

5 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 test referred isolates of suspected carbapenemase-producing Enterobacteriaceae (CPE) for the presence of selected carbapenemase genes. For February 2014, a total of 76 isolates were screened, 60% (46/76)

of which were confirmed as carbapenemase-producing Enterobacteriaceae. The commonest referred isolates were *Klebsiella pneumoniae* (50/76, 66%) followed by *Enterobacter cloacae* (19/76, 25%) - Figure 2.

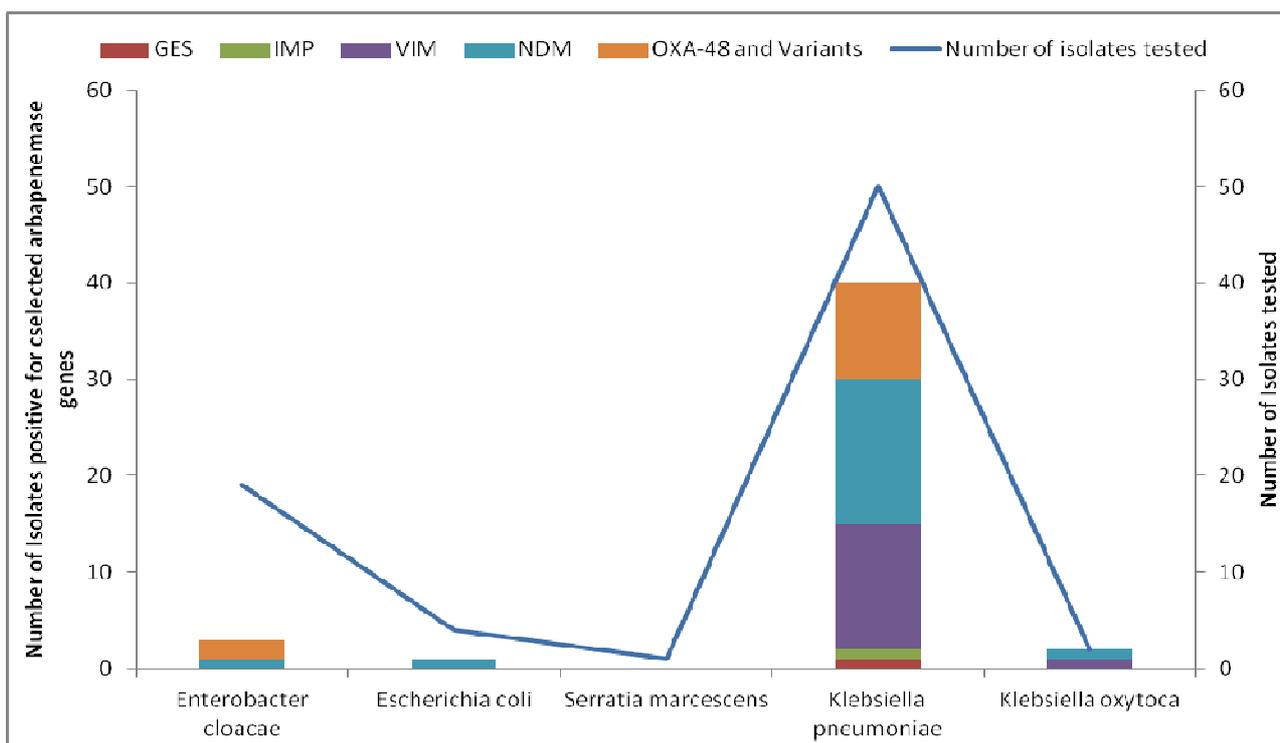


Figure 2. Enterobacteriaceae isolates screened (n=76) and confirmed CPE (n=46), February 2014 at AMRRL (NICD-NHLS)

Eighteen NDM-positive isolates were identified (three from private hospitals in KwaZulu-Natal and Gauteng provinces, and 15 from public hospitals in Gauteng, Western Cape and KwaZulu-Natal provinces). Twelve OXA-48 positive isolates were identified (four from one private hospital in Gauteng Province and eight from public hospitals in Western Cape and Eastern Cape provinces). Fourteen VIM-positive isolates (all from public sector hospitals in Gauteng Province), one IMP-positive isolate from the public sector in Eastern Cape Province and one GES-positive isolate from the public sector in Western Cape Province were identified (Figure 3).

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.

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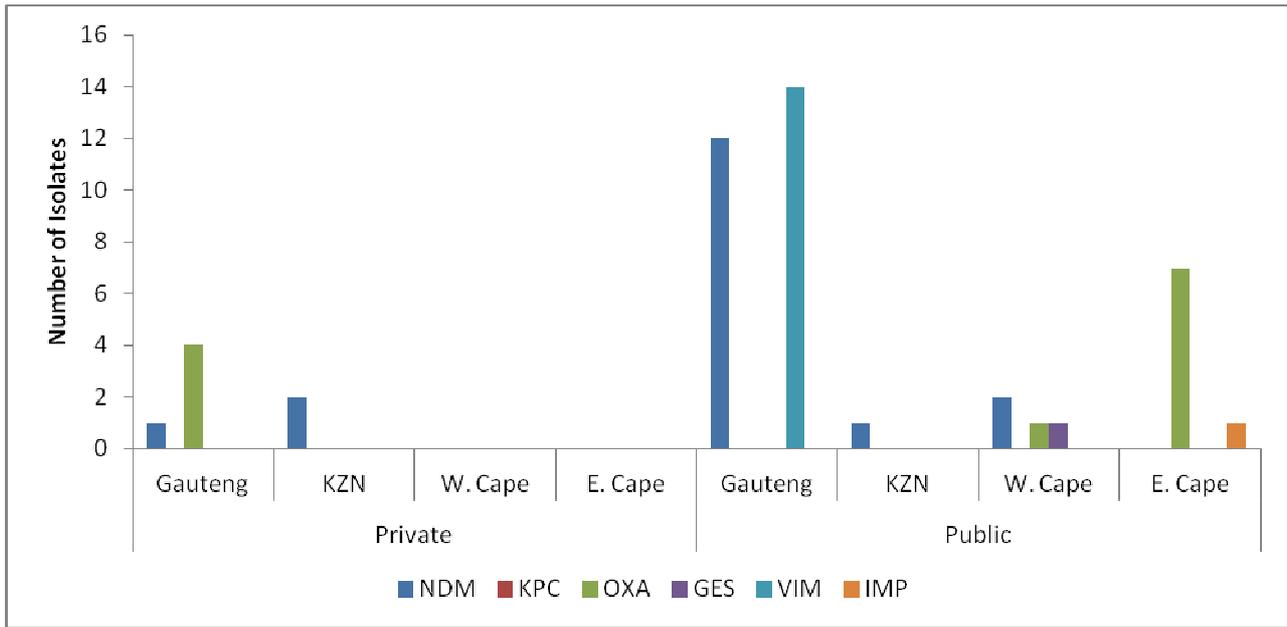


Figure 3. Laboratory-confirmed CPEs (n=46) by province and healthcare sector

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