

Trends in Outpatient Bacteremia in British Columbia, Canada between 2010-2015

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INTRODUCTION

Understanding the epidemiology of etiologic organisms that cause bacteremia in the community setting is important for treatment and prevention strategies. In British Columbia, Lifelabs Medical Laboratories receives specimens submitted for blood culture from 128 community collection sites distributed across the province. We explored the trends in outpatient blood cultures in British Columbia between 2010 and 2015.

MATERIALS & METHODS

Blood cultures drawn at community based Lifelabs collection sites between 2010-2015 were included. Cultures and identification were performed according to routine laboratory methods.

Basic demographic information including age, gender, and organism cultured were collected.

Antibiotic resistant organisms included methicillin resistant *Staphylococcus aureus* (MRSA), vancomycin resistant *Enterococcus faecalis* or *faecium* (VRE), ciprofloxacin resistant *Salmonella sp.*, extended spectrum beta lactamase (ESBL) positive *Enterobacteriaceae* and carbapenem resistant *Enterobacteriaceae* (CRE).

RESULTS

- Between 2010- 2015, a total of 16,619 sets of blood cultures were drawn.
- Average sampling rate of 60.56 per 100,000 population.
- 342 sets (2.05%) were significant isolates.
- 66 sets of contaminants (0.04%) included predominantly coagulase negative staphylococci (CNS).
- The eight most common organisms constituted 85.3% of the total positive isolates.
- Among these organisms, there was no significant change in proportion between 2010- 2015.
- Both *Salmonella sp.* and *Streptococcus pneumoniae* showed a proportional decrease with age ($p < 0.008$), while *Klebsiella pneumoniae* showed a proportional increase with age ($p < 0.001$).

