Available online at www.sciencedirect.com

Public Health

journal homepage: www.elsevier.com/puhe

Original Research

Depression among caregivers of children with asthma and its impact on communication with health care providers

M. Fagnano[a,*], E. Berkman[a], E. Wiesenthal[a], A. Butz[b], J.S. Halterman[a]

[a] Department of Pediatrics, University of Rochester School of Medicine and Dentistry, Rochester, NY, USA
[b] Department of Pediatrics, Johns Hopkins University, Baltimore, MD, USA

ARTICLE INFO

Article history:
Received 16 February 2012
Received in revised form
24 July 2012
Accepted 8 August 2012
Available online 25 October 2012

Keywords:
Asthma
Caregiver depression
Health care provider
Communication

SUMMARY

Background: Caregiver depression is common, can negatively influence one's ability to communicate with health care providers, and may hinder appropriate care for children with asthma.

Objective: To evaluate the impact of caregiver depression on communication and self-efficacy in interactions about asthma with their child's physician.

Study design: Cross sectional analysis using data from the Prompting Asthma Intervention in Rochester–Uniting Parents and Providers study.

Methods: We enrolled caregivers of children (2–12 yrs) with persistent asthma prior to their health care visit. Caregivers were interviewed via telephone after the visit to assess depression, self-efficacy, and provider communication at the visit. Caregiver depression was measured using the Kessler Psychological Distress scale. We assessed caregiver self-efficacy using items from the Perceived Efficacy in Patient–Physician Interactions scale; caregivers rated their confidence for each item (range 0–10). We also inquired about how well the provider communicated regarding the child's asthma care. Bivariate and multivariate analyses were used.

Results: We interviewed 195 caregivers (response rate 78%; 41% Black, 37% Hispanic), and 30% had depressive symptoms. Caregiver rating of provider communication did not differ by depression. Most caregivers reported high self-efficacy in their interactions with providers; however depressed caregivers had lower scores (8.7 vs. 9.4, $p = .001$) than non-depressed caregivers. Further, depressed caregivers were less likely to be satisfied with the visit (66% vs. 83%, $p = .014$), and to feel all of their needs were met (66% vs. 85%, $p = .007$). In multivariate analyses, depressed caregivers were $>2\times$ more likely to be unsatisfied with the visit and to have unmet needs compared to non-depressed caregivers.

Conclusions: Depressed caregivers of children with asthma report lower confidence in interactions with providers about asthma and are less likely to feel that their needs are met at a visit. Further study is needed to determine the best methods to communicate with and meet the needs of these caregivers.

---

[*] *Corresponding author*. University of Rochester School of Medicine and Dentistry, Box 777, Strong Memorial Hospital, 601 Elmwood Avenue, Rochester, NY 14642, USA. Tel.: +1 585 275 8220; fax: +1 585 276 2206.

E-mail address: maria_fagnano@urmc.rochester.edu (M. Fagnano).

0033-3506/$ – see front matter © 2012 The Royal Society for Public Health. Published by Elsevier Ltd. All rights reserved.
http://dx.doi.org/10.1016/j.puhe.2012.08.007

Background

An estimated 6 million children in the United States are living with asthma, making it one of the most common chronic diseases of childhood.[1] The effects of poorly controlled pediatric asthma are widespread and include missed school and work days, rising health care utilization costs, emergency department visits, hospitalizations, and avoidable deaths.[2–5] As a result, the health care community has paid significant attention to the prevention of asthma morbidity and mortality. Despite these efforts, inadequate asthma management has remained prevalent, especially in urban and minority populations.[2,6] The National Heart, Lung and Blood Institute (NHLBI) has established asthma guidelines that provide specific recommendations for asthma management to reduce morbidity. In these recommendations, the guidelines emphasize the importance of ongoing asthma education and effective communication with caregivers to develop a partnership with providers, elicit specific symptom information and concerns, and establish shared treatment goals.[7]

