

Letter to the Editor

Oral food challenge practices among allergists in the United States

To the Editor:

The recently published National Institute of Allergy and Infectious Diseases–sponsored “Guidelines for the diagnosis and management of food allergy in the United States”¹ and the “Work group report”² both state that oral food challenge (OFC) is a critical procedure for the evaluation of food allergy. Fleischer et al³ reported that OFCs were crucial in identifying children who were otherwise following unnecessary dietary restrictions based on the results of *in vitro* testing. A subgroup of the Adverse Reactions to Foods Committee of the American Academy of Allergy, Asthma & Immunology (AAAAI) conceived and designed a survey to collect data about allergists’ use of this important diagnostic procedure.

The anonymous survey, distributed to AAAAI member allergists whose primary practice site was located in the United States or its territories, was conducted in December 2009 by using Survey Monkey. There were 670 respondents in total whose practices were located in the District of Columbia, Puerto Rico, and all states except Alaska and Wyoming. Among them, 35% reported being in practice for more than 20 years, whereas 27% practiced for less than 5 years. Thirty-five percent of respondents were in group allergy/immunology practices, 23% were in solo practices, and 16% were in group multispecialty practices; 19% were in academics, and 5% were hospital based. More than half (52%) of respondents had residency training in pediatrics, 39% trained in internal medicine, and 9% reported a combined medicine-pediatrics residency. Only 45% reported having personally performed OFCs during fellowship training. A majority of respondents (85.5% [n = 568]) indicated that they currently perform office-based OFCs. Those who did not (14.5% [n = 96]) were instructed not to continue with the rest of the survey. The rest of the data in this report are limited to those who indicated that they perform OFCs in their offices.

The majority (69.9%) of respondents generally perform 1 to 5 OFCs per month; 12.7% perform less than 1, 11.8% perform 6 to 10, and 5.6% perform more than 10 per month. Open nonblinded challenges are most commonly performed (87.6% of respondents); 8.2% of OFCs are single-blind, 1.1% are double-blind without placebo, and 3.2% are double-blind, placebo-controlled OFCs. More than half (53.6%) of respondents obtain written informed consent for OFCs. Fifty-seven percent stated that their office staff is involved in preparation of the food to be used in OFCs. Table I shows specific issues related to effort in conducting OFCs.

The survey also inquired about coding and reimbursement. When asked how they code for OFCs, 59.4% submit both an Evaluation and Management (E and M) and ingestion challenge procedure code (Current Procedural Terminology [CPT] code 95075); 29.4% use only CPT code 95075, and 7.1% use only an E and M code. In response to the question “If you receive reimbursement from third party payors, do you feel it is adequate?” 76.9% responded no. Despite the perceived barriers (Table II), 98.7% of respondents indicated that they saw a need to perform OFCs in their clinical practice.

In summary, 85.5% of respondents report that they perform OFCs. However, there is a large discrepancy in the number of

TABLE I. Effort and personnel involved in OFCs

Question	Response rate (%)
Average time physician/staff spend preparing OFCs	
0 min	1.1
1-15 min	39.4
16-30 min	34.2
31-60 min	15.3
>1 h	9.9
Who typically administers and monitors OFCs (may select >1)?	
Allergist	77.4
Registered nurse	55.2
Medical assistant	26.1
Nurse practitioner	10.9
Physician’s assistant	4.6
Other	9.1
Average duration of OFC procedure visit	
<1 h	1.3
1-2 h	27.0
3-4 h	63.6
5-6 h	7.4
>6 h	0.7

TABLE II. Barriers to performing OFCs

Barrier	Response rate (%)	Response count
Lack of time	55	292
Reimbursement	53.7	285
Risk of adverse event	51.8	275
Lack of staff	44.3	235
Lack of office space	27.1	144
Lack of experience	11.5	61
No nearby hospital	7.9	42
Lack of need	2.6	14
Other	9.2	49
Total		531

Respondents were instructed to check all answers that apply.

OFCs being performed, with a very small proportion (5.6%) of allergists performing more than 10 OFCs per month and 70% performing 1 to 5 OFCs per month. The top 3 perceived barriers to performing OFCs were time, inadequate reimbursement, and risk of an adverse event. Indeed, the survey disclosed that the duration of the procedure is most often 3 to 4 hours, with significant use of the allergist and additional office staff for preparation and supervision. The reported lack of adequate reimbursement (77%) for the time-intensive procedure represents another important barrier, which likely explains the low rate of use. The survey also disclosed underperformance of written informed consent and discrepancies regarding the manner of coding. A troubling finding was that fewer than half of the respondents had personally performed OFCs during allergy/immunology training.

The survey has limitations, including self-selected participation and self-report. For example, lack of adequate training in the performance of OFCs could be a self-selecting factor. However, it is likely that nonparticipants would comprise allergists who find barriers to performing OFCs to be insurmountable, biasing the

results toward lower rates of barriers among participating respondents who perform OFCs.

OFC is a required procedure to properly diagnose food allergy, allow adequate nutrition, document resolution of allergy, and improve quality of life.^{1,2,4} The barriers identified in this survey must be addressed to increase appropriate use of this procedure. Some of the barriers identified can be addressed through education, whereas others would require improved reimbursement. Special training opportunities could include how-to seminars, webinars, video materials and interactive hands-on sessions. National organizations, such as the AAAAI; the American College of Allergy, Asthma and Immunology; and the joint council of these bodies should promote and publicize the necessity of OFCs to members, the public, and insurance companies. Insurers might not recognize that the OFC is a 3- to 4-hour procedure (even longer with preparatory time) and that there are risks of anaphylaxis requiring intensive monitoring and appropriate personnel. Written informed consent should be performed, just as it is for other procedures that have risk. Training-program directors should take heed of the findings and ensure that adequate training and experience are provided for conducting OFCs in all training programs. Through advocacy, education, and improved reimbursement, this required procedure can be more appropriately used to properly manage food allergy.

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REFERENCES

1. Boyce JA, Assa'ad A, Burks AW, Jones SM, Sampson HA, Wood RA, et al. Guidelines for the diagnosis and management of food allergy in the United States: report of the NIAID-sponsored expert panel. *J Allergy Clin Immunol* 2010;126(suppl):S1-58.
2. Nowak-Wegrzyn A, Assa'ad AH, Bahna SL, Bock SA, Sicherer SH, Teuber SS. Work group report: oral food challenge testing. *J Allergy Clin Immunol* 2009;123(suppl):S365-83.
3. Fleischer DM, Bock SA, Spears GC, Wilson CG, Miyazawa NK, Gleason MC, et al. Oral food challenges in children with a diagnosis of food allergy. *J Pediatr* 2011;158:578-83.
4. DunnGalvin A, Cullinane, Daly DA, Flokstra-de Blok BMJ, Dubois AEJ, Hourihane JO'B. Longitudinal validity and responsiveness of the food allergy quality of life questionnaire—parent form in children 0-12 years following positive and negative food challenges. *Clin Exp Allergy* 2010;40:476-85.

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