

Oral Health Intervention for Low-Income African American Men in Atlanta, Georgia

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Objectives. To describe the Minority Men's Oral Health Dental Access Program (MOHDAP) intervention and report participants' outcomes and satisfaction.

Methods. MOHDAP was designed to increase the oral health knowledge of low-income, African American men in Atlanta, GA, in 2013. A community-based participatory approach and needs assessment guided the intervention development, which consisted of 3 educational modules delivered over a 2-day period. All participants ($n=45$; mean age=50 years) were African American men. We assessed changes in oral health knowledge and attitudes at baseline and postintervention via survey.

Results. After the intervention, the percentage of correct responses to questions about gingivitis increased by 24.2% ($P=.01$), about use of a hard (instead of a soft) toothbrush increased by 42.2% ($P<.01$), and knowledge of ways to prevent gum diseases increased by 16.0% ($P=.03$). The percentage agreeing with erroneous statements decreased 11.3% ($P=.02$) regarding oral health-related fatalism and oral health self-care and 17.4% ($P=.05$) regarding saving front versus back teeth.

Conclusions. Community-based oral health educational interventions designed for African American men may reduce oral health disparities among this population. (*Am J Public Health.* 2017;107:S104–S110. doi:10.2105/AJPH.2017.303760)

 See also Borrell, p. S6.

Oral health is one of the leading indicators in the Healthy People 2020 initiative; however, there has been a decline in the percentage of adults annually visiting a dentist.¹ Racial and ethnic disparities in oral health, access, and service utilization are well documented.^{2–5} Specifically, African American men are among the most disadvantaged populations with respect to oral health care and access by both gender and race.⁵ African American men experience untreated tooth decay nearly twice as often as White men, and compared with African American women and adults from other racial/ethnic groups, they have the highest incidence rate of oral cavity and pharyngeal cancers in the country.^{6–8} Furthermore, although oral cancer incidence rates are steadily declining for all races, mortality rates for oral cancer are increasing among African American men.^{9,10}

Concurrent with poor oral health is limited or inaccurate oral health knowledge.^{11,12} Many educational interventions have been

implemented to modify the dental care knowledge, attitudes, and habits that directly affect oral health.^{13–18} Studies measuring the effect of oral health literacy and self-care interventions on oral health outcomes also identified significant improvements in knowledge and oral health status.^{16,17}

Despite the well-documented positive impact of educational interventions, no identified studies have focused on oral health intervention strategies designed specifically for African American men. Culturally appropriate health education that improves oral health knowledge is an essential component of interventions designed to increase

awareness and risk perception associated with promoting improved oral self-care. Effective approaches have been characterized as multifaceted, culturally sensitive, promoting participant self-efficacy, and including both group-based and individual activities.¹⁵

Although community-based participatory research (CBPR) approaches are being used broadly in research focused on prevention of a variety of health issues, its use in oral health research has been limited, and only a few recent studies have reported community-based approaches to be a priority in the development of oral health interventions.^{19–21} Community partnerships can play a central role in improving access to care and utilization of services through approaches that position community residents as senior partners. These partnerships facilitate relationships central to intervention implementation, increase community research capacities, and result in interventions that are owned and sustained because of cultural and contextual relevance and responsiveness.^{22–26}

We established the Minority Men's Oral Health Dental Access Program (MOHDAP) in Atlanta, Georgia, in February 2013 as a pilot CBPR intervention led by a community-based organization in partnership with an academic medical institution, thus reversing academia's typical role of serving as the project lead. In response to the relevance of CBPR, we also conducted a needs assessment, which is detailed elsewhere,²⁷ and identified the cultural and community contexts of this underrepresented group using a formative CBPR process.

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Given the lack of evidence about oral health interventions for African American men, our aim was to fill that gap and evaluate the pilot MOHDAP intervention toward strengthening subsequent intervention delivery.

