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Health Care Information in African-American Churches

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Abstract

Churches are a trusted resource in African American communities; however, little is known about their presentation of health care information. This study characterized health care information disseminated by 11 African American churches. Content analysis conducted on print media systematically collected over one year used a coding scheme with .77 intercoder reliability. Health care information was identified in 243 items and represented three topics (screening, medical services, health insurance). Screening was the most common topic (n=156), flyers/handouts most often used (n=90), and the church the most common source (n=71). Using **chi-square** tests, information was assessed over time with health insurance information showing a statistically significant increase ($\chi^2=6.08$, $p < .05$). Study churches provided health care information at varying levels of detail with most coming from church and community publications. Future research should examine additional characteristics of health care information, its presence in other churches and community settings, and how exposure influences behaviors.

Keywords

consumer health information; health care access; faith-based; African Americans

Eliminating health disparities in the United States has been an underlying measure of success for both past and present Healthy People goals and objectives.¹ Health disparities are hypothesized to result from a constellation of factors including differences in income, education, insurance coverage, health care access, medical provider practices, and health-related behaviors.^{1–3} Given these complexities, it is important to understand how and where

individuals obtain information related to their health and to deepen our understanding of how such information is utilized in health care decision making.

Health information as a more global concept is most frequently described in the literature on messaging related to health.⁴ The concept typically includes messages related to lifestyle behaviors (e.g., diet, physical activity) as well as health care information (e.g., screening, medical care).^{4,5} Less is known about the subset of messages that pertains specifically to health care information; however, research related to the more global health information provides valuable insight. It is theorized that individuals may try to lower their health care uncertainty through seeking health information to increase their understanding of disease etiology, treatment options, and self-management.⁶ Health information seekers report using the information they find to maintain their health, understand an illness or condition, or to change behaviors related to their health.⁵⁻⁷ Eighty percent of people in the United States have reported paying attention to health information in the media⁸ and over half report purposefully seeking information outside of their doctors.⁷ When behaviors such as diet, physical activity, and cancer screening are evaluated, both more active seeking of information and more passive scanning for information have been associated with increases in knowledge, healthier choices, and improved screening practices.^{5,8}

African Americans' exposure to health information, particularly health care information, is of particular interest given the burden of disease faced in this community, and the affect mistrust, limited finances, and less access to health insurance may have on medical care.^{2,3,9,10} Potentially due to these constraints, African Americans may be more likely than European Americans to seek and utilize health information in their efforts to understand the treatment of illness and change health-related behaviors.^{5,6} Commonly reported sources of health information sought by African Americans include pamphlets, doctors, friends, knowledgeable acquaintances, and family.² Despite listing doctors as a health information source, higher levels of mistrust in traditional medical systems have been reported by African Americans.^{2,11} A recent study of health-information seeking found minority individuals and low socioeconomic populations are less likely to seek or trust health information from a doctor or other health care provider.⁹ Mistrust coupled with limited finances and health insurance may lead to decreased use of medical services¹¹ or individuals may turn to alternative sources of information to verify findings from a doctor.⁵ Either way, knowing where African Americans can obtain health care information within their community and the sources of this information is important to understand in order to ensure high-quality, reliable information is being provided to a population at risk for poor health outcomes.

Churches have been noted as a trusted source of health information for African Americans.² Historically, churches have been considered the cornerstone of African American communities with their mission extending to social, economic, and political issues affecting their congregants and the larger community.^{12,13} Nationwide, 87% of African Americans report belonging to a formal religious affiliation¹⁴ and churches have been recommended as a venue for reaching the larger African American community with health related information and programs.¹² Church settings are becoming increasingly popular venues for community health education, health promotion programs, and research.^{15,16}

While health promotion programming within churches is growing, detailed information on both the health and health care information being provided by churches is absent from the literature. Studies have looked at church members' perceptions of health information provided via printed materials.^{17–19} However, most of this work has focused on diet and physical activity information.^{18,19} Little has been done to look at other topics such as health care information that are being presented in churches and African American churches in particular. This gap in the literature surrounding messaging related to health care is of concern given the historical role of the church in the African American community and the potential for the information presented to influence both community members' awareness of health care options and their health care decisions. It is theorized that each church has its own unique “church culture,”²⁰ and ecological models suggest this “church culture” has the ability to influence the knowledge, attitudes, beliefs, and behaviors of congregation members as well as the social norms within the church and the larger community it serves.^{21,22}

