SUPPLEMENT ARTICLE

THE AMERICAN JOURNAL of MEDICINE®

Anaphylaxis Challenges on the Front Line: Perspectives from Community Medicine

John R. Bennett, MD (Moderator),[a,1] Leonard Fromer, MD,[b] and Mary Lou Hayden, MS, RN, FNP, AE-C[c,2]

[a]*Cumming Internal Medicine, Cumming, Ga;* [b]*University of California at Los Angeles, Los Angeles, Calif;* [c]*University of Virginia, Charlottesville, Va.*

ABSTRACT

This report reflects a discussion from the multidisciplinary Partnership for Anaphylaxis Round Table meeting, held in November 2012, in Dallas, Texas. Community medicine participants included John R. Bennett, MD, an internist who practiced in Cumming, Georgia, and whose patients were adults; Leonard Fromer, MD, a family practitioner in Los Angeles, California, who was the medical director of a network of 600 medical groups, including pediatricians, internists, and family physicians, and who in his previous practice treated children and adults, many of them with severe allergies; and Mary Lou Hayden, MS, RN, FNP-BC, AE-C, a nurse practitioner who treated adults in a university employee health clinic and in an allergy clinic in Charlottesville, Virginia, and whose prior practice focused on allergy and immunology in children and adults. This discussion was moderated by Dr Bennett. Participants provided their perspectives as primary care providers (PCPs) concerning anaphylaxis, which has become a major public health concern. The rising prevalence of severe allergies and incidence of anaphylaxis and other severe allergic reactions among children and adults is shifting more care to PCPs. This discussion provides insights into challenges faced by PCPs in treating patients at risk for anaphylaxis in the community setting and provides potential solutions to those challenges.

 • *The American Journal of Medicine (2014) 127, S25-S33*

KEYWORDS: Anaphylaxis; Community medicine; Epinephrine; Patient management; Severe allergic reaction; Symptom recognition

As noted in the article in this supplement by Dr Philip Lieberman,[1] the National Institute of Allergy and Infectious Diseases (NIAID) and the Food Allergy and Anaphylaxis Network (FAAN) have defined anaphylaxis for the general public as a serious allergic reaction with rapid onset that may cause death.[2] (Note: As of November 12, 2012, FAAN merged with the Food Allergy Initiative under the name Food Allergy Research & Education [FARE].) For health care professionals, anaphylaxis was characterized as a systemic reaction resulting from the sudden release of multiple mediators from mast cells and basophils; the reaction is often life threatening and usually unexpected.

Funding: This work was supported by Mylan Specialty L.P.

Conflict of Interest: John R. Bennett, MD, received an honorarium for attending the Partnership for Anaphylaxis Round Table, but no payment was provided for writing of this manuscript. Leonard Fromer, MD, is a speaker and consultant for Mylan Specialty L.P., and received an honorarium for attending the Partnership for Anaphylaxis Round Table. However, no payment was provided for writing of this manuscript. Mary Lou Hayden, MS, RN, FNP, AE-C, is a speaker and consultant for Mylan Specialty L.P., and received an honorarium for attending the Partnership for Anaphylaxis Round Table. However, no payment was provided for writing of this manuscript. Ms Hayden also is a consultant and speaker for Teva, Sunovion, and Genentech.

Authorship: Drs Bennett and Fromer and Ms Hayden all fully qualify for authorship of the manuscript, having all participated in the discussion upon which it is based, and having made substantial contributions to the conception and design of the work; the acquisition, analysis, and interpretation of data for the work; and the identification and interpretation of the appropriate published literature. All of the authors were involved in drafting and critically revising the manuscript for important intellectual content, reviewed the final manuscript, and gave approval for submission. Drs Bennett and Fromer and Ms Hayden are all accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Requests for reprints should be addressed to John R. Bennett, MD, Internal Medicine Practitioner, Effingham Family Medicine at Port Wentworth, 7306 Highway 21, Suite 105, Port Wentworth, GA 31407.

E-mail address: jrb1003@hotmail.com

[1]Current affiliation: Effingham Family Medicine at Port Wentworth, Port Wentworth, Ga.

[2]Current affiliation: BreatheAmerica Richmond at Glen Allen, Va.