METHODS

The City of Atlanta is divided into 25 Neighborhood Planning Units (NPIUs) within which citizen advisory councils are organized. These citizen advisory councils make recommendations to the mayor and city council on zoning, land use, and other planning issues. The communities prioritized for MOHDAP were NPIUs V, X, Y, and Z (partner NPIUs), which are composed of 25 contiguous census tracts.²⁸ At the aggregate level, 88% of the residents of these NPIUs are young African Americans (median age = 30 years) with low educational attainment (26% of adults have not completed high school). Fewer than half (40.9%) of African American households within the partner NPIUs live below the poverty level.²⁹

Theoretical Framework

This study's theoretical frameworks included CBPR and the Health Belief Model. CBPR emphasizes an equal partnership, power sharing in decision-making, and data ownership between community and academic partners.²² Among the advantages of CBPR are strengthened community-academic relationships, improved research question relevance, enhanced research recruitment and implementation, collective dissemination, and mutual benefit for a diverse group of stakeholders.³⁰ This collaborative approach enables the creation of interventions specifically tailored to a community's needs and existing resources toward increased recruitment, retention, and sustainability. CBPR was operationalized by the MOHDAP advisory board, which was created with partner NPIU residents who were in the board membership majority among representatives of social service agencies and academic members. The MOHDAP advisory board was involved in each step of the intervention's development, implementation, and evaluation. First, following the

identification of board members, the advisory board developed oral health priorities and themes to be included in a communitywide oral health assessment, with each question vetted to establish face validity, relevance, and meaning.²⁷ Community-led survey administration training, recruitment, and data collection were also central methodological elements. The advisory board subsequently reviewed the data results in order to give advice regarding the intervention's content and to ensure that the intervention resonated with the African American male participants. Closely aligned with CBPR—which has, among its tenets, an understanding of community ecology as well as the contextual barrier and facilitators to individual health behaviors—is the Health Belief Model. Central to the Health Belief Model is the idea that the individual makes health decisions within a social context, with cues to action that include knowledge and education, among other factors assessed through MOHDAP.³¹

Recruitment

We used nonprobability purposive sampling strategy to recruit participants. Eligible participants were African American men living in partner NPIUs who were aged 18 years or older. MOHDAP advisory board members, who had established relationships with community-based organizations that serve predominantly urban low-income African American men, facilitated presentation of the project and the invitation for interested men to complete a MOHDAP ambassador application. Participants were also recruited through flyers, referrals, and word of mouth. The application requested demographic information to confirm an individual's eligibility, details related to his current community involvement, and a brief essay on why he believed that he exemplified the characteristics of MOHDAP ambassadorship. The MOHDAP advisory board received 90 applications, which they reviewed and ranked. The board selected 52 ambassadors, who made up a representative sampling of the NPIUs. The participants were called ambassadors because the intervention intended to empower them to subsequently lead educational outreach efforts among their peers on how oral health can positively affect overall

health, as well as to educate elected officials on the barriers that African American men face when seeking oral care. The study protocol, design and intervention were developed, reviewed, and approved by the MOHDAP advisory board.

Overview of Intervention

The primary aim of MOHDAP was to provide low-income African American men in underserved communities with oral health knowledge and increased self-efficacy, enabling them to increase their awareness and understanding of oral health.

On the basis of the needs assessment findings, existing literature, and input from the MOHDAP advisory board, the intervention consisted of 3 modules delivered over a 2-day period. To decrease reported barriers to recruitment and retention, educational sessions were conducted at a centrally located community college in metropolitan Atlanta that was easily accessible to public transportation. The ambassadors were evenly split into 2 smaller groups to facilitate a learning group rather than a traditional classroom environment, whereby participants were encouraged to be active participants rather than passive learners. Sessions, which lasted 2.5 hours, were facilitated by trained dentists and public health practitioners who were involved in all aspects of the intervention's development and implementation, including dialogue and resolution toward standardized and consistent content delivery. Sessions consisted of oral health didactic teaching, tactical demonstrations, and interactive discussions on the implications (including barriers and facilitators) of knowledge and practice skills gained in daily life. The format and content of each module is detailed in Table 1. Ambassadors received \$25 per session attended.

Study Design

We employed a pretest and posttest study design to assess primary outcomes, changes in oral health knowledge, and attitudes from baseline to postintervention. To analyze knowledge and change in attitude at the individual level, we assigned ambassadors unique, nonpersonal identification numbers to facilitate matching pretests to posttests. Additionally, MOHDAP trained

