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P1067 Prevalence of carbapenemase-producing Enterobacteriaceae in Switzerland from 2013 to 2017

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Background: Increasing rates of carbapenem-producing *Enterobacteriaceae* (CPE) have been observed all over the world. CPE represent a great concern because of their broad antibiotic resistance, which reduces considerably therapeutic options. In 2016, CPE were defined as notifiable disease to the Swiss Federal Office of Public Health. Here we compare the prevalence and distribution of CPE in Switzerland from 2013 to 2017.

Methods: Before 2016, Swiss microbiology laboratories were asked by the Swiss Society for Microbiology to send all their CPE cases to one of 8 expert laboratories that could characterize isolates according to EUCAST guidelines. Data from 2013-2015 (before mandatory reporting) and from 2016-2107 were then collated by the Swiss Antibiotic Resistance Centre ANRESIS and analysed for temporal and regional trends. Results from 2013-2016 data were presented at ECCMID 2017 and are here updated with data from 2017.

Results: From 2013 to 2015, a total of 69, 89 and 121 CPE isolates were reported respectively. In 2016 and 2107, total CPE numbers were 142 and 102 (up to Q3 in 2017), respectively, indicating a slight increase in prevalence. The species most frequently isolated were consistently *Klebsiella pneumoniae* (53-66% of the cases), followed by *Escherichia coli* (15-27%). The most frequent carbapenemase genotypes were OXA-48-like (34-47%), KPC (16-37%), and NDM (16-21%). At the regional level, highest CPE numbers were identified in the Geneva and North East regions from 2013 to 2016. Yet in 2017 (data until Q3 2017), the West, Central West, and North East regions presented the highest CPE numbers (each >20 cases), with the Geneva region associated with only 10 cases. Further regional and temporal trends of the CPE species and genotypes will be presented with the complete data for 2017.

Conclusions: Molecular data indicate a high diversity of different carbapenemases, with OXA-48-like, KPC- and NDM-type being the most prevalent carbapenemases in Switzerland. Overall OXA-48-like and NDM producers are increasing slightly over time, in contrast to neighboring European countries where the increase has been more substantial. Temporal and regional trends were identified and due to the current mandatory reporting scheme, a continuous surveillance of the situation in Switzerland is achieved.