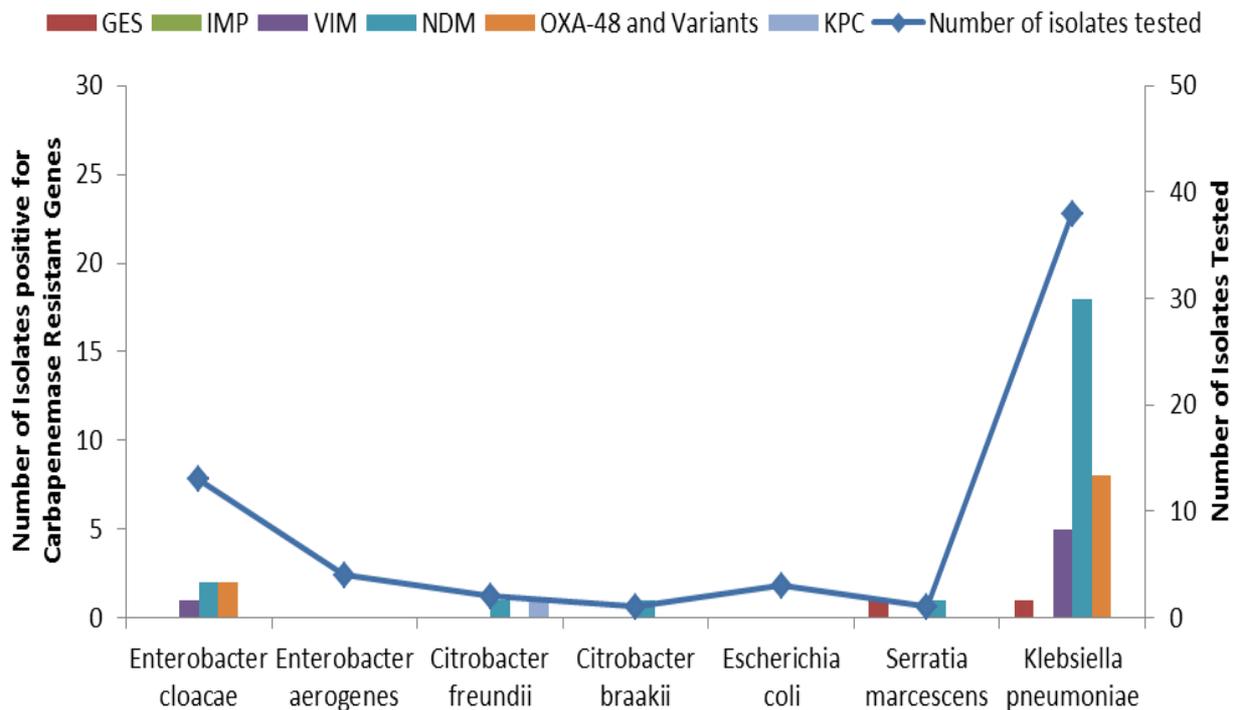


## 5 ANTIMICROBIAL RESISTANCE

### 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 offer testing of suspected carbapenemase-producing Enterobacteriaceae (CPE) isolates for the presence

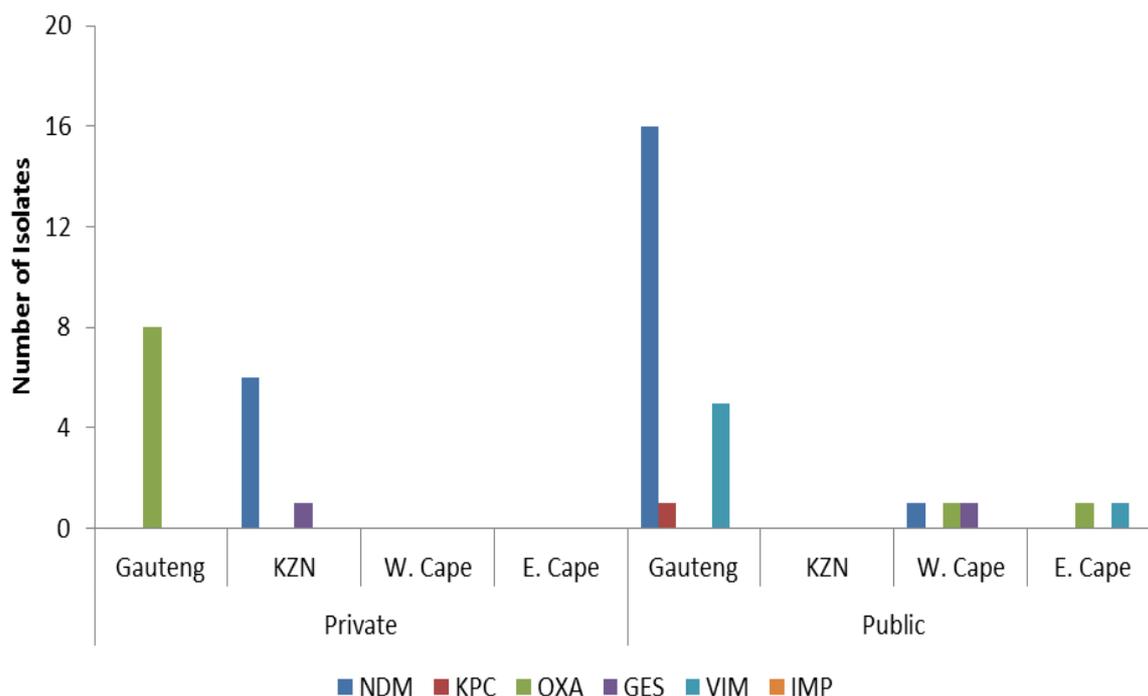
of selected carbapenemase genes. For March 2014, a total of 75 isolates was screened, 56% (42/75) of which were confirmed as carbapenemase-producing Enterobacteriaceae. The most commonly referred isolates were *Klebsiella pneumoniae* (38/75, 51%) and *Enterobacter cloacae* (13/75, 17%) (Figure 3).



**Figure 3. Enterobacteriaceae isolates screened (n=75) and confirmed CPE (n=42) during March 2014 at AMRRL (NICD-NHLS)**

Twenty-three NDM-positive isolates were identified: 6 from private hospitals in KwaZulu-Natal and 17 from public hospitals in Gauteng and Western Cape provinces. Ten OXA-48 positive isolates were identified: 8 from one private hospital in Gauteng Province and one each from public hospitals in Western and Eastern Cape provinces. Six VIM-positive isolates from the public sector (5 from

Gauteng Province and 1 from Eastern Cape Province), 2 GES-positive isolates (1 from the private sector in KwaZulu-Natal Province and 1 from the public sector in Western Cape Province) and one KPC-positive isolate (from the public sector in Gauteng Province) were also identified (Figure 4).



**Figure 4. Laboratory-confirmed CPE (n=42) by carbapenemase gene, province, and healthcare sector**

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](mailto:ashikas@nicd.ac.za) and [olgap@nicd.ac.za](mailto:olgap@nicd.ac.za).

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