TABLE 1—Key Components of MOHDAP Intervention Curriculum: Atlanta, GA, 2013

Module Topics	Description	Learning Objectives
Lesson 1: introduction—the importance of oral health and its connection to overall health; dental terminology	Uses PowerPoint presentation and class discussion explaining the importance of oral health and total health; definitions of oral health and of teeth structure and function; pretest survey administration.	<ol style="list-style-type: none"> 1. Importance of oral health and its impact on total health of the body 2. Dental health terminology 3. Basic teeth structure and functions
Lesson 2: oral pathology and its effect on heart disease, diabetes, and stroke	Uses PowerPoint presentations and class discussion explaining the effect of oral health on chronic disease.	<ol style="list-style-type: none"> 1. Oral health literacy concepts 2. General oral pathology 3. Effect of alcohol and tobacco on oral health 4. Oral health's effect on chronic diseases such as heart disease, diabetes, and stroke
Lesson 3: conclusion; dental hygiene knowledge and dental care attitudes	Uses class discussion, PowerPoint presentations, demonstration of correct brushing and flossing techniques; emphasizes the importance of preventive dental care and timely active dental care approach; course review, posttest and satisfaction survey administration.	<p>Oral health-related self-efficacy and knowledge</p> <ol style="list-style-type: none"> 1. Oral health-related fatalism 2. Correct flossing, brushing techniques 3. Preventive dental care measures

Note. MOHDAP = Minority Men's Oral Health Dental Access Program.

ambassadors to facilitate peer-led oral health promotion and education. This training was evaluated through postexperience satisfaction surveys.

Measures

We finalized MOHDAP by following a CBPR process that included oral health theme prioritization, review of several surveys by the advisory board and academic institution staff, and subsequent pilot testing of the survey tool. We created measures to collect demographic information and assess oral health knowledge, attitudes toward dental care, and program satisfaction.

Demographic information. We assessed sociodemographic information such as annual income (<\$10 000, \$10 000–\$25 000, >\$25 000), education (<high school, completed high school or GED [general equivalency diploma], some college or bachelor's degree, graduate school), and employment status (full-time, part-time, unemployed, school) with a single survey item. Because of the impact of socioeconomic status on an individual's dental care attitude, we also measured participants' financial situation with 1 item, which asked, "Which of these statements best describes your present financial situation?" The possible responses were "I really can't make ends meet," "I manage to get by," "I have enough to

manage, plus some extra," and "Money is not much of a problem; I can buy about whatever I want." We grouped marital status responses as single or never married, divorced or widowed, and married or cohabitating.

Oral health knowledge. We assessed the ambassadors' oral health and hygiene knowledge as well as attitudes toward dental care through a 35-item survey adapted from the Centers for Disease Control and Prevention's Dental, Oral and Craniofacial Data Resource Center.³² We performed a reliability analysis among the items to determine their internal consistency, as described elsewhere.²⁷ This data resource center was the source for questions related to oral health literacy concepts and oral health-related self-efficacy and knowledge. For example, ambassadors were asked to choose the correct definition of common dental disorders such as gingivitis and periodontitis. Oral health self-efficacy questions asked about the best way to prevent gum diseases, the effect of tobacco and alcohol on oral health, oral health-related fatalism, and the correct time interval to replace a toothbrush. Answer choices were "true," "false," and "don't know."

Attitudes toward dental care. We assessed attitudes toward dental care with items from the Florida Dental Study Baseline Survey. This instrument was used at the University of Florida to collect information from residents in north Florida to learn more about oral

health problems.³³ To determine internal consistency among the items, we performed a reliability analysis as described previously.²⁷ To examine attitudes related to preventive oral care, participants were asked to agree or disagree with each item in a list of statements related to dental care costs, to keeping and caring for one's natural teeth rather than having them pulled, and to being active in decisions about one's dental care, among others.

Analysis

We administered a total of 52 pretest surveys and 45 posttest surveys, representing an 83% response rate. We used only matched pre- and posttest surveys for the analysis. We did not include in the analysis pretest surveys completed by the ambassadors (n = 7) who did not attend the second session or complete a posttest. We analyzed the survey responses, comparing frequencies and means for each outcome variable from pre- and post-intervention groups. We used the paired *t* test to compare the groups, with a *P* value of less than .05 to differentiate the statistical significance of outcomes between study groups. If the parameter was statistically significant, we concluded that there was a difference in outcome between groups. We conducted statistical analyses using SAS version 9.2 (SAS Institute, Cary, NC).