To address this gap in the literature, we used content analysis methodology to evaluate the health care information disseminated by 11 African American churches. We aimed to characterize the health care information found in these churches by describing the frequency of health care topics as well as the sources and types of media used to promote health care information. We also analyzed frequencies to determine if meaningful differences existed among common topics, sources, and media types. In order to understand how messaging might change throughout a church year, we assessed if health care topics changed during a one-year time period.

Methods

This study was part of a larger five-year randomized controlled trial aimed at cancer prevention through the implementation of a faith-based diet and physical activity intervention. The primary purpose of the intervention was to assist congregation members in adopting a more anti-inflammatory diet and increasing their physical activity. The study funding period began April 1, 2008 and ended March 31, 2013. A community-based participatory research approach was used in all aspects of the larger study's development and implementation. Initially, a relationship was built with state leaders in the Baptist denomination, which led to the majority of churches recruited being Baptist in denomination. In addition to recruitment of Baptist churches, community liaisons were hired who had relationships with pastors and churches from other denominations. These liaisons led to the inclusion of both United Methodist and nondenominational churches in the study. As recruitment progressed, word -of-mouth, and community presentations were used to recruit additional churches. Data from the first wave of 11 churches recruited was used in this study. Five of these churches had been randomized into the control arm and six into the intervention arm. Participating churches were from the Midlands of South Carolina (SC) and included a mix of urban and rural churches that had predominately African American congregations. One small church (less than 100 members), five medium churches (101–350 members), four large churches (351–1000 members), and one mega church (over 1000 members) were recruited.²⁰ All study procedures were approved by the Internal Review Board at the University of South Carolina before recruitment and data collection began.

Data collection

Data collection occurred between July 2010 and October 2011 and included collection at three time points baseline (July–September 2010), six months (February–April 2011, and one year (August–October 2011). As it was not logistically or financially feasible to collect data during the entire year, experts in church practices were consulted regarding sampling frequency. It was determined that data would be collected over two-month intervals at each of the three time points in order to provide representative information on the church environment across all seasons of the year.

Data were collected by a study staff member at the start and end of each two-month interval. This person remained the same for all time points and all churches. Their background included a history of work in faith-based settings and training in general research methods as well as content analysis methodology. At the start and end of a two-month period, the staff data collector visited each church and documented all written information within the church (e.g., bulletins, bulletin boards, flyers, newsletters), both health and non-health related. Pictures were taken of all posted information and copies of all items provided to congregation members were collected. Collection occurred when no events were taking place at the church to ensure all areas frequented by the congregation at large were accessible. A church leader led the tour of the church and indicated areas where information was usually made available to congregation members. The most common areas toured in each church included the vestibule, fellowship hall, hallways, and entrances. Steps were taken to document items in common areas even when they were not arranged for easy access (e.g., a pile of items on a vestibule table were spread out and documented). The church leader who led the tours of the church also collected information provided to the congregation between staff visits. When each church leader was identified to assist with data collection, they received a letter from the staff data collector that contained an overview of the data collection process and time points. The church leaders also received a folder to use in the collecting of information for each time point. Each folder included instructions with the inclusion dates for data collection and details on what to include in the folder. The contact information of the staff data collector also was given in case the church leader had questions during the process. The church leader remained the same at each church for all time points and was instructed to collect all information, not just health and health care information, provided to the congregation. To reduce bias favoring larger churches, no information from church marquees or websites was included in the dataset.

