follow-up visits, and future studies should prospectively follow up outcomes such as resolution of symptoms. We do not compare phone care for these conditions, which is commonly provided in primary care. Our results highlight key differences between office visits and e-visits and emphasize the need to assess the clinical impact of e-visits as their popularity grows.

Ateev Mehrotra, MD
Suzanne Paone, DHA
G. Daniel Martich, MD
Steven M. Albert, PhD
Grant J. Shevchik, MD

Published Online: November 19, 2012. doi:10.1001/2013.jamainternmed.305
Author Affiliations: University of Pittsburgh School of Medicine (Drs Mehrotra and Martich), RAND Corporation (Dr Mehrotra), University of Pittsburgh Medical Center Health System (Drs Paone, Martich, and Shevchik), and University of Pittsburgh Graduate School of Public Health (Dr Albert), Pittsburgh, Pennsylvania.
Correspondence: Dr Mehrotra, Department of Medicine, University of Pittsburgh School of Medicine, 230 McKee Pl, Ste 600, Pittsburgh, PA 15213 (mehrotra@rand.org).
Author Contributions: *Study concept and design:* Mehrotra, Paone, Martich, and Shevchik. *Acquisition of data:* Mehrotra, Paone, Martich, and Shevchik. *Analysis and interpretation of data:* Mehrotra, Martich, and Albert. *Drafting of the manuscript:* Mehrotra and Paone. *Critical revision of the manuscript for important intellectual content:* Martich, Albert, and Shevchik. *Statistical analysis:* Mehrotra and Albert. *Obtained funding:* Mehrotra, Paone, and Martich. *Administrative, technical, and material support:* Paone, Martich, and Shevchik. *Study supervision:* Mehrotra, Paone, Martich, and Shevchik.
Conflict of Interest Disclosures: None reported.
Funding/Support: This study was supported in part by funding from the National Institutes of Health (KL2 RR24154-6, R21 AI097759-01) and the University of Pittsburgh Medical Center.
Online-Only Material: Listen to an author interview about this article, and others, at http://bit.ly/OsqsNt.
Previous Presentation: This study was presented in part at the AcademyHealth Annual Research Meeting; June 25, 2012; Orlando, Florida.

1. E-visits: connect with a clinician online. Allina Health website. http: //www.allinahealth.org/ahs/medicalservices.nsf/page/evisits_MyChart. Accessed March 29, 2012.
2. Bershow B. The doctor is in (your inbox). Minnesota Medicine website. http: //www.minnesotamedicine.com/PastIssues/PastIssues2009/January2009/PulseInboxJanuary2009.aspx. Accessed March 29, 2012.
3. Rohrer JE, Angstman KB, Adamson SC, Bernard ME, Bachman JW, Morgan ME. Impact of online primary care visits on standard costs: a pilot study. *Popul Health Manag.* 2010;13(2):59-63.
4. Whitten P, Buis L, Love B. Physician-patient e-visit programs: implementation and appropriateness. *Dis Manag Health Outcomes.* 2007;15(4):207-214.
5. Williamson IG, Rumsby K, Benge S, et al. Antibiotics and topical nasal steroid for treatment of acute maxillary sinusitis: a randomized controlled trial. *JAMA.* 2007;298(21):2487-2496.
6. Clinical laboratory fee schedule. Centers for Medicare & Medicaid Services website. https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/ClinicalLabFeeSched/clinlab.html. Accessed March 29, 2012.
7. Mehrotra A, Liu H, Adams JL, et al. Comparing costs and quality of care at retail clinics with that of other medical settings for 3 common illnesses. *Ann Intern Med.* 2009;151(5):321-328.

Users' Views of Dietary Supplements

Despite the rapid growth of the dietary supplement market, little is known about the reasons people take supplements. Awareness of the number of persons using dietary supplements, as well as the range of products they use and their reasons for using them, may help practicing physicians improve their communications with patients.[1] In this article, we present findings from a recently conducted nationwide public survey about dietary supplements to report on the purposes for which supplement users take these products and which types they use.

