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Mind the Widening Gap:Have Improvements In Asthma Care Increased Asthma Disparities?

Cynthia S. Rand, Ph.D[a] and **Andrea J. Apter, M.D., MSc**[b]

[a] The Johns Hopkins School of Medicine

[b] The University of Pennsylvania School of Medicine

Keywords

Asthma morbidity

Rate of emergency department (ED) care for asthma has long been used as a benchmark metric of asthma morbidity within a population. National data on asthma ED use and hospitalizations collected in the 1980s and 1990s provided alarming evidence of increasing rates of asthma morbidity across broad sections of the population, with disproportionately high rates for minority adults and children with asthma.(1) Based in part on this evidence that asthma morbidity was a significant and growing public health problem, the National Institutes of Health (NIH), professional organizations, and multiple health care organizations launched extensive national educational and health care quality initiatives to educate physicians and other health care workers about asthma and increase the use of effective controller therapies. The goal of all these diverse initiatives has ultimately been to reduce overall asthma morbidity and help all patients with asthma achieve better asthma control.

In the current issue, Ginde et al. provide evidence that progress may have been made in reducing acute asthma morbidity for some, but not all populations.(2) Using data from the National Hospital and Ambulatory Medical Care Survey (NHAMCS) they describe trends in asthma-related ED use from 1993 through 2005, and report that while asthma-related ED use increased throughout the late 1990s, more recent data suggests that overall rates have plateaued. From a peak rate of 7.6 asthma-related ED visits per 1000 persons in 1998, the rate by 2005 decreased to 6.0. The authors suggest that the observed stabilization is likely attributable to successful national efforts to improve asthma management, particularly the increased use of long-term controller medications.(3) However, while these data provide some encouraging news that rates of asthma morbidity are not continuing to sky-rocket, the sobering reality is that current asthma-related ED use still remains unnecessarily high. As

Corresponding Author: Cynthia Rand, PhD, Professor of Medicine, Pulmonary and Critical Care Medicine, Johns Hopkins School of Medicine, JHAAC, 5501 Hopkins Bayview Circle, Baltimore, MD 21224. E-mail: crand@mail.jhmi.edu.

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the authors note, the great majority of ED visits for asthma can be prevented by effective asthma management by clinicians and patients. The data reported by Ginde et al. highlight the potential to effect positive change in controlling asthma through professional education, while underscoring the need for additional improvement.

More troubling is the differential improvement observed for rates of asthma-related ED use in white and black populations. For whites the rate of asthma-related ED use has decreased by 25% from 1998 to 2000, however, since 2000 the rate for blacks has trended upward. In fact, Ginde et al. found that blacks have four times the rate of asthma-related ED use as whites, and the black/white ratio of ED use has increased from 4.1 in 2002–2003 to 4.5 in 2004–2005.[2] The Centers for Disease Control (CDC) National Surveillance for Asthma --- United States, 1980—2004 has previously reported that at-risk based rates of ED use (i.e. among those with asthma) are higher overall for blacks adults and children compared to whites (21.0 per 100 for blacks with current asthma vs. 7.0 for whites with current asthma), confirming that these disparities are not attributable to differing rates of asthma prevalence.[4] Further, the CDC also reports that Hispanics had higher rates of at-risk-based emergency department visits than did non-Hispanics (12.4 per 100 for Hispanics with current asthma vs.8.4 for non-Hispanics with current asthma). Others have reported that asthma disparities continue to be particularly high for Puerto Rican children and adults.[5;6] Taken together this data suggests that disparities gap may have actually increased during the same time frame in which multiple, broad-based public and private health initiatives were implemented to reduce asthma morbidity, including widespread dissemination of the National Asthma Education and Prevention Program (NAEPP) guidelines, as well as associated education programs for medical professionals, schools, and patients; the adoption of asthma quality of care measures by 90% of America's health care plans; as well as special initiatives by many health care agencies and plans specifically targeting asthma related health disparities. [3;7–10]

