



Sign up for [Insight Alerts](#) highlighting editor-chosen studies with the greatest impact on clinical care.

Get Involved! [Journal editorial boards](#) are seeking candidates.



Due to the popularity of the AAP Virtual Career Fair, there's a new Winter event Wednesday, January 31 through Thursday, February 1. **Registration is free to all job seekers; [sign up now](#).**



[Advertising Disclaimer](#) »

↓ [Tools and Links](#)

[Pediatrics](#)

January 2018

Rhinovirus in Febrile Infants and Risk of Bacterial Infection

Anne J. Blaschke, E. Kent Korgenski, Jacob Wilkes, Angela P. Presson, Emily A. Thorell, Andrew T. Pavia, Elizabeth D. Knackstedt, Carolyn Reynolds, Jeff E. Schunk, Judy A. Daly, Carrie L. Byington

[Article](#) [Figures & Data](#) [Info & Metrics](#) [Comments](#)

 [Download PDF](#)

Abstract

BACKGROUND: Febrile infants with viral respiratory infections have a reduced risk of bacterial infection compared with virus-negative infants. The risk of concomitant bacterial infection in febrile infants positive for human rhinovirus (HRV) by polymerase chain reaction (PCR) is unknown.

METHODS: Infants 1–90 days old managed using the care process model for well-appearing febrile infants and with respiratory viral testing by PCR (RVPCR) in the emergency department or inpatient setting of 22 hospitals in the Intermountain Healthcare system from 2007–2016 were identified. Relative risk (RR) of bacterial infection was calculated for infants with HRV, non-HRV viruses, or no virus detected.

RESULTS: Of 10 964 febrile infants identified, 4037 (37%) had RVPCR. Of these, 2212 (55%) were positive for a respiratory virus; 1392 (35%) for HRV alone. Bacterial infection was identified in 9.5%. Febrile infants with HRV detected were more likely to have bacterial infection than those with non-HRV viruses (7.8% vs 3.7%; $P < .001$; RR 2.12 [95% CI 1.43–3.15]). Risk of urinary tract infection was not significantly different for HRV-positive infants at any age, nor was risk of invasive bacterial infection (IBI; bacteremia and/or meningitis) meaningfully different for infants 1–28 day olds. Infants 29–90 days old with HRV had a decreased likelihood of IBI (RR 0.52 [95% CI 0.34–0.80]).

CONCLUSIONS: HRV is common in febrile infants. Detection did not alter risk of concomitant urinary tract infection at any age or risk of IBI in infants 1–28 days old. HRV detection may be relevant in considering risk of IBI for infants 29–90 days of age.

Accepted November 15, 2017.

- Copyright © 2018 by the American Academy of Pediatrics

[View Full Text](#)

Log in using your username and password

<input type="text" value="Username"/>	<input type="text" value="Password"/>
<input type="button" value="Log in"/>	

[Forgot your user name or password?](#)

Log in through your institution

You may be able to gain access using your login credentials for your institution. Contact your library if you do not have a username and password.

[Pay Per Article](#) - You may access this article (from the computer you are currently using) for 2 days for US\$25.00


[Regain Access](#) - You can regain access to a recent Pay per Article purchase if your access period has not yet expired.

[Offer Reprints](#)

◀ Previous

Next ▶

When you're responsible for life-saving care, what you read matters.



Hospital Pediatrics[®]
Subscribe

shopAAP
shop.aap.org/journals

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN[®]

[Advertising Disclaimer »](#)

View this article with
LENS

[◀ Previous](#)

[Next ▶](#)

[✉ Email](#)

[🔒 Permissions](#)

[🔔 Alerts](#)

[🌐 Citation Tools](#)

[🔗 Share](#)

[🖨️ Print](#)

[📄 PDF](#)

[🔔 Insight Alerts](#)

[Table of Contents](#)

[Early Release](#)

[Current Issue](#)

[Past Issues](#)

[AAP Policy & Collections](#)

[Editorial Board](#)

[Editorial Policies](#)

[Overview](#)

[Open Access](#)

[Pediatric Collections](#)

[Author Guidelines](#)

[Reviewer Guidelines](#)

[Submit My Manuscript](#)

Subjects

[Fetus/Newborn Infant](#) ▶

[Fetus/Newborn Infant](#) ▶

[Infectious Disease](#) ▶

[Infectious Disease](#) ▶

[Epidemiology](#) ▶

Related Articles

The Common Febrile Infant and the Common Cold

John Morrison et al., AAP News

Serious Bacterial Infections in Febrile Infants 1 to 90 Days Old With and Without Viral Infections

Carrie L. Byington et al., Pediatrics

Outcomes After Skin and Soft Tissue Infection in Infants 90 Days Old or Younger.

Gabrielle Hester et al., Hosp Pediatr

A polymerase chain reaction-based epidemiologic investigation of the incidence of nonpolio enteroviral infections in febrile and afebrile infants 90 days and younger.

C L Byington et al., Pediatrics

Procalcitonin a promising biomarker to identify invasive bacterial infections in febrile infants

Sri S., AAP News

Inner city infants have different patterns of viral respiratory illness than infants in the suburbs

Oxford University Press (OUP), ScienceDaily

Common Cold Virus Leads To Death In Lung Transplant Patients

American Thoracic Society, ScienceDaily

Recently Discovered Virus Associated With Pediatric Respiratory Tract Infection In Germany

Columbia University's Mailman School of Public Health, ScienceDaily

Studies explore use of genetics to help determine appropriate treatment for fever in children

The JAMA Network Journals, ScienceDaily

Infections in childhood could provide clues to disease development in later life

European Lung Foundation, ScienceDaily

Powered by

[^ Back to top](#)