Methods. The data are derived from a survey conducted by the Harvard Opinion Research Program at the Harvard School of Public Health, Boston, Massachusetts. Fieldwork was conducted via telephone (landline and cell phone) for the Harvard Opinion Research Program by SSRS of Media, Pennsylvania, from August 11 to September 7, 2011, among a national representative sample of 1579 respondents 18 years and older. The interviews were conducted in English and Spanish. Responses were weighted according to US Census data to reflect the demographic makeup of the adult population. The margin of error is plus or minus 2.9 percentage points for total respondents at the 95% confidence level and plus or minus 4.8 percentage points for the 584 dietary supplement users.

In the survey, dietary supplements are described as follows:

> . . . dietary supplements other than vitamins and minerals. These kinds of supplements include pills, drops, syrups, and other liquids and capsules made from or containing one or more herbal products, like echinacea, ginseng, probiotics, amino acids, and many other such substances that people take to improve their health and well-being.

Respondents were also instructed to exclude from their responses "foods that people eat, or vitamins and minerals alone, like multivitamins or calcium, or prescription or over-the-counter drugs." Complete results of the survey are available at http://www.hsph.harvard.edu/research/horp/files/topline_for_report.pdf.

Results. Nearly 4 in 10 American adults (37.8%) reported having taken any dietary supplement in the past 2 years, including 1 in 7 (13.9%) who reported taking supplements regularly. The supplement with the highest level of reported use was fish oil or other omega-3 supplements, with nearly one-fourth of adults (23.9%) reporting having taken these supplements in the past 2 years. Lower proportions—fewer than 1 in 7—reported having taken other types of supplements, such as herbals (12.5%) or probiotics (9.9%).

When dietary supplement users (those who had used dietary supplements in the past 2 years) were asked why they made the decision to use dietary supplements, the most common answers were "to feel better" (41.0%), "to improve your overall energy levels" (40.8%), and "to boost your immune system" (35.9%). Significant numbers of

Table. Purposes for Dietary Supplement Use Among Adults[a]

Variable	% of Adult Supplement Users[b] (95% CI)
Over the last 2 years, have you taken dietary supplements for any of the following reasons	
To feel better?	41.0 (34.6-47.8)
To improve your overall energy levels?	40.8 (34.3-47.6)
To boost your immune system?	35.9 (29.9-42.4)
To treat digestive issues?	28.4 (22.8-34.7)
To reduce the risk of heart disease?	27.8 (22.3-34.0)
To relieve pain?	25.5 (20.0-31.9)
To improve your mental functioning?	25.0 (19.8-31.0)
To help you sleep?	24.4 (19.2-30.5)
To get a quick energy boost or to help you stay awake?	23.7 (18.2-30.2)
To lower cholesterol?	20.6 (15.7-26.4)
To help with weight control?	20.2 (15.2-26.2)
To reduce risk of or prevent a disease such as cancer?	18.8 (14.1-24.7)
To treat premenstrual syndrome, menstrual cramps, or menopause? (asked of all female users) (n = 354)	17.8 (13.4-23.2)
To lower high blood pressure?	15.7 (11.4-21.1)
To build muscle?	13.7 (9.4-19.5)
To treat arthritis?	13.3 (9.7-17.9)
To improve mood or alleviate depression?	11.9 (8.4-16.6)
To improve athletic performance?	11.2 (7.4-16.6)
To slow down the aging process?	11.0 (7.6-15.6)
To improve appearance?	11.0 (7.4-15.9)
To lower blood glucose levels or to prevent the onset of type 2 diabetes?	8.7 (5.9-12.7)
To treat acne or other skin disorders?	5.0 (2.7-9.3)
To increase sexual drive, sexual performance, or other sexual issues?	4.7 (2.7-8.1)
To relieve the effects of altitude?	1.4 (0.5-3.4)
To treat infertility?	0.2 (0-1.5)

[a] All items, except where indicated, were asked of half of the dietary supplement users (n = 292).
[b] Adult dietary supplement users were 37.8% of the total sample.

users reported taking supplements for a wide range of other purposes, including "to treat digestive issues" (28.4%), "to relieve pain" (25.5%), "to lower cholesterol" (20.6%), "to lower high blood pressure" (15.7%), "to treat arthritis" (13.3%), and "to improve mood or alleviate depression" (11.9%) (**Table**).

