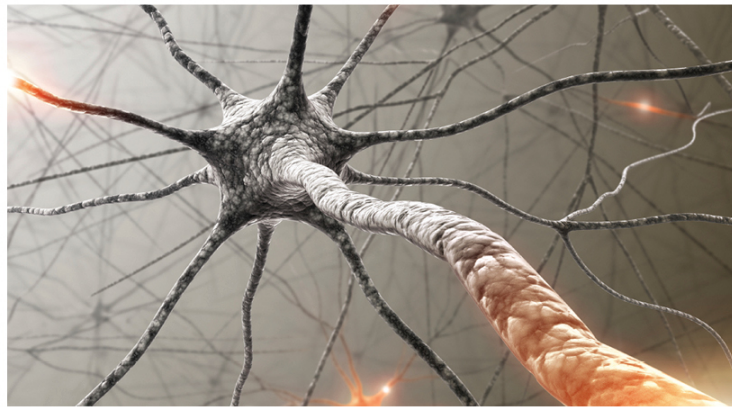


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Canadian Public Health Laboratory Network  
(CPHLN) Voluntary Reporting of Carbapenemase-  
Producing Enterobacteriaceae (CPE)

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PROTECTING CANADIANS FROM ILLNESS



Public Health  
Agency of Canada

Agence de la santé  
publique du Canada

Canada

# Overview of NML CPE Activities

- Reference services for hospital/provincial laboratories in Canada as well as other countries requesting assistance
  - » Confirmation using both susceptibility testing and genetic testing
  - » Outbreak investigations using molecular typing methods for strains and plasmids
  - » Whole genome/plasmid sequence analysis for specific cases or research projects
- Laboratory support for CPHLN, the Canadian Nosocomial Infection Surveillance Program (CNISP), the Canadian Integrated Program on Antimicrobial Resistance Surveillance (CIPARS), and CAN-WARD hospital surveillance
- Information dissemination to other federal departments and the research community in Canada and abroad

