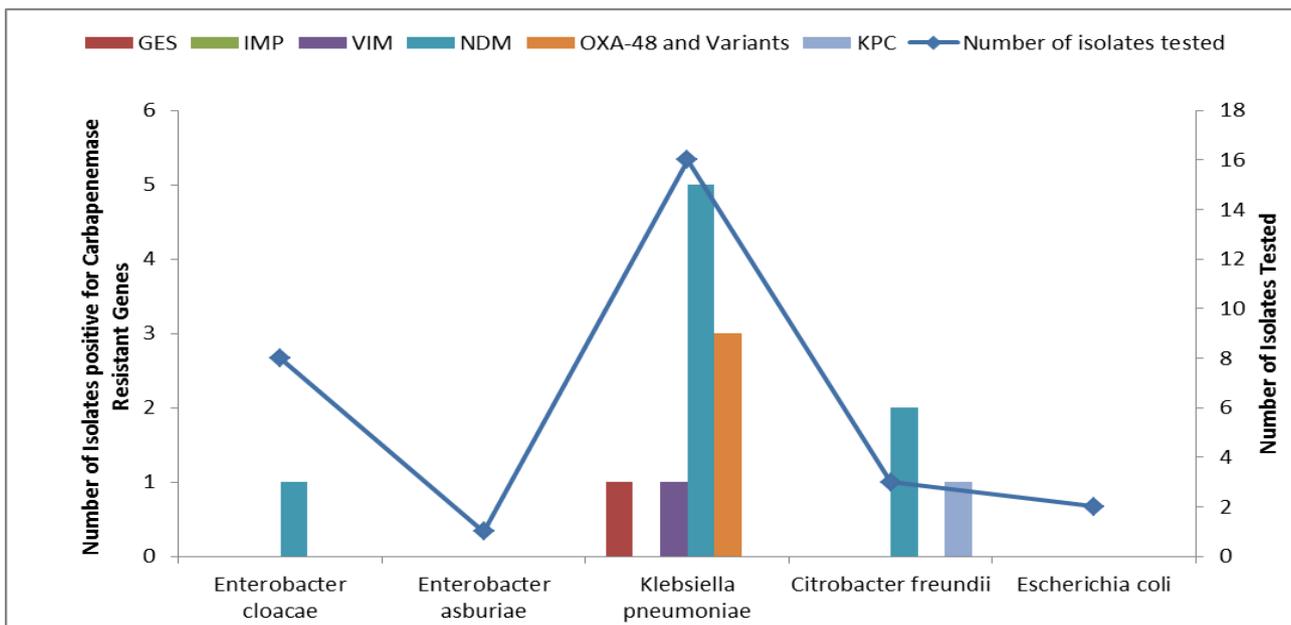


## 5 ANTIMICROBIAL RESISTANCE

### Update on carbapenemase-producing Enterobacteriaceae

The Johannesburg and Cape Town Antimicrobial Resistance Reference Laboratories (AMRRL) of the Centre for Opportunistic, Tropical and Hospital Infections (COTHI) at NICD/NHLS test referred isolates of suspected carbapenemase-producing Enterobacteriaceae (CPE) for the presence of selected carbapenemase genes. For July 2014, a total of 30 Enterobacteriaceae isolates was

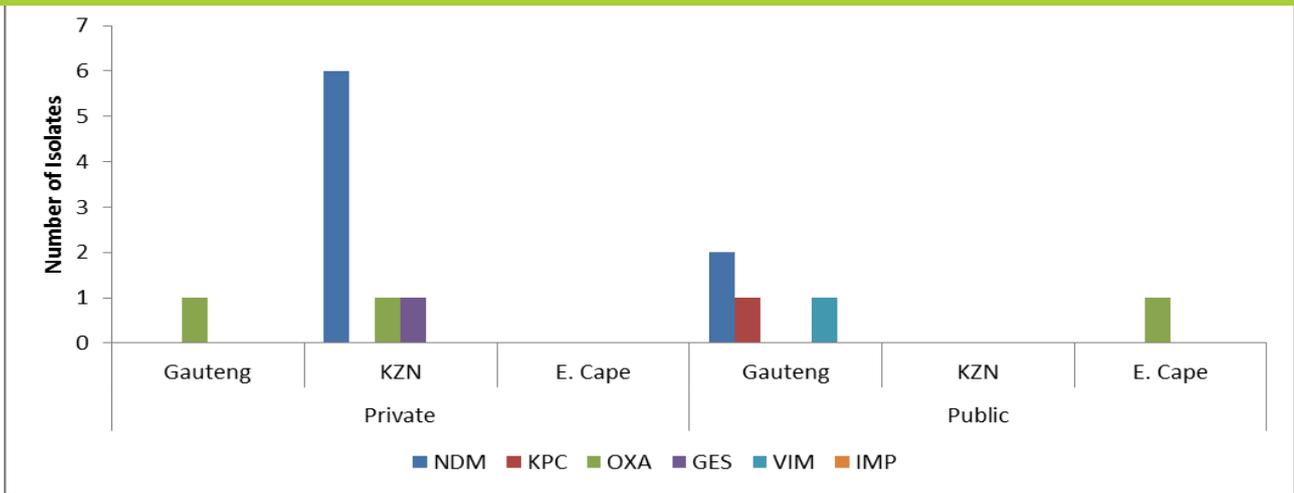
screened, 47% (14/30) of which were carbapenemase-producing Enterobacteriaceae. *Klebsiella pneumoniae* (53%, 16/30) and *Citrobacter freundii* (10%, 3/30) were the most common isolates referred for testing (Figure 2).



**Figure 2. Enterobacteriaceae isolates screened (n=30) and confirmed CPE (n=14) during July 2014 at AMRRL (NICD-NHLS)**

Eight NDM-positive isolates were identified (six from private hospitals in KwaZulu-Natal Province (KZN) and 2 from public hospitals in Gauteng Province (GP)). Three OXA-48 positive isolates were identified (2 from private hospitals in GP and KZN) and one from the public sector in Eastern Cape

Province). One KPC-positive isolate and one VIM-positive isolate were identified from the public sector in GP, while one GES-positive isolate was identified from a private hospital in KZN (Figure 3).



**Figure 3. Distribution by province of CPEs (n=14), July 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](mailto:ashikas@nicd.ac.za) and [olgap@nicd.ac.za](mailto:olgap@nicd.ac.za) for queries or further information. In the Western Cape area, please email [colleen.bamford@nhls.ac.za](mailto:colleen.bamford@nhls.ac.za).

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