

Antidepressant Self-Discontinuation: Results From the Collaborative Psychiatric Epidemiology Surveys

Hillary Samples, M.H.S., and Ramin Mojtibai, M.D., Ph.D.

Objective: The goal of this study was to examine the extent and correlates of self-discontinuation of antidepressant medications without physician advice.

Methods: Among 1,411 participants of the nationally representative Collaborative Psychiatric Epidemiology Surveys who reported using antidepressants in the past year, socio-demographic and clinical correlates of self-discontinuation of medication without physician advice or approval were examined, along with participants' reasons for discontinuation.

Results: A total of 313 (22%) antidepressant users in the preceding year reported discontinuing their antidepressant medication without physician advice or approval. Older individuals had reduced odds of self-discontinuing antidepressants. Participants with an anxiety or substance use disorder and those prescribed an antidepressant by a provider other than

a psychiatrist had higher odds of self-discontinuation. Participants with public insurance had lower odds of self-discontinuation than those with private insurance. The two most commonly reported reasons for self-discontinuation of antidepressants were side effects and experiencing no benefit from the medication.

Conclusions: Physicians prescribing antidepressants need to clearly communicate the expected benefits of treatment, the minimum duration of use required to experience benefits, and the potential side effects of these medications, particularly to younger patients, those with anxiety disorders, and patients treated in general medical settings, all of whom have increased odds of self-discontinuation.

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Extensive research evidence supports antidepressant efficacy in treating depression and anxiety disorders (1–5). Nevertheless, antidepressant treatments in the community commonly fall short of evidence-based guidelines (6). Many patients use antidepressants inconsistently or stop them prematurely (7). Practice guidelines for treatment of mood and anxiety disorders generally recommend continuing antidepressant treatment for several months after the symptoms have resolved. In the STAR*D (Sequenced Treatment Alternatives to Relieve Depression) trial comparing antidepressant treatments for patients with major depression, half of patients who remitted did so after six weeks of treatment (8). Yet in one study, over 40% of patients in a representative community sample stopped medication within 30 days of initiation (7).

Knowing who is at greater risk of stopping antidepressants and the reasons they stop would benefit prescribing clinicians and provide guidance for interventions aimed at improving continuation of treatment. Past research has identified a number of sociodemographic and clinical factors associated with stopping antidepressants (7–17) but has mainly focused on clinical samples (13,16,17) or used pharmacy or other administrative data (9,15,18). Past research rarely examined self-reported reasons for stopping antidepressants in conjunction

with clinical information in a representative population sample. This study aimed to address this deficiency by examining self-discontinuation of antidepressants in a large and representative population sample of U.S. adults.

Specifically, we compared sociodemographic (sex, age, race-ethnicity, education, income, and insurance status) and clinical (diagnosis, impairment, antidepressant medication class, and prescriber) characteristics of antidepressant users who discontinued medication with those who did not and assessed the self-reported reasons for self-discontinuation. In further analyses, we explored the characteristics associated with specific reasons for self-discontinuation.

METHODS

Sample

Data were drawn from the Collaborative Psychiatric Epidemiology Survey (CPES), which included 20,013 U.S. adults participating in three similar surveys of the U.S. population between 2001 and 2003 (19). The component surveys included the National Comorbidity Survey–Replication (NCS-R) (20), the National Survey of American Life (NSAL) (21), and the National Latino and Asian American Study (NLAAS) (22). The

NCS-R recruited noninstitutionalized English-speaking civilians in the U.S. general population. The response rate for primary respondents was 70.9% (19). The NSAL and NLAAS focused on specific racial-ethnic groups. The NSAL focused on black Americans and had a total response rate of 71.5%; the NLAAS focused on Latinos and Asian Americans, with an overall response rate of 74.7% (19). All three surveys interviewed adults 18 years old and older who were living in households in the coterminous United States. The surveys used very similar sampling and ascertainment methods. Detailed information regarding the CPES is provided elsewhere (23). The sample was further limited to 1,411 (9%) participants who reported taking one or more antidepressants at some point during the preceding year.

Measures

Antidepressant use. Participants were asked to indicate which medications they had taken in the past year if they endorsed receiving any prescription for “emotions, nerves, mental health, substance use, energy, concentration, sleep, or ability to cope with stress.” Up to 20 different medications were recorded. Analyses were limited to the first three the participant cited because other relevant variables, including stopping medication and prescriber type, were ascertained only for the first three medications. Most antidepressant mentions (98%) were captured by participants’ first three mentions.