After data collection at each time point, items were sorted by one person to remove any information that did not relate to health. If there was a question about an item's relevance to health, it was left in the dataset. During coding, coders had an option of marking an item as unrelated to health. This occurred with only three items and these items were removed after review. Items collected that contained no health care information were counted and saved for analysis with future research questions. A total of 1,109 items collected contained information related to health. Items in this dataset that contained information related to diet, physical activity, or other health concerns were counted and set aside. Of the items collected, 243 included information related to health care and are reported on in this paper. Table 1 provides the number of health and health care items collected by church.

Coding

Table 2 presents the codebook and definitions used to classify items collected by topic, source, and media type. Both deductive and inductive methods were used to establish the codebook. A review of the literature as well as immersion in the church provided an initial list of codes.^{15,17,19,23} Other codes were inductively established after a review of materials collected. The codebook was revised several times as analysis progressed to its current version.

Two graduate students coded items after participating in several training sessions and pilot tests, where consensus on definitions and codes was reached. Intercooder reliability was estimated using a double-coded sample that equaled 30% ($n = 73$) of the total dataset. Intercooder reliability corrected for agreement by chance (Cohen's kappa) ranged from .23 to 1. The "Other" categories in both health care topics and source had the lowest kappas and were not included in our analysis. All other items ranged between .71 and 1 except for medical services, which had an intercooder reliability of .39.

Each definition was coded as either zero (absent) or one (present). Due to the complexity of the media types in which information was found, a coding hierarchy was created to assist coders in assigning topic codes. For booklets/brochures, topics were determined by reading the main titles and subtitles. For magazines/newspapers and newsletters, topics were determined by reading article headlines. For any other media type, topics were determined by reading the entire text (see Table 2). Multiple topics could be coded as present in a single item; however, when the same topic was present more than once in an item, it was counted only once.

Analysis

Data were analyzed using SPSS (v. 19.0).²⁴ An *independent t-test* was conducted to determine if variation existed in the frequency of items collected in the intervention arm compared with the control arm. A *one-way ANOVA* was conducted to determine if variation existed in the frequency of items collected between the three time points. These analyses were conducted for verification purposes to ensure no statistical differences existed between study arms or across time points. The lack of variation allowed us to pool data from all churches for analysis relevant to the study's purpose (see Table 1 for statistics). As our coding schematic was based on the presence or absence of variables versus counts, the nonparametric *McNemar's chi-square* test was used in our analysis of frequency of topics, media types, and sources. To look at changes in the occurrence of topics across time, a *chi-square* test was used to determine if the change in frequency of each topic at each time point was statistically significant.

Results

After the data from all churches and time points was pooled, a total of 243 items were identified that included at least one message related to health care. Of these, 156 (64%) items contained information related to screening for disease (Table 3). Reference to medical services was the next most frequent topic at 62 (26%) and health insurance was third with 56

(23%) mentions. *McNemar's chi-square tests* show information related to screening significantly outnumbered information related to medical services ($\chi^2=52.10$, $p < .001$) and health insurance ($\chi^2=58.34$, $p < .001$).

We also characterized the information collected by coding the types of media and sources most frequently used to provide health care information. When looking at media type, flyers/handouts were most common ($n=90$, 37%). Magazines and newspapers ($n=51$, 21%), booklets and brochures ($n=38$, 16%), and bulletins and programs ($n=33$, 14%) also were commonly used to present health care information in this setting (Table 3). Flyers/handouts significantly outnumbered magazines/newspapers ($\chi^2=10.21$, $p < .01$), booklets/brochures ($\chi^2=20.32$, $p < .001$), and bulletins/programs ($\chi^2=25.50$, $p < .001$) in their use as media vehicles for health care information.

Most health care information appeared in church-published items ($n=71$, 29%). This source was followed by community magazines/newspapers ($n=49$, 20%) and items published by local health organizations ($n=46$; 19%) (Table 3). Information appeared in an equal number of items published by companies and national health organizations ($n=21$, 9% for each). Church-published items outnumbered community magazines/papers with marginal significance ($\chi^2=3.68$, $p=.06$), but significantly outnumber publications by local health organizations ($\chi^2=4.92$, $p < .05$) as well as those by companies and national health organizations ($\chi^2=26.01$, $p < .001$ for each).