Effective patient–provider communication can improve patient satisfaction and health outcomes.[8] Studies have demonstrated a correlation between effective communication and improved physiologic status, functional outcomes, mental health and symptom resolution.[9] However, little is known about caregiver–provider communication for children with asthma. In a prior study, we found that poor communication can be a significant barrier to appropriate preventive asthma care for urban children, leading to underestimation of symptom severity and missed opportunities to provide guideline-based treatments.[10,11]

Additionally, depression is common among caregivers of children with asthma, and is associated with poor adherence to preventive asthma care and increased health care utilization.[12–14] Caregiver depression may compromise the family's ability to comply with an asthma treatment plan and may inhibit active participation in the child's care.[15] Studies have also indicated that in caregivers, especially mothers, life stressors and depression are associated with worse pediatric asthma symptom severity and overall morbidity.[15,16] Further, Weil *et al.* found that children of caregivers with mental health problems were almost twice as likely to require hospitalization for their asthma.[13] Depression also can impact one's ability to comprehend information and communicate effectively.[14,17] Thus, depression in caregivers of children with asthma may impact the way in which caregivers communicate with health care providers as well as their understanding and perceptions of the health care visit.

The purpose of this study is to evaluate the impact of caregiver depression on caregiver–provider communication, as well as caregiver self-efficacy in interactions about asthma and satisfaction with the care they received. We hypothesize that depressed caregivers will report worse communication and have lower self-efficacy in interacting with their child's physician and lower satisfaction with care compared to non-depressed caregivers.

Methods

Setting and participants

This study uses data from the *Prompting Asthma Intervention in Rochester – Uniting Parents and Providers (PAIR-UP)* trial in Rochester, NY. Potential participants included caregivers of children 2–12 years old with documentation of asthma in their medical record who were visiting a health care provider at one of 12 participating urban practices in Rochester, NY. We approached families in the waiting room prior to their visit to assess eligibility for the study based on current asthma severity or level of control. Children who had persistent or poorly controlled asthma symptoms based on NHLBI guidelines were eligible for enrollment (participation rate: 78%). We obtained written informed consent from the primary caregiver and assent from children 7 years or older. The University of Rochester and Rochester General Health System's Institutional Review Boards approved the study protocol.

For the PAIR-UP intervention study, each participating practice was randomly assigned as either a treatment or usual care site. Families enrolled at the intervention sites received a paper prompt at the time of the visit to give to the provider that was designed to assist the provider in assessing severity and delivering guideline-based asthma care. We used data from the initial baseline survey and a follow-up telephone survey from this larger study, and controlled for treatment effect in this analysis.

We collected data in-person in the waiting room prior to the child's visit, as well as by telephone following the visit to inquire about actions related to the visit. While all eligible children had persistent asthma or poor control, not all were being seen for an asthma-related visit. Eligible health care visits included well-child exams, asthma-related visits, and any other visit in which the child was seen by a physician or nurse practitioner. Caregivers were asked to think about their child's recent health care visit when answering questions about provider communication, caregiver's self-efficacy in interactions with the provider, and satisfaction with care. Caregiver depression also was assessed. Between October 2009 and October 2010, we collected data for 195 families.

Assessment of caregiver depression

We assessed caregiver depression using the validated 10-item Kessler Psychological Distress scale, which measures symptoms of anxiety and depression.[18] Caregivers were asked to indicate how often they had certain feelings (i.e. nervous, fidgety, tired for no good reason, etc.) over the past 4 weeks on a scale of *None of the Time* to *All of the Time* (range 10–50). Scores ≥ 20 indicate measurable psychological distress consistent with depressive symptoms.[19] Caregivers with scores above this cut-off were considered "Depressed" and caregivers with scores <20 were considered "Not Depressed" in our analyses based on prior use of this scale.[19]

Assessment of provider communication

We evaluated provider communication using 5 statements previously used by Clark *et al.* regarding caregiver views of their pediatrician's performance regarding asthma care.[20]