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## Update on RSV Seasonality and Palivizumab Prophylaxis in Alaska

### Introduction

Palivizumab (Synagis®) is a monoclonal antibody that reduces respiratory syncytial virus (RSV) hospitalization risk in certain high-risk children (*Redbook: 2009 Report of the Committee on Infectious Diseases*, American Academy of Pediatrics [AAP]). Recommendations for administration of palivizumab in the United States were recently updated in the 2009 *Redbook*, and include a 5-month administration recommendation.

### 2009 Redbook Recommendations

Palivizumab should be administered monthly between November 1 and April 1 to high-risk infants and children in the United States who meet the following criteria during the RSV season (the last two bullets represent new recommendations):

- children aged <24 months with chronic lung disease or hemodynamically significant cardiac disease;
- infants <29 weeks gestation who are aged <12 months;
- infants 29–32 weeks gestation who are aged <6 months;
- infants 32–<35 weeks gestation who are aged <3 months with 1 or more of the following risk factors: sibling <5 years, daycare attendance; and
- infants <35 weeks gestation with congenital airway anomalies or neuromuscular disease who are aged <12 months.

The *Redbook* update also includes an Alaska-specific recommendation based on the higher rates of RSV hospitalization and longer seasonality observed in the YK Delta. It states that health care providers in the region may wish to use local RSV hospitalization data to “assist in determining the onset and offset of RSV season for the appropriate timing of palivizumab administration”.

### Alaska RSV Seasonality Data

1. Three hospital databases were queried for children aged <3 years who were hospitalized with laboratory-confirmed RSV infection. The Alaska RSV season onset and offset were defined as the first and last of two consecutive weeks, respectively, with RSV being detected in  $\geq 2$  specimens and >10% of all submitted specimens.

- *YK Delta Hospitalization Data, 1994–2009*  
Season onset started as early as the second week of September and season offset ended as late as the second week of June. The median season length was 27.5 weeks (compared with 17.5 weeks in the contiguous United States; Figure 1).
- *Providence Alaska Medical Center, 2006–2009*  
Season onset started as early as the second week of November and season offset ended as late as the second week of April.
- *Alaska Native Medical Center, 2006–2009*  
Season onset started as early as the fourth week of November and season offset ended as late as the fourth week of May.

2. The Alaska Medicaid hospitalization database was queried from 2004–2009 for children aged <2 years with an approved claim for bronchiolitis/RSV pneumonia hospitalization (ICD-9: 466.1, 480.1). In general, bronchiolitis hospitalizations increased during Oct–Nov, peaked Feb–Mar, and declined in June regardless of race (Figure 2). Hospitalization seasonality varied yearly, and was similar in southcentral, northern, and southwestern Alaska.

Figure 1. YK Delta Hospitalization Data, 1994–2009

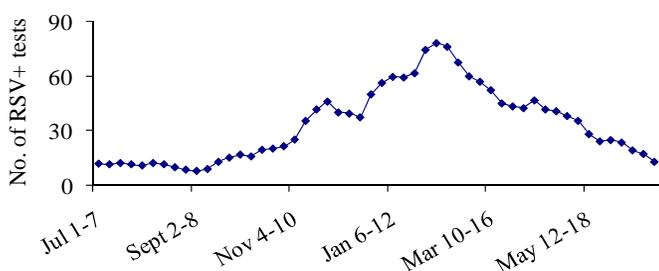


Figure 2. Bronchiolitis Hospitalizations in Medicaid-enrolled Children Aged <2 years — Alaska, July 2004–May 2009