TABLE 2—Demographic Characteristics of MOHDAP Intervention Participants (n = 45): Atlanta, GA, 2013

Characteristic	No. (%)
Race	
Black/African American	43 (95.6)
Other (includes multiracial)	2 (4.4)
Education	
< high school	6 (13.3)
Completed high school or GED	17 (37.8)
Some college, bachelor's degree	20 (44.4)
Graduate school	2 (4.4)
Employment	
Employed full-time	8 (17.7)
Employed part-time	5 (10.1)
Unemployed or seeking work	32 (72.2)
Financial situation	
"I can't make ends meet"	11 (24.4)
"I manage to get by"	29 (64.4)
"I have enough to manage and extra"	4 (8.9)
"I can buy about whatever I want"	1 (2.2)
Annual income,^a \$	
< 10 000	21 (51.2)
10 000–25 000	10 (24.4)
> 25 000	10 (24.4)
Living situation	
Married	15 (33.3)
Divorced	9 (20.0)
Single, never married	21 (46.7)

Note. GED = general equivalency diploma; MOHDAP = Minority Men's Oral Health Dental Access Program. The mean age of participants was 49.69 years (range = 21–66; SD = 12.6).

^aAnnual income does not equal 45 due to 4 missing responses.

RESULTS

Table 2 provides the demographic characteristics of ambassadors. The average age was approximately 50 years, with the majority (95.6%) identifying as Black or African American. More than one third (37.8%) had completed high school; of those, 44.4% had completed some college or graduate school. Most of the men (72.2%) were unemployed or seeking work, and most (75.6%) reported a family income of less than \$25 000 annually.

Table 3 displays the results of the pre- and posttest surveys and includes items to demonstrate the ambassadors' comprehension of oral health literacy concepts and of oral health-related self-efficacy and knowledge.

The total average percentage of correct answers related to oral health knowledge was 74.4% on the pretest. There was a statistically significant increase from pretest to posttest in the percentage of ambassadors with correct knowledge of the following oral health literacy items: "What is gingivitis?" (pretest = 66.7%; posttest = 90.9%; percentage point difference = 24.2; $P = .01$); "Oral habits such as cheek biting and lip biting increase the chance for oral cancer" (pretest = 47.6%; posttest = 65.9%; percentage point difference = 18.3; $P = .03$); "Poor oral health is worsening in persons with uncontrolled diabetes (sugar)" (pretest = 78.6%; posttest = 93.2%; percentage point difference = 14.6; $P = .03$); "A hard toothbrush is better than a soft toothbrush" (pretest = 55.6%; posttest = 97.8%; percentage point difference = 42.2; $P < .01$); and "What is the best way to prevent gum diseases?" (pretest = 77.3%; posttest = 93.3%; percentage point difference = 16.0; $P = .03$). A few questions showed a marginal decrease; however, each of these questions had very high pretest percentages (84%–98%), indicating that there was a ceiling effect beyond which we would not expect significant increases.

We also assessed pre- and postintervention dental care attitudes, and several positive changes in attitude were statistically significant (Table 4). The total average percentage of correct responses related to dental care attitudes was 48.1% on the pretest. After the intervention, there was a significant decrease in agreement with the statement, "Regardless of how well you and your dentist take care of your teeth, you will eventually lose them" (pretest = 22.7%; posttest = 11.4%; percentage point difference = 11.3; $P = .02$). Ambassadors also demonstrated a significant decrease in agreement with the statements "It is more important to save a front tooth than it is to save a tooth in the back of the mouth" (pretest = 35.6%; posttest = 18.2%; percentage point difference = 17.4; $P = .05$) and "Some people are born with good teeth, and others are not" (pretest = 47.7%; posttest = 33.3%; percentage point difference = 14.4; $P = .05$), indicating a more active attitude toward dental care after the intervention.

Most (n = 41) of the MOHDAP ambassadors volunteered to have a local dental clinic evaluate their oral health status. The group

needed 148 extractions (3.6 per participant) and 31 fillings (0.76 per participant). The clinical care was completed after the intervention at no cost.

DISCUSSION

This is the first pilot educational intervention to improve oral health literacy among African American men, an underserved minority community, with 56.3% of participants living below the Georgia poverty level and the majority unemployed. The primary aim of this intervention was to provide low-income African American men in underserved communities with oral health knowledge that would enable them to increase awareness and understanding of oral health, and to improve their leadership role in influencing their peers and family on how oral health can positively affect their overall health. After the intervention, we found that MOHDAP ambassadors showed improved comprehension of oral health literacy concepts and oral health-related self-efficacy.

Oral health-related fatalism and care attitudes were also shifted toward preventive care and active approaches to oral health self-management. Specifically, there was a statistically significant improvement in ambassadors' perception that tooth loss is unavoidable even with regular visits to a dentist. Additionally, there were improvements in their perception that certain people are born with better or healthier teeth than others, negating the need for visiting a dentist or taking care of one's teeth. A shift in the importance of overall dental care was evident in their significantly decreased perception that teeth that were visible (front teeth) were more important to save than those in the back and not visible.

