Effectiveness of a Barber-Based Intervention for Improving Hypertension Control in Black Men

The BARBER-1 Study: A Cluster Randomized Trial

Ronald G. Victor, MD; Joseph E. Ravenell, MD, MS; Anne Freeman, MSPH; David Leonard, PhD; Deepa G. Bhat, ME; Moiz Shafiq, MD; Patricia Knowles; Joy S. Storm, BS; Emily Adhikari, BA; Kirsten Bibbins-Domingo, PhD, MD, MAS; Pamela G. Coxson, PhD; Mark J. Pletcher, MD, MPH; Peter Hannan, MStat; Patricia Knowles; Joy S. Storm, BS; Emily Adhikari, BA; Kirsten Bibbins-Domingo, PhD, MD, MAS; Pamela G. Coxson, PhD; Mark J. Pletcher, MD, MPH; Peter Hannan, MStat; Robert W. Haley, MD

Background: Barbershop-based hypertension (HTN) outreach programs for black men are becoming increasingly common, but whether they are an effective approach for improving HTN control remains uncertain.

Methods: To evaluate whether a continuous high blood pressure (BP) monitoring and referral program conducted by barbers motivates male patrons with elevated BP to pursue physician follow-up, leading to improved HTN control, a cluster randomized trial (BARBER-1) of HTN control was conducted among black male patrons of 17 black-owned barbershops in Dallas County, Texas (March 2006–December 2008). Participants underwent 10-week baseline BP screening, and then study sites were randomized to a comparison group that received standard BP pamphlets (8 shops, 77 hypertensive patrons per shop) or an intervention group in which barbers continuously offered BP checks with haircuts and promoted physician follow-up with sex-specific peer-based health messaging (9 shops, 75 hypertensive patrons per shop). After 10 months, follow-up data were obtained. The primary outcome measure was change in HTN control rate for each barbershop.

Results: The HTN control rate increased more in intervention barbershops than in comparison barbershops (absolute group difference, 8.8% [95% confidence interval (CI), 0.8%–16.9%]) (P = .04); the intervention effect persisted after adjustment for covariates (P = .03). A marginal intervention effect was found for systolic BP change (absolute group difference, −2.5 mm Hg [95% CI, −5.3 to 0.3 mm Hg]) (P = .08).

Conclusions: The effect of BP screening on HTN control among black male barbershop patrons was improved when barbers were enabled to become health educators, monitor BP, and promote physician follow-up. Further research is warranted.

Trial Registration: clinicaltrials.gov Identifier: NCT00325533


Uncontrolled Hypertension (HTN) is one of the most important causes of premature disability and death among non-Hispanic black men. Indeed, black men have the highest death rate from HTN of any race, ethnic, and sex group in the United States.

See Invited Commentary at end of article

The age-adjusted HTN-related death rate is 3 times higher among black men than white men, with blood pressure (BP) remaining above recommended levels in 70% of the 4.4 million adult black men with HTN—a chronic medical condition that requires frequent physician interaction for initiation and adjustment of prescription BP medication. Compared with black women, men have less frequent physician contact for preventive care and thus substantially lower rates of HTN detection, medical treatment, and control. Accordingly, the Centers for Disease Control and Prevention has issued a new priority to develop novel HTN outreach programs with community partners and deliver intervention messages that resonate with black men. Existing community-level health promotion research specific to black men and HTN is scarce, with most work having considered blacks of both sexes as a group.

Black churches are conventional community partners for medical outreach, but regular church attendance is less common among black men than women. Thus, popular secular sites—sporting...
events and barbershops—have been approached for HTN outreach to a larger segment of the at-risk male population.\(^5\)\(^6\) Black-owned barbershops hold special appeal for community-based intervention trials because they are a cultural institution that draws a large and loyal male clientele and provides an open forum for discussion of numerous topics, including health, with influential peers.\(^8\)\(^9\)\(^\dagger\) Barbershop-based HTN outreach programs are becoming common nationwide,\(^1,13-17\) but whether they are an effective approach for improving HTN control among black men is unknown owing to a dearth of evaluation research. Interventions described in the peer-reviewed literature previously had no evaluation component.

