

Public to be roped into fight against antibiotic overuse

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Microbes are becoming increasingly resistant to drugs, largely caused by the overuse or abuse of medication like antibiotics, making it more difficult to treat certain diseases.

To fight this, Singapore set up an inter-ministerial committee called the One Health workgroup in January, to provide a whole-of-government effort to combat antimicrobial resistance (AMR).

Yesterday, Senior Minister of State for Health and Transport Lam Pin Min launched the group's National Strategic Action Plan on AMR. "It is only a matter of time after the discovery of an antimicrobial and its introduction to market that a micro-organism develops resistance to it, often fuelled by the overuse or abuse of these antimicrobials," he said.

He was speaking at the Public Health Thought Leadership Dialogue on Antimicrobial Resistance at the National University of Singapore.

Should resistance mount and antibiotics become no longer effective, then even simple infections could kill.

Dr Lam said the plan includes educating the public on the problem and what they can do to prevent it. For example, one key message is that antibiotics do not work against viral infections such as the flu. Such education involves even children, with school activities to teach them about the risk of AMR.

"These can include simple steps such as maintaining good hand and personal hygiene, to more in-depth understanding of antibiotics and how they work," he added.

Aside from public education, the One Health agencies will also work with professionals and the industry.

Professor Keiji Fukuda of the University of Hong Kong, who gave the main lecture, said there is a growing shortage of effective antibiotics. The last new class hit the market in 1987, with nothing new since then. He added that one problem is the high cost – about US\$2 billion (S\$2.7 billion) – of producing a new antibiotic.

Professor Patricia Conway, a visiting professor at Nanyang Technological University, said another problem is the short life of antibiotics, with resistance setting in as early as six months from launch.

Prof Fukuda also pointed to agriculture as a major cause of AMR. In the United States, more than 70 per cent of antibiotics are used on

animals, he said.

Resistance can develop along the food chain as people eat these animals, or through waste water containing traces of antibiotics.

In Singapore's fight, Dr Lam said three key elements are:

- Integration of the various agencies, such as the coordination of surveillance activities and data sharing across sectors. "This is important to improve our understanding of how AMR develops and circulates between humans, animals, food and the environment," he said.
- In-depth research to understand the complex factors influencing AMR. Dr Lam highlighted a recent four-year study by clinicians and researchers of the National University Health System, Singapore General Hospital and Communicable Diseases Centre. The study focused on the use of novel diagnostics, infection control strategies and behavioural sciences to strengthen institutional and national capability in targeting drug-resistant bacteria.
- International collaboration. "Our domestic efforts must be complemented by cooperation and partnerships with our neighbours and international counterparts, where we learn from each other through the sharing of best practices in our collective effort to fight AMR," he said.

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SENIOR MINISTER OF STATE FOR HEALTH AND TRANSPORT LAM PIN MIN,
on the growing threat of antimicrobial resistance.