

4 SEASONAL DISEASES

a Respiratory syncytial virus infections during 2016

At sentinel sites where surveillance for respiratory viruses is being conducted, the number of cases testing positive for RSV this season continues to increase.

During the first 18 weeks of 2016, 1 Jan 2016 to 8 May, 1 075 patients hospitalised with severe respiratory illness were enrolled at the six pneumonia surveillance sentinel sites. Of these 18% (190/1 075) tested positive for respiratory syncytial virus (RSV). Of the 190 patients that tested positive for RSV, 91% (173/190) were children less than one year. The 2016 RSV season started in week eight (week ending 28 February 2016) when the detection rate rose to and was sustained at $\geq 10\%$ for ≥ 2 consecutive weeks. In epidemiological week 18 (week ending 8 May 2016), 51% of all individuals hospitalised with lower respiratory tract infections tested RSV positive.

RSV is the most common cause of bronchiolitis and lower respiratory tract illness (LRTI) among young children. It is highly contagious and interpersonal spread is frequent. RSV-associated bronchiolitis occurs more frequently in infants, a rate 2 to 3 times higher than in children >5 years. Infection with RSV does not result in permanent or long-term immunity and re-infections can occur. In keeping with our observations this season, approximately 40% of patients of all ages and approximately 60% of children aged <5 years who are hospitalised for management of lower respiratory illness, test positive for RSV.

Bronchiolitis is usually self-limiting. Patients present with signs of upper respiratory illness, low grade fever and wheezing. The majority of infants with RSV-associated bronchiolitis do not require

hospitalisation, but certain children are at risk of severe disease or require supplemental oxygen. Infants aged <6 months may develop severe disease with inability to feed, hypoxia and severe respiratory distress as evidence by tachypnoea, nasal flaring or lower chest retractions. Some children and infants may develop apnoea. In very young infants, irritability, decreased activity, and breathing difficulties may be the only presenting symptoms. Risk factors for severe RSV-associated disease include prematurity, congenital heart disease, chronic lung disease of prematurity, neurological disease, infants <6 months, immunodeficiency and lack of breast feeding. Environmental factors that are risk factors for severe RSV-associated disease include overcrowding, poverty and day care centre attendance.

Prevention of RSV plays an important role in the management of the disease. Measures include isolation of children with influenza-like symptoms (sick children should not go to crèches for a few days), and teaching children (and adults looking after infants) to practise sneeze and cough hygiene. The use of prophylactic antibiotics for children with upper respiratory tract infections is not recommended. The monoclonal antibody, palivizumab, administered monthly throughout the RSV season to infants and children at high risk of severe RSV disease, has been shown to be effective for prevention. However, high costs and the need for monthly intramuscular injections through the RSV season, limit its use.

Sources: Centre for Respiratory Disease and Meningitis, NICD-NHLS