In recent nonrandomized feasibility studies, our research group\(^1\) found that a program of continuous BP monitoring and peer-based health messaging in a barbershop can (1) increase physician referrals and lower BP among long-term patrons with uncontrolled HTN and (2) be implemented by barbers rather than research personnel. Based on the encouraging pilot data, we designed and conducted a cluster-randomized trial—the Barber-Assisted Reduction in Blood Pressure in Ethnic Residents (BARBER-1) study.\(^16\) To our knowledge, BARBER-1 is the first randomized controlled trial of a barbershop-based health promotion program. The intent was to use the nature of black-owned barbershops—haircut service and socialization—to have barbers become promoters of physician follow-up for BP control. We chose the cluster-randomized trial, knowing that the design needed to avoid contamination between intervention and comparison conditions, and analysis must allow for possible dependency of response between individual patrons within a barbershop as well as withdrawals and additions of individual patrons over time.\(^19-21\)

### METHODS

All black men attending the participating barbershops were offered 10-week baseline BP screenings for HTN. Study sites were then randomized to a comparison group of barbershops that received standard HTN education pamphlets written for a broad audience of black men and women or an intervention group in which barbers continually offered their entire male clientele BP checks with haircuts and used personalized sex-specific peer-based health messaging to promote physician follow-up. Intervention barbershop patrons received this message repeatedly from both day-to-day conversations with their barbers (and other male patrons) and large role-model posters on the shop walls showing their own male peers (actual patrons of their barbershop) modeling specific HTN treatment-seeking behavior and using their own words to tell the story. After 10 months, follow-up data were collected to determine if barbershops randomized to the intervention arm showed a larger improvement in HTN control rates (percentage of a barbershop’s hypertensive patrons with recommended BP levels).

### PARTICIPATING BARBERSHOPS

The trial was conducted in black-owned barbershops with 95% or greater black male clientele in Dallas County, Texas, from March 2006 to December 2008 (Figure 1 and Figure 2 and eFigure 1, http://www.archinternmed.com). Fifty-five of 222 shops met additional selection criteria (in business for ≥10 years and employing ≥3 barbers). We selected 18 of these to represent 4 geographic sectors with sizeable black populations. All 18 initially agreed to participate, but 1 shop went out of business prior to randomization; 1 intervention shop dropped out before the intervention began; and 1 shop assigned to the comparison group was eliminated on safety concerns (criminal activity in the shop). Randomization was stratified by baseline HTN control rate and sector. Randomization was blinded.

Figure 1. Flow diagram for the design of the Barber-Assisted Reduction in Blood Pressure in Ethnic Residents (BARBER-1) Study.\(^16\) HTN indicates hypertension. *Eligible barbershops had non-Hispanic black owners and barbers and had a greater than 95% black male clientele. †Barbershops had been in business for 10 or more years and had 3 or more barbers. ‡Other reasons for not selecting barbershops included 9 or more barbers per shop; inadequate space to accommodate study staff; barbers stations separated by walls (inadequate space for peer group influence); and insufficient grant funds to enroll a larger number of shops from each geographic quadrant. ‡Black field interviewers administered the baseline health questionnaire and measured blood pressure on adult black male patrons entering the barbershops for 10 weeks to identify those with confirmed HTN and obtain accurate estimates of their baseline blood pressure levels. Patrons found to have elevated blood pressure readings were given written recommendations for physician follow-up. ||Barbers were paid for offering a blood pressure check to each adult black male patron at every haircut for 10 months and for facilitating physician follow-up for patrons they identified as having elevated blood pressure readings. ¶Barbershops in the comparison group were given a continual supply of lay education pamphlets from the American Heart Association on HTN in blacks for 10 months. *Black field interviewers collected the follow-up data for 10 weeks following completion of the 10-month intervention period.©2011 American Medical Association. All rights reserved.
approved by the institutional review boards of University of Texas Southwestern Medical Center and Temple University Institute for Survey Research, which conducted the evaluation. Patron consent was obtained, and data were collected and stored in accordance with the guidelines of the Health Insurance Portability and Accountability Act.

