Antibiotic resistance – one goal, one strategy

Maintaining the efficacy of antibiotics for the future

Strategy on Antibiotic Resistance

StAR

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Imprint:
Photos: Caspar Martig
Concept and text: Scarton Stingelin AG
Available from: BBL, Vertrieb Bundespublikationen, CH-3003 Bern
Order number: 316.400.e
www.bundespublikationen.admin.ch
November 2015

One goal

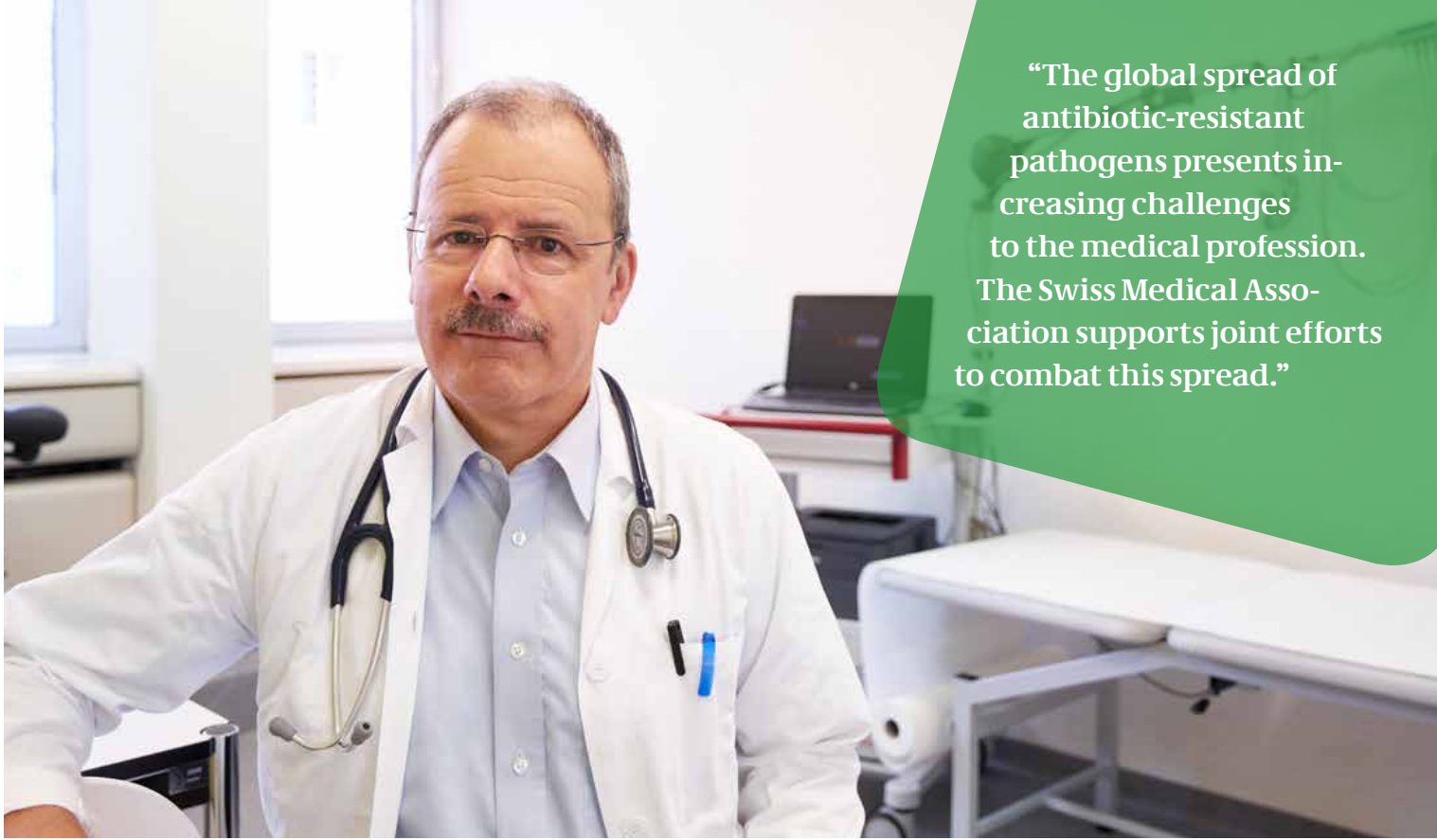
The main aim of the national Strategy for Antibiotic Resistance (StAR) is to maintain the efficacy of antibiotics for humans and animals for the long term. The strategy identifies the areas where action is needed and the measures that aim to achieve this goal.

The development of antibiotics is one of the most important achievements of medical research. However, their excessive and inappropriate use means that more and more bacteria are becoming resistant to antibiotics. The consequences are significant and affect humans, animals and agriculture as well as the environment. Every year people in Switzerland die of infections caused by bacteria for which antibiotics are no longer effective. The measures that have been taken so far to combat antimicrobial resistance are inadequate. Antibiotics must be used more selectively and less extensively in the future.