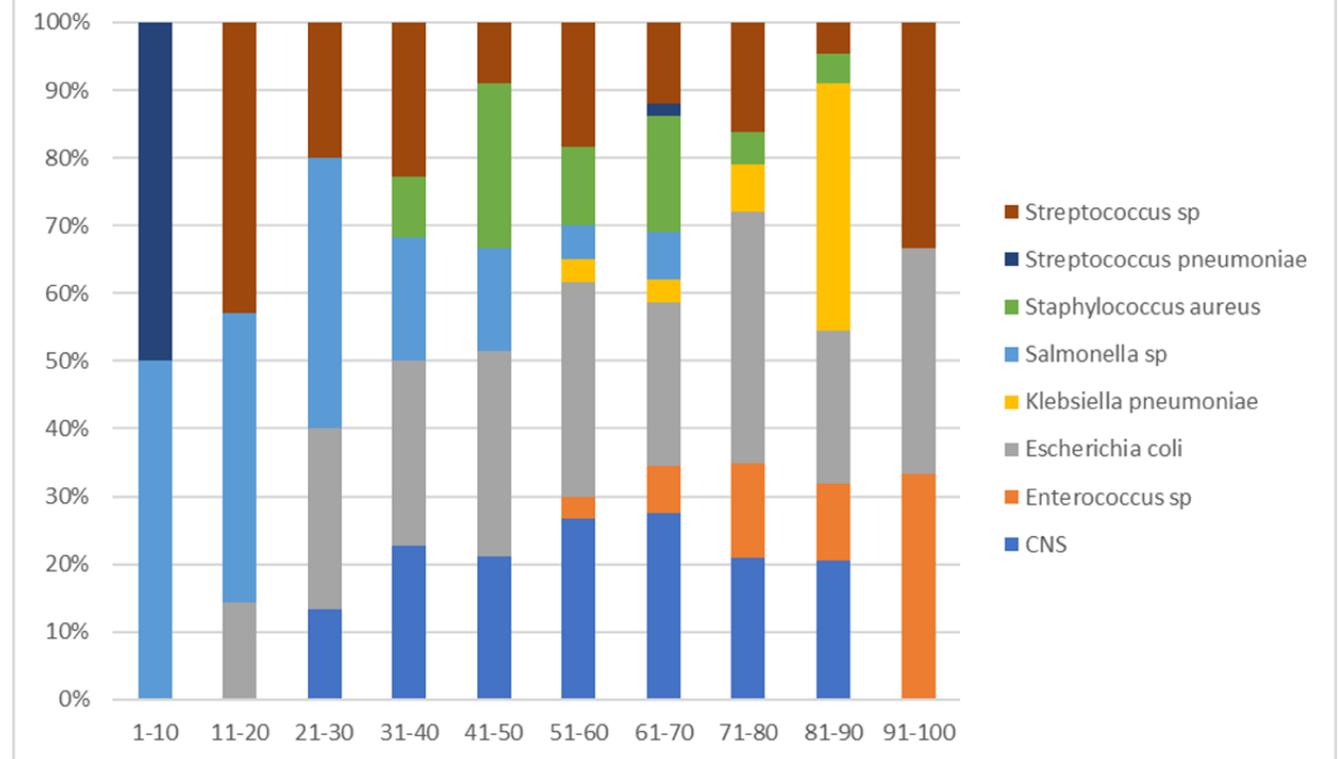
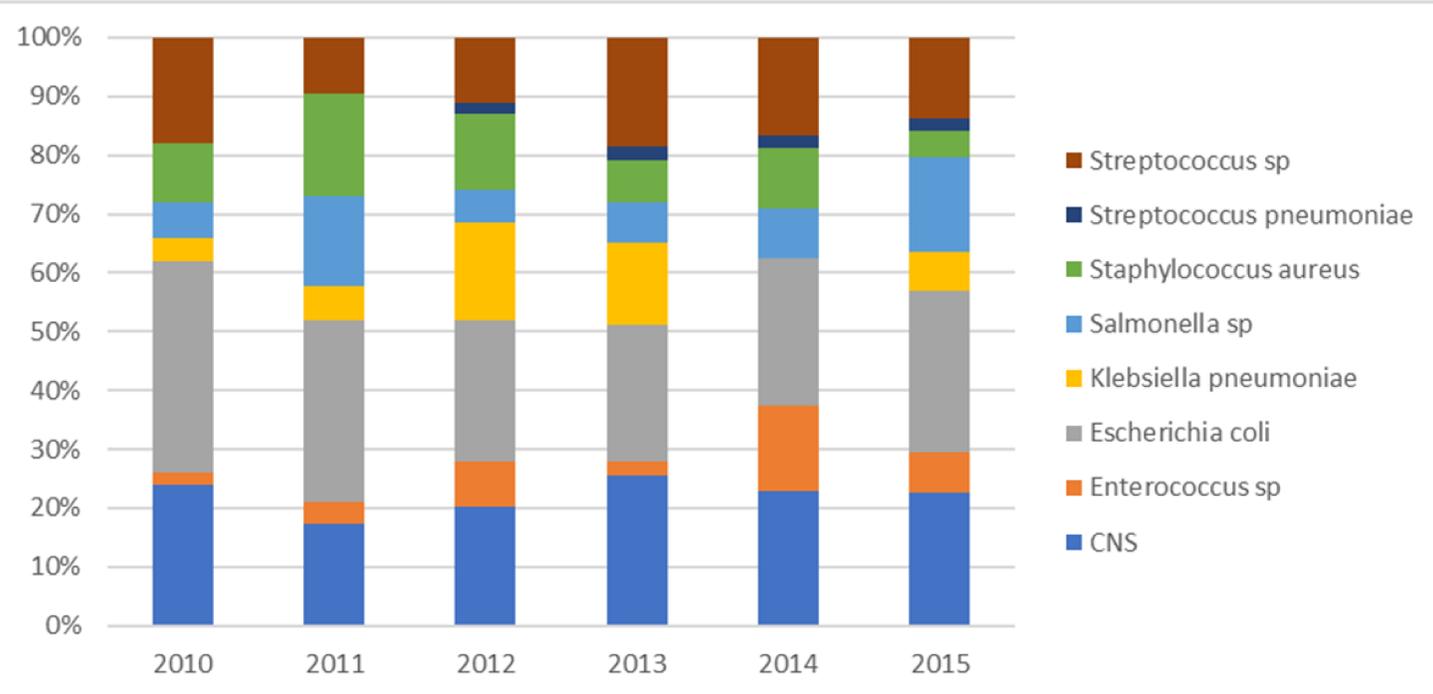


Figure 2 Relative proportion of eight most common organisms across age groups

Figure 1: Relative proportions of eight most common organisms across 2010-2015



RESULTS

- No VRE or CRE were noted.
- 30.4% of *Salmonella sp.* were ciprofloxacin resistant.
- 17.4% of *Enterobacteriaceae* were ESBL positive.
- 6.45% of *Staphylococcus aureus* were MRSA.

CONCLUSIONS

When analyzed over a 6- year period, there were no significant changes in the proportion of identified organisms. The proportion of antibiotic resistant organism in the community is low.

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