INTERVENTION AND COMPARISON GROUPS

Before randomization, both groups of hypertensive patrons were treated identically: they had 2 baseline BP screenings performed by field interviewers who provided the patrons with written screening results and standard written recommendations for physician follow-up. After randomization, comparison barbershops received standard pamphlets written by the American Heart Association (High Blood Pressure in African Americans, product code 50-1466). No BPs were measured in the comparison barbershops for 10 months.

In contrast, the intervention barbershops received no pamphlets, but for 10 months the barbers continually offered BP checks during haircuts (eFigure 2). In addition, personalized sex-specific peer-based health messaging was provided—both through conversations with barbers and other male patrons and through peer role-model stories consisting of large posters placed on the barbershop walls depicting authentic stories of other male hypertensive patrons of the same shop modeling the desired treatment-seeking behavior and using the model’s own words to tell the story (eFigure 3).

The intervention’s theoretical underpinning was adapted from the successful AIDS Community Demonstration Projects that

Figure 2. Identification of barbershop patrons with HTN at baseline and follow-up in intervention and comparison groups. HTN indicates hypertension; BP, blood pressure. *Patrons eligible for BP screening were non-Hispanic black men aged 18 years or older (no upper age limit). Race/ethnicity was self-assigned. †Screening criteria for HTN were self-reported prescription for BP medication or a measured BP higher than 135/85 mm Hg for patrons without self-reported diabetes or higher than 130/80 mm Hg for those with diabetes. Patrons meeting screening criteria were offered an incentive for returning another day to (1) complete a second set of BP readings and a health interview and (2) to bring their prescription pill bottles to the barbershop for interviewers to transcribe medication data from prescription labels. Each incentive was a free haircut. ‡Hypertension was confirmed if patrons meeting screening criteria had elevated BP on both days or provided a pill bottle with a current prescription for BP medication.
mobilized community peers to deliver intervention messages (specific action items) with role model stories and made medical equipment available in the daily environment. Here we trained, equipped, and paid barbers to make BP monitoring and interpretation available to every adult black male patron with every haircut in intervention barbershops and to deliver the main intervention message that each patron with an elevated BP reading needs to follow-up with a physician. The barbers encouraged patrons with an established physician to make a follow-up appointment and referred those without physicians to the project nursing staff, who facilitated insurance-appropriate referral to local community physicians and safety net clinics, including the University of Texas Southwestern Hypertension Specialty Clinic staffed by physicians who were part of the study. The barbers also gave the patrons with elevated BP readings wallet-sized referral cards to give their physicians ongoing feedback—accurate out-of-office BP readings—about the need to start or intensify BP medicine regimens (eFigure 4).

In the intervention barbershops, barbers were paid $3 per recorded BP, $10 per phone call requesting nurse-assisted physician referral, and $50 per BP card returned (by the patron to the barber) with the physician’s signature (documenting physician-patient interaction—the study’s major behavioral objective). Patrons received a free $12 haircut for each high BP referral card signed by their physician and returned to their barber.

OUTCOME EVALUATION

Several steps were taken to rigorously evaluate the study’s primary outcome—the change in HTN control rates for shops in each study arm. Baseline and 10-month follow-up BP measurements and computer-assisted health interviews were conducted not by the barbers but rather by independently contracted, trained black field interviewers. The HTN control rates were derived from a second set of multiple BP measurements and prescription pill bottle labels rather than the 1 or 2 BP measurements and subjective treatment reporting typically used in survey research.

For 10 weeks at both ends of the study, interviewers offered free BP screenings to all adult black men entering the barbershop. Men meeting screening criteria for HTN (measured BP of $135/85 mm Hg or diabetic patients) or reported use of BP medication) were asked to return another day to (1) complete a second set of BP measurements and a health questionnaire, and (2) bring their pill bottles to the barbershop for interviewers to transcribe medication data. The questionnaire consisted of structured response items from previously validated instruments on numerous covariates, including age (years), education beyond high school (yes/no), marital status (yes/no), and current smoking status (yes/no). An additional covariate, an indicator for participation in baseline and follow-up surveys, was constructed by merging the baseline and follow-up unique identifiers. These covariates were included in an adjusted analysis of the primary outcome because of their plausible influence on health care–seeking behavior and BP.

