

5 SURVEILLANCE FOR ANTIMICROBIAL RESISTANCE

b Update on carbapenemase-producing Enterobacteriaceae

The Antimicrobial Resistance Laboratory and Culture Collection (AMRL-CC) of the Centre for Opportunistic, Tropical and Hospital Infections (COTHI) at the NICD have been testing referred isolates of suspected carbapenemase-producing Enterobacteriaceae (CPE) for the presence of selected carbapenemases. CPE have become a threat to healthcare and patient safety worldwide by compromising empiric antibiotic therapeutic choices and increasing morbidity, hospital costs and the risk of death. CPE surveillance is required to determine the extent of the problem as a first step in order to restrain the emergence and spread of CPE. For June 2016, a total of 108 Enterobacteriaceae isolates was received. Seventy-nine isolates were screened, 73 of which expressed carbapenemases (Table 1). Majority of the isolates were *Klebsiella pneumoniae* (44) followed by *Enterobacter cloacae* (12).

Africa. Given that CPE infections are currently not reportable or notifiable in South Africa, there is no platform for appropriate surveillance reports and consequently no locally representative data is available. This is of major concern, since meaningful data can inform public health policy and highlight priorities for action. Controlling the spread and limiting the impact of CPEs in South Africa will require intensive efforts in both the public and private healthcare sectors going forward. NHLS and private laboratories are encouraged to submit suspected CPE isolates based on antimicrobial susceptibility testing (AST) criteria to AMRL-CC, NICD/NHLS.

Source: Centre for Opportunistic, Tropical, and Hospital Infections, NICD-NHLS; (olgap@nicd.za.za)

It is important to note that these figures do not represent the current burden of CPEs in South

Table 1. Enterobacteriaceae by CPE enzyme type, AMRL-CC, COTHI, NICD, June 2016 and January-May 2016

Organism	NDM		OXA-48 & Variants		VIM	
	Jan-May 2016	June 2016	Jan-May 2016	June 2016	Jan-May 2016	June 2016
<i>Citrobacter</i> spp.	5	1	2	1	-	-
<i>Enterobacter aerogenes</i>	-	1	5	1	-	-
<i>Enterobacter cloacae</i>	16	4	19	4	-	-
<i>Enterobacter kobei</i>		1	1		-	-
<i>Escherichia coli</i>	5	2	35	4	-	-
<i>Klebsiella pneumoniae</i>	149	15	170	21	6	1
<i>Providencia rettgeri</i>	9	2	-	-	-	-
<i>Serratia marcescens</i>	17	8	1	9	-	-
Total	201	26	233	40	6	1

NDM: New Delhi metallo-beta-lactamase; **OXA:** oxacillinase; **VIM:** Verona integron-encoded metallo-beta-lactamase.