The prevalence of topics within frequent media types and sources was examined for descriptive purposes. Differences were seen between the media types and sources used for presenting screening information versus those used for information related to medical services and health insurance (Table 4). Flyers/handouts were the most frequently used media for presenting screening information ($n=54$, 35%) followed by bulletins/programs and magazines/newspapers ($n=29$, 19% each). Both medical services and health insurance information was found most often in magazines/newspapers ($n=33$, 53% and $n=25$, 45%, respectively) followed by flyers/handouts ($n=15$, 24% and $n=17$, 30%, respectively). The church was the most frequent source of screening information ($n=55$, 35%) while community magazines/newspapers were the primary source of both medical services ($n=30$, 48%) and health insurance information ($n=24$, 43%).

Changes occurred in the presence of health care topics between July 2010 and October 2011. All topics increased in frequency over the 3 collection time points (Table 5). However, only changes in the number of health insurance information was statistically significant ($\chi^2=6.08$, $p < .05$) and the greatest increase was seen between time point two (six months) and time point three (one year).

Discussion

We used content analysis methodology to characterize the health care information disseminated by 11 African American churches. Topics most frequently found within our dataset related to screening, medical services, and health insurance, with screening being more common than the other topics. Overall, flyers/handouts were the most frequently

occurring type of media and the church was the most frequent source of health care information. When topics were examined over time, all increased; however, only the increase in health insurance information was statistically significant. These findings shed light on the health care information individuals attending African American churches are exposed to and have important implications for the development of approaches to communicate better with African American communities about health care issues.

Screening is considered a promising strategy for eliminating some health disparities.^{25,26} However, screening rates, such as those for cancer, remain low among African Americans.²⁵ Despite the high frequency of screening information found in this study there may be a disconnect between exposure to messaging and action. Flyers/handouts were the media type most frequently used to present screening information with more detailed booklets/brochures used less frequently. In addition, church-published items were the most frequent source of screening information. Health fairs at African American churches are considered by the community as a trusted source of health information and many times provide screening opportunities.² Our findings suggest screenings and screening events are being promoted within the church, but more detailed information related to the screening tests may be absent. Previous studies have demonstrated that message personalization, information to reduce fear, details on burden versus benefits, and tailoring to fit religious beliefs promote screening action.²⁷⁻²⁹ Such details may be absent from flyers and handouts. Future research should assess whether awareness of screening is raised with exposure to information at a high frequency but with few details. Next steps should also examine if this awareness promotes action or if more detailed information is required.

Unlike with screening information, medical services and health insurance information was found most often in magazines/newspapers. These findings indicate that the detail level of health care information may vary by topic. To our knowledge, no studies have examined how detail level of health care information influences health care decision making. The literature does suggest that health information quality and reliability (e.g., source, supporting evidence, date of publication), are important to the decision making process.^{6,29-31} As with screening information, future research should assess how frequency of exposure to medical service and health insurance information and detail level interact to influence health care decision making and actions. The source of medical service and health insurance information differed from screening information in that community magazines/newspapers were the primary source compared with churches. Many of these magazines and newspapers targeted the African American community in the study area. The prominence of both the church and Black news publications as sources of health care information is consistent with the literature that shows they are trusted sources of information in the African American community.^{2,33} A study of Black newspapers found this type of media was a poor quality source for information on cancer and health topics, but general-audience newspapers were of even poorer quality.³³ Health care information that is of low quality may lead to confusion and mistrust. We coded items in our dataset for source to provide an indicator of information quality. However, to understand better how sources such as magazines and newspapers rank in quality, the purpose (e.g., inform, advertise) of messages present also should be assessed. Future studies should assess the ratio of advertisements to articles providing health care information and examine the influence message purpose has on health care decision making.

Despite many health organizations' missions including the provision of health care information to the community, local and national health organizations were the third and fourth most frequent sources, respectively, of health care information in our study. It appears most health care information in African American churches is delivered through secondhand sources such as church publications and community publications. Our findings indicate that health care information is for the most part not being provided directly by health organizations, but is filtered through personnel who prepare church publications and editors and journalists who produce community publications. While these sources may rely on or reference health organizations, they are in essence serving as middlemen and providing their own interpretations on the topics. This is an area where church members and community health professionals can work together with health organizations and other sources to ensure that high quality information is disseminated in churches.