One strategy

The national Strategy for Antibiotic Resistance was developed on behalf of the Federal Department of Home Affairs and the Federal Department of Economic Affairs, Education and Research. It was created in close cooperation with the Federal Offices of Public Health (FOPH), Food Safety and Veterinary Affairs (FSVO), for Agriculture (FOAG) and the Environment (FOEN) as well as the cantons. The problem of resistance to antibiotics can only be solved by cooperation and coordination.

The strategy will be implemented gradually after its adoption by the Federal Council. The federal agencies listed above are responsible for the detailed planning and implementation of the measures. The relevant stakeholders have already made a crucial contribution to the development of the strategy and are playing an important role in its realisation.



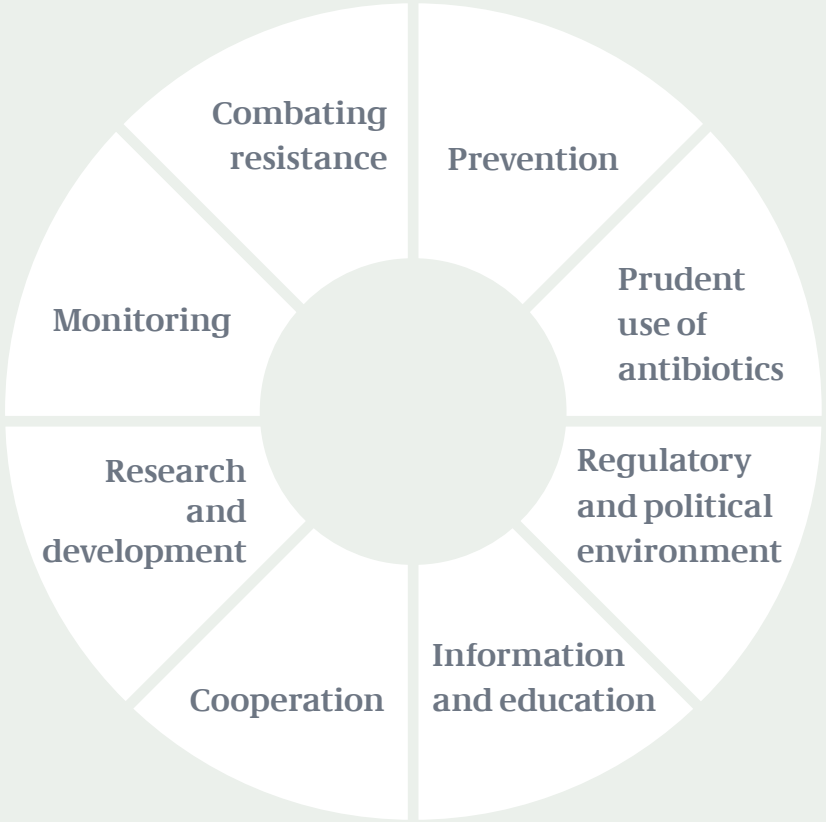
“The global spread of antibiotic-resistant pathogens presents increasing challenges to the medical profession. The Swiss Medical Association supports joint efforts to combat this spread.”

Dr. med. Jürg Schlup, President, Swiss Medical Association

Susanne Hochuli, member, Executive Council of the Canton of Aargau, and Director, Department of Health

Eight areas

Eight main areas are involved in the strategy against antibiotic resistance, which affects people, animals, agriculture and the environment. The strategy follows the One Health approach.



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The eight areas

Monitoring

The prevalence of resistance and antibiotic use needs to be monitored systematically in all areas. This is the only way in which we can detect relationships between use, type of antibiotics and development of resistances, in order to evaluate the success of the various measures.

Prevention

The factor that contributes most to combating resistance is reduction of antibiotic use. The old motto ‘prevention is better than cure’ is relevant here. Fewer people and animals suffering from infections means less use of antibiotics. Preventive measures such as better hygiene, targeted diagnostic tests, use of vaccines and optimised animal husbandry can reduce the use of antibiotics to an optimal minimum.

Prudent use of antibiotics

Excessive and inappropriate use is the main cause of the increasing resistance to antibiotics. Clear guidelines for prescribing and dispensing in medical and veterinary practice are needed, particularly for newly developed antibiotics or those classified as critical.

Combating resistance

Resistance must be detected quickly and its proliferation prevented. In human medicine, this requires reducing the risk of patients introducing resistant microorganisms to a hospital or to a nursing home at admission – for example with precautionary examinations. In veterinary medicine, it is important to restrict the spread of resistant pathogens between livestock.

Research and development

The basis for effective measures is an understanding of causes and correlations. Targeted interdisciplinary research will fill the gaps in our current knowledge. New findings are the basis for product development, for example in the areas of diagnostic testing or antimicrobial agents.

Cooperation

Dealing effectively with this problems requires cooperation. Interdisciplinary coordination across various areas is therefore essential. A coordination committee and a panel of experts will support implementation of the strategy. International networking and knowledge sharing will continue to be supported.