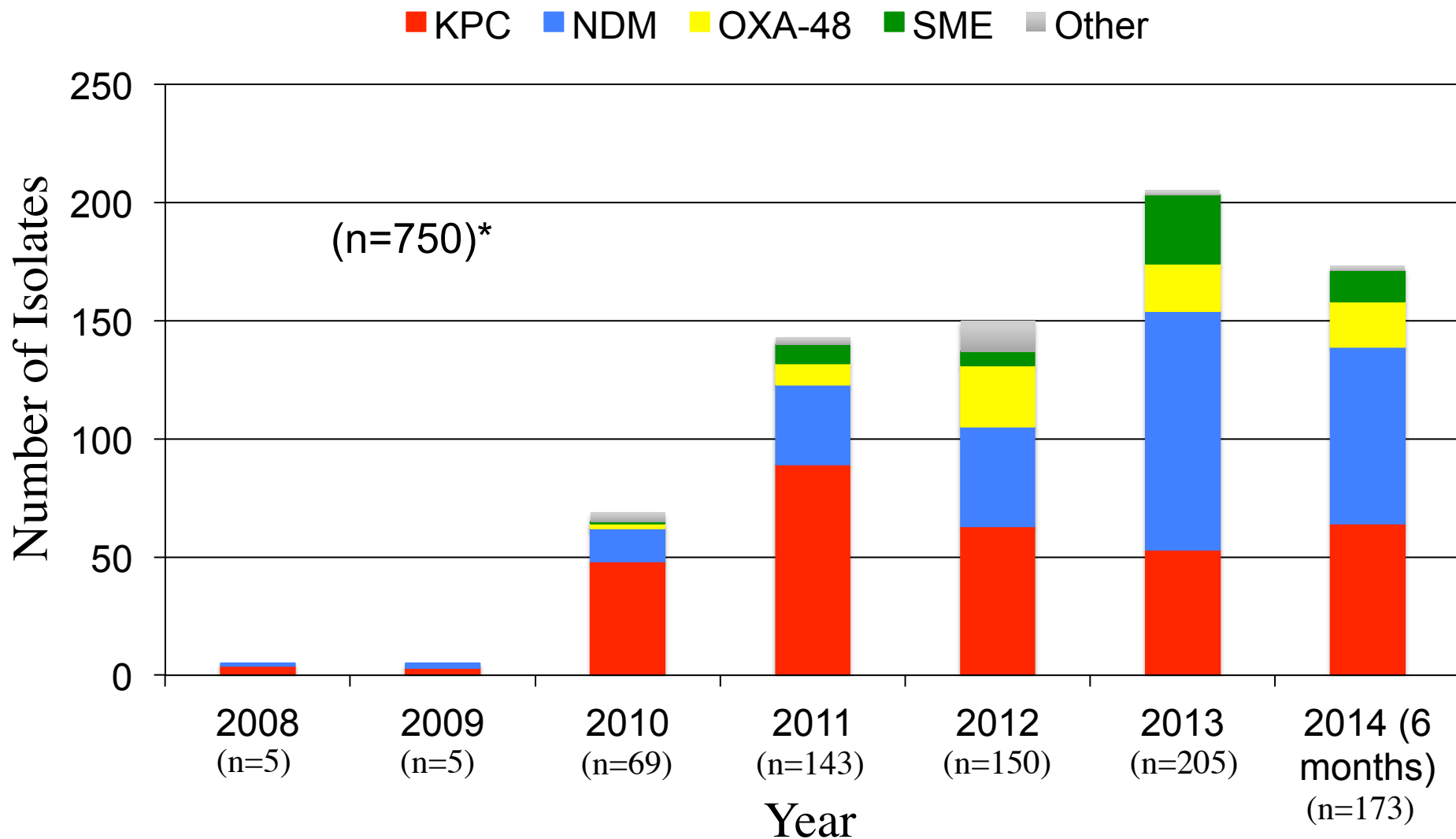
# Data Acquisition

- Data or isolates were submitted by members of the Canadian Public Health Laboratory Network (CPHLN) on a voluntary basis
- CPE was identified at the provincial/clinical lab level using in-house screening assays
- Numbers of CPE were submitted by provincial public health laboratories (ON, QC, or BC), while NML generated numbers for other provinces
- Some data from BC and QC were generated by NML
- Limitations
  - » The numbers could involve duplicate samples on the same patient although efforts to reduce this have been made
  - » As CPE is not reportable in provinces, the numbers most likely represent an underestimate of CPE cases reported to the CPHLN
  - » This data represents patient infections and colonizations, and it is believed that no environmental samples were included
  - » Increased numbers of CPE could be a reflection of increased screening at healthcare facilities
  - » Quebec began reporting CPE in 2010
  - » The SME reports from Ontario represents data from 2014 onwards only