Participants were asked whether they were still taking each of the first three medications they listed. If participants discontinued their medication, they were asked whether a health professional either instructed or approved the discontinuation and whether they stopped because they felt so much better that the medication was no longer needed or for another reason. Those reporting continuing to take medication or stopping because of professional directive or approval or because the medication was no longer needed were coded as non-self-discontinuers. Those who reported stopping medication for any other reason were coded as self-discontinuers.

Participants who self-discontinued were asked about the reasons for stopping. Options included the medicine not helping, thinking the problem would resolve without medication, considering the medication costs unaffordable, being too embarrassed to continue medication, wanting to solve the problem without medication, experiencing side effects, fearing dependence on the medication, feeling pressure from someone to stop, or other reasons not specified. Participants could endorse multiple reasons.

Antidepressants were categorized as selective serotonin reuptake inhibitors (SSRIs), selective norepinephrine reuptake inhibitors, tricyclic antidepressants (TCAs), and other antidepressants. Participants were asked whether a psychiatrist, a general or family doctor, or another doctor or health professional prescribed the medication. Individual antidepressant medications included are described elsewhere (24). In addition to clinically relevant factors, such as antidepressant class and diagnosis, covariates were chosen on the basis of associations with antidepressant use from past research (7–17).

Diagnosis and impairment. Twelve-month diagnoses were based on *DSM-IV* criteria (25) and were ascertained with the Composite International Diagnostic Interview (CIDI) (26). Diagnoses for this study included anxiety disorders (generalized anxiety disorder, posttraumatic stress disorder, social phobia, panic disorder, or agoraphobia without panic disorder), mood disorders (bipolar I or II disorders, dysthymia, or major depressive disorder), and substance use disorders (alcohol or drug abuse or dependence). Impairment associated with mental health problems was assessed for participants reporting symptoms of depression, generalized anxiety disorders, panic disorder, agoraphobia, and social phobia. Respondents were asked how much the problem interfered with work, social life, or personal relationships. Responses were recorded with a Likert scale that ranged from 1, “not at all,” to 5, “extremely.” For individuals reporting interference due to two or more sets of symptoms, we used the highest level of interference reported.

Sociodemographic characteristics. Age, race-ethnicity (non-Latino white, non-Latino black, Latino, and other), educational attainment, income, and insurance status were also included in the analyses because these variables have been found in past research to be associated with stopping antidepressant medications (7–17).

Statistical Analysis

Analyses were conducted in two stages. First, we examined the prevalence of self-discontinuation of antidepressants among participants who reported using these medications in the past year. We also conducted unadjusted and adjusted binary logistic regression analyses to examine the sociodemographic and clinical correlates of stopping antidepressants. Next, we examined the proportion of participants who reported specific reasons for stopping antidepressants among those who used and self-discontinued these medications.

In further analyses, we explored the correlates of self-discontinuation according to the reasons given. Separate binary logistic regression analyses were conducted for each specific reason or group of reasons if the number of participants reporting specific reasons was too few. These further analyses were exploratory because of small sample sizes and multiple testing.

All analyses were conducted with version 12.1 of Stata statistical software (27). CPES survey weights, clustering, and stratification were included in analyses to account for multistage sampling and nonresponse and to ensure representativeness of the survey sample. All percentages reported were weighted by the CPES sampling weights. We used $p < .05$ as a threshold for determining statistical significance.

RESULTS

Antidepressant Self-Discontinuation

Of the 1,411 CPES participants who reported taking one or more antidepressants at some point during the preceding year, 1,098 (79% weighted) reported either continuing to

take the medication (76%) or stopping because of professional directive or approval (13%) or because the medication was no longer needed (6%; percentages do not add to 79% because some participants took multiple antidepressants). A total of 313 (21% weighted) reported stopping medication for other reasons and constituted the sample of antidepressant self-discontinuers for this study. Self-discontinuers had 334 antidepressant discontinuation episodes in total (some of the 313 participants who reported stopping antidepressants reported stopping more than one antidepressant in the past year).

