

# Temperature Measurement in Well Children Promotes Bias

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The well-child visit remains the cornerstone of pediatric primary care even in the face of a global pandemic. Given that children should have roughly 27 well-child visits by the time they are 18 years old, it is not surprising that some children present for well-child care while ill.<sup>1</sup> Pediatric training emphasizes recognizing the sick versus well child and when to escalate care. Children often declare their illness in ways that are beyond measurement; the insidious signs of illness are uncovered through careful history-taking and thorough examination by a trained clinician.

During the coronavirus disease 2019 (COVID-19) pandemic, routine temperature measurements have become commonplace in public health efforts to screen for possible infection. Incidental fevers have implications in rates of COVID-19 testing, health care encounters, school or work absences, and social isolation. However, screening for asymptomatic COVID-19 infection by measuring temperature has many flaws, including both individual and environmental factors that cause temperature variations.<sup>2</sup> So, who benefits from universal temperature screens in healthy children? Is this a framework for public health mitigation, individual risk identification, or institutionalized bias?

In this issue of *Pediatrics*, Dang et al<sup>3</sup> discuss practice variations in primary care that lead to temperature measurements during routine care and how incidental fevers change the course of care.

Although temperature measurement is not recommended as part of routine preventive care, more than half of pediatric practices perform this measure routinely.<sup>3-5</sup> This study supports that temperature measurement is a clinic-driven practice, but the clinics measuring temperatures most often are those with higher proportions of Hispanic or Latinx, Black, and government-insured patients.<sup>3,5</sup> We do not know how the policies for universal temperature screening were made in these clinics or how the systems-level factors may contribute to the persistence of this practice.

The authors argue that, although clinic-driven decisions supporting routine temperature measurement may not affect office efficiency, they have the potential for harm when incidental fever is detected, including increased rates of antibiotic prescribing (1.7%) and vaccine deferral (50%).<sup>3</sup> Although these unintended consequences had low rates in this study, they have a significant impact at the population level.<sup>3</sup> Incidental fevers contribute to missed opportunities for vaccinations, which predict further delays in vaccination, particularly in our youngest, most vulnerable patients.<sup>6,7</sup> As the COVID-19 vaccine rolls out to younger age groups, it will be important to use office visits as an opportunity to vaccinate, even when children have a mild illness, including low-grade fever.<sup>8</sup> Measuring temperatures more often in Black and Hispanic or Latinx patients or those on government insurance plans may

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exacerbate disparities that already exist in immunizing children with the COVID-19 vaccine.<sup>9</sup>

In addition to vaccines, an important aspect of the well-child examination is how pediatricians model parenting behaviors. We provide anticipatory guidance about what to expect and counseling about when to worry and seek care. Measuring a temperature in a well child is not a practice we want to encourage and changing the course of care on the basis of this incidental fever may feed into a behavior known as “fever phobia.”<sup>10</sup> Over 40 years ago, Dr Barton Schmitt<sup>10</sup> published that 52% of parents surveyed believed incorrectly that moderate fever with a temperature of  $\leq 40^{\circ}\text{C}$  can cause serious neurologic effects.<sup>10</sup> These attitudes have changed little over the ensuing 40 years, and fever phobia persists in both parents and health care providers.<sup>8</sup> Pediatricians should continue to educate families that healthy children, older than a few months, with temperatures  $< 39^{\circ}\text{C}$  do not need treatment with antipyretics and doing so does not change the course of their infection.<sup>11</sup>

Dang et al<sup>3</sup> make the implications of routine fever measurements at well visits clear, but additional research into the drivers of this practice could be done to better explore

potential systemic bias in resource use, antibiotic stewardship, and vaccine hesitancy. Standardization of vital sign collection may improve office efficiency, but superfluous measurements come at a cost to the patient. In a system in which health care providers are inundated with electronic data, we need evidence-based approaches to eliminate the extra noise to return our focus to each patient before us.

#### ABBREVIATION

COVID-19: coronavirus disease 2019

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