In addition to describing the health care information present within our study, we also sought to examine changes in topics over time. While increases in frequency of information was seen for all major topics, the only change that was statistically significant was related to the frequency of health insurance information and this was primarily seen between the second and third time points (see Table 5). Our second data collection time point occurred between February and April of 2011 and our third occurred between August and October of the same year. These data collection periods coincided with key time points in the enactment of the Affordable Care Act, which occurred primarily on January 1, 2011 and October 1, 2011.³⁴ Not seeing an increase in health insurance information from baseline and time point two may indicate a lag in the time it took companies and organizations to prepare messages. For example, in the third time point we observed multiple messages about a new health insurance option, the Community First Choice Option, which began October 1, 2011 and allows Medicaid to provide home and community-based services to individuals with disabilities. In addition to enactment of components of the Affordable Care Act, October 15th begins the enrollment period for Medicare Advantage Plans³⁵ and promotion of plan options could have caused an increase in health insurance information during our third time point. Older adults have a higher church attendance rate than other age groups,¹⁴ and churches may provide an ideal location for the promotion and notification of changes in Medicaid and Medicare programs.

While our study provides insight into an important topic there are some limitations. We only characterized information within African American churches located in the Midlands of SC. This limits the generalizability of our findings to churches located elsewhere. However, we believe the description of our methodology and findings are useful to other researchers interested in expanding this area of research or examining these relationships in other settings and with other populations. We also obtained an intercoder reliability of only .39 for the topic variable medical services, which limits the ability to interpret our findings related to this variable. However, the extensive training of our coders and the high intercoder reliability of the screening and health insurance variables suggests that overall our findings are robust. We did exclude marquee and website information from our dataset to standardize data collection across churches. Future research, with larger samples of small, medium, large, and mega sized churches, should include these areas to examine the frequency of health care information present as well as how frequency may differ across varying sized

churches. To our knowledge, this is the first study of information related to health care in African American churches. This is an important first step toward a better understanding of African Americans' exposure to health care information in an important community setting. Future research should further examine the characteristics of health care information within churches as well as other African American community settings, and explore relationships between characteristics of information exposure and health behavior outcomes.

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References

1. United States Department of Health and Human Services. Healthy People 2020. United States Department of Health and Human Services; Washington, DC: 2010. Available at www.healthypeople.gov
2. Matthews AK, Sellergen SA, Manfredi C, et al. Factors influencing medical information seeking among African American cancer patients. *Journal of Health Communication: International Perspectives*. 2002; 7(3):205–219.
3. Centers for Disease Control and Prevention, United States Department of Health and Human Services. Morbidity and Mortality Weekly Report: CDC health disparities and inequalities - United States. Centers for Disease Control and Prevention, United States Department of Health and Human Services; Atlanta, GA: 2011. Available at www.cdc.gov/mmwr
4. Lambert SD, Loiselle CG. Health information seeking behavior. *Qualitative Health Research*. 2007; 17(8):1006–1019. [PubMed: 17928475]
5. Kelly B, Hornik R, Romantan A, et al. Cancer information scanning and seeking in the general population. *Journal of Health Communication: International Perspectives*. 2010; 15(7):734–753.
6. Rooks RN, Wiltshire JC, Elder K, et al. Health information seeking and use outside the medical encounter: Is it associated with race and ethnicity? *Social Science and Medicine*. 2002; 74:176–184. [PubMed: 22154611]
7. Tu, HT.; Cohen, GR. Striking jump in consumers seeking health care information: Centers for Studying Health System Change. 2008.
8. Shim M, Kelly B, Hornik R. Cancer information scanning and seeking behavior is associated with knowledge, lifestyle choices, and screening. *Journal of Health Communication: International Perspectives*. 2006; 11(S1):157–172.
9. Richardson A, Allen JA, Xiao H, et al. Effects of race/ethnicity and socioeconomic status on health information-seeking, confidence, and trust. *Journal of Health Care for the Poor and Underserved*. 2012; 23(4):1477–1493. [PubMed: 23698662]
10. Zhang Q, Wang Y, Huang ES. Changes in racial/ethnic disparities in the prevalence of Type 2 diabetes by obesity level among US adults. *Ethnicity & Health*. 2009; 14:439–457. [PubMed: 19360513]
11. Armstrong K, Mcmurphy S, Dean LT, et al. Differences in the patterns of health care system distrust between blacks and whites. *Journal of General Internal Medicine*. 2008; 23(6):827–833. [PubMed: 18299939]
12. Campbell MK, Hudson MA, Resnicow K, et al. Church-based health promotion interventions: Evidence and lessons learned. *Annual Review of Public Health*. 2007; 28:213–234.
13. Mamiya, L. River of struggle, river of freedom: Trends among black churches and black pastoral leadership. Duke Divinity School; Durham, NC: 2006.

