

## Managing Antimicrobial Resistance Through Behavior Change, March 2021

### Teaching antimicrobial resistance. Educating young people to be change agents

Malena Lidar, Eva Lundqvist, Cecilia Eriksson, Malin Hjertson, Ida Solum, Leif Östman

#### Brief background

International organisations are acknowledging education as crucial for creating awareness of antimicrobial resistance (AMR) and for development of responsible habits relating to AMR. The UN does so in the Sustainable Development Goals, as does the WHO in the Action Plan for Antimicrobial Resistance. Young people spend much of the day in school, and given that habits are established early in life, schools have an important role to play in promoting better understanding, awareness and action competencies in matters related to AMR.

Responsible habits are a prerequisite to shaping sustainable behaviours concerning for example health issues and food consumption. The (re)creation of habits includes not only learning the facts about AMR, but also learning different values and priorities connected to the issue, and the skills to translate and transform the knowledge, values and ethical considerations into new priorities. These aspects must be addressed in school.

In this workshop, we discussed challenges and opportunities related to teaching on the topic of AMR and how we can work in formal education to ensure that the next generation is prepared with both relevant knowledge concerning the emergence and spread of AMR and decision-making processes for managing questions related to AMR. The education system needs to find means to address AMR that will ensure this generation is committed and engaged to make a difference in handling this issue. This requires that we make available and concrete teaching that promotes pupils' confidence in their own ability to make changes in their personal life, as well as in shaping society, now and in the future.

#### Approach

The workshop was initiated to increase knowledge on and discuss how schools can be a part in supporting the next generation of citizens to be competent and willing to act in matters related to AMR. The overarching aim of the workshop was to address questions regarding what education should include to help pupils act competently in relation to AMR issues, and how such competence is best taught in the context of a formal education system.

The workshop discussions were guided by the following questions:

- What does teaching need to address, including both facts and values, to educate students and ensure their competence and willingness to act in relation to AMR issues?
- How can we work to enable teachers to feel confident about teaching highly complex issues, encompassing multiple perspectives and, at times, conflicting interests and needs?
- How is it possible to teach a topic that may have very severe consequences, without making students scared or disillusioned about the future?
- How can we work to accumulate, sustain and disseminate experiences of teaching related to AMR and build a knowledge base around this topic?

The workshop gathered 30 participants from around the world, many from Sweden and Europe, but also from countries in Africa, Asia and Central America. The participants had diverse professional backgrounds, e.g., educators, educational researchers, curriculum experts, policymakers and health experts. Bjarne Bruun Jensen, Professor in Health Promotion in Denmark, and Tracie Muraya, Policy Officer at ReAct Africa, each gave an inspirational talk. Jensen highlighted, among other things, that we need to provide students with action experiences and strategies to make changes already in school. Central to Muraya's talk was the importance of using life in the family and matters relevant to the local community as starting points for education.

#### Recommendations

As stated above, we need for young people to have knowledge and competence to act in relation to AMR issues. The conclusion from the discussions at the Uppsala Health Summit was that to make this possible, there is a need to rethink modes of teaching, moving away from simply transferring an established set of facts about an issue. Teaching in schools has to be interesting, meaningful and engaging for pupils to motivate them

to learn and develop responsible habits. One way to achieve motivation is to work with authentic problems. This offers pupils a possibility to gain knowledge and skills that are part of concrete problem-solving activities. Any problem-solving activity must involve learning basic facts about the problem and its causes. Furthermore, as Jensen highlighted in his talk, it is important that pupils can take part in developing visions for the future and learning about different strategies to work towards these visions, in their own life as well as in the local community. When trying to solve problems, pupils will experience the complexity and the conflicting interests involved, which requires them to learn the difficult art of creating good arguments for priorities and decisions. Problem-solving activities also require that pupils learn how to transform visions, knowledge and prioritisations into concrete actions and activities.

A strategy for teaching can be to let pupils work with challenges from their own lives, where they can take the lead and develop their own 'actions plans' for changing everyday behaviours. With this mode of teaching, motivation can be turned into commitment and (re)creation of habits. When pupils truly engage in a problem-solving activity, they get emotionally involved and can gain a sense of ownership of the solutions. Muraya pointed out that real-life examples with positive outcomes that can put a face on AMR may contribute to giving students hope for the future. Notably, the contextual differences for teaching AMR in different parts of the world are huge. In some parts of the world, young people live with the consequences of lack of access to functional drugs for infections. Letting these pupils cooperate with local stakeholders in trying to solve a problem may introduce them to new knowledge as well as to the understanding that there are different points of views about the issues that must be acknowledged in the search for solutions. In other parts of the world, it can be a challenge to make pupils acknowledge that AMR is something that concerns them, since the problems are not visible in their everyday context. Here, we might need to introduce stories or scenarios in order to touch upon their feelings and create commitment and a willingness to (re)create habits.

New perspectives might mean that we need to interrupt teachers' habitual ways of teaching and

introduce new ones. For a teacher, it can be challenging to address an issue like AMR in teaching, as there is not necessarily a solution or a correct answer and multiple disciplinary perspectives and conflicting interests are present. To support confidence in this matter, it could be beneficial to ensure tailored teacher education, continued professional development and expanded collaborations between different disciplines or school subjects, to enable the highlighting of different aspects of AMR.

Schools could make a vast contribution in teaching the next generation about AMR, if their structural barriers to action, such as lack of time and curricular space, are avoided. The AMR topic must be purposefully incorporated in school curricula – not only in life sciences, but also in subjects such as social sciences and home economics. This would require continuous capacity building for teachers on the AMR topic and that school leaders work to facilitate this process. Teachers need to have opportunities to engage in multisectoral collaborations. There is also a need to share and make public functional teaching tools and experiences, in order to further accumulate our capabilities to perform teaching that makes a difference on sustainability issues in society.

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Authors: Malena Lidar, Uppsala University; Eva Lundqvist, Uppsala University; Cecilia Eriksson, Uppsala University, teacher at Bagarmossens skola, Stockholm; Malin Hjertson, teacher at Fyris skolan, Uppsala; Ida Solum, teacher at Rosendalsgymnasiet, Uppsala; Leif Östman, Uppsala University.

Corresponding author: [eva.lundqvist@edu.uu.se](mailto:eva.lundqvist@edu.uu.se).



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