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Place, Not Race: Disparities Dissipate In Southwest Baltimore When Blacks And Whites Live Under Similar Conditions

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Abstract

Much of the current health disparities literature fails to account for the fact that the nation is largely segregated, leaving racial groups exposed to different health risks and with variable access to health services based on where they live. We sought to determine if racial health disparities typically reported in national studies remain the same when black and white Americans live in integrated settings. Focusing on a racially integrated, low-income neighborhood of Southwest Baltimore, Maryland, we found that nationally reported disparities in hypertension, diabetes, obesity among women, and use of health services either vanished or substantially narrowed. The sole exception was smoking: We found that white residents were more likely than black residents to smoke, underscoring the higher rates of ill health in whites in the Baltimore sample than seen in national data. As a result, we concluded that racial differences in social environments explain a meaningful portion of disparities typically found in national data. We further concluded that when social factors are equalized, racial disparities are minimized. Policies aimed solely at health behavior change, biological differences among racial groups, or increased access to health care are limited in their ability to close racial disparities in health. Such policies must address the differing resources of neighborhoods and must aim to improve the underlying conditions of health for all.

There is extensive documentation of persistent health disparities among the racial and ethnic groups that make up the United States. In recent years, researchers have attempted to understand the reasons for these disparities and to find ways to eliminate them. Much of this

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research relies on data from national studies. These data are suboptimal for the study of racial health disparities for two reasons.

First is the confounding of race with socioeconomic status.[1] Health status varies by both race and socioeconomic status, and socioeconomic status tends to be lower among black Americans than among white Americans. Consequently, the overlap between these two factors complicates efforts to determine whether it is "race and class" or "race or class" that produces disparities in health status.[2]

The second challenge resulting from using national data is complex and, we suspect, even more powerful. The United States is segregated along racial lines. Racial segregation creates different exposures to economic opportunity and to other community resources that enhance health. Likewise, segregation produces differential exposure to health risks.[3–5] Thus, racial disparities may be confounded by disparities based on place. As a result, estimates of racial disparities from national samples may be biased because they fail to consider the differing opportunity and risk profiles of communities where racial and ethnic groups live.

Confounding race with socioeconomic status and segregation can have profound implications for the development of policies to address racial and ethnic health disparities. For instance, some researchers have focused on biological factors, assuming that disparities result from biological differences among racial groups. Others have focused on health behaviors thought to be concentrated among different cultural groups.

But it may be that racial and ethnic disparities observed in national data reflect disparities based on features of the communities where people live. Racial and ethnic health disparities may be driven mostly by place—that is, the segregated communities where the preponderance of these minority populations may live.

To shed further light on this issue, we sought to design an analysis of racial disparities in health-related outcomes that also accounts for social determinants based on place.We designed the Exploring Health Disparities in Integrated Communities study to compare health outcomes among black and white Americans who live in the same socioenvironmental conditions and have similar financial resources.[6] In this article we briefly describe the study, summarize several key findings that have been previously reported in scientific journals, and outline the relevant policy implications.

Study Data And Methods

SELECTING THE COMMUNITY

We identified communities in the United States that contained at least 35 percent African American and at least 35 percent white residents; had a ratio of black-to-white median income between 0.85 and 1.15; and had a ratio of black-to-white high school graduation rates (among people age twenty-five and above) between 0.85 and 1.15. Of 66,438 census tracts identified in the 2000 US census, 425 tracts met our inclusion criteria. We selected two contiguous tracts in Southwest Baltimore, Maryland, as our first study site.

The study design is novel in that it compares black and white Americans who are exposed to the same set of socioeconomic, social, and environmental conditions. Thus, we can discern whether or not racial differences in health-related outcomes stem from something endemic to the people or whether they are more properly attributable to differences in conditions within communities.

