SUMMARY

International Circumpolar Surveillance (ICS), a population-based surveillance system for invasive bacterial diseases, has been established in the U.S. Arctic, Northern Canada, Greenland, Iceland, Norway, and Finland. Data collection began in 1999 and includes the organisms *Streptococcus pneumoniae* (Sp), *Haemophilus influenzae* (Hi), *Neisseria meningitidis* (Nm), and groups A and B streptococcus (GAS, GBS). This report reviews the data collected for the year 2002.

Data on invasive disease with the organism *Streptococcus pneumoniae* are collected from all participating countries; data on invasive disease due to the remaining organisms are currently collected by the U.S. Arctic, Northern Canada, and, beginning with this reporting year, Greenland. A total of 1,698 cases of invasive pneumococcal disease were identified in 2002. Overall, rates of invasive *S. pneumoniae* were highest in individuals less than 2 years of age, however, the median age of cases was greater than 40 years in all countries except N. Canada. Case fatality ratios ranged from 4-29%. Race and ethnicity data are collected only in N. Canada and the U.S. Arctic; rates of invasive pneumococcal disease in Northern Canadian Aboriginals and U.S. Arctic Native populations were 60 and 25 cases per 100,000 population, respectively, which represents an increase in disease from 2000 in Northern Canadian Aboriginals and a decrease in disease in U.S. Arctic Natives. Pneumonia and septicemia were the most common clinical presentations; cigarette smoking was the most common risk factor. Pneumococcal vaccine status was reported from four countries: Canada, Greenland, Norway, and the U.S. Arctic and ranged from 0-36% of reported cases vaccinated. The most common *S. pneumoniae* serotypes in Finland and the U.S. Arctic are 4 and 14; in Iceland the most common serotype is 7; and in Greenland and N. Canada the most common serotype is 1.

Data on invasive disease due to *Haemophilus influenzae, Neisseria meningitidis*, and groups A and B streptococcus are currently collected in Greenland, Northern Canada, and the U.S. Arctic. A total of 19 *H. influenzae* cases, 9 *N. meningitidis* cases, 47 group A streptococcus cases, and 25 group B streptococcus cases were reported in 2002. In general, the highest rates of disease as a result of all organisms occurred in N. Canada Aboriginal or Alaska Native persons less than two years of age; however in N. Canada the highest rates of meningococcal disease occurred in non-Aboriginals and in the U.S. Arctic the highest rates of invasive disease with *Haemophilus influenzae* occurred in the 65+ years of age category.

Surveillance Organisms Reported by Country, ICS 2002 Data

Country	*S. pneumoniae* n (rate*)	*H. influenzae* n (rate*)	*N. meningitidis* n (rate*)	group A strep n (rate*)	group B strep n (rate*)
Finland	599 (12)	N/A	N/A	N/A	N/A
Greenland	16 (28)	0 (0)	2 (4)	0 (0)	0 (0)
Iceland	45 (16)	N/A	N/A	N/A	N/A
N. Canada	35 (27)	8 (6)	1 (1)	5 (4)	2 (2)
Norway	914 (20)	N/A	N/A	N/A	N/A
U.S. Arctic	89 (14)	11 (2)	6 (1)	42 (7)	23 (4)
Total	1698 (16)	19 (2)	9 (1)	47 (6)	25 (3)

*Cases per 100,000