More than 8 in 10 users (82.3%) considered it important that they have access to supplements, including about half (49.5%) who considered it very important. Also, supplement users were asked about the potential impact of government-sponsored studies on the efficacy of particular dietary supplements that they were taking. Most dietary supplement users said that they would be minimally influenced by government statements contradicting the efficacy claims of supplement manufacturers. Only one-fourth of users (25.4%) responded that they would cease their use of a supplement if public health authorities stated that it was ineffective. This number is the same as that reported in a 2001 study of the attitudes of dietary supplement users.[2] The poll also found that more than one-third of supplement users (35.9%) had not told their physician that they use any dietary supplements. Approximately 3 in 10 users (30.9%) said that a physician or nurse had recommended that they take a dietary supplement during the past 2 years, while 5.5% of users said that they had been told by a physician or nurse in the past 2 years to cease use of a dietary supplement.

Comment. Our findings indicate that nearly 4 in 10 of the general population are taking dietary supplements, and the reasons for such use are varied, with the most common being general improvements in health and well-being, such as to feel better, to improve overall energy levels, and to boost immune systems. Practicing physicians should be aware that substantial numbers of persons take supplements to treat potentially serious health conditions, and many of them may not share this information with their physicians.

Many of the most commonly stated reasons for use have little connection to specific, measurable health goals and are more likely to be driven by individual perceptions of efficacy than by external scientific statements as to efficacy. As a result, many supplement users are unlikely to change behavior in response to statements from public health authorities about studies showing the ineffectiveness of particular supplements.

Robert J. Blendon, ScD
John M. Benson, MA
Michael D. Botta, AB
Kathleen J. Weldon, BA

Published Online: November 19, 2012. doi:10.1001/2013.jamainternmed.311
Author Affiliations: Department of Health Policy and Management, Harvard School of Public Health, Boston (Dr Blendon, Mr Benson, and Ms Weldon), and Program in Health Policy, Harvard University, Cambridge (Mr Botta), Massachusetts.
Correspondence: Dr Blendon, Department of Health Policy and Management, Harvard School of Public Health, 677 Huntington Ave, Fourth Floor, Boston, MA 02115 (rblendon@hsph.harvard.edu).
Author Contributions: All authors had full access to all the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis. *Study concept and design:* Blendon, Benson, and Weldon. *Acquisition of data:* Benson. *Analysis and interpretation of data:* Blendon, Benson, Botta, and Weldon. *Drafting of the manuscript:* Blendon and Botta. *Critical revision of the manuscript for important intellectual content:* Benson and Weldon. *Statistical analysis:* Botta. *Obtained funding:* Blendon. *Administrative, technical, and material support:* Benson and Weldon. *Study supervision:* Blendon.

Conflict of Interest Disclosures: None reported.
Funding/Support: The survey, part of an ongoing Harvard School of Public Health series focused on the public's response to public health emergencies, was funded under a cooperative agreement with the Centers for Disease Control and Prevention (CDC), the Food and Drug Administration (FDA), and the National Public Health Information Coalition (NPHIC).
Disclaimer: The contents of this article are solely the responsibility of the authors and do not necessarily represent the official views of the CDC, the FDA, or the NPHIC.

1. Kemper KJ, Amata-Kynvi A, Dvorkin L, et al. Herbs and other dietary supplements: healthcare professionals' knowledge, attitudes, and practices. *Altern Ther Health Med.* 2003;9(3):42-49.
2. Blendon RJ, DesRoches CM, Benson JM, Brodie M, Altman DE. Americans' views on the use and regulation of dietary supplements. *Arch Intern Med.* 2001; 161(6):805-810.

