

LCQ12: Highly drug-resistant pathogens

Following is a question by Dr the Hon Chiang Lai-wan and a written reply by the Secretary for Food and Health, Professor Sophia Chan, in the Legislative Council today (May 8):

Question:

It has been reported that the number of sickness cases caused by the infection of *Candida auris*, a species of fungi, is increasing in different places around the world. Given that such fungus is highly drug-resistant, and almost half of the patients concerned will die within 90 days, the Centers for Disease Control and Prevention of the United States have added this pathogen to the list of "urgent threats". In this connection, will the Government inform this Council:

(1) whether it knows the number of sickness cases confirmed to have been caused by the infection of *Candida auris* in each of the past five years; the treatments received by and the recovery situation of the patients concerned;

(2) given the extremely high fatality rate of sickness cases caused by the infection of *Candida auris*, whether the Government will require that (i) all such infection cases be notified under the Prevention and Control of Disease Ordinance (Cap 599), and (ii) the patients concerned be isolated for receiving treatment; if so, of the details; if not, the reasons for that;

(3) whether the Government (i) conducted epidemiological studies on *Candida auris*, (ii) formulated measures to prevent the spread of such fungus in medical wards and the community, and (iii) introduced special drugs for treating the patients concerned, in the past five years; if so, of the details; if not, the reasons for that; and

(4) whether it will review the guidelines on the prescription of antibiotics for patients with a view to reducing the abusive use of antibiotics and avoiding the emergence of highly drug-resistant pathogens; if so, of the details; if not, the reasons for that?

Reply:

President,

The Government attaches great importance to the work on antimicrobial resistance (AMR). The High Level Steering Committee on Antimicrobial Resistance (HLSC), chaired by the Secretary for Food and Health, formulated a holistic strategy and action plan under a "One Health" framework. It has taken into account the recommendations put forward by the experts of HLSC' Expert Committee on Antimicrobial Resistance and considerations from the perspectives of human health, animal health and environmental well-being. In consultation with the Department of Health (DH) and the Hospital Authority

(HA), the reply to various parts of the question raised by Dr the Hon Chiang Lai-wan is as follows:

(1) There were no confirmed cases of *Candida auris* recorded by the HA in the past five years. In general, Echinocandin antifungal drugs, such as Anidulafungin or Micafungin, are the most effective medication for *Candida auris*. Doctors in public hospitals adjust the relevant treatment plans according to the antifungal susceptibility results. The actual time needed for treatment varies depending on patients' conditions and their clinical response to medication. For example, in the case of Candidemia, doctors determine the treatment duration having regard to the recovery progress of the patient concerned and whether the *Candida auris* in the bloodstream can be cleared. Such treatment usually takes about two to four weeks.

(2) The Government will consider a number of factors in determining whether a particular disease should be listed as a statutory notifiable infectious disease under the Prevention and Control of Disease Ordinance (Cap 599). These factors include the epidemiological trend and severity of the disease, the potential risk of outbreak of the disease, the availability of reliable diagnostic methods, the availability of effective personal or public health intervention and other better surveillance methods, the surveillance and reporting requirements of the World Health Organization, international practices, the possibility of the disease being used as a biological weapon, etc. The DH keeps in view the evolution of infectious diseases and reviews the list of statutory notifiable infectious diseases from time to time, in order to strengthen disease surveillance and implement effective preventive and control measures on public health to prevent the spread of infectious diseases in Hong Kong.

According to the DH's records, there have been no reports of *Candida auris* outbreaks in Hong Kong so far. At present, *Candida auris* is not a notifiable infectious disease in most countries, including Australia, Canada, Japan, New Zealand, Singapore and the United Kingdom, etc. The DH will continue to closely monitor the epidemiological situation and the latest development of *Candida auris*, and will review the relevant surveillance measures in a timely manner.

(3) As mentioned above, since there have been no reports of *Candida auris* outbreaks in Hong Kong so far, the DH has not conducted any epidemiological studies on the disease. The current relevant epidemiological data reflect overseas situations only. The DH will continue to closely monitor the epidemiological situation and the latest development of the disease.

The DH has been providing guidelines and advice on personal and environmental hygiene and isolation precautions to promote infection prevention and control in the community and healthcare settings, and also regularly organising training for relevant stakeholders to update their knowledge of infectious diseases and infection control. In principle, the infection control measures for *Candida auris* are the same as those for most multi-drug resistant organisms. The main measures include taking standard and contact precautions, maintaining hand and environmental hygiene, and

promoting the proper use of personal protective equipment. At the same time, the HA has also formulated guidelines on *Candida auris* and the necessary infection control measures.

Generally speaking, *Candida auris* is more drug-resistant than other candida. The drug category for treating the disease, however, is basically no different from the antifungal drugs generally used for treating serious fungal infections. All these drugs have been registered and are available in the local market. At present, the following special drugs for treating *Candida auris* are available in HA Drug Formulary: Echinocandin antifungal drugs (Anidulafungin, Caspofungin and Micafungin) and Lipid formulation amphotericin B antifungal drugs.

(4) To tackle the increasingly serious AMR problem, the HLSC launched the Hong Kong Strategy and Action Plan on Antimicrobial Resistance (2017-2022) in 2017, which sets out the following six key areas of work:

- (i) Strengthen knowledge through surveillance and research;
- (ii) Optimise use of antimicrobials in humans and animals;
- (iii) Reduce incidence of infection through effective sanitation, hygiene and preventive measures;
- (iv) Improve awareness and understanding of AMR through effective communication, education and training;
- (v) Promote research on AMR; and
- (vi) Strengthen partnerships and foster engagement of relevant stakeholders.

The departments and organisations concerned have been taking actions according to the timetable set out in the Action Plan. To minimise abuse of antimicrobials through the promotion of their judicious use, the Advisory Group on Antibiotic Stewardship in Primary Care of the DH rolled out in 2017 the Antibiotic Stewardship Programme in Primary Care, providing doctors with evidence-based antibiotic prescription guidance for common infections in the community. The departments and organisations concerned will update the guidance notes in a timely manner based on local epidemiology and international best practices in order to optimise the use of antibiotics. For instance, the Interhospital Multi-disciplinary Programme on Antimicrobial ChemoTherapy, which provides guidelines on the use of antibiotics, was updated to the fifth edition in November 2017.

On public education, the DH has disseminated through different media a collection of health information, including the Guidance Notes on Antibiotic Use provided on social networks and the medication tips for patients regarding common communicable diseases, so as to enhance the public's understanding of AMR and help lower patients' expectation on prescription of antimicrobials.