

IMPACT – a Sino-Swedish collaboration to combat antibiotic resistance

Antibiotic resistance costs lives and money and threatens to undermine modern basic health care and advanced medicine. The scale of the challenge grows through globalization, with increased travel and worldwide food- and animal trade.

In the IMPACT project many of the contributing factors to the development and spread of antibiotic resistance are addressed through a holistic approach within a geographically defined area in China. Recent technical advances permit new answers to be sought for in a comprehensive manner. Main areas included in the IMPACT research collaboration are:

- Knowledge, attitudes and practice concerning human and animal antibiotic use.
- Distribution of resistant bacteria and genetic elements within the human, animal, environmental and health care sectors.
- Design, implementation and evaluation of strategies to promote rational use of antibiotics and to limit the spread of antibiotic resistance in all sectors.

Interventions for sustainable behavioural change

The project aims to deliver a deeper understanding of the interaction and the overlap of antibiotic resistant bacteria between humans, animals and the environment. The project will also propose evaluated interventions that lead to sustainable behavioural change which later can be included in national and international policies.

One world – One health

Antibiotic resistance is an area where a 'one health – one world' approach is needed to fully understand and deal with the problem. Much is still unknown regarding the emergence of antibiotic resistance and how the spread can be mitigated. Cooperation between countries, between veterinary and human medicine, as well as the environmental sector opens up for new opportunities for sustainable change.

Contact

ANETTE HULTH, Public Health Agency of Sweden:
anette.hulth@folkhalsomyndigheten.se

ZHENG BEIWEN, Zhejiang University, China: mpio@163.com

Partners

The Sino-Swedish integrated multi-sectorial partnership for antibiotic resistance containment (IMPACT) runs from 2014 to 2018 and is funded by the Swedish Research Council (VR) and National Natural Science Foundation of China (NSFC). The project brings together a wide range of expertise in Sweden and China in the area of antibiotic use and resistance.

CHINA

Zhejiang University

China Agricultural University

Shandong University

Shandong Academy of Agricultural Science

Shandong Provincial CDC

Zhucheng County CDC

Zhucheng People's Hospital

SWEDEN

Public Health Agency of Sweden

Karolinska Institutet

Linköping University

National Food Agency

National Veterinary Institute

Strengthening long term commitment

The importance of a long term commitment for collaboration between China and Sweden on containment of antibiotic resistance was manifested at the China-Sweden conference on antibiotic resistance held in Beijing in April 2009. One year later, the Plan of Action on Health Cooperation was signed by the Chinese and Swedish health ministers, forming the basis for joint projects between the countries. In 2012, a Memorandum of Understanding on agriculture cooperation was signed between the Ministry of Agriculture of China and the Ministry for Rural Affairs in Sweden, supporting enhanced cooperation and knowledge exchange within the field of antibiotic resistance and use.