14. The Pew Forum on Religion and Public Life. A religious portrait of African Americans. Pew Research Center; Washington, DC: 2009. Available at <http://pewforum.org/docs/?DocID=389>
15. Wilcox S, Laken M, Parrott AW, et al. The Faith, Activity, and Nutrition (FAN) program: design of a participatory research intervention to increase physical activity and improve dietary habits in African American churches. *Contemporary Clinical Trials*. Jul; 2010 31(4):323–335. [PubMed: 20359549]
16. Resnicow K, Campbell MK, Carr C, et al. Body and Soul: A dietary intervention conducted through African-American churches. *American Journal of Preventive Medicine*. 2004; 27(2):97–105. [PubMed: 15261895]
17. Campbell MK, Motsinger BM, Ingram A, et al. The North Carolina Black Churches United for Better Health project: Intervention and process evaluation. *Health Education and Behavior*. 2000; 27(2):241–253.
18. Baruth M, Wilcox S, Condrasky MD. Perceived environmental church support is associated with dietary practices among African-American adults. *Journal of the American Dietetic Association*. 2011; 111:889–893. [PubMed: 21616203]
19. Williams RM, Glanz K, Kegler MC, et al. A study of rural church health promotion environments: Leaders' and members' perspectives. *Journal of Religion and Health*. 2009 DOI 10.1007/s10943-10009-19306-10942.
20. Carroll, J. *God's Pottery*. William B. Eerdmans Publishing Co; Grand Rapids, MI: 2006.
21. McLeroy KR, Bibeau D, Steckler A, Glanz K. An ecological perspective on health promotion programs. *Health Education Quarterly*. 1988; 15:351–377. [PubMed: 3068205]
22. Cohen DA, Scribner RA, Farley TA. A structural model of health behavior: A pragmatic approach to explain and influence health behaviors at the population level. *Preventive Medicine*. 2000; 30:146–154. [PubMed: 10656842]
23. Baruth M, Wilcox S, Laken M, et al. Implementation of a faith-based physical activity intervention: Insights from church health directors. *Journal of Community Health*. 2008; 33:304–312. [PubMed: 18473154]
24. IBM Corp. IBM SPSS Statistics for Windows. Version 19.0. IBM Corp; Armonk, NY: Released 2010.
25. Centers for Disease Control and Prevention: Office of Minority Health and Health Disparities. Eliminate Disparities in Cancer Screening and Management. Centers for Disease Control and Prevention; Atlanta, GA: Feb. 2009 Available at www.cdc.gov/omhd/AMH/factsheet/cancer.htm
26. Centers for Disease Control and Prevention: Office of Minority Health and Health Disparities. Eliminate Disparities in Cardiovascular Disease. Centers for Disease Control and Prevention; Atlanta, GA: Jun. 2007 Available at www.cdc.gov/omhd/AMH/factsheet/cardio.htm
27. Jones RM, Devers KJ, Kuzel AJ, et al. Patient-reported barriers to colorectal cancer screening. *American Journal of Preventive Medicine*. May; 2010 38(5):508–516. [PubMed: 20409499]
28. Green BL, Lewis RK, Wang MQ, et al. Powerlessness, destiny, and control: The influence on health behaviors of African Americans. *Journal of Community Health*. 2004; 29(1):15–27. [PubMed: 14768932]
29. Scarinci IC, Garcia FAR, Kobetz E, et al. Cervical Cancer Prevention: New Tools and Old Barriers. *Cancer*. 2010; 116(11):2531–2542. [PubMed: 20310056]
30. Mills ME, Davidson R. Cancer patients' sources of information: Use and quality issues. *Psycho-Oncology*. 2002; 11:371–378. [PubMed: 12228870]
31. Kunst H, Groot D, Latthe PM, et al. Accuracy of information on apparently credible websites: Survey of five common health topics. *British Medical Journal*. 2002; 324:581–582. [PubMed: 11884323]
32. Kontos EZ, Viswanathan K. Cancer-related direct-to-consumer advertising: A critical review. *Nature Reviews: Cancer*. 2011; 11:142–150.
33. Caburnay CA, Kreuter MW, Cameron G, et al. Black newspapers as a tool for cancer education in African-American communities. *Ethnicity and Disease*. 2008; 18:488–495. [PubMed: 19157255]
34. United States Department of Health and Human Services. What's Changing and When. United States Department of Health and Human Services; Washington, DC: n.d. Available at www.healthcare.gov/law/timeline