The question is therefore why increased public health efforts to improve asthma control across all people apparently only benefited some people. Were these diverse asthma education and quality of care initiatives insufficient, misdirected or simply ineffectual in addressing asthma-related health disparities? Some researchers have suggested that none of the above apply, and that in fact, efforts to improve the health of the overall population will invariability increase the gap in health between majority and disadvantaged populations, since those with more education and resources will be most able to adopt and benefit from health care innovations and initiatives. However, others have argued that there is no predictable pattern of increasing or decreasing health disparities when overall population health improves, and that improvements in population health are dependent on social and political priorities, as well as the effectiveness of specific health policies and programs.[11;12] Krieger et al. hypothesize that social factors that influence levels of health inequity include "rising levels of medical uninsurance, persistent racial/ethnic and socioeconomic disparities in the quality of medical care, and delayed access of underserved populations to effective medical innovations." [13] Based on this perspective, effective strategies to reduce asthma-related disparities would require going beyond ICS prescribing, to more directly addressing relevant systemic, social and behavioral determinants of asthma health.

Recently, multiple authors in this journal have contributed thoughtful analyses of the contributing roles of genetic, environmental, community and cultural factors to asthma disparities.[14–19] The Institute of Medicine (IOM) report on health inequities has also described systemic health care factors, including bias, stereotyping and clinical uncertainty which contribute to these disparities.[20] Consistent with the IOM report, multiple studies have confirmed that disparities in health care exist for asthma, with minority patients less likely to receive guideline-based management from their providers. For example, Okelo et al. found that physicians tended to underestimate asthma severity in black patients compared to white patients.[21] The investigators suggested that underestimation of asthma severity may contribute to under-treating of asthma in minority patients. Supporting this observation, several studies have found that minority adults and children are less likely to receive ICS controller therapy and other components of guideline-based care, such as asthma action plans, allergen counseling, or referral to a specialist. [22–24]

In addition to deficits in asthma medical management, a number of studies suggest that minority patients may be more likely to share health beliefs about asthma and asthma management that are not congruent with effective asthma management.[25–27] Halm et al. surveyed low-income, inner-city patients hospitalized for asthma and examined beliefs about asthma care and chronicity.[28] They found that the majority of patients believed that they only had asthma when they were symptomatic (“no symptoms, no asthma”), and this belief was, in turn, associated with lower ICS adherence. Similarly, Le et al. found that black adults with asthma were less likely to use their ICS inhaler than white patients, and this adherence difference was mediated by more negative beliefs about the needs for ICS therapy among black patients.[29] When patients believe that asthma comes and goes it is understandable that they would be less likely to use controller therapies regularly, which in turn can contribute to poorer asthma control. In addition, patients whose asthma-self-care is driven primarily by the urgency of symptoms may be more likely to delay treatment too long, and thus require ED care.

There is growing evidence that patient-provider asthma communication during the clinical encounter may be a critical and promising juncture for addressing health disparities and translating guidelines into improved asthma management. Effective, patient-centered communication can result in more accurate clinical assessment of asthma, identification of health literacy barriers to understanding and self-care, increased patient trust and acceptance of therapy, and improved adherence.[30] And while routine outpatient care rightly remains the appropriate setting for regular asthma management and communication, a number of researchers have argued that the time has come to incorporate more elements of chronic asthma education, communication and treatment into the ED encounter.[31]

Reversing the increasing gap in asthma-related ED utilization will require innovative, national efforts to further translate, tailor and adapt asthma guidelines for diverse populations with differential risk. Recent guideline revisions which now explicitly assess and address patient risk, including history of ED use, is a positive step in this direction.[32] More broadly, public policy needs to acknowledge and address how economic, social and environmental factors directly and indirectly contribute to asthma health disparities.

Together, these efforts have the potential to extend the reductions in ED morbidity described by Ginde et al. to all patients, regardless of race, age or gender.

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