Interviewers were trained on proper BP measurement technique. They measured BPs using validated oscillometric monitors (Welch Allyn, Arden, North Carolina) with patrons seated after 5 minutes of rest. For each subject, the appropriately sized arm cuff was determined, recorded, and used for all subsequent BP measurements. For both baseline and follow-up data, field interviewers took 6 consecutive BP readings on each hypertensive subject on each of 2 days. Measurements on each first monitoring day are known to be higher and unstable and therefore were excluded, as recommended by current guidelines and substantiated by preparatory field work. The final 4 readings on the second day were averaged to obtain a stable mean value, which was used to calculate BP outcomes.

Hypertension was defined as having either (1) a documented current prescription for BP medication or (2) for untreated patients, a measured BP of 135/85 mm Hg or higher for men without diabetes and 130/80 mm Hg or higher for those with diabetes (recommended cutoff values for out-of-office BP). Control of HTN was defined as BP levels below these limits. In each barbershop, the percentage of hypertensive patrons having goal BP values was calculated at both ends of the study. The primary outcome, calculated for each barbershop, was the change in HTN control rate. Prespecified secondary outcomes included barbershop-level changes in HTN treatment rates, HTN awareness rates, and BP levels.

The study was designed to have 80% power for detecting a 15% absolute mean difference in improvement in HTN control rate between study groups. Power calculations assumed 8 shops per study arm, 100 hypertensive patrons per shop, and an over-time correlation of 0.1. However, the actual over-time correlation was about 1 (as shown for the intraclass correlation for change of 0 in eTable 1), indicating that the study design provided more statistical power than anticipated. The power was driven mainly by the number of barbershops once the number of hypertensive individuals exceeded about 50 per barbershop; thus, differences in the range of 70 to 100 had only a minor effect.

STATISTICAL ANALYSIS

Because of the cluster design, summary statistics are presented as the means (standard errors of barbershop means [SEMs]). A difference between study arms at baseline was tested with a mixed effects regression model with study arm as a fixed effect and barbershop within the arm as a random effect. A difference between study arms over time was tested with a mixed-effects regression model with arm, time, and arm × time as fixed effects and barbershop, barbershop × time, and patron within barbershop as random effects. The random effects of barbershop and barbershop × time account for the clustering of outcome levels and changes within barbershops, while the random effect of patron within barbershop accounts for repeated measures of clients present at both baseline and final assessment periods. These models simultaneously estimate the outcome measure in both study arms at both time points; the arm × time effect tests the intervention effect, thereby adjusting for baseline values. Generalized linear mixed models with logit link functions were used for binary outcome variables, and linear mixed models were used for continuous outcome variables. Adjusted models were fit with centered, individual-level covariates included as additional fixed effects. Model-based significance levels and 95% confidence intervals (CIs) were obtained. P < .05 was considered statistically significant. Analyses were conducted using SAS/STAT software, version 9.1.3 (SAS Institute Inc, Cary, North Carolina).

COST-EFFECTIVENESS SIMULATION

We used the CHD (Coronary Heart Disease) Policy Model—an established computer-simulation, state-transition (Markov cohort) model of CHD incidence, prevalence, mortality, and costs in the US population—to simulate the average benefits of the observed systolic BP reduction in BARBER-1 on the numbers of adverse events prevented and associated health care cost savings during a 1-year intervention. The total cost savings figure provides an estimate of how much could be spent on intervention implementation plus antihypertensive treatment for the program to be cost-neutral in the first year. Details on methods and model population characteristics are provided in eTable 2 and eTable 3.
RESULTS

The characteristics of the participating barbershops and the patrons with HTN are summarized in Table 1. The groups were well balanced at baseline across most characteristics. However, at baseline, a higher percentage of patrons in the comparison group reported being married (\(P = .01\)).

