STREPTOCOCCUS PNEUMONIAE SEROTYPES IN ONTARIO, CANADA: RESULTS FROM THE CANADIAN BACTERIAL SURVEILLANCE NETWORK

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Introduction
The Canadian Bacterial Surveillance Network (CBSN) monitors the prevalence, mechanisms and epidemiology of antibiotic resistance to *Streptococcus pneumoniae* and *Haemophilus influenzae* via a group of clinical laboratories from all Canadian provinces and territories that voluntarily provide bacterial isolates for epidemiological and microbiological study.

Purpose
To evaluate trends in *S. pneumoniae* serotypes collected between 2003 and 2008 in Ontario children under 16 years of age.

Material and Methods
The CBSN receives clinical isolates from up to 100 centres per year, with a representative core group of 50 laboratories having submitted annually for the entire 2003-2008 period. Laboratories are asked to submit up to 100 consecutive isolates of *S. pneumoniae* (depending on volume of testing done) from all sites, as well as all sterile isolates for the year (1 per patient). Isolates are sent to the central laboratory at Mount Sinai Hospital in Toronto where they are confirmed as *S. pneumoniae* and stored frozen. Broth microdilution susceptibility testing is performed using CLSI standards. All pediatric sterile isolates collected between 2003 and 2008 were serotyped. Since the results for the province of Ontario are particularly robust, they were analyzed separately.

Results
A total of 559 *S. pneumoniae* isolates from sterile sites from Ontario children were serotyped. The proportion of isolates with serotypes in the 7-valent pneumococcal vaccine, which was introduced into the Ontario immunization program in the early 2000s, decreased from 79% in 2003 to 19% in 2008. In contrast, the number of isolates with serotypes not in the vaccine varied only between 30 and 51 throughout the study period with no obvious trend and, in particular, serotype 19A isolates remained between 6 and 14.

Conclusions
The CBSN data show that the current pneumococcal vaccine has been highly effective in Ontario and there has been no obvious replacement of serotypes between 2003 and 2008.