Our findings agree with previous research that reported on the effectiveness of educational oral health interventions.^{13–18} However, this study fills a gap in the literature on CBPR approaches to addressing oral health disparities through oral health educational interventions specifically targeting African American men. Most programs have not explicitly identified the unique needs or considered the culture and community context of this underrepresented group through use of a CBPR approach to inform the planning and implementation of oral

TABLE 3—Analysis of MOHDAP Participants' Preintervention vs Postintervention Oral Health Knowledge: Atlanta, GA, 2013

Item	Correct Answer	No. (%) Answering Correctly Preintervention	No. (%) Answering Correctly Postintervention	Pre- vs Postintervention <i>P</i>
What is gingivitis?	An inflammation of the gums	30 (66.7)	40 (90.9)	.011
What is periodontitis (gum disease)?	Inflammation of the supporting structures of the tooth or teeth	39 (86.7)	39 (90.7)	.74
The hard substance that forms on the teeth if plaque is not removed.	Tartar or calculus	20 (48.8)	27 (61.4)	.07
Tobacco (using tobacco products) and alcohol use are risk factors for oral cancer.	True	44 (97.8)	44 (97.8)	> .99
Oral habits such as cheek biting and lip biting increase the chance for oral cancer.	True	20 (47.6)	29 (65.9)	.033
As one gets older, the chance for cavities decreases (goes down).	False	34 (75.6)	37 (84.1)	.21
Poor oral health is worsening in persons with uncontrolled diabetes (sugar).	True	33 (78.6)	41 (93.2)	.032
A hard toothbrush is better than a soft toothbrush.	False	25 (55.6)	44 (97.8)	< .001
The use of both alcohol and tobacco increases your chances of oral cancer.	True	41 (95.4)	43 (97.7)	.57
If you brush 3 times a day instead of twice, flossing is not necessary.	False	43 (95.6)	38 (86.4)	.16
Poor dental health is linked to many serious diseases and conditions.	True	44 (97.8)	42 (93.35)	.32
What causes tooth decay?	Combination of all of the above (acid, plaque, bacteria)	38 (84.4)	40 (88.9)	.53
When should people change their toothbrush?	Once every 2–3 mo or after flu or cold	38 (86.4)	36 (80.0)	.49
Fluoride is useful to apply to the teeth because it (does what?)	Decreases the chance of cavities	33 (73.3)	36 (80.0)	.37
What is the best way to prevent gum diseases?	All of the above ^a	34 (77.3)	42 (93.3)	.033
What is the hardest substance in your body?	Enamel	30 (71.4)	40 (88.9)	.07
What is the part of the tooth that is below the gum line and anchors the tooth in the bone?	Root	36 (80.0)	34 (75.6)	.81
What are the large back teeth for grinding your food?	Molars	27 (62.8)	40 (88.9)	< .001
This tooth structure is next to and protects the pulp (nerve).	Cementum	8 (19.1)	12 (27.3)	.62
Name the 4 important functions of the teeth.	All of the above ^b	36 (87.8)	42 (93.3)	.023

Note. MOHDAP = Minority Men's Oral Health Dental Access Program.

^aOther possible answers were brush your teeth, remove plaque, floss, and brush your tongue.

^bOther possible answers were eating, talking, appearance and support to bone.

health intervention strategies. Additionally, this approach may help to increase recruitment and retention of African American men in interventions. It is likely that the CBPR–driven advisory board and local educators, who were socially and culturally congruent to

participants, fostered increased trust and community credibility toward sustained participation (83% participants retained from pretest to posttest). This study demonstrates that active participation of the community in the planning, development, and

implementation of oral health interventions is needed. Furthermore, it reveals that collaborative partnerships between oral health providers, public health practitioners, the community, and academia produce desired results.