35. Centers for Medicare and Medicaid Services. When can I join a health or drug plan?. Centers for Medicare and Medicaid Services; Baltimore, MD: n.d. Available at <http://www.medicare.gov/sign-up-change-plans/when-can-i-join-a-health-or-drug-plan/when-can-i-join-a-health-or-drug-plan.html#collapse-3190>

Table 1

Total Health Items and Health Care Items by Church, Time Point, and Study Arm

Church Details*	Time Point			Total (Health Care Items)
	Baseline (Health Care Items)	6 Months (Health Care Items)	1 Year (Health Care Items)	
Medium Church	7 (3)	13 (1)	3 (2)	23 (6)
Large Church	34 (5)	51 (5)	62 (9)	147 (19)
Large Church	19 (6)	50 (16)	40 (11)	109 (33)
Mega Church	25 (4)	32 (6)	66 (12)	123 (22)
Medium Church	15 (2)	31 (6)	20 (5)	66 (13)
Medium Church	46 (7)	86 (23)	67 (9)	199 (39)
Intervention Arm Totals:	146 (27)	263 (57)	258 (48)	667 (132**)
Small Church	18 (5)	21 (9)	24 (6)	63 (20)
Medium Church	20 (2)	31 (3)	47 (16)	98 (21)
Large Church	14 (7)	21 (4)	21 (4)	56 (15)
Medium Church	13 (2)	20 (3)	27 (6)	60 (11)
Large Church	63 (8)	47 (12)	55 (24)	165 (44)
Control Arm Totals:	128 (24)	140 (31)	174 (56)	442 (111**)
Dataset Totals:	274 (51 [†])	403 (88 [†])	432 (104 [†])	1109 (243)

* Small = less than 100 members, Medium = 101–350 members, Large = 351–1000 members, Mega = over 1000 members

** *Independent t-test* (comparing number of health care items in control arm to number in intervention arm): $t = 0.03$, $p = .97$

[†] *one-way ANOVA* (comparing between group differences in the number of health care items collected at baseline, 6 months, 1 year): $F = 2.29$, $p = .12$

Table2

Intercoder Reliability for Topics, Media Type, and Sources.

