INBRIEF | Summarizing the Evidence

Palivizumab for Infection Prevention in Inuit Infants: A Review

Key Messages

- No evidence was identified that specifically compared the clinical effectiveness and/or cost-effectiveness of universal versus high-risk palivizumab prophylaxis, or seasonal versus year-round palivizumab prophylaxis, for respiratory syncytial virus prevention in Inuit infants.
- Two studies were nevertheless summarized in the report because they did consider the clinical effectiveness and cost-effectiveness of palivizumab for infants residing in northern Canadian or Arctic communities (even though they did not address the specific research questions):
  - Gilca et al. attempted to evaluate the impact of broadening the palivizumab prophylaxis criteria on Nunavik Inuit infants less than three months of age born at term. However, the authors reported that their analysis of data following the first year of implementation was inconclusive and that a longer observation period was required.
  - Banerji et al. compared the cost-effectiveness of palivizumab prophylaxis versus no prophylaxis in term infants residing in the Canadian Arctic. However, the authors reported great variability in incremental cost-effectiveness ratios across several different regions.
- Overall, further research is needed to allow for evidence-based decision-making regarding palivizumab prophylaxis for respiratory syncytial virus prevention in Inuit infants.

Context

Respiratory syncytial virus is the leading cause of lower respiratory tract illnesses in children, and Inuit children living in circumpolar regions have higher hospital admission rates for respiratory illnesses compared to those living in more southern areas. In addition, many Inuit infants who live in northern regions do not have access to hospitals equipped to manage severe RSV illnesses, so that air evacuation to tertiary hospitals may be necessary. As a result, the appropriate use of palivizumab for infants in Canadian northern and Arctic communities has been debated.

Technology

Palivizumab is a monoclonal antibody against respiratory syncytial virus and was approved for use in Canada in 2002. Some Canadian Arctic and far northern jurisdictions have provided government funding for palivizumab as prophylaxis since 2005. However, coverage criteria vary across jurisdictions.

Issue

A review of the clinical effectiveness and cost-effectiveness of palivizumab prophylaxis in Inuit children up to four years of age — specifically considering universal versus high-risk palivizumab prophylaxis, as well as seasonal versus year-round palivizumab prophylaxis — will help to inform decisions regarding who should receive prophylaxis.

Methods

A limited literature search was conducted of key resources, and titles and abstracts of the retrieved publications were reviewed. Full-text publications were evaluated for final article selection according to predetermined criteria (population, intervention, comparator, outcomes, and study designs).

Results

The literature search identified 362 citations; 27 were deemed potentially relevant and were retrieved for full-text review. However, none of them met the inclusion criteria for the Rapid Response Report. Two studies (Gilca et al. and Banerji et al.) were identified that did not address the specific comparisons of interest and therefore did not meet the inclusion criteria of the report. They did, however, consider the clinical effectiveness and cost-effectiveness of palivizumab for infants residing in Canadian northern or Arctic communities.

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