Although at baseline 85% of the hypertensive patrons in both groups reported having health insurance (mostly private insurance) and middle-income levels (Table 1), HTN was uncontrolled in most affected patrons. Overall, 45% of the subjects screened had HTN, and of these, 78% were aware of their diagnosis; 69% were being treated for it; and only 38% had their BP controlled. These rates are all slightly higher than recent national estimates (eTable 4). Baseline HTN control rates were not significantly different between study groups (\(P = .22\)) but tended to be lower in the intervention group (33.8% vs 40.0%) (Table 2 and Figure 3).

PRIMARY OUTCOME

Table 2 details the change over time in the primary and secondary outcomes. Figure 3 shows the barbershop-specific changes over time in HTN control rates. In unadjusted analysis that used all available data (17 barbershops at baseline, 15 at follow-up), the enhanced barber-based intervention resulted in a greater improvement in the primary outcome of HTN control rate than the comparison treatment: absolute group difference,
8.8% (95% CI, 0.8%-16.9%) \((P = .04)\); the intervention effect persisted after adjustment for covariates \((P = .03)\). In addition, in a conservative intention-to-treat analysis, which assumed that the 2 barbershops lost to follow-up (1 per arm) both followed the lesser trajectory of the comparison barbershops, the resultant intervention effect was 7.8% (95% CI, 0.4%-15.3%) \((P = .04)\).

**SECONDARY OUTCOMES**

Borderline intervention effects were observed for several secondary outcomes (Table 2), including systolic BP reduction: absolute group difference, −2.5 mm Hg (95% CI, −5.3 to 0.3 mm Hg) \((P = .08)\). However, there was no evidence for an intervention effect on HTN awareness.

**Process Data on Intervention Implementation, Penetration, Incentive Payments, and Acceptability**

In the intervention group, follow-up data were collected on 539 patrons with HTN served by 29 participating barbers in 8 barbershops completing the study. Of the 539 patrons, 275 reported that during the intervention, their barbers discussed a model story during every haircut (51%);
175 reported that their barbers discussed a story during half of their haircuts (32%); and 89 reported that their barbers never discussed one (17%). The barbers measured BP for 417 of the 539 hypertensive patrons (77%), recording 3350 sets of BPs (8 sets per patron), and successfully counseled 180 of 350 patrons with elevated BP readings to have documented nurse-assisted referrals.

The mean total incentive payment was estimated at $133 per hypertensive patron, calculated as follows: barbers were paid $60474 in total for intervention activities for 539 hypertensive patrons ($112 per patron). These patrons returned 939 signed physician-referral cards to the barbers and received 1 free $12 haircut per card ($21 value per patron). In the intervention group, 530 of the 539 hypertensive patrons completing the study (98%) and all 29 participating barbers reported that they would like the barber-based intervention program continued indefinitely.

Cost-effectiveness Simulation

If the intervention could be implemented in the approximately 18,000 black-owned barbershops in the United States (eTable2) to reduce systolic BP by 2.5 mm Hg in the approximately 50% of hypertensive US black men who patronize these barbershops (N=2.2 million persons), we project that about 800 fewer myocardial infarctions, 550 fewer strokes, and 900 fewer deaths would occur in the first year alone, saving about $98 million in CHD care and $13 million in stroke care (but offset by $6 million in additional non-CHD costs contributed by persons who would otherwise have died). For this intervention to be cost-neutral from a health care system perspective, therefore, the program costs (including performance incentives, medication, and other health care delivery costs) could be as high as about $5800 per barbershop or about $50 per hypertensive barbershop patron.