Seventy-five (23%) of the 334 antidepressant treatment episodes lasted two weeks or less, 151 (46%) lasted more than two weeks but less than six months, and 102 (31%) lasted more than six months (data not shown). Data on duration of treatment for six medication episodes were missing. Because follow-up questions regarding reasons for discontinuation were asked about each medication, the analyses focused on antidepressant treatment episodes.

Sociodemographic and Clinical Correlates of Self-Discontinuation

In logistic regression analyses, younger age was associated with greater odds of self-discontinuation, with a gradient along the age spectrum, where persons ages 18–30 had the highest odds of self-discontinuation. Any anxiety or substance use disorder diagnosis was associated with higher odds of self-discontinuation (Table 1); however, there was no association between level of impairment and self-discontinuation. The specialty of the prescriber was also a significant correlate of self-discontinuation. In adjusted analyses, participants prescribed antidepressants by a primary care or other prescriber who was not a psychiatrist had higher odds of self-discontinuation compared with participants who were prescribed antidepressants by psychiatrists. In addition, participants with public insurance—Medicaid, Medicare, military benefit, or state-based programs—had significantly lower odds of self-discontinuation than those with private insurance, whether it was employer sponsored, individually purchased, or a Medicare supplement.

Reasons for Self-Discontinuation

Participants reported stopping antidepressants for various reasons (Figure 1). The two most commonly reported reasons for discontinuing individual antidepressants were side effects (20%) and the medication not helping (21%). A relatively high number of self-discontinuations resulted because participants wanted to resolve their mental health problems without medication or expected such resolution. A smaller proportion stopped because the medication was unaffordable or for other attitudinal reasons, such as embarrassment or pressure from others. Almost a quarter of self-discontinued antidepressants were stopped for other unspecified reasons.

In further analyses, age, race-ethnicity, education, diagnosis, the type of prescriber, and medication class were each related to stopping antidepressants for specific reasons. [A table in the online supplement provides details.] Compared with participants 18–30 years old, those 31–40 years old had lower odds of

stopping antidepressants because they found medication not helpful (odds ratio [OR]=.33, 95% confidence interval [CI]=.14–.83, $p=.019$), whereas participants age 51 and older had lower odds of reporting attitudinal reasons for self-discontinuation (OR=.10, CI=.01–.91, $p=.041$). The latter analysis, however, was based on very small sample sizes, in that only one person over age 50 reported attitudinal reasons for discontinuation.

Compared with whites, Latinos had higher odds of reporting side effects (OR=2.19, CI=1.12–4.33, $p=.025$) and more than threefold higher odds of reporting attitudinal reasons for discontinuation (OR=3.33, CI=1.07–10.33, $p=.038$).

Compared with participants who had attained up to 11 years of education, those with 12 years of education (OR=.45, CI=.20–.99, $p=.049$) and those with ≥ 16 years (OR=.40, CI=.17–.95, $p=.039$) had reduced odds of reporting that they discontinued their medication because it was not helping. In addition, compared with participants with up to 11 years of education, those with 12 years of education had lower odds of reporting attitudinal reasons for discontinuation (OR=.06, CI=.01–.46, $p=.007$). Again, the analyses of attitudinal reasons were based on very small samples.

DISCUSSION

Self-discontinuation of antidepressant medications is common. A sizable proportion of this community sample reported discontinuing antidepressants on their own in a one-year period. Research on antidepressant treatment quality for depression and anxiety disorders in community settings repeatedly finds brief duration, especially for patients treated in primary care settings (6,7,28). Premature self-discontinuation of antidepressants is a major barrier to achieving the full benefit of medication treatment and is associated with increased risk of relapse and incomplete response (1,29–31).

This study also found that antidepressant self-discontinuation was more common with younger age. This finding is consistent with other research suggesting a greater prevalence of long-term use among older adults compared with younger adults (32); however, the reasons for the age difference in discontinuation rates remain unclear. Side effects and finding medication unhelpful were the most common reported reasons for stopping antidepressants in all age groups [table in online supplement]. Future research should explore other reasons for the age gradient in antidepressant self-discontinuation.