SURVEY METHODS

We conducted in-person interviews with adult residents (age eighteen and older) of the Southwest Baltimore study site. Trained interviewers administered a structured questionnaire and measured blood pressure for approximately 42 percent ($n = 1$; 489) of the 3,555 eligible residents of the study area. The study methods are described in greater detail elsewhere.[6]

The study questionnaire incorporated questions from three national surveys: the National Health Interview Survey, 2003; the National Health and Nutrition Examination Survey, 1999–2004; and the Medical Expenditure Panel Survey, 2002. Replication of questions enabled us to compare results from analyses of the national samples, which do not account for segregation, with results from Southwest Baltimore, which is racially integrated.

We used data from the National Health Interview Survey to compare national and study-site data for obesity,[7] smoking,[8] and diabetes.[9] This survey is conducted annually by the National Center for Health Statistics and includes the civilian, noninstitutionalized population of the United States.[7] The interviews are conducted in the homes of adults age seventeen and older.We used the Sample Adult Core section of the survey for our comparison because of similarities with the time period and age range for our Southwest Baltimore study. Detailed information regarding the National Health Interview Survey can be found elsewhere.[10]

We used data from the National Health and Nutrition Examination Survey to compare national and study-site data for hypertension.[11] This is an annual survey from which public-use data files are released every two years. The survey is a nationally representative sample of the US civilian, noninstitutionalized population, with an oversample of low-income people, participants ages 12–19, adults age 60 and older, black Americans, and Mexican Americans.[12]

We used data from the Medical Expenditure Panel Survey to compare use of health services[13] nationally and in the study area. This survey, conducted by the Agency for Healthcare Research and Quality, includes the US civilian, noninstitutionalized population. It is an authoritative source of information on the nation's health care use and is used by the agency to monitor progress on eliminating health care disparities.[14]

ANALYTIC STRATEGY

This article is a synthesis of previously reported information in which we focused separately on the health outcomes reviewed here. As such, our research offers a comprehensive look at disparities—if any—between black and white people living in similar circumstances.[6–9,11,13] Using the Southwest Baltimore data, we analyzed health-related outcomes for

hypertension, diabetes, obesity among women, smoking, and use of health services—categories for which well-documented racial disparities exist on a national basis. We then conducted the same analysis using the national data. Our goal was to determine if the racial disparities found in the national surveys (which do not account for racially segregated living environments) differed from the results of our analysis. Using this approach, we could estimate whether disparities found in national studies existed when we accounted for differences in place.

Study Results

We compared selected characteristics of the Southwest Baltimore study site with each of the national surveys (Exhibit 1). Because the national surveys are representative of the US population, there are only minor variations among them. However, in some cases there are substantial differences between the Baltimore sample and the national samples. For example, respondents in the Baltimore sample tended to be younger and were less likely to have received formal education beyond high school. Also, the Baltimore respondents were more likely to rely on public health insurance or to be uninsured. Consequently, all analyses adjusted for these differences.

Exhibit 2 summarizes key findings from previously published studies based on the Southwest Baltimore sample.

HYPERTENSION

A study published by Roland Thorpe and colleagues[11] sought to examine hypertension disparities between blacks and whites in Southwest Baltimore compared to those shown in the National Health and Nutrition Examination Survey. That study defined *hypertension* as systolic blood pressure greater than or equal to 140 mm Hg, diastolic blood pressure greater than or equal to 90 mm Hg, respondent's self-report of taking antihypertensive medications, or some combination. We used logistic regression analysis to adjust for age, sex, marital status, household income, education, health insurance, self-rated health, weight, exercise, diabetes, drinking, and smoking. We replicated the same model in both samples.

We found a racial disparity in hypertension in Southwest Baltimore, where blacks suffered from hypertension at a higher rate than whites. However, the race odds ratio was 29 percent smaller in the racially integrated community compared to the national survey. We concluded that racial differences in social environments explained about one-third of the racial difference in hypertension typically found in national data. More than two-thirds of the disparity in hyper-tension, however, appears to result from something other than place.