When Physicians Counsel About Stress: Results of a National Study

The prevalence of stress in primary care is high; 60% to 80% of visits may have a stress-related component.[1] Over the past 5 years, 44% of Americans have reported an increase in psychological stress.[2] Stress is associated with more office visits and disease, but little is known about stress management counseling in primary care.[3,4] Our study objective was to examine the rates of stress management counseling by US primary care physicians and to identify associated factors.

Methods. We obtained data from the 2006-2009 National Ambulatory Medical Care Survey (NAMCS), a cross-sectional, multistaged, stratified sampling survey of randomly selected, office-based physicians in the United States from 2006 through 2009; information was available on an aggregate of 123 192 office visits to 5105 physicians (average response rate, 60.4%).[5] We examined office visits, which included stress management counseling provided by a primary care physician. Stress management was defined as "information intended to help patients reduce stress through exercise, biofeedback, yoga, etc" and included physician counseling at the visit and "referrals to other health professionals for the purposes of coping with stress."[5] Our final sample consisted of 34 065 visits to 1263 physicians.

We conducted weighted analyses using SAS-callable SUDAAN (version 10.0; SAS Institute Inc) to account for the multistaged probability design, clustering of patients by physician, and oversampling of selected physician practices used by NAMCS. Potential correlates of the provision of stress management counseling by primary care physicians were (1) patient demographic characteristics (age, sex, race, education, income, region, insurance status, and survey year) and (2) visit characteristics (physician specialty, visit continuity, visit acuity, number of chronic conditions, number of visits, visit length, and diagnosis). Multivariable logistic regression modeling identified those factors independently associated with physician counseling about stress.

Table. Factors Associated With the Provision of Stress Management Counseling by US Primary Care Physicians[a]

Factor	aOR (95% CI)	*P* Value
Age, y		
18-29	1.22 (0.90-1.66)	
30-39	1.19 (0.86-1.64)	
40-49	1.17 (0.90-1.53)	<.001
50-64	1 [Reference]	
≥65	0.61 (0.45-0.81)	
Region		
Northeast	1.63 (1.00-2.65)	
Midwest	0.99 (0.70-1.39)	.02
South	1 [Reference]	
West	0.70 (0.46-1.06)	
Acuity of problem		
New problem	0.83 (0.65-1.05)	
Chronic problem, routine	1 [Reference]	<.001
Chronic problem, flare-up	1.43 (1.05-1.95)	
Chronic conditions, No.		
None	1 [Reference]	
1-2	1.70 (1.32-2.20)	<.001
3-4	1.94 (1.31-2.85)	
≥5	3.14 (2.05-4.82)	
Depressive disorder		
Yes	4.10 (3.06-5.49)	<.001
No	1 [Reference]	
Visit length, min		
0-20	1 [Reference]	
21-40	2.07 (1.64-2.61)	<.001
≥41	1.75 (1.16-2.65)	

Abbreviation: aOR, adjusted odds ratio.
[a] Analyses were adjusted for all factors in the table in addition to patient sex, race, education, income, insurance status, and survey year.

Results. From 2006 through 2009, 1020 of 33 045 office visits (3%) included stress management counseling by primary care physicians. Stress management counseling was the least common type of counseling, compared with counseling about nutrition (16.8%), physical activity (12.3%), weight reduction (6.3%), and tobacco cessation (3.7%).

Adjusted multivariable analyses identified factors independently associated with physician counseling about stress (**Table**). Older patients (age ≥65 years) were 39% less likely to be counseled, while patients living in the Northeast were 63% more likely to be counseled. Counseling was 43% more likely for patients being seen for a chronic problem flare-up. Counseling increased with the number of chronic conditions. Physicians were more likely to counsel patients with a depressive disorder. Finally, counseling was associated with longer visits.

Comment. This is the first study, to our knowledge, to examine factors associated with the provision of stress management counseling by US primary care physicians using a nationally representative sample. The low rate of counseling points to potential missed opportunities, suggesting that physician counseling about stress has not been incorporated into primary care to the extent of other types of counseling.

As the number of chronic conditions increased, so did the receipt of stress counseling, especially in patients seen for flare-ups of existing conditions. This is expected, since