TABLE 4—Analysis of MOHDAP Participants' Preintervention vs Postintervention Dental Care Attitudes: Atlanta, GA, 2013

Item	No. (%) Agreeing With Statement Preintervention	No. (%) Agreeing With Statement Postintervention	Pre- vs Postintervention <i>P</i>
You can get over almost any dental problem if you just wait long enough.	4 (8.9)	3 (6.7)	.66
Regardless of how well you and your dentist take care of your teeth, you will eventually lose them.	10 (22.7)	5 (11.4)	.024
It is more important to save a front tooth than it is to save a tooth in the back of the mouth.	16 (35.6)	8 (18.2)	.05
Some people are born with good teeth, and others are not.	21 (47.7)	15 (33.3)	.05
I would rather have my teeth pulled than take the time and money trying to keep them.	8 (17.8)	8 (17.8)	> .99
Unless you are in pain, most dental work can be delayed in the long run.	6 (13.3)	4 (8.9)	.42
Some dentists care more about making money than in making sure people get good dental care.	23 (51.1)	19 (42.2)	.32
Dentists often suggest treatment that you don't really need.	18 (40.0)	16 (37.2)	.66
I would rather rely on my dentist to make decisions about my dental care.	28 (63.7)	22 (48.9)	.11
Some dental treatment can be painful, but it's worth it in the long run.	41 (93.2)	39 (88.6)	.32
I think that the health of my teeth is an important part of my overall health.	43 (95.6)	42 (93.3)	.57
I would rather take an active part in decisions about my dental care.	43 (97.7)	41 (93.2)	.32
I am afraid of dental visits because of the pain.	17 (37.8)	16 (36.4)	.71

Note. MOHDAP = Minority Men's Oral Health Dental Access Program.

Limitations

Limitations of this study are also acknowledged. A small convenience sample of intervention participants, who were older than those in the target NPU population, were recruited at local sites in metropolitan Atlanta. Additionally, a comparison group was not used. Therefore, the results are not generalizable to individuals who did not meet intervention inclusion criteria. The use of pretest and posttest matching by nonpersonal identifiers, however, allowed for evaluation of knowledge and attitude changes among

these ambassadors, which can be attributed to the intervention. Additionally, a 1-time intervention may not be adequate when long-term behavioral preventive health care changes are intended. Future research can determine whether oral health disparities among this population can be ameliorated through MOHDAP ambassadors acting as oral health educators. Interventions that empower community residents (ambassadors) to lead interventions in their community may be a critical step toward sustainability and continued effectiveness through a CBPR approach.

Public Health Implications

Using a community-based participatory governance structure and needs assessment results, we developed an oral health educational intervention designed for African American men who resided in prioritized low-income, underserved communities. Our evaluation produced statistically significant evidence that this community-based participatory intervention increased knowledge and positive attitudes that may reduce oral health disparities among this population. Although oral health knowledge is central to increased awareness and risk perception, low access to dental care and lack of dental insurance are also central contextual and structural determinants that contribute to moving the needle toward improved oral health for all populations, and it should be addressed in future interventions.³⁴ **AJPH**

CONTRIBUTORS

L. M. Hoffman, who developed and conceptualized the MOHDAP intervention and developed sections related to the description of the intervention, was responsible for recruitment and retention activities related to evaluation and research data collection and analysis. L. Rollins, who supported epidemiological aspects, was responsible for evaluation and research data collection and helped write the Methods section; she coauthored or edited each section of the article. T. H. Akintobi was responsible for guiding evaluation and research implementation and conceptualizing the focus of the Results and Discussion sections. K. Erwin and K. Lewis were responsible for management of MOHDAP intervention activities; were the regular interface and liaison between the programmatic, evaluation, and research teams; and advised development of the Methods section, specifically detailing the intervention implementation process. N. Hernandez reviewed the manuscript, and contributed significantly to the introduction and discussion sections. A. Miller was responsible for analysis of data and synthesizing the Methods and Results sections. Each author helped to gather literature on the subject matter through their programmatic and research expertise. Each author was central to revisions of the article toward final submission.

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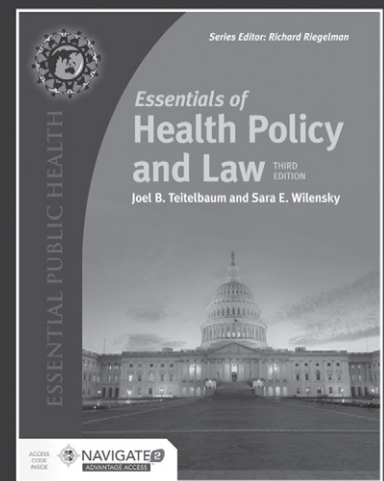
HUMAN PARTICIPANT PROTECTION

The Morehouse School of Medicine institutional review board reviewed and approved the study protocol, design, and intervention prior to implementation (IRB# 446014-3). Accessed May 24, 2016.

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