisms
- Are children taught about micro-organisms?
- Are children taught the difference between bacteria, virus and fungi?
- Are children taught about good and bad microbes?
- Are children taught that microbes are found everywhere?
- Are children taught that there are different species of bacteria?

Curriculum content in relation to respiratory hygiene
- Are children taught the difference between a cold/flue?
- Are children taught that a virus causes the flu?
- Are children taught that sneezing can spread germs?
- Are children taught to put something over their mouth when they sneeze?
- Are children taught why they should do this?

Curriculum content in relation to hand hygiene
- Are children taught the importance of hand hygiene?
- Are children taught how to wash their hands properly?
- Are children taught that microbes can spread via unclean hands?
- Are children taught that the difference between clean and sterile environments?
- Are children taught to wash their hands before eating, etc?

IN SUMMARY

- 100% of countries’ include structured hand hygiene in the curriculum of both primary and secondary schools
- The curricula in all partner countries adequately cover the topic of human health and hygiene
- Limited information is provided on prudent antibiotic use and bacterial resistance
- Only two countries highlight that antibiotic resistance is a problem in hospitals
- Greece is the only country highlighting that antibiotic resistant bacteria are not exclusive to hospitals
- Educational resources reinforcing teaching and implementing national advice to the public campaigns are either limited or do not exist.
- Evaluation on the impact of school education on attitude and behaviour change is also limited throughout Europe

CONCLUSION

- Not enough is currently being done across Europe to educate children on the importance of appropriate antibiotic use and antibiotic resistant bacteria.
- There is a current need for more educational resource which emphasise these issues
- The data from this research will be used to develop e-Bug: a pan-European antibiotic and hygiene teaching resource.