# Notable Changes from the Previous Year

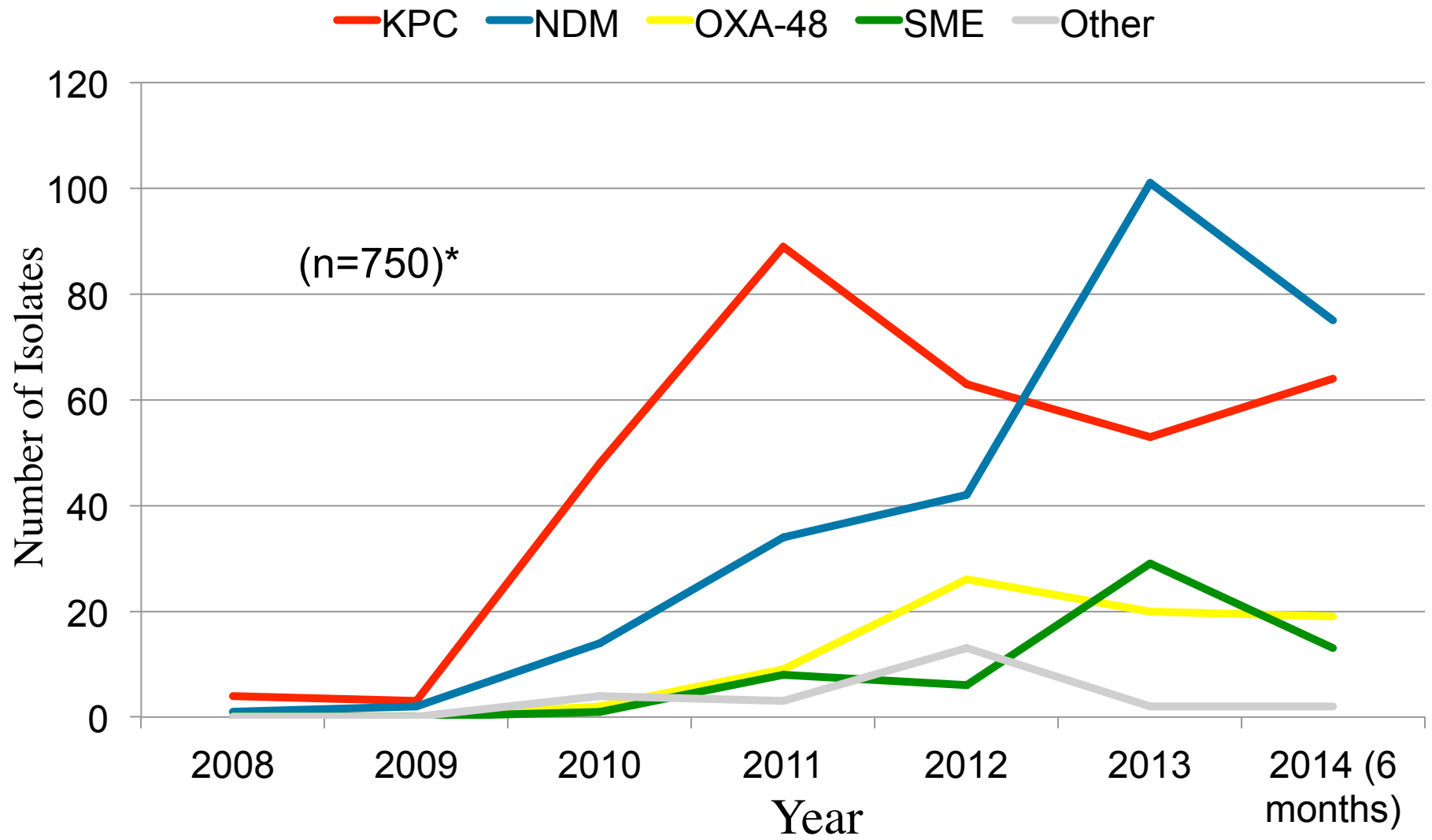
- Carbapenemases have been observed in 8 of 10 provinces and no territories have reported cases
- We have added species information to this report and 14 different species have been identified harbouring carbapenemases (slide 11)
- Canada has observed more CPE in the first 6 months of 2014 than in all of 2012 (slide 5)
- In the first 6 months of 2014, KPC has surpassed the numbers for all of 2013 KPCs (slide 6)
- OXA-48 numbers in the first 6 month of 2014 are the same as the totals for 2013 (slide 6)

