

## b Update on carbapenemase-producing Enterobacteriaceae

The Johannesburg Antimicrobial Resistance Laboratory and Culture Collection (AMRL-CC) of the Centre for Opportunistic, Tropical and Hospital Infections (CO THI) at the NICD have been testing referred isolates of suspected carbapenemase-producing Enterobacteriaceae (CPE) for the presence of selected carbapenemase genes. 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. In April 2016, a total of 135 Enterobacteriaceae isolates were received. One hundred and nine isolates were screened, 97 of which expressed carbapenemases (Table 1). Majority of these CPE isolates were *Klebsiella pneumoniae* (71) followed by *Enterobacter cloacae* (17).

It is important to note that these figures do not represent the current burden of CPEs in South 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. Please telephone (011) 555 0342/44 or email: [olgap@nicd.ac.za](mailto:olgap@nicd.ac.za); for queries or further information.

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

**Table 2.** Enterobacteriaceae by CPE enzyme type, AMRL-CC, CO THI, NICD, April 2016 and January-March 2016

Organism	NDM		OXA-48 & Variants		VIM	
	Jan-Mar 2016	Apr 2016	Jan-Mar 2016	Apr 2016	Jan-Mar 2016	Apr 2016
<i>Enterobacter aerogenes</i>	-	-	2	1	-	-
<i>Enterobacter cloacae</i>	7	6	11	3	-	-
<i>Enterobacter kobei</i>	-	-	-	1	-	-
<i>Escherichia coli</i>	1	2	20	11	-	-
<i>Klebsiella oxytoca</i>	-	-	2	1	-	-
<i>Klebsiella pneumoniae</i>	72	46	125	25	-	1
<i>Klebsiella spp</i>	-	-	-	1	-	-
<i>Proteus vulgaris</i>	-	1	-	-	-	-
<i>Providencia rettgeri</i>	6	1	-	-	-	-
<i>Serratia marcescens</i>	14	1	3	1	-	-
<b>Total</b>	<b>100</b>	<b>57</b>	<b>163</b>	<b>44</b>	<b>-</b>	<b>1</b>

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