COMMENT

Black-owned barbershops are rapidly gaining traction as potential community partners for health promotion programs targeting HTN as well as diabetes, prostate cancer, and other diseases that disproportionately affect black men. Yet to our knowledge, the effectiveness of barber-based HTN screening and referral programs on BP control previously has not been evaluated by a randomized trial. In this cluster-randomized controlled trial, we found an enhanced intervention program—in which barbers continuously monitored BP and actively promoted physician follow-up with personalized sex-specific messages—resulted in improved BP control among black male barbershop patrons with HTN. Although BP control also improved in the comparison group, which was not an inactive comparator, the results of this study provide the first evidence for the effectiveness of a barber-based intervention for controlling HTN in black men and indicate that more research is needed to develop a highly effective and sustainable intervention model prior to large-scale program implementation.

We detected a positive intervention effect despite an unexpectedly large improvement in BP control in the comparison group, which was not an inactive comparator. In collecting thorough baseline BP data, we unavoidably intervened in both groups: patrons with HTN in all participating barbershops were repeatedly exposed to research staff measuring their BP at 2 baseline haircut visits. For ethical reasons, those with elevated BP readings in both groups were given detailed written recommendations for physician follow-up. In addition to this Hawthorne effect, educational pamphlets written for black individuals were distributed only to comparison groups.

The larger improvement in HTN control seen in the intervention group is not explained by baseline values, which were taken into account by the mixed-effects model. Moreover, within either group, barbershops with lower baseline values did not show larger increments in HTN control, and there was no ceiling effect.

The new data confirm and extend earlier pilot data by indicating that the characteristic long-term patronage in black-owned barbershops (almost a decade) and frequent haircut visits (1 every 3–4 weeks) provided much opportunity for barbers to repeatedly monitor BP and deliver intervention messages. The process data indicate that, in general, the intervention was implemented as intended and with reasonably high levels of implementation and penetration: barbers measured BP on 3 of every 4 patrons with HTN, and each of the participating barbers averaged 8 barber BP checks in 10 months. The barbers motivated 50% of their patrons with elevated BP readings to visit a physician, supporting the theoretical underpinning of the behavior theory–based intervention, namely that barbers, as influential peers, can increase HTN treatment–seeking behavior. The intervention effect on primary and secondary BP outcomes may have been larger than observed if barbers had motivated the other 50% of high-BP patrons to see a physician.

A salient finding is the middle-income status of the barbershop clientele. Although most participating barbershops were in low-income areas, patrons need financial resources to afford frequent haircuts. Because socioeconomic status and affordability of health insurance are major determinants of HTN control, the low baseline HTN control rates among the barbershop patrons may seem disproportionate to income level and health care access. However, for reasons that require more study, middle-income status alone does not protect black men from many poor health indicators, including underutilization of available medical services to control HTN and prevent its complications. For example, sociocultural factors related to masculinity (such as a desire to avoid showing vulnerability) also can deter men from fully utilizing available preventive medical services. Our data suggest that barbers can deliver health messages that resonate with men and, more broadly, that the barbershop constitutes a unique opportunity for further research on improving the health status of this particularly vulnerable and understudied group of men—middle-income black men.
health workers in the care of people with HTN.

Our study has several important limitations. The impact of the barber-based intervention was less than optimal because not all barbers participated fully, and not all patrons agreed to have their BP monitored and be referred for physician follow-up. Because study sites were confined to 1 county, the results cannot be generalized to other geographic areas without further study. Because the barbershops’ clientele were predominately middle-income, the intervention had limited ability to reach very low-income individuals who will require other types of intervention. The evaluation strategy provided a snapshot of BP improvement at a point in time and does not demonstrate whether the outcomes are sustainable, particularly because financial incentives were paid to barbers for conducting the intervention and to patrons for following their advice in seeking medical attention. However, the $112 incentive paid per barber per hypertensive patron and the $21 paid per patron in free haircuts for HTN-related physician visits is far less than the $750 cash incentive per patient used in a recent smoking-cessation study.

Because hypertensive patrons chose their individual physicians, we could not collect actual data on increased antihypertensive treatment costs associated with the intervention. Our CHD Policy Model simulation indicates that the projected cost savings from reduced HTN-related cardiovascular disease (CVD) events in the first year alone would substantially offset intervention costs. More extensive simulations are needed to project the cost savings and quality-adjusted life-years from reduced CVD that would accumulate beyond the first year (eg, long-term care savings from prevented strokes), particularly if the modest reductions in systolic BP observed in BARBER-1 could be sustained or augmented in this high-risk black male population.

