

# The Hazards of Medicalizing Variants of Normal

**AUTHOR:** William B. Carey, MD, FAAP

*Division of General Pediatrics, The Children's Hospital of Philadelphia, Philadelphia, Pennsylvania*

**KEY WORDS**

gastroesophageal reflux disease, GERD, regurgitation in infants, overdiagnosis, medicalization, pediatric pathogenesis

**ABBREVIATION**

GERD—gastroesophageal reflux disease

[www.pediatrics.org/cgi/doi/10.1542/peds.2013-0286](http://www.pediatrics.org/cgi/doi/10.1542/peds.2013-0286)

doi:10.1542/peds.2013-0286

Accepted for publication Jan 29, 2013

Opinions expressed in these commentaries are those of the author and not necessarily those of the American Academy of Pediatrics or its Committees.

Address correspondence to William B. Carey, MD, FAAP, Division of General Pediatrics, The Children's Hospital of Philadelphia, 34th Street and Civic Center Boulevard, Philadelphia, PA 19104-4399. E-mail: [carey@email.chop.edu](mailto:carey@email.chop.edu)

PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

Copyright © 2013 by the American Academy of Pediatrics

**FINANCIAL DISCLOSURE:** *The author has indicated he has no financial relationships relevant to this article to disclose.*

**FUNDING:** No external funding.

**COMPANION PAPER:** A companion to this article can be found on page 839, online at [www.pediatrics.org/cgi/doi/10.1542/peds.2012-3070](http://www.pediatrics.org/cgi/doi/10.1542/peds.2012-3070).

FREE

Elsewhere in this issue of *Pediatrics* there appears an important article pointing to the hazards of using a disease label to describe a common, usually normal physiologic variant, regurgitation in small infants: "Influence of "GERD" Label on Parents' Decision to Medicate Infants with Excessive Crying and Reflux" by Scherer et al.<sup>1</sup> The authors' concern is that acid-reducing medications are being overused and are rarely indicated. There are a few methodologic issues in their presentation, some of which they discuss, but their evidence is clear that use of the disease label "gastroesophageal reflux disease (GERD)" to diagnose any such regurgitation and crying makes parents more likely to favor the use of medication for the condition, even when there has been no confirmation by endoscopy, and even when the drug offered is acknowledged as being unlikely to be effective. This is compelling evidence that the choice of words by physicians can significantly affect parents' views of their children's health. As Scherer et al put it, "...physicians' language can play a role in the process of medicalization and overtreatment."

About half of normal, healthy infants in the first 6 months of life have enough daily regurgitation to be annoying to parents. This "spitting up" typically disappears spontaneously between 6 and 12 months. The use of the GERD label is appropriate only when the reflux is causing troublesome symptoms and there is support for the diagnosis from endoscopy. "Reflux is not a common cause of unexplained crying, irritability, or distressed behavior in otherwise healthy infants."<sup>2</sup> Also, about 20% of healthy infants between 1 and 4 months cry "excessively" (presumably more than 3 hours a day most days) and are usually said to have infantile colic.<sup>3</sup> Despite controversy over the definition and causes of colic, the preponderance of evidence points to the usual contributory factors of: a) a physiologic or temperamental predisposition to be sensitive, irritable, and hard to soothe; b) parental misunderstanding about how best to handle such an infant; and c) the underlying neurologic immaturity and vulnerability of those first few months. The most effective management of colic has repeatedly been demonstrated to be parent counseling, with only rare use of medication. There is little support in the scientific literature for routine drug treatment of either reflux or colic.

Although this study was a questionnaire study assessing parental views of a hypothetical situation, not actual clinical cases, and the investigators did not assess physician thinking on management other than their choice of the diagnostic designation, the evidence here argues strongly against the use of a pathologic diagnosis when a disease has not been established. This study demonstrates that the labeling of any regurgitation as a disease makes parents more likely to want to use a medication. One must ask whether it is adherence to the principles of evidence-based medicine to recommend use of

an ineffective drug for a condition that has not been confirmed by appropriate evaluation. We are informed that this is happening frequently.

