

# Facing threat of superbugs

ANTIMICROBIAL Resistance (AMR) is the ability of germs or bacteria to grow despite the presence of a drug that would normally kill them or limit their growth. The propagation of drug-resistant organisms or superbugs is a serious phenomenon that is now becoming a major global concern to human and animal health.

As a consequence of AMR, drugs that used to be efficacious are no longer effective in treating infectious diseases, thus increasing the risk of spreading them. Drug resistance can be catastrophic if left unchecked.

In fact in 2012, about 480,000 people were reported to have developed resistance towards several tuberculosis (TB) drugs. In addition, the World Health Organization (WHO) reported increasing resistance to influenza and malaria drugs, hampering treatment of these diseases.

The impact of AMR is significant as the death rate due to serious infections can be very high while

those who survive are at risk of developing debilitating conditions.

In the manufacture of animal products and by-products, antibiotics is rampantly used to increase yield and control infections. The improper use of antibiotics can lead to propagation of drug-resistant bacteria in the gut of the animals. They eventually appear in the animal and agriculture products through contaminated water or soil and surfaces during the preparation of food, and through the environment.

Eventually, people may be exposed to and develop antibiotic-resistant infections that cause mild to serious illnesses.

Malaysia has legislated the Animal Feed Act 2009 to control the spread of these infections among animals. The Health Ministry has also launched the Antimicrobial Stewardship Programme in all government healthcare organisations to con-

trol infections among humans.

These efforts will be further strengthened with the improvement of legislation, regulatory surveillance and monitoring systems pertaining to the control and use of antimicrobials.

The threat of superbugs is a complex problem that requires top priority and collective action across sectors to control. The One Health approach is the most appropriate means to address the challenges of these superbugs.

The recent establishment of the Malaysia One Health University Network (MyOHUN) is a very positive step to address this issue. One of the agendas of MyOHUN is to promote collaborations among multi- or trans-disciplines in the response to emerging infectious diseases and global public health concerns. This initiative will go a long way to facilitate collaborative work among experts and workers in the human and animal health sectors.

At the global level, trans-discipli-

nary collaboration through a tripartite agreement on AMR among the World Organisation for Animal Health (OIE), Food and Agriculture Organization (FAO) and WHO has been established. Through this, representatives from the human and animal health sectors are working together to align and collate policies, strategies and activities in collaboration with other key stakeholders from both the private and public sectors.

One of the tasks of the One Health initiative is to educate the public on the dangers and importance of being aware of AMR.

Awareness must be instilled in people on how to control these infections and this can only be achieved through their cooperation.

The public must be made aware of the importance of proper hand-washing procedures when in close contact with sick people, and of up-to-date vaccination.

Antimicrobial drugs must only be prescribed by certified health

professionals; all prescriptions must be taken until finished; and sharing drugs with others must be avoided.

Good farm practices on the use of antibiotics on food-producing animals must be ensured through legislation and close monitoring to prevent abuse.

Farmers who are the primary food producers must be educated on the judicious and rational use of antimicrobials through training and awareness and outreach programmes. This endeavour can only be successfully achieved through collaborations among multi- or trans-disciplines or the One Health approach.

It is only through these efforts that the general health and safety of the population now and for generations to come can be protected from the threat of superbugs.

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