

A Suspected Outbreak of Carbapenem-Resistant *Klebsiella pneumoniae* Infection in A Southern Taiwan Hospital, 2016

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Abstract

Carbapenem-resistant *Enterobacteriaceae* (CRE) surveillance is a voluntary notification program for hospitals in Taiwan. A hospital in Southern Taiwan isolated Carbapenem-resistant *Klebsiella pneumoniae* (CRKP) strains from 21 patients from February to July, 2016. Because of the increasing trend of notification compared with that during the same period in 2015, we conducted an epidemiological investigation for this suspected outbreak. According to our investigation, residents from long-term care institutions might carry CRE into the hospital. Furthermore, the lack of environmental cleaning standard procedures of the hospital and the decreased infection control awareness among some staff members might increase the risk of cross infection. Afterwards, the hospital improved environmental cleaning procedures, established cleaning appliance management and auditing systems, planned specialty staff and education training, and increased active monitoring screening. The hospital and the institutions cooperated and extended the infection control procedures into all the surrounding long-term care institutions. Only one new KPC case was identified in the hospital during the following eight months since November 2016. The infection outbreak was under control after implementing aforementioned measures. We recommended that inter-institutional infection control measures should be promoted to effectively prevent drug-resistant bacterial infections.

Keywords: Carbapenem-resistant *Klebsiella pneumoniae*, environmental cleaning, long-term care institution, inter-institution cooperation.

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