The relatively high prevalence of self-discontinuation associated with anxiety disorders is consistent with past research (12,33). Discontinuation in this population may be attributable to negative attitudes toward antidepressant medication use, such as embarrassment or outside pressure [table in online supplement]. Discontinuation may also reflect the activating side effects associated with some antidepressants, which may be associated with heightened anxiety or agitation (34), although analyses did not reveal differences among diagnostic groups for participants who responded that side effects were a reason for discontinuation. Alternatively, this

TABLE 1. Sociodemographic and clinical correlates of self-discontinuation of antidepressant medications among 1,411 participants in the 2001–2003 Collaborative Psychiatric Epidemiology Surveys who reported past-year antidepressant use

Characteristic	Total sample		Self-discontinued		Did not self-discontinue		Unadjusted		Adjusted			
	N	%	N	%	N	%	OR	95% CI	p	AOR	95% CI	p
Sex												
Female (reference)	1,049	71	247	72	802	70						
Male	362	29	66	28	296	30	.90	.69–1.18	.458	.86	.6–1.22	.711
Age (years) ^a												
18–30	228	16	77	28	151	13	8.11	4.39–15.00	<.001	3.09	1.37–6.96	.007
31–40	295	18	81	21	214	18	4.59	2.30–9.16	<.001	2.35	.99–5.56	.052
41–50	378	26	92	28	286	26	4.20	2.24–7.89	<.001	2.46	.93–6.46	.069
51–64	338	26	48	18	290	28	2.55	1.44–4.52	.002	1.42	.59–3.42	.432
≥65 (reference)	172	13	15	4	157	16						
Race-ethnicity												
White (reference)	803	84	160	81	643	85						
Black	226	5	49	5	177	5	1.03	.69–1.55	.887	1.43	.82–2.49	.206
Latino	249	7	56	9	193	6	1.37	.85–2.21	.188	1.69	.92–3.12	.093
Other	133	4	48	6	85	4	1.59	.89–2.86	.118	.76	.22–2.68	.672
Education (years)												
0–11 (reference)	281	16	66	15	215	16						
12	399	31	88	33	311	31	1.13	.71–1.79	.604	1.38	.80–2.40	.244
13–15	425	31	98	32	327	30	1.13	.72–1.80	.588	1.00	.61–1.64	.990
≥16	306	23	61	20	245	23	.90	.57–1.42	.655	1.13	.55–2.32	.729
Income (\$)												
≤15,000 (reference)	325	18	66	15	259	18						
15,001–50,000	483	33	113	36	370	32	1.41	.86–2.33	.173	1.03	.58–1.85	.913
50,001–100,000	336	27	74	26	262	27	1.19	.63–2.24	.595	.83	.39–1.77	.621
>100,000	168	23	36	23	132	23	1.21	.66–2.19	.538	.92	.40–2.10	.845
Insurance												
Private (reference)	652	61	154	77	498	58						
Public	477	34	69	19	408	37	.38	.23–.64	<.001	.44	.22–.87	.019
Other	60	5	13	4	47	5	.59	.31–1.15	.121	.47	.20–1.10	.081
Diagnosis ^a												
No mood, anxiety, or substance use disorder	711	53	152	49	559	54	.82	.62–1.07	.141	1.83	.64–5.21	.258
Mood disorder	402	28	84	26	318	29	.86	.61–1.21	.394	.73	.38–1.40	.339
Anxiety disorder	512	34	131	42	381	32	1.53	1.17–2.00	.002	2.58	1.12–5.96	.026
Substance use disorder	75	6	25	10	50	5	2.24	1.31–3.83	.003	2.84	1.44–5.61	.003
Impairment												
Not at all (reference)	356	24	81	20	275	25						
A little	136	9	31	8	105	9	1.04	.53–2.03	.911	1.07	.46–2.49	.874
Some	214	17	45	20	169	16	1.59	.90–2.81	.113	1.30	.69–2.46	.414
A lot	382	27	90	30	292	26	1.44	.94–2.20	.093	1.47	.80–2.72	.216
Extremely	323	23	66	23	257	24	1.20	.69–2.08	.511	.90	.47–1.70	.741

