Impact of Antimicrobial Awareness Week educational activities on the knowledge of primary school children

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BACKGROUND

- SA Health disseminates educational resources during Antimicrobial Awareness Week (AAW) to educate about the risks of antimicrobial resistance.

AIM

- To investigate the impact of AAW activities on childrens' understanding of the risks of antimicrobial resistance.

METHODS

- Educational activities (AAW colouring and poster competitions) and links to resources (including library resources, videos, other online resources) were distributed to South Australian primary schools.
- Multi-choice surveys were administered (online or paper-based) before and after AAW 2021.

KEY FINDINGS

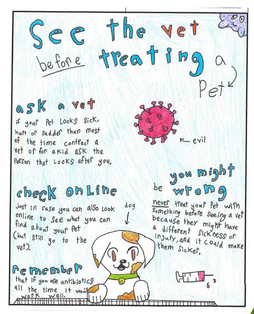
- 54 surveys were completed prior to AAW and 78 completed post AAW. The age range of the children was 7 to 9 years.
- Participation in AAW colouring and poster competitions was associated with an increased knowledge of antimicrobial resistance, including an increased understanding that antibiotics treat bacterial infections, not viral infections.

TAKE-AWAY

- **Participation in a colouring/poster competition was an effective method of raising awareness of antimicrobial resistance and increasing the knowledge of primary school students.**
- **Further research would help inform optimum methods to educate children on the importance of antimicrobial resistance.**

Key messaging for Antimicrobial Awareness Week:

- Antimicrobial resistance (AMR) is when microorganisms such as bacteria, viruses and fungi no longer respond to antimicrobial medication, making infections more difficult to treat.
- Overuse and inappropriate use of antimicrobials in humans and in animals is the key driver of antimicrobial resistance.
- Antibiotics target bacterial infections; using antibiotics for colds and flu has no impact on the viral infection but increases the risk of AMR.
- AMR affects humans, animals and the environment.

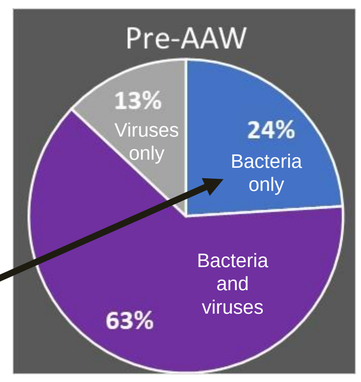


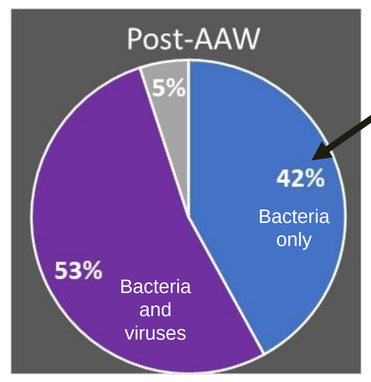
Understanding appropriate antibiotic use

Key message: Antibiotics do not kill viruses; antibiotics are used for bacterial infections

Survey question: Antibiotics are used to treat infections caused by which types of bugs?

Before AAW only **24%** of students understood antibiotics treat bacteria and not viruses





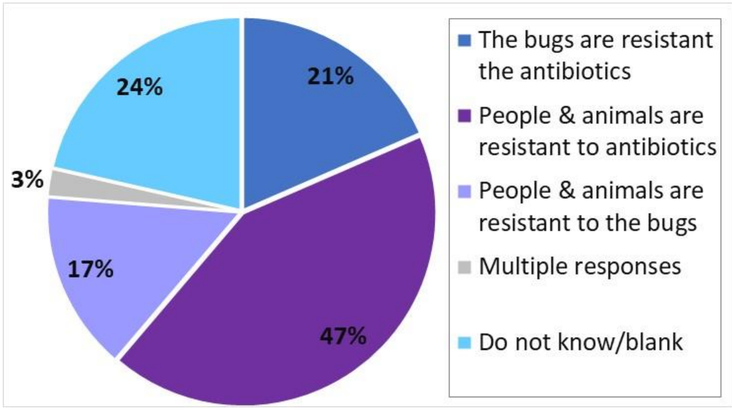
After AAW **42%** of students understood antibiotics treat bacteria and ***not*** viruses

Outcome: More students understood antibiotics treat bacteria

A misunderstood definition: Antibiotic Resistance

Key message: Antibiotic resistance means that the bugs (bacteria) are resistant to the antibiotics

Survey question: Antibiotic resistance means:



After AAW Only **21%** of children understood that antibiotic resistance means the bacteria are resistant to the antibiotics.

Most students still incorrectly believe 'antibiotic resistance' means that people/animals are resistant to the antibiotics.

Finding: Many children are still confused about the term 'antibiotic resistance'

Limitations:

- Survey size was limited, and because participant groups pre- and post- AAW differed, it was not possible to illustrate a statistically significant change in survey results.
- Aside from participation in the colouring/poster competitions, conveying information on antimicrobial resistance to students was up to individual teachers and schools.

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This study was approved by the Women's and Children's Health Network Human Research Ethics Committee [Approval number 2021/HRE00279]