Health care: Topics, Media Types, Sources	Cohen's Kappa
Topic:	
Screening - Messages promoting or recommending screening for a disease (HIV/AIDS, cancer, diabetes, etc.)	.78
Health Insurance - Messages promoting, selling, or providing guidelines related to health insurance	.81
Medical Services - Messages promoting or recommending medical services (hospital, clinics, eye, dental, and primary health services)	.39
Other - Messages related to purchasing medications, health care reform, etc.	.23
Media Type:	
Booklet/Brochure - Media presenting an educational or promotional topic in a format with bound pages or a single page that can be unfolded (coded at the media level)	.76
Bulletin/Program - Media passed out or posted to provide information regarding Sunday service or other event being held at the church (coded at the word level)	.96
Calendar - Media providing months and dates with events listed	1
Email - Media that was an electronic communication between a church representative and the congregation (coded at the word level)	.79
Flyer/Handout - Media that promotes events, programs, services, or topics that is posted, passed out, or left for pick up. This code includes letters from individuals, organizations, or other churches, (coded at the word level)	.89
Magazine/Newspaper - Media that is self-identified as a magazine or paper or contains information presented in a format with articles, stories, pictures, and ads. (code at the article level, calendars within were coded at the word level)	.95
Newsletter - Media that was a small publication and provided news and information relevant to the congregation or a subset of the congregation (i.e. the women's group, children, etc.) (coded at the article level)	1
Other - Media not captured by any other code. This included banners, books/catalogues, fans, bulletin boards, forms, business cards, etc. (coded at the word level)	.85
Source:	
Church made - Media created and printed by any church or religious organization (i.e. brotherhoods, foundation, or organizations that are part of a church, denomination or general religious groups).	.91
Community Paper/Magazine - Magazines and newspapers targeting a particular community in the midlands of SC.	1
Company - Media published by a privately owned company	.71
Local Health Organization - Media published by a SC health organization or a SC chapter of a national health organization. If both a local and national health organization were listed as the source, the item was coded as from a local health organization.	.73
National Health Organization - Media published by a national health organization and distributed nationwide or worldwide.	.79
Other - Media whose source could not be determined (no publisher, organization, etc. listed) or if the publishing group was an organization not local to SC or national, a community group (i.e. organization, center, coalition), or a school.	.23

Table 3

Frequency of Topics, Media Type, and Sources.

Health care: Topics, Media Types, Sources		Frequencies N=243
Topic:		
Screening		156 (64%)
Health Insurance		56 (23%)
Medical Services		62 (26%)
Other		48 (20%)
Media Type:		
Booklet/Brochure		38 (16%)
Bulletin/Program		33 (14%)
Calendar		4 (2%)
Email		2 (1%)
Flyer/Handout		90 (37%)
Magazine/Newspaper		51 (21%)
Newsletter		9 (4%)
Other		16 (7%)
Source:		
Church made		71 (29%)
Community Magazine/Newspaper		49 (20%)
Company		21 (9%)
Local Health Organization		46 (19%)
National Health Organization		21 (9%)
Other		35 (14%)

Table 4

Health Care Topics by Most Frequently Identified Media Types and Sources

Topic	Media Type *				Source *		
	Flyer/Handout	Magazine/Newspaper	Booklet/Brochure	Bulletin/Program	Church	Community Magazine/Newspaper	Local Health Org.
Screening	54 (35%)	29 (19%)	20 (13%)	29 (19%)	55 (35%)	30 (19%)	34 (22%)
Medical Services	15 (24%)	33 (53%)	3 (5%)	2 (3%)	18 (29%)	30 (48%)	5 (8%)
Health Insurance	17 (30%)	25 (45%)	12 (21%)	0	3 (5%)	24 (43%)	9 (16%)

* Rows do not add up to 100% as counts and percentages for less frequently occurring media types and sources are not presented

Table 5

Change in Health Care Topics Over Time.

Time Point	Total Items Collected*	Topics			
		Screening	Medical Services	Health Insurance [†]	Other Health Care Topics
Baseline (July–Sept 2010)	51 (21%)	36 (23%)	11 (18%)	12 (21%)	4 (8%)
6 Months (Feb–April 2011)	88 (36%)	56 (36%)	20 (32%)	13 (23%)	24 (50%)
1 Year (Aug–Oct 2011)	104 (43%)	64 (41%)	31 (49%)	31 (55%)	20 (42%)
Total	243	156	62	56	48

* Total items collected = 243; due to multiple messages occurring in a single item the row total for the four topics adds to >243

[†] *Chi-square* test of time point and health insurance significant at $p=.05$