

## Insights on Managing Fever in Pediatric Patients after Immunization

Sherri L. Rudinsky\*

Department of Emergency Medicine, US Naval Hospital Okinawa, Camp Foster, Japan

### DESCRIPTION

Fever is a frequent concern in pediatric Emergency Department (ED) visits, accounting for up to 20% of all pediatric cases annually. Although most fevers in children are benign, infants under 90 days old are at increased risk for Serious Bacterial Infections (SBIs), such as Urinary Tract Infections (UTIs), Invasive Bacterial Infections (IBIs) and pneumonia. The prevalence of SBIs in this age group ranges from 8% to 21.5%, with IBIs affecting approximately 0.3% to 4.5% of well-appearing infants under 90 days of age. The presence of fever in young infants presents a diagnostic challenge and clinical guidelines are continually evolving to improve the management of febrile infants who appear well. However, there is less clarity regarding how to approach febrile infants between 60 and 90 days old, particularly.

It is estimated that up to 40% of children may develop a fever of 38°C or higher within 48 h of receiving vaccinations. A significant number of these children will seek medical evaluation in the ED due to concerns about their fever. Limited evidence suggests that Recently Immunized (RI) febrile infants have a lower risk of developing IBIs compared to those who have not been immunized recently. This has led to the suggestion that RI febrile infants may not require as extensive an evaluation as those who are not recently immunized. In fact, RI febrile infants are excluded from the 2021 American Academy of Pediatrics (AAP) guidelines on managing febrile infants, as well as from the step-by-step guideline and Pediatric Emergency Care Applied Research Network (PECARN) rule. As a result, clinicians are left with limited guidance when managing febrile RI infants, making it challenging to engage in shared decision-making with parents regarding the need for further workup and evaluation.

Given this uncertainty, the study aimed to assess the prevalence of IBIs in well-appearing febrile RI infants aged 6 to 12 weeks who present to the ED for evaluation. It was hypothesized that the incidence of IBIs in this group would be extremely low. However, it was also anticipated that the risk of UTIs could remain elevated in infants who had been immunized within the

past 72 h. By examining this population, the aim is to provide greater clarity on the optimal management of febrile infants with RI.

In summary, while the majority of febrile infants have self-limiting illnesses, those under 90 days of age remain at high risk for SBIs, making their evaluation complex. Recent immunization may influence the possibility of serious infections, but the evidence surrounding the need for extensive workups in this population remains limited. The study seeks to address this gap by investigating the prevalence of IBIs in febrile infants between 6 and 12 weeks old who are recently immunized. Should aim to offer insights that will inform clinical practice, particularly in the context of shared decision-making with families.

While clinical guidelines for managing febrile infants under 90 days have been well-established, the approach to infants aged 60 to 90 days, especially those who are recently immunized, remains less clear. RI infants—those who have received vaccinations within the past 48–72 h may develop fever as a common side effect of immunization. However, there is limited evidence on whether these infants are at a reduced risk of serious infections compared to their non-immunized counterparts. This uncertainty presents a clinical challenge, as physicians must balance the likelihood of a vaccine-related fever with the need to rule out serious infections. In the face of this ambiguity, clinical guidelines, such as those from the American Academy of Pediatrics (AAP), the step-by-step guideline and the PECARN rule, do not specifically address how to manage febrile RI infants, leaving practitioners with less guidance.

This study aims to address this gap by examining the prevalence of IBIs in well-appearing febrile infants aged 6 to 12 weeks who present to the ED following recent immunization. The hypothesis is that the incidence of IBIs in this group will be extremely low, while the risk of UTIs may still be present, particularly in those who have been immunized within the last 72 h. By investigating the prevalence of serious infections in this population.

**Correspondence to:** Sherri L. Rudinsky, Department of Emergency Medicine, US Naval Hospital Okinawa, Camp Foster, Japan, E-mail: sherri.rudinsky@health.mil

**Received:** 25-Nov-2024, Manuscript No. EGM-24-35065; **Editor assigned:** 27-Nov-2024, PreQC No. EGM-24-35065 (PQ); **Reviewed:** 11-Dec-2024, QC No. EGM-24-35065; **Revised:** 18-Dec-2024, Manuscript No. EGM-24-35065 (R); **Published:** 26-Dec-2024, DOI: 10.35248/2165-7548.24.14.333

**Citation:** Rudinsky SL (2024). Insights on Managing Fever in Pediatric Patients after Immunization. *Emergency Med.* 14:333.

**Copyright:** © 2024 Rudinsky SL. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original author and source are credited.

## CONCLUSION

In febrile infants under 90 days of age present a significant diagnostic challenge due to the risk of serious bacterial infections. While the majority of these fevers are benign, the identification of infants at higher risk for infections, particularly invasive bacterial infections and urinary tract infections, remains essential condition. Recently immunized infants in the 60 to 90day age range represent a unique subset and current guidelines provide limited direction for managing their fever.

Although some studies suggest a lower risk of IBIs in febrile infants who have recently been vaccinated, the optimal approach to this group remains unclear. The study aims to fill this gap by evaluating the prevalence of IBIs in well-appearing febrile infants between 6 and 12 weeks of age who have received recent immunizations. The findings could help refine clinical protocols and guide shared decision-making with parents, ultimately improving the management of febrile infants in the emergency department.