Despite these limitations, the study establishes an important precedent for future quantitative evaluation research on this and other health promotion programs in barbershops. The results provide proof of concept for 1 effective barber-based intervention, which lowered systolic BP by about 8 mm Hg from baseline—2.5 mm Hg more than in the comparison group. Based on the observed intervention effect of an 8.8% greater improvement in HTN control rate, we estimate that 12 hypertensive black male patrons would need to be exposed to this intervention to achieve BP control in 1 more patron.

The study addresses the newly recommended policy shift away from a traditional case-management system toward novel population-based systems and community-based support for persons with HTN. The data add to an emerging literature on the effectiveness of community health workers in the care of people with HTN; contemporary barbers constitute a unique workforce of community health workers whose historical predecessors were barber-surgeons. Future studies should evaluate the potential effectiveness of the intervention in other urban centers, alternative incentive structures, comparative effectiveness of the intervention with and without certain components (eg, model stories), and projected long-term cost-effectiveness of alternative strategies (eg, targeting barbershops with a mainly older clientele to enhance screening efficiency and prevent more HTN-related events). The public health potential is intriguing.
Role of the Sponsor: The sponsor had no role in the design and conduct of the study; in the collection, analysis, and interpretation of the data; or in the preparation, review, or approval of the manuscript.


Additional Contributions: Martin Shapiro, MD, provided helpful comments and suggestions during critical revision of the manuscript. Julie Groth, MPH, and Edward Szczepaniak, PhD, provided administrative support revising the manuscript.

REFERENCES


INVITED COMMENTARY

ONLINE FIRST

A Bald Fade and a BP Check

As a black man with HTN who has frequented the same community barber for 17 years, I reviewed with great fascination the article by Victor et al. I typically get a “bald fade” haircut, which camouflages my frontal baldness, and sit quietly as the barbers and other patrons address the burning issues of the day. More importantly, the black barbershop experience is a remarkable social barometer that pro-
vides gut-check social commentary, defines a “captive audience,” and represents a commensurate “teachable moment”; but is this an appropriate venue to convey meaningful health messages and/or conduct health screening? The investigators of the BARBER-1 study suggest that it might be and are to be commended for taking the provocative initiative to study this venue as a viable one not only to increase awareness of HTN in a community at high risk for cardiovascular disease but also to create a model of improved care for that same community. Kudos.

The dilemma of HTN in the African American community has been well chronicled. The onset of this disease in African Americans is early—perhaps as early as childhood, given evidence of increased vascular resistance in preadolescent African American children. Growing data suggest that differences in the natural history of HTN in African Americans may in part be driven by genetic predispositions affecting renal sodium handling, reduced nitric oxide bioavailability, and the propensity for left ventricular hypertrophy. But genetic considerations do not explain the entirety of the proclivity for HTN. The adverse ecology of local communities (eg, absence of fresh foods, preponderance of fast food outlets, limited access to parks) and unhealthy lifestyle choices (eg, excess sodium consumption, physical inactivity, and obesity) combine to generate significant additional risks for the development of HTN. Importantly, the consequent prevalence of HTN in African Americans is greater than 40%. This inordinately high penetration of HTN leads to an alarming incidence of end-organ manifestations, especially cardiovascular disease. The risk for stroke, end-stage renal disease, myocardial infarction, and particularly heart failure with its attendant excess morbidity and premature mortality are excessive. Clearly, HTN is both an onerous risk and a scourge for the African American community.

Hypertension in the African American community is further aggravated by disparate health care. The confluence of an increased incidence of HTN, significant and disproportionate end-organ disease, poor clinical outcomes, and disparate health care makes it very clear that current systems of health care are not working for African Americans with HTN. This sobering observation mandates a change in process—one that begs for transformative thought.