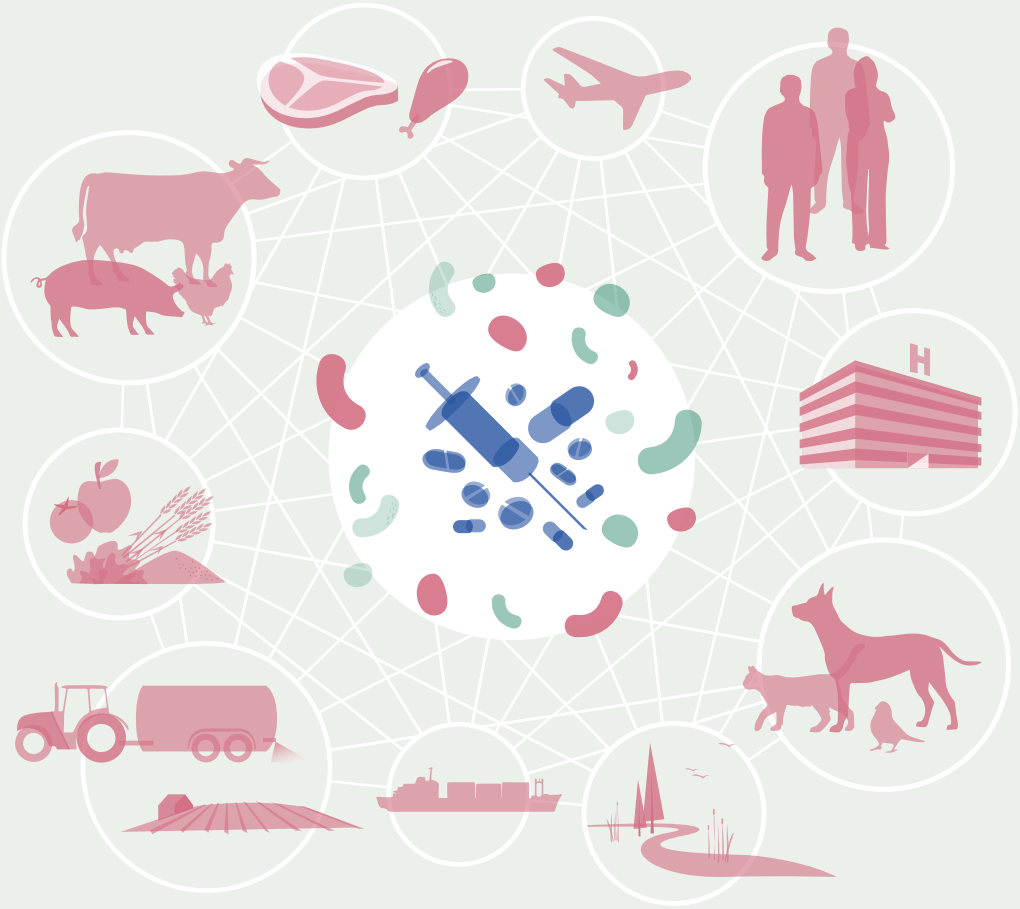
Information and education

The population also has an important role to play. Raising awareness at all levels will sensitise individuals to their personal responsibilities in dealing with antibiotics. Specialists in this area must update their knowledge of resistance, preventive measures, diagnostic tests and the responsible application of antibiotics.

Regulatory and political environment

In order for antibiotics to remain effective in the future, the regulatory and political environment must be appropriate. Suitable measures, e.g. at the levels of policy and legislation, are needed to support the development of new antibiotics and their rational use. In the livestock sector, incentives will also be developed to improve animal health and reduce the use of antibiotics.

The One Health approach is important because microbial resistance to antibiotics affects humans, animals, agriculture and the environment alike.



- Antibiotics
- Bacteria
- Multiresistant bacteria

Cyril Nietlispach, dipl. Ing. Agr. ETH, Manager, Wauwilermoos Prison Farm

Antibiotics

Antibiotics are drugs that kill bacteria or inhibit their growth. They are used in human and veterinary medicine to treat bacterial infections. Not all antibiotics are active against all bacteria, and they are ineffective on viruses.

Antibiotic resistance

Antibiotic resistance means that bacteria respond less or not at all to antibiotics. Resistance may be acquired by mutation or genetic exchange between bacteria. There are various ways in which resistant bacteria can be transmitted between humans, animals and the environment. The development of resistance is accelerated by excessive and inappropriate use of antibiotics.

Multidrug resistance in bacteria

Bacteria that are resistant to several antibiotics or even (in rare cases) to all antibiotics are said to be multiresistant. Infections caused by multiresistant bacteria are difficult or impossible to treat.

One Health

Human health is closely linked to that of animals and the environment, and they influence each other. One Health means that various sectors work together for the benefit of all.

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Swiss Confederation

Federal Office of Public Health FOPH

Federal Office for Agriculture FOAG

Federal Food Safety and Veterinary Office FSVO

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