continued

Table 1. continued

Characteristic	Total sample		Self-discontinued		Did not self-discontinue		Unadjusted		Adjusted			
	N	%	N	%	N	%	OR	95% CI	p	AOR	95% CI	p
Prescriber ^b												
Psychiatrist (reference)	397	25	62	19	335	26						
Primary care physician	769	60	174	63	595	59	1.47	.96–2.26	.079	2.26	1.23–4.14	.009
Other	198	15	50	18	148	14	1.68	1.04–2.71	.033	2.82	1.49–5.34	.002
Medication group ^c												
SSRI	923	66.7	220	70.7	703	65.6	1.26	.87–1.84	.222	1.74	.92–3.27	.086
SNRI	99	7.5	19	5.9	80	7.9	.74	.40–1.36	.327	.57	.29–1.10	.091
TCA	201	12.8	41	9.8	160	13.6	.69	.45–1.05	.083	1.06	.47–2.37	.887
Other	354	25.5	76	28.7	278	24.7	1.23	.85–1.79	.278	1.70	.93–3.11	.083

^a Each diagnostic category was compared with all other diagnostic categories. Percentages add to more than 100% because some participants met criteria for more than one diagnosis.

^b Percentages add to more than 100% because multiple providers prescribed some participants antidepressants in the past year. The reference group (prescribed by psychiatrists) included those who received any antidepressant prescription from a psychiatrist whether or not they received prescriptions from other providers.

^c Each medication group was compared with all other medication groups. Percentages add to more than 100% because some participants used more than one medication type in the past year. SSRI, selective serotonin reuptake inhibitor; SNRI, selective norepinephrine reuptake inhibitor; TCA, tricyclic antidepressant.

relationship may suggest less severe symptoms or impairment in common anxiety disorders compared with other common mental illnesses, such as mood disorders. Discontinuation patterns may also signify the episodic and context-dependent nature of symptoms in anxiety disorders. It is noteworthy, however, that individuals without any mood, anxiety, or substance use disorders did not have higher odds of discontinuation.

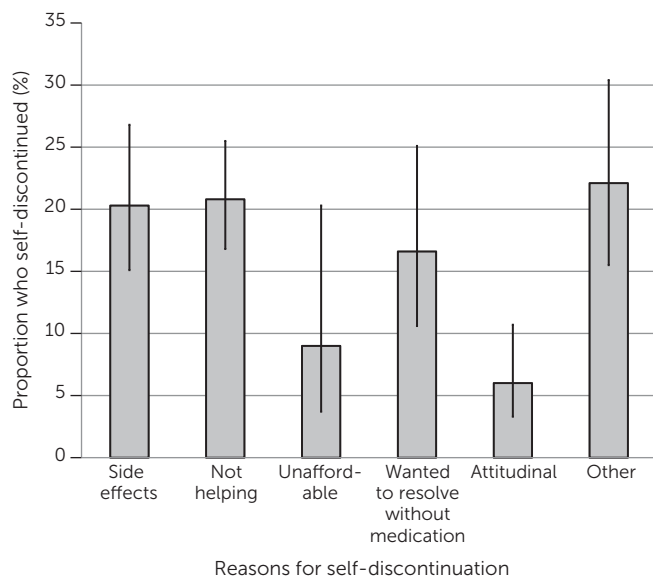
Lesser severity and impairment associated with the target psychiatric conditions may partly explain greater prevalence of discontinuation in general medical settings where patients typically have a shorter duration of treatment (24,33). Preferences and attitudes of patients regarding treatment might also lead patients to differentially select providers. Alternatively, differences in practice styles of primary care providers and psychiatrists, such as differences in communication style and content of communications, have been shown to affect treatment adherence patterns (35). Providers who are not psychiatrists also tend to have less comprehensive knowledge of successful antidepressant treatment strategies. To differentiate contributing factors, more detailed assessments of illness severity, expectations of patients, and practice styles of providers are needed.

The finding of no association between medication type and self-discontinuation is noteworthy. Fewer side effects of newer antidepressants, such as SSRIs, are often noted as a “practice innovation” (36), leading to greater acceptability of newer medications by patients and providers. This study did not find that TCAs were more likely to be self-discontinued compared with other medication groups, nor were TCAs more likely to be discontinued due to side effects. This trend may reflect changing patterns of antidepressant use, such as declining use of TCAs between the 1990s and 2000s (37). Individuals who remain on these medications likely include a larger proportion of long-term users who tolerated these medications well, without significant adverse effects. Thus cohort differences may have obscured differences in discontinuation rates among medication groups.