# CPE in Canada: CPHLN Data



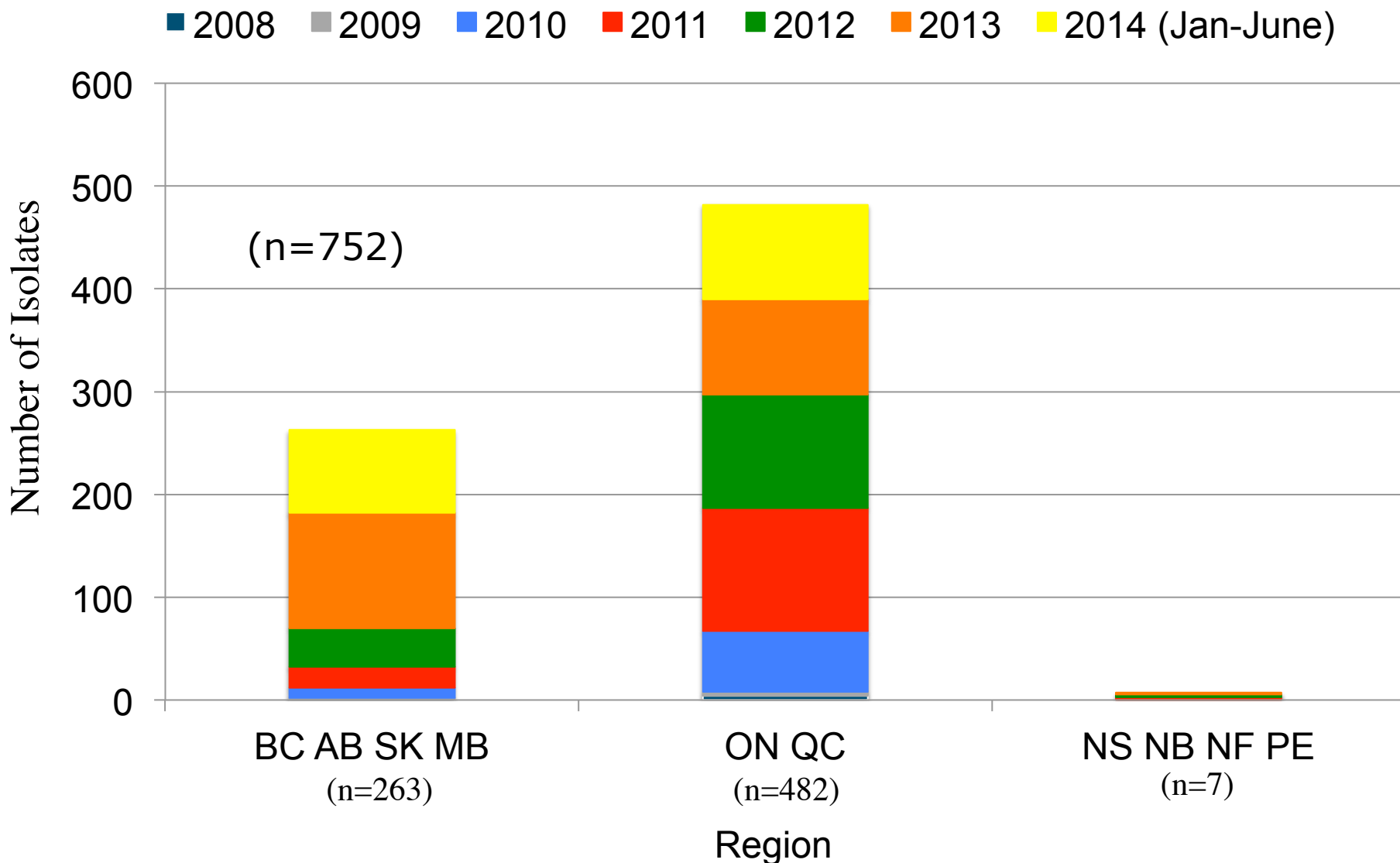
\*One NDM/OXA-48 (2013) and one VIM/KPC (2013) NOT included

