

4 ANTIMICROBIAL RESISTANCE

Update on carbapenemase-producing Enterobacteriaceae

The Johannesburg and Cape Town Antimicrobial Resistance Reference Laboratories (AMRRL) of the Centre for Opportunistic, Tropical and Hospital Infections (CO THI) at NICD-NHLS provide a service for testing referred isolates of suspected carbapenemase-producing Enterobacteriaceae (CPE) for the presence of selected carbapenemase genes. For December 2014, a total of 64 Enterobacteriaceae isolates was received. Fifty-nine isolates were screened, 46 of which were CPE. Five isolates were not processed due to technical issues. The majority of the isolates tested were *Klebsiella pneumoniae* (26/64, 41%) followed by *Enterobacter cloacae* (12/64, 19%) (Figure 5).

Eighteen *bla*_{NDM}-positive isolates were identified, twelve from private hospitals in KwaZulu-Natal Province and six from public hospitals in Gauteng Province. Nineteen *bla*_{OXA-48}-positive isolates were identified: thirteen from private hospitals (eleven from Gauteng Province, one from Eastern Cape Province and one from Western Cape Province) and six from public hospitals (four from Gauteng Province, one from Eastern Cape Province and one from Western Cape Province). Five *bla*_{VIM}-positive isolates were identified: one from the private sector in KwaZulu-Natal Province, and four from the public

sector in Gauteng Province. Additionally, three *bla*_{KPC}-positive isolates were identified from the public sector in Gauteng Province, and one *bla*_{IMP}-positive isolate from the private sector in Gauteng Province was identified (Figure 6).

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.

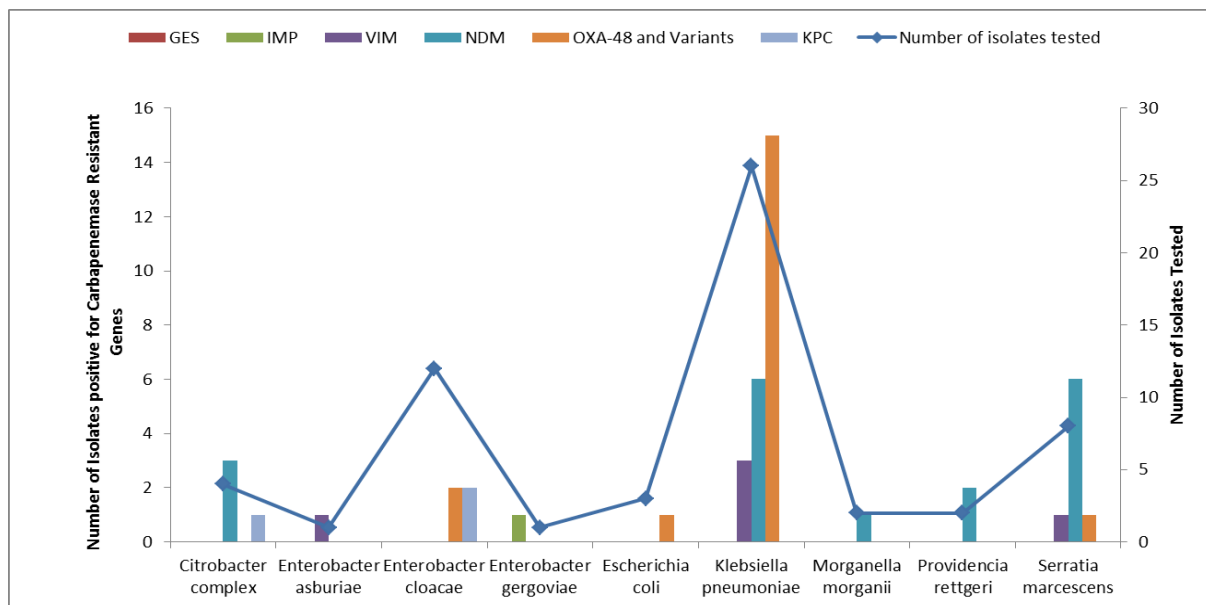
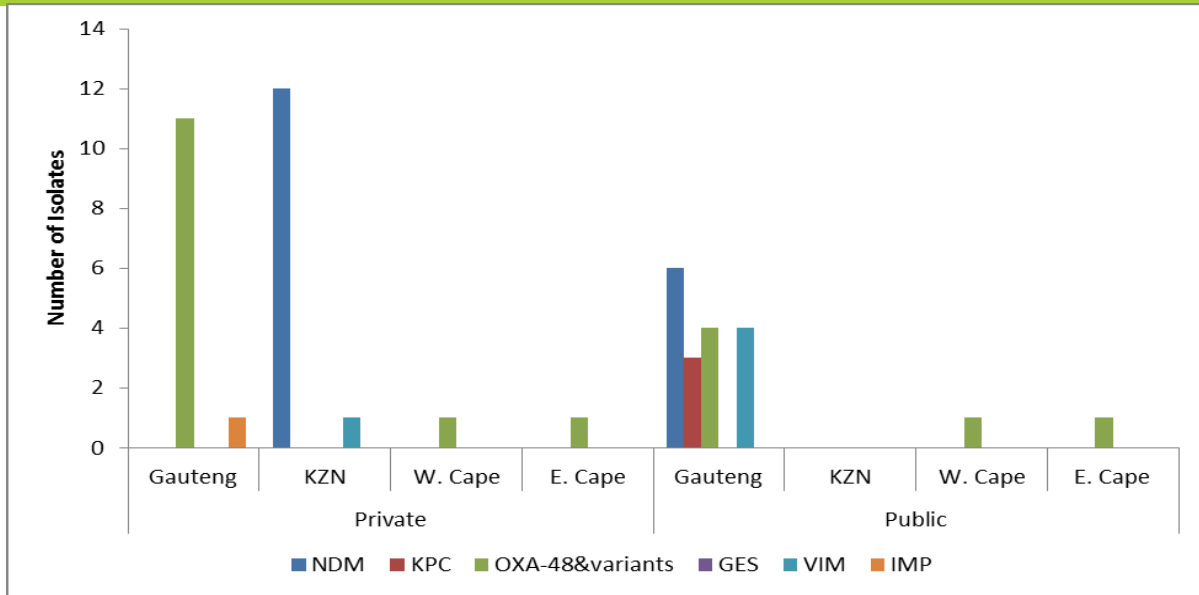


Figure 5. Enterobacteriaceae isolates phenotypically screened (n=59) and confirmed CPE (n=46) during December 2014 at AMRRL, NICD-NHLS



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