Such overdiagnosis gives parents the impression that their child is sick, when that is not so, and makes them likely to believe that medication is necessary. They may also think that their infant has a defect that will somehow continue

and may make the child susceptible to this or other diseases in the future, as documented in the common but inadequately appreciated phenomenon of Vulnerable Child Syndrome.<sup>4</sup>

Forty years have now passed since this journal published two related articles on similar topics: "Avoiding pediatric pathogenesis in the management of acute minor illness,"<sup>5</sup> and "Dealing with

unnecessary medical trauma to children."<sup>6</sup> Their impact in the interim is not known. This paper should reinforce the need to focus attention on pediatric pathogenesis and strengthen efforts to reduce it. The way we identify and deal with annoying normal or insignificant variations and how we discuss them with parents makes a big difference in the quality of care.

## REFERENCES

1. Scherer L, Zikmund-Fisher B, Fagerlin A, Tarini B. Influence of "GERD" label on parents' decision to medicate infants with excessive crying and reflux. *Pediatrics*. 2013; 131(5):839–845
2. Vandenas Y, Rudolph CD, DiLorenzo C, et al. Pediatric gastroesophageal reflux clinical practice guidelines: Joint recommendations of the North American Society for Gastroenterology, Hepatology and Nutrition (NASPGHAN) and the European Society for Pediatric Gastroenterology, Hepatology, and Nutrition (ESPGHAN). *J Pediatr Gastroenterol Nutr*. 2009;49:498–547
3. Carey WB. "Colic": Prolonged or excessive crying in young infants. In: Carey WB, Crocker AC, Coleman WL, Elias ER, Feldman HM, eds. *Developmental-Behavioral Pediatrics*, 4th ed. Philadelphia: Saunders/ Elsevier; 2009: 557–562
4. Forsyth BWC: Early health crises and vulnerable children. In: Carey WB, Crocker AC, Coleman WL, Elias ER, Feldman HM, eds. *Developmental-Behavioral Pediatrics*, 4th ed. Philadelphia: Saunders/ Elsevier; 2009: 337–342.
5. Carey WB, Siblinga MS. Avoiding pediatric pathogenesis in the management of acute minor illness. *Pediatrics*. 1972;49(4): 553–562
6. Siblinga MS, Carey WB. Dealing with unnecessary medical trauma to children. *Pediatrics*. 1976;57(5):800–802

## The Hazards of Medicalizing Variants of Normal

William B. Carey

*Pediatrics* 2013;131;991

DOI: 10.1542/peds.2013-0286 originally published online April 1, 2013;

<b>Updated Information &amp; Services</b>	including high resolution figures, can be found at: <a href="http://pediatrics.aappublications.org/content/131/5/991">http://pediatrics.aappublications.org/content/131/5/991</a>
<b>References</b>	This article cites 3 articles, 2 of which you can access for free at: <a href="http://pediatrics.aappublications.org/content/131/5/991#BIBL">http://pediatrics.aappublications.org/content/131/5/991#BIBL</a>
<b>Subspecialty Collections</b>	This article, along with others on similar topics, appears in the following collection(s): <b>Gastroenterology</b> <a href="http://www.aappublications.org/cgi/collection/gastroenterology_sub">http://www.aappublications.org/cgi/collection/gastroenterology_sub</a> <b>Pharmacology</b> <a href="http://www.aappublications.org/cgi/collection/pharmacology_sub">http://www.aappublications.org/cgi/collection/pharmacology_sub</a> <b>Therapeutics</b> <a href="http://www.aappublications.org/cgi/collection/therapeutics_sub">http://www.aappublications.org/cgi/collection/therapeutics_sub</a>
<b>Permissions &amp; Licensing</b>	Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at: <a href="http://www.aappublications.org/site/misc/Permissions.xhtml">http://www.aappublications.org/site/misc/Permissions.xhtml</a>
<b>Reprints</b>	Information about ordering reprints can be found online: <a href="http://www.aappublications.org/site/misc/reprints.xhtml">http://www.aappublications.org/site/misc/reprints.xhtml</a>

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™



# PEDIATRICS®

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

## **The Hazards of Medicalizing Variants of Normal**

William B. Carey

*Pediatrics* 2013;131;991

DOI: 10.1542/peds.2013-0286 originally published online April 1, 2013;

The online version of this article, along with updated information and services, is located on the World Wide Web at:

<http://pediatrics.aappublications.org/content/131/5/991>

Pediatrics is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since 1948. Pediatrics is owned, published, and trademarked by the American Academy of Pediatrics, 141 Northwest Point Boulevard, Elk Grove Village, Illinois, 60007. Copyright © 2013 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 1073-0397.

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

