

Update on carbapenemase-producing Enterobacteriaceae

5 ANTIMICROBIAL RESISTANCE

The Johannesburg and Cape Town Antimicrobial Resistance Reference Laboratories (AMRRL) of the Centre for Opportunistic, Tropical and Hospital Infections (CO THI) at NICD/NHLS have been testing referred isolates of suspected carbapenemase-producing Enterobacteriaceae (CPE) for the presence of selected carbapenemase genes. For November 2014, a total of 32 Enterobacteriaceae

isolates were received. Twenty-six isolates were screened, 16 of which were carbapenemase-producing Enterobacteriaceae. Six isolates were not analysed genotypically for technical reasons. Most isolates were *Klebsiella pneumoniae* (17) followed by equal numbers of *Enterobacter cloacae* and *Serratia marcescens* (6) (Figure 3).

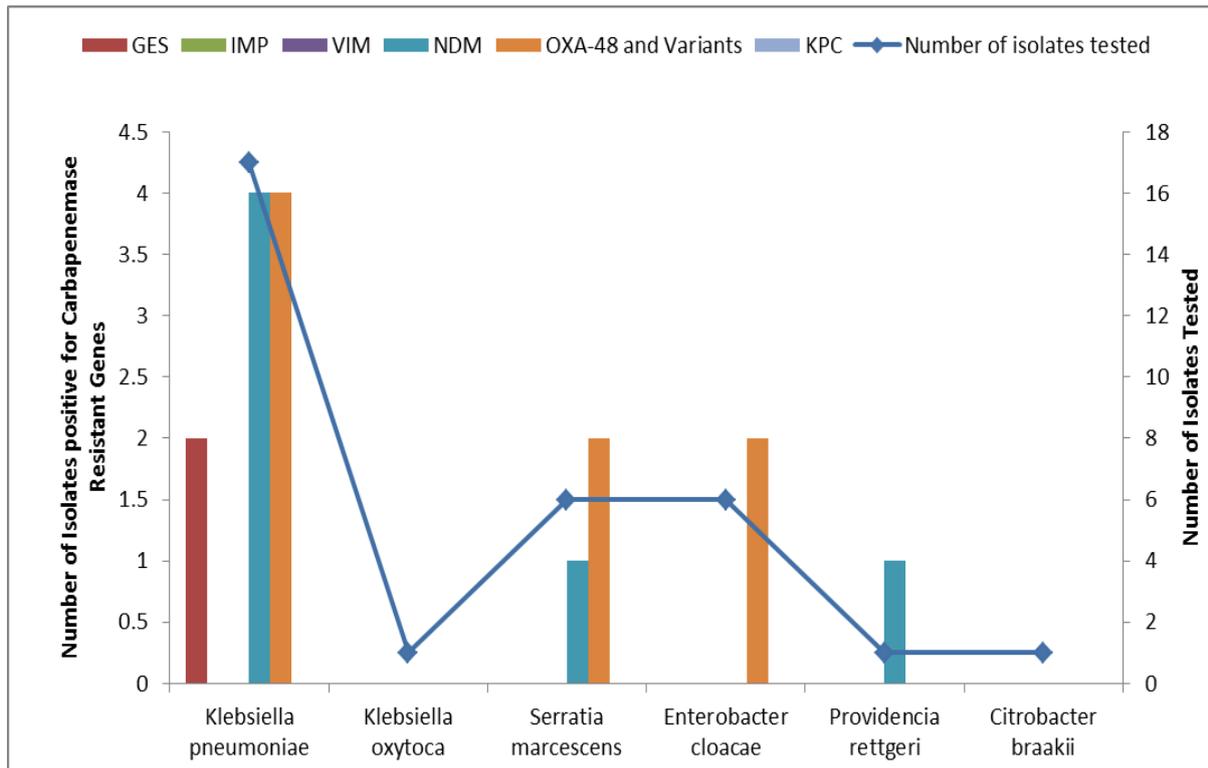


Figure 3. Enterobacteriaceae isolates phenotypically screened (n=32) and confirmed CPE (n=16) during November 2014 at AMRRL (NICD-NHLS)

Six NDM positive isolates were identified (four from private hospitals in KwaZulu-Natal and two from public hospitals in Gauteng). Eight OXA-48 positive isolates were identified (five from private hospitals - three from Gauteng and two from KwaZulu-Natal, and three were from public hospitals - two from the Eastern Cape and one from Gauteng). Two GES

positive isolates were identified – one from the private sector in KwaZulu-Natal and one from the public sector in the Western Cape (Figure 4).

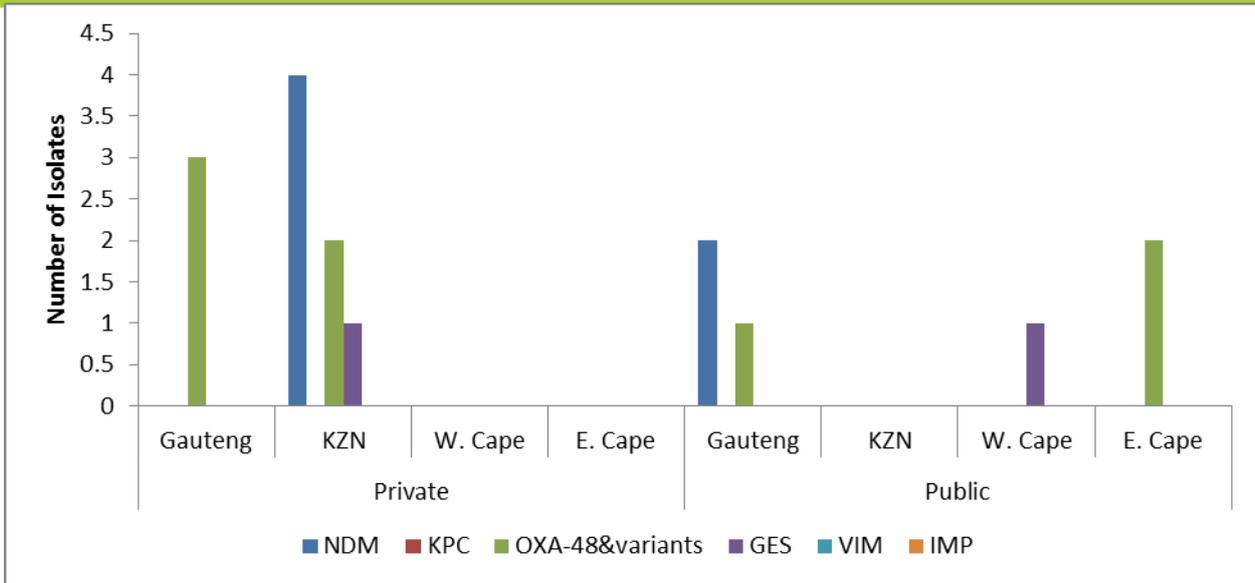


Figure 4. Distribution by province of CPEs (n=16), November 2014

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 the AMRRL, NICD/NHLS. Please telephone (011) 555 0342/44 or email: ashikas@nicd.ac.za; and olgap@nicd.ac.za; for queries or further information. In the Western Cape area, please email: colleen.bamford@nhls.ac.za.

Source: Centre for Opportunistic, Tropical and Hospital Infections, NICD-NHLS