There were few consistent associations between participants' clinical and sociodemographic characteristics and their stopping medications for specific reasons, although these analyses were limited by small sample sizes and multiple testing. What was not observed with regard to reasons for self-discontinuation of medications is perhaps more noteworthy than the few striking differences across medication groups, diagnoses, and prescribers.

The most commonly reported reasons for self-discontinuing antidepressants included side effects, perceptions that the medication was not helpful, and a desire or expectation that the mental health problem should resolve without pharmaceutical intervention. Fears of dependence on medication may also influence decisions to stop antidepressants prematurely (38). Providing patients with realistic information regarding the expected side effects, benefits of treatment, and the minimum recommended length of treatment may help them adjust their expectations and reduce the risk of premature self-discontinuation. Moreover, cultural sensitivity when treating

FIGURE 1. Reasons for self-discontinuation of 334 antidepressant medication treatment episodes among participants in the 2001–2003 Collaborative Psychiatric Epidemiology Surveys who reported past-year antidepressant use^a



^a Vertical lines represent 95% confidence intervals.

Latinos may address some of the unique social pressures that might affect Latinos' concerns and attitudes about antidepressants. Indeed, quality improvement interventions involving counseling patients and regular follow-ups have had promising results with regard to continuity of treatment in primary care settings (39).

The results of this study should be considered in the context of its limitations. First, data were collected over ten years ago. Mental health care in the United States has changed in important ways since then. There were several policy developments in this period with potential impact on treatment of mental disorders, including the passage of the Mental Health Parity and Addiction Equity Act of 2008 and the Affordable Care Act of 2010. There have also been significant changes in prescribing practices for antidepressants, including an overall increase in antidepressant prescriptions, especially in primary care, mainly because patients are using these medications for longer periods (37,40). The impact of these policy initiatives and trends on self-discontinuation of antidepressants must be examined in future research.

Second, the survey did not assess duration of antidepressant use before discontinuation. Individuals in the early phases of treatment may be at greater risk of discontinuation than those in later phases. The risk factors for discontinuation may also vary according to treatment phase. Longitudinal data could identify treatment phase and correlates of discontinuation at different phases. These data would also be useful for identifying individuals who stop an antidepressant medication and restart the same or another medication at a later time.

Third, response rates varied somewhat among the component surveys of CPES, but overall response rates were relatively high (19), and the survey weights adjusted for

nonresponse. Fourth, both medication use and reasons for discontinuation were self-reported, which could be affected by recall bias; however, self-reports of antidepressant medication use have demonstrated acceptable concordance with pharmacy records and other administrative data (41–48). In most (41,42,44,46) but not all studies (43,47), the specificity of self-report against the gold standard of pharmacy or other administrative data were much higher (typically >.90) than the sensitivity of such reports, suggesting few false-positive self-reports of medication use. Nonetheless, data regarding the validity of self-reported reasons for stopping medications are lacking.

Fifth, analyses of reasons for discontinuation are limited by multiple testing, which could result in spurious statistically significant findings. These findings need to be corroborated in future studies. Sixth, the sample size for assessing racial-ethnic variations in discontinuation was limited. In view of the past research on racial-ethnic disparities in psychiatric medication use, the findings from this study should be viewed cautiously. Finally, the clinical and functional outcomes associated with medication discontinuation were not examined.

CONCLUSIONS

In the context of these limitations, the data presented allowed for a general overview of the extent, correlates, and reasons for antidepressant medication self-discontinuation in the U.S. general population. Although randomized controlled trials provide persuasive evidence supporting the efficacy of antidepressants in selected clinical populations, translating efficacy of treatments in randomized trials to real-world effectiveness requires a better understanding of provider and patient factors that determine treatment patterns.

There is growing evidence that more positive attitudes toward medications, as well as improved physician-patient communications regarding the appropriate management and expected benefits of treatment would improve adherence with antidepressant treatment, particularly in primary care settings, where a majority of antidepressants are prescribed (40,49). With the implementation of the Affordable Care Act, the role of primary care in management of mental health conditions is expected to grow. This growth highlights the need for improved quality of diagnosis and treatment of mental disorders, including improved adherence with antidepressant and other psychiatric medications.

AUTHOR AND ARTICLE INFORMATION

Ms. Samples is with the Department of Health Policy and Management and Dr. Mojtabai is with the Department of Mental Health, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland (e-mail: hsamples@jhu.edu).

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