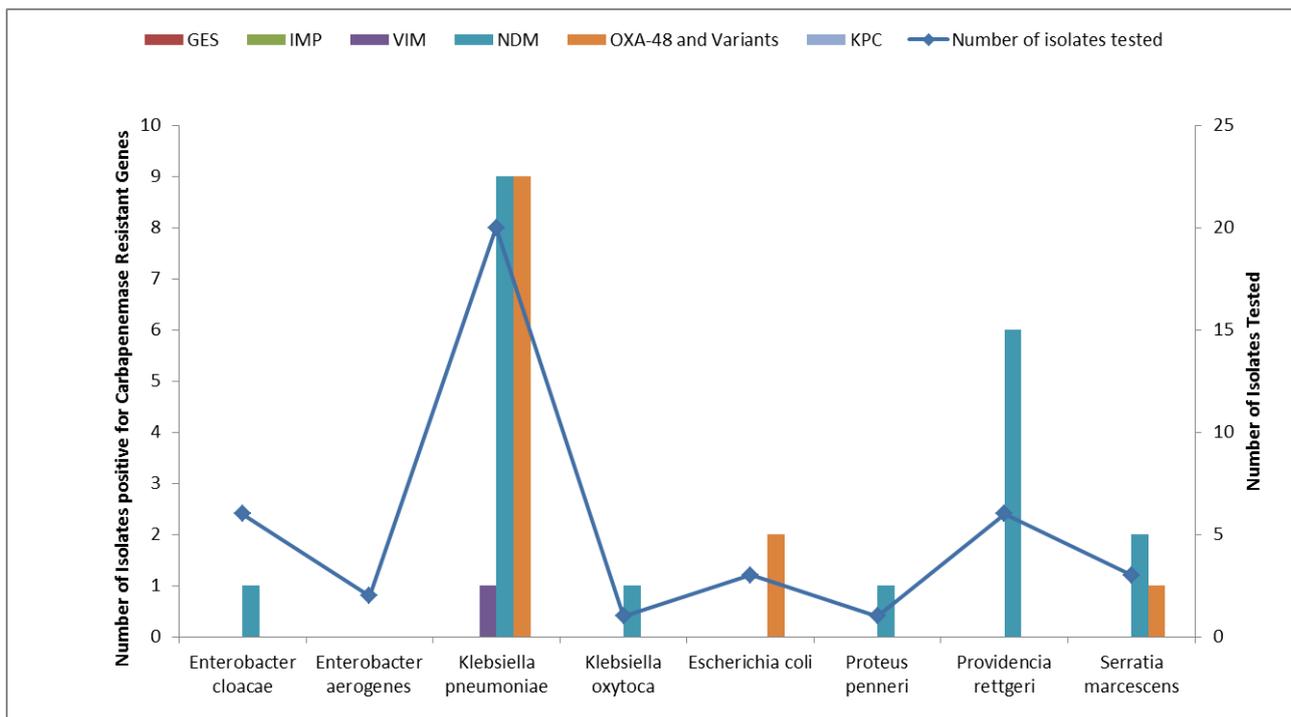


## 6 ANTIMICROBIAL RESISTANCE

### Update on carbapenemase-producing Enterobacteriaceae

The Johannesburg and Cape Town Antimicrobial Resistance Laboratories of the Centre for Opportunistic, Tropical and Hospital Infections (CO THI) at the NICD/NHLS perform testing on referred isolates of suspected carbapenemase-producing Enterobacteriaceae (CPE) for the presence of selected carbapenemase genes. For February 2015, a total of 43 Enterobacteriaceae

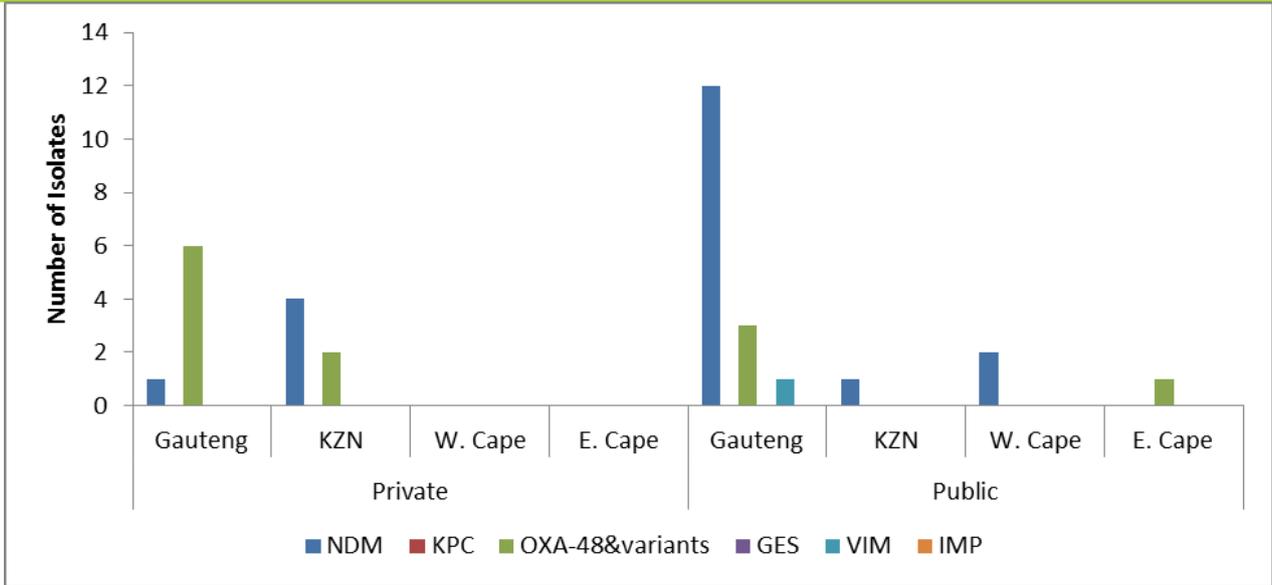
isolates was received. Forty-two isolates were screened, 33 of which were confirmed to be carbapenemase-producing Enterobacteriaceae (CPE). One isolate was not processed due to technical issues. The majority of the isolates tested were *Klebsiella pneumoniae* (20/42, 48%) followed by equal numbers (6/42, 14%) of *Enterobacter cloacae* and *Providencia rettgeri* (Figure 2).



**Figure 2. Suspected CPE Enterobacteriaceae isolates screened (n=42) and confirmed CPE (n=33) during February 2015, Antimicrobial Resistance Laboratories, CO THI (NICD-NHLS)**

Twenty *bla*<sub>NDM</sub>-positive isolates were identified: five from private sector hospitals (four from KwaZulu-Natal Province (KZN) and one from Gauteng Province (GP)) and 15 from public sector hospitals (12 from GP, one from KZN and two from Western Cape Province (WCP) hospitals). Twelve *bla*<sub>OXA-48</sub>-positive isolates were identified: eight from private sector hospitals (six from GP and two from KZN) and four from public sector hospitals (three from GP and one from Eastern Cape Province). One *bla*<sub>VIM</sub>-positive isolate was identified, from the public sector in GP (Figure 3). It is important to note that these figures do not represent the current prevalence 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 [olgap@nicd.ac.za](mailto:olgap@nicd.ac.za) for queries or further information. In the Western Cape area, please email [cothi.wc@nhls.ac.za](mailto:cothi.wc@nhls.ac.za).



**Figure 3. Distribution by province of confirmed CPEs (n=33), February 2015**

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