Victor et al have suggested such a transformative approach that might actually work. In the current study, African American men frequenting community barbershops were exposed to health messaging and specifically HTN screening by a trusted partner. This issue cannot be overemphasized because the barrier of cultural competency that permeates the traditional health care provider–patient interface in at-risk communities is a nonissue when a community partner assumes the task of elevating awareness, screening for risk factors and becoming a change agent.

Given the income level of the patrons in the study by Victor et al, ready access to conventional health care should have ensured quality health care. It is therefore remarkable that adequate HTN detection and control were not evident in this population. This finding is a cause for great concern because it indicates that simply providing better access to health care does not necessarily result in the delivery of better health care. However, using the barbershop as a health care delivery venue, the researchers achieved promising results: compared with baseline, a nearly 20% improvement in HTN control was found after the barbershop intervention. The difference in BP between the 2 groups was more modest, but it nevertheless represents a real reduction in mean systolic BP of approximately 3 mm Hg—a threshold recognized as an appropriate target associated with improvements in clinically meaningful outcomes.

Of note, the change of more than 10% in HTN control for the comparison group is not trivial and highlights that the comparison group was not a control group. The present study therefore outlines 2 potentially effective community-based strategies to improve HTN detection and control: (1) providing culturally sensitive health education materials (the American Heart Association pamphlet “High Blood Pressure in African Americans,” product code 50-1466) in a trusted venue (barbershops); and (2) incorporating community partners (barbers) in the care of those with known risk factors for heart disease.

But the model is not perfect. What is the sustainability of this approach? Will the benefit extend beyond the provision of free haircuts (mine cost $20)? And will outcomes, the ultimate endgame, be benefited by this novel community strategy? Who are the barbers involved, ie, age, socioeconomic status, education? Will the barbers tire of this process? And what happens when the first case of liability is prosecuted—where does the chain of liability start, and with whom does it stop? Such an event would exert a chilling effect and likely bring a halt to this practice. Does this approach work in other at-risk communities? What is the barbershop corollary in the Hispanic community? Do we have a cost-effectiveness comparison for the intervention vs comparator vs control? Given the 7 million black men (and >60 million Americans) who have HTN, is this really a workable strategy? These are the questions that this provocative study raises.

However, there is a greater question that we all should ponder: why must we resort to a community-driven approach that abdicates the responsibility to detect disease and institute preemptive care to well-intentioned, appropriately trained, but nonetheless clinically naive health care providers? Project Brotherhood (http://www.projectbrotherhood.net) has adopted a similar strategy of using barbershops to provide messaging to African American men regarding colon cancer, prostate cancer, and human immunodeficiency virus education. The implicit commentary here reflects our collective failure to provide adequate fundamental health information—a core foundational element in the practice of medicine. It is worth noting once again that those African Americans in the current study were largely insured patrons, and thus access to care cannot be in-
voked as an excuse for limited health care. Are we as health care providers sufficiently culturally competent to provide best health care experiences to all of our patients? A biopsy of our usual care practices appears to be in order.

The efficacy of this partnership with the community, however, cannot be dismissed; taking the message to the people has some merit. But how best to incorporate more broadly based community-focused efforts in disease prevention, detection, and treatment is an integral question germane to true health care reform. The authors have proposed a truly novel idea and, moreover, have provided an evidence base to suggest efficacy. This model merits further development. But we must remain cautious and strictly evidence based; before we invest significant resources, more research is needed, especially to generate outcomes and cost-effectiveness data.

In the meantime, I will continue to visit my local barber and enjoy my position in this unique social mosaic. I will anticipate the day when I get my bald fade, BP check, and perhaps a host of other important health information. But I will also wonder why it is they, the barbers, and not we, the physicians, who are providing the care.

Clyde W. Yancy, MD

Author Affiliation: Baylor Heart and Vascular Institute, Baylor University Medical Center, Dallas, Texas.
Published Online: October 25, 2010. doi:10.1001/archinternmed.2010.404
Correspondence: Dr Yancy, Baylor University Medical Center, Baylor Heart and Vascular Institute, 3500 Gaston Ave, Ste H-30, Dallas, TX 75246 (clydey@baylorhealth.edu).
Financial Disclosure: None reported.