

Guest Editorial

Characterizing asthma in Qatar



Asthma is a generic, “wastebasket” term that characterizes a heterogeneous group of chronic inflammatory disorders of the airways that have sufficiently similar features to be listed under the rubric asthma. Asthma is a multidimensional syndrome that exhibits some geographic diversity. The expression of asthma is variable because of gene-by-environment interactions, multiple pathophysiologic mechanisms, varied environmental exposures, comorbidities, age, underlying disease severity, inconsistencies in health care access and quality of care received, biopsychosocial factors, variable responsiveness to therapy, and variable burden of disease. This syndrome has multiple phenotypes as determined by recent cluster analysis.¹ Endogenous mechanisms that underlie asthma phenotypes are being gradually elucidated. Multiple asthma studies have found that the demographic characteristics of asthma, in conjunction with expressed phenotypes, place subgroups of the population at high risk for poor asthma outcomes.

In the current study published in the *Annals*, the authors' primary objectives were to assess asthma control, asthma patients' level of asthma education, and the level of asthma care in Qatar. Additional objectives were to link the level of asthma control to the type of physician practice and to assess the clinical characteristics of asthma in Qatar.

In this cross-sectional asthma study of 520 adults with physician-diagnosed asthma (all patients being at least 15 years old), several observations were made:

- Many asthmatic patients in Qatar have asthma that is uncontrolled or only partly controlled despite Qatar's high rank in wealth among nations. Approximately 59% of asthmatic patients in this study had either partly controlled or uncontrolled asthma.
- Asthma control was generally poor at all levels but worse at the primary care level.
- Despite Qatar's financial assets, some patients with asthma cannot afford their asthma medications.
- Many asthmatic patients in Qatar have limited knowledge about asthma. Approximately 43% of the participants in this study did not know the difference between reliever and controller asthma medications.
- This study determined that 47% of the study participants had poor inhaler technique.
- The asthma education program in Qatar is deficient. Asthma education is underdeveloped even at the tertiary care level. Physicians have limited knowledge and understanding of international asthma guidelines.
- Primary care physicians in Qatar rarely use spirometry to objectively assess lung function in individuals with asthma. Spirometry is not available in most of their primary care centers.

- Access to respiratory specialists in Qatar is limited. As is the case in the United States, approximately two-thirds of asthmatic patients in Qatar are cared for by primary care physicians. In this study, approximately 34% of asthmatic patients were managed by a respiratory specialist.
- There are no dedicated asthma clinics in primary health centers in Qatar.
- Some asthmatic patients in Qatar use the emergency department (ED) as an outpatient clinic, increasing resource use for asthma management: approximately 57% of the study participants had at least one ED visit within the previous year (approximately 19% had >3 ED visits within the previous year).
- There appears to be no formal asthma management program in Qatar.
- Qatar does not have an asthma registry.
- The prevalence of asthma among asthmatic adults in Qatar is unknown.
- Work absenteeism due to asthma is high in Qatar: in this study, approximately 26% of asthmatic patients were absent from work because of asthma in the previous 3 months. There is no mention of school absenteeism rates.

In this study, the authors did not pursue assessing the prevalence of asthma in Qatar or assessing the association between socioeconomic factors and asthma control. Because the prevalence and demographic characteristics of asthma in Qatar have not been worked out, it would be inappropriate to assume that the sex discrepancy traditionally seen in adult asthma in many populations (with women dominating the categories of asthma prevalence and morbidity) is not operative in Qatar. The authors provided no data on asthma mortality in Qatar.

On the basis of the data presented in this study, one can conclude that very high gross domestic product per capita has not led to better asthma care in Qatar compared with other affluent countries.

Qatar has a need for a national asthma management program based on evidence-based asthma guidelines. In Qatar, there is also a need for behavior modification on three fronts: (1) there is a need for patient behavior modification in asthma self-efficacy, (2) there is need for clinician behavior modification in asthma management, and (3) there is a need for institutional behavior modification and the adoption of a systems approach to asthma disease management.

There are many risk factors that contribute to the increasing likelihood of poor asthma outcomes. For a given asthmatic patient or group of asthmatic patients, such factors constitute variables that may negatively affect asthma, thereby contributing to asthma exacerbations, premature loss of lung function, and increased resource use. High-risk asthmatic patients should be identified. In

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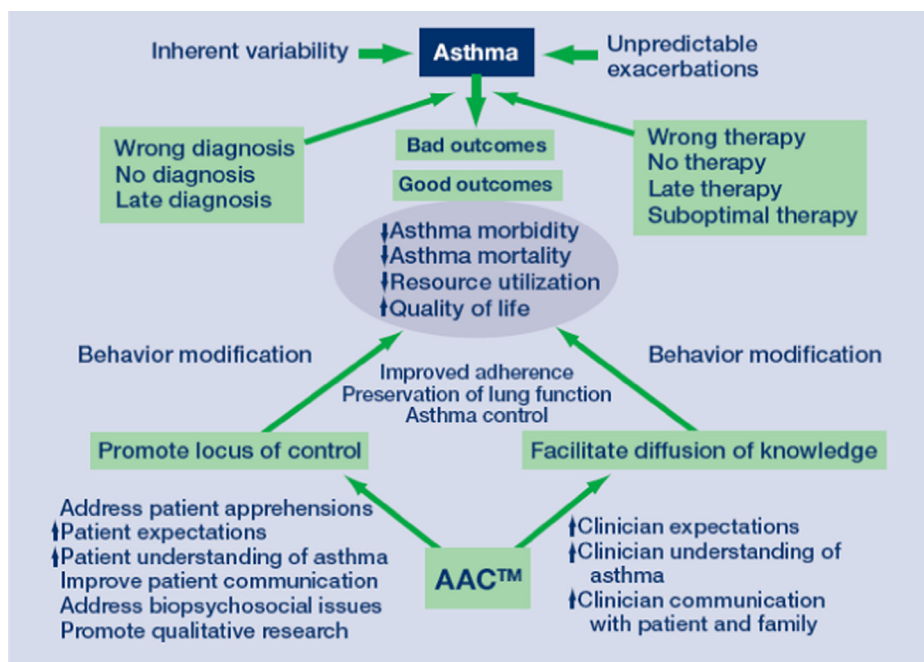


Figure 1. Anticipatory Asthma Care (AAC) paradigm.

keeping with individualization of therapy, aggressive interventions should be commensurate with the patient's current impairment to minimize future risks of asthma morbidity, asthma mortality, decreased lung function, and unnecessary resource use.

Other specific actions that the Qatar Ministry of Health could implement to improve asthma outcomes include the following:

- Establish an asthma registry
- Measure asthma prevalence
- Improve access to respiratory specialty care
- Identify patient belief systems and perceptions about asthma
- Identify high-risk asthmatic patients
- Use asthma-dedicated case managers to longitudinally track high-risk asthmatic patients' medical disposition
- Use problem-based learning to educate and update clinicians about evidence-based asthma guidelines
- Aggressively attack modifiable barriers to optimal asthma care
- Increase availability of asthma medications
- Make spirometry readily available at all health care facilities

At Advocate Health Care, we use what I have designated the Anticipatory Asthma Care paradigm (Figure 1). The implementation of this paradigm incorporates the National Institutes of Health

asthma guidelines-generated impairment and risk domains and facilitates the induction of behavior modification at a number of levels to improve asthma outcomes.^{2–4} We have used it with great success in decreasing asthma morbidity and improving quality of life in high-risk asthmatic African Americans cared for within our system.

Michael B. Foggs, MD
 Advocate Health Care
 Chicago, Illinois
immunotype@post.harvard.edu

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