# CPE in Canada: CPHLN Data

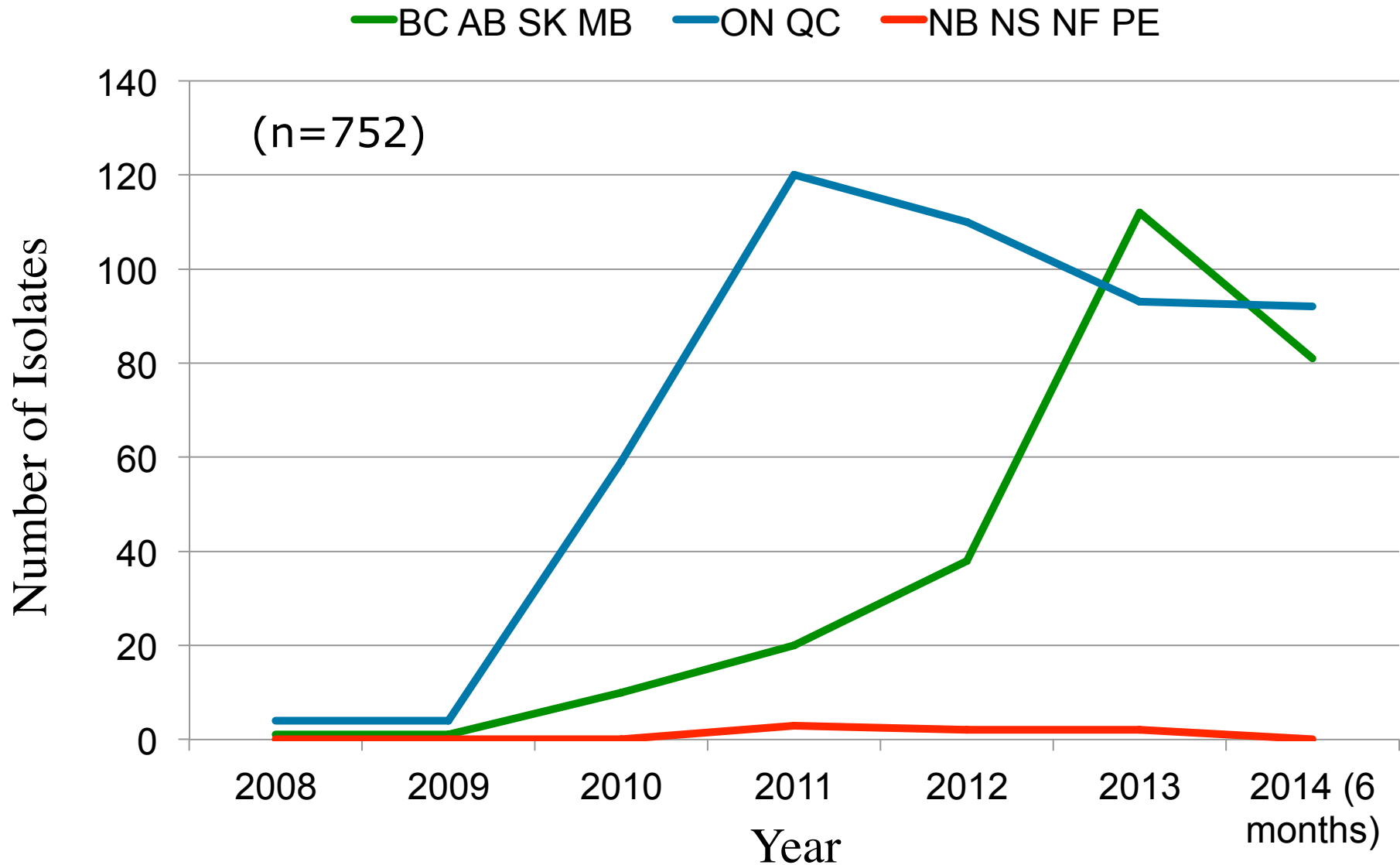


\*One NDM/OXA-48 (2013) and one VIM/KPC (2013) NOT included

# CPE by Region: CPHLN Data



# CPE by Region: CPHLN Data





# CPE by Species: CPHLN Data