0002-9343/$ -see front matter
http://dx.doi.org/10.1016/j.amjmed.2013.09.011

The prevalence of anaphylaxis is difficult to ascertain, with some estimates as low as 0.03% and others as high as 15%, although most estimates are under 2.0%.[3,4] Factors such as age, medical history, and geographic location can all influence the rates of anaphylaxis in a given patient population.[3-5] In addition, the prevalence of anaphylaxis is increasing,[6-8] such that primary care providers (PCPs) are increasingly likely to provide care for patients at risk for anaphylaxis.

This report reflects a discussion from the multidisciplinary Partnership for Anaphylaxis Round Table meeting held in November 2012, in Dallas, Texas. Participants provided their perspectives as PCPs in the community medicine setting in a discussion moderated by John R. Bennett, MD. Participants included Leonard Fromer, MD and Mary Lou Hayden, MS, RN, FNP-BC, AE-C. At the time of the round table, Dr Bennett was an internist practicing in Cumming, Georgia, whose patients were adults. He now practices in Port Wentworth, Georgia. Dr Fromer was a family practitioner in Los Angeles, California, and the medical director of a network of 600 medical groups, including pediatricians, internists, and family physicians. In his previous practice, Dr Fromer treated children and adults, many of whom had severe allergies. Ms Hayden is a nurse practitioner who currently practices in a Virginia allergy and immunology subspecialty group (BreatheAmerica Richmond). At the time of the round table, she treated adults in a university employee health clinic and in an allergy clinic in Charlottesville, Virginia. Before that, her practice focused on allergy and immunology in children and adults. Although this discussion reflects their individual practices, it is hoped that other PCPs and specialists will find useful points that they can apply to their own settings.

FROM WHERE DO ALLERGY PATIENTS COME TO YOUR PRACTICE?

Dr Bennett: My patients are all adults, most of whom have had their allergies and anaphylactic triggers identified and who come to me for continuity of care. If they are sent to me from the emergency department (ED) after an anaphylactic reaction, I refer them to an allergist. Once one anaphylactic trigger is identified, there is a good chance that other potential triggers exist, and the allergist is best equipped to uncover them.

Dr Fromer: In our family practice setting, one third of our allergy patients were referred by other PCPs in our network for an allergy evaluation work-up. Another third were referred from the ED, and the last third were patients in my own practice who developed anaphylaxis.

Ms Hayden: In an allergy and immunology practice, most of our patients have already had an event and are referred either directly from the ED or from their PCPs. Nurse practitioners (NPs) in primary care practices are an important source of referrals.

WHAT ANAPHYLACTIC TRIGGERS ARE MOST COMMON IN YOUR AREA?

Dr Bennett: The most common anaphylactic triggers among my patients in Georgia are insect stings/venom, followed by food, and then medications. Latex also is a fairly common trigger in my practice.

Dr Fromer: In the practices in my network, the most common anaphylactic trigger is food. In my own practice in urban southern California, the weather is so dry that insect stings are not very common.

Ms Hayden: Food is the most common trigger in Virginia, followed by stinging insects, drugs, and idiopathic causes.

IN WHAT ENVIRONMENTS DO YOUR PATIENTS MOST COMMONLY EXPERIENCE AN ANAPHYLACTIC OR SEVERE ALLERGIC REACTION?

Dr Bennett: The most common environment for my patients is the outdoors (stings or venom), followed by the workplace (latex), home (food and medications), school, and transportation (Table 1).

Dr Fromer: In southern California, where food is the most common anaphylactic trigger, the home, restaurants, and school were the most frequent environments for an anaphylactic reaction, followed by the outdoors. There is great awareness about removing latex from the workplace in our area; therefore, I have not seen many exposures to latex.

Ms Hayden: Home, school, and restaurants most commonly, and in the case of venoms, home and recreation sites.

Table 1 Comparison of Settings in Which Patients from Each Practice Experience Anaphylaxis

	Bennett (Georgia)	Fromer (Southern California)	Hayden (Virginia)
Rank	Internal Medicine Practice	Family Medicine Practice	Allergy and Immunology Subspecialty Group
1	Outdoors	Home	Home
2	Workplace	Restaurants	School
3	Home	School	Recreation sites (venom)
4	School	Outdoors	Restaurants
5	Transportation	Workplace	—