

Introduction of Taiwan Antibiotic Resistance Surveillance System

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Abstract

Since the discovery of penicillin, many infectious diseases have been treated effectively, and patient safety has been promoted significantly. However, irrational use of antibiotics not only wastes medical resources but also produces the "antimicrobial resistance (AMR)" problem.

Facing the continuous spread of new drug resistance organism, existing antibiotics lose their efficacy faster than the development of new antibiotic drugs. In the recent years, the World Health Organization (WHO) calls upon all States should take actions as soon as possible to solve the problem of AMR and consider AMR and healthcare-associated infection as the most important challenge of patient safety.

To combat AMR, strategies or interventions proposed internationally all include improving surveillance of drug resistance. The topic, "Combat antimicrobial resistance: No action today, no cure tomorrow" was adopted from WHO for World Health Day 2011. Member States were required to promote the surveillance of AMR with political commitment. Obama Administration released "National Action Plan for Combating Antibiotic-resistant Bacteria" in 2015, and one of the 5 goals of the Plan was to strengthen national one-health surveillance efforts to combat resistance. To prevent and control drug resistance, European Union also established European Antimicrobial Resistance Surveillance Network and published annual AMR surveillance report.

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Taiwan CDC implemented "Antibiotic Resistance Surveillance System" as part of "Taiwan Nosocomial Infection Surveillance System" with the experiences of Taiwan Antibiotic Stewardship Program and the knowledge learnt from US CDC's "National Healthcare Safety Network" establishment. Taiwan CDC will then expand drug resistance monitoring to understand the epidemiology and trends of drug-resistant microorganisms in local hospitals for further strategy formulation and effectiveness evaluation.

Keywords: antibiotic resistance, multi-drug resistance bacteria, Taiwan Nosocomial Infection Surveillance System (TNIS)