

Pneumococcal Disease (invasive)

The increase of invasive pneumococcal disease (IPD) observed in 2016 continued through 2017 with 530 cases reported in BC (11 per 100,000 population). The 2017 IPD case count and rate exceeds those observed in BC since 2008, approaching the rate observed in 2007 (12.7 per 100,000)¹ which was driven by two IPD outbreaks.

The age distribution of 2017 cases differs from the previous 9 years. Notably, the age specific incidence rates among infants under 1 and children 1 to 4 years in 2017 were each almost a third of the average rates observed from 2008 to 2016. Rates among the adult age groups (30-39 years, 40-59 years, and 60+ years) increased in 2017 relative to the average age specific rates from 2008 to 2016.

Twenty-six pediatric (≤16 years of age) cases were reported, which is the lowest number of annual pediatric cases in the last 10 years. Eight of the pediatric cases occurred in children under 5 years of age. The majority of pediatric cases (n= 22, 85%) were hospitalized. For cases where data were available, two pediatric cases presented with meningitis (n=2/23, 8.7%). No pediatric cases were reported as fatal.

Complete serotype/subtype results were available for 478 cases. Among cases 65 years of age and older, an age group for which routine vaccination with the 23-valent polysaccharide vaccine (PPV23) is recommended, serotype/subtype results were available for 90% (159 of 177); of these cases, 38% (n= 60) were due to serotypes covered by PPV23. Pneumococcal immunization status of adult cases of invasive pneumococcal disease is not reported in the BC surveillance system, so the proportion previously immunized cannot be assessed. Serotype/subtype results were available for all eight cases among children under 5 years of age; of these cases, only 1 (12.5%) was due to a serotype covered by pneumococcal conjugate 13-valent vaccine (PCV-13).

The serotypes, age at onset, and documented immunizations prior to onset of illness were reviewed against the BC immunization schedule for healthy and medically high-risk children to determine preventability by the current pneumococcal immunization program for children under 5 years of age.

Six cases were not preventable:

- These were due to serotypes not covered by PCV-13 (10B, 15C, 22F, 33F, and 38)

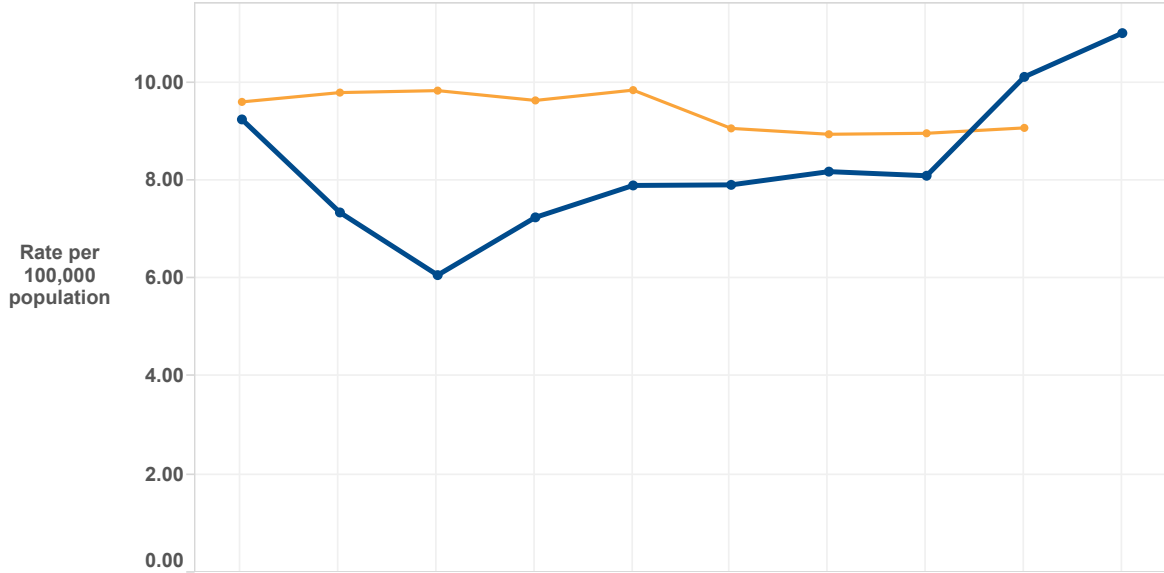
Two cases were preventable:

- One case due to a PCV-13 preventable serotype (14) occurred in an incompletely immunized child.
- One case due to a PPV-23 preventable serotype (11A) was reported in a medically high-risk child older than 2 years of age who was eligible for, but had not received a dose of, PPV-23 vaccine and without exemptions or medical contraindications to pneumococcal vaccine recorded.



¹ BC Centre for Disease Control. Annual Summary of Reportable Diseases – 2007. Available at: www.bccdc.ca/resource-gallery/Documents/Statistics%20and%20Research/Statistics%20and%20Reports/Epid/Annual%20Reports/Epid_Stats_Research_CDAnnualReport_2007.pdf

26.1 Pneumococcal Disease (invasive) Rates by Year, 2008-2017



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Reports	402	324	271	326	359	363	380	380	481	530
BC Rate	9.24	7.35	6.07	7.25	7.90	7.91	8.18	8.09	10.11	11.00
Canada Rate	9.60	9.79	9.83	9.63	9.84	9.06	8.94	8.96	9.07	9.07

26.2 Pneumococcal Disease (invasive) Rates by Age Group, 2008-2016 and 2017