DIABETES

A study published by Thomas LaVeist and colleagues[9] used research methods similar to those used in the hypertension study to determine if the racial disparity in diabetes reported in national data is similar when black and white Americans live under similar social conditions. In the National Health Interview Survey data, black Americans had greater odds of having diabetes compared to whites. In Southwest Baltimore, however, white and black Americans had similar odds of having diabetes. Moreover, diabetes prevalence for black

Americans was similar in both samples (10.4 percent and 10.5 percent, respectively), whereas the rate for whites was much higher in Southwest Baltimore (10.1 percent compared to 6.6 percent nationally). We concluded that racial disparities in diabetes may stem from differences in the social and environmental health risks in communities where black and white Americans typically live.

OBESITY

Sara Bleich and colleagues[7] investigated whether there were racial disparities in obesity among women. In the National Health Interview Survey data, black women exhibited nearly twice the odds of being obese when compared with white women, after covariates were controlled for. However, in Southwest Baltimore, black and white women had similar odds of being obese. We concluded that there were no racial disparities in obesity among black and white women exposed to similar living conditions.

SMOKING

LaVeist and colleagues8 examined racial disparities in tobacco use, comparing our Baltimore study data with data from the National Health Interview Survey. In Southwest Baltimore, whites had greater odds of being a current smoker and reported smoking more cigarettes per day compared to blacks. However, the national survey showed no significant racial difference in smoking status or in the number of cigarettes smoked per day. For both black and white residents, the prevalence rates for both lifetime and current smoking were much greater in the local sample. However, when comparing blacks and whites across samples, we found that the magnitude of difference between the samples was greatest for whites. We concluded that differences in social and environmental exposures resulting from segregation partially account for racial differences in smoking patterns normally found in national data.

USE OF HEALTH SERVICES

Darrell Gaskin and colleagues[13] used the Southwest Baltimore sample to study racial disparities in the use of health care services. In the Medical Expenditure Panel Survey data, blacks were less likely to have had a health care visit within the past year when compared with whites. However, in the Southwest Baltimore sample, blacks were more likely to have had a visit. Moreover, in the Southwest Baltimore data, among those who had at least one health care visit, there was no disparity in the number of follow-up visits. But in the national sample, blacks had fewer follow-up visits. This indicates that disparities in initiating care may be influenced by community-level factors such as the availability of providers and transportation. In contrast, disparities in continued use of care may be related to factors associated with interactions between patients and physicians.

Discussion

In this article we report on a set of previously published findings generated from a novel study design that allowed us to compare black and white Americans who live under similar social and economic conditions and receive health care in the same marketplace. We found that the racial disparity we normally see in national samples was attenuated or completely

erased when white and black Americans live under similar conditions. The sole exception was smoking, where we found that white residents in the Baltimore sample were more likely to smoke than black residents. When social factors and medical care are equalized, racial disparities are minimized.

It is important to point out that the smaller racial disparity in our studies resulted from dramatically higher rates of ill health among whites in Southwest Baltimore compared with the national samples. Conversely, blacks' rates of ill health from Southwest Baltimore tended to be similar to rates found in national samples. When whites are exposed to the health risks of a challenging urban environment,[15] their health status is compromised similarly to that of blacks, who more commonly live in such communities.

We acknowledge that the Southwest Baltimore community is urban and low income, and thus not representative of all communities. Results may differ in other types of communities —higher income, suburban, rural—or in other regions of the country. We are in the planning phase of a similar study to be conducted in a high-income community. At this point in our research, we have generated a set of findings that strongly suggests that at least some portion of the disparities normally attributed to race should more appropriately be attributed to place —communities where people live, work, play, and pray.

POLICY CHALLENGES

The challenge in developing policies that focus on place is that race also determines place. That is, members of racial minorities have fewer options in the housing market.[16] A racially segmented housing market affects health through several routes: limited appreciation in home values leading to restricted opportunities for building wealth;[17,18] increased exposure to health risks;[15,19–21] decreased availability of resources necessary to live a healthy lifestyle;[22,23] less access to quality health care;[24–28] and limited access to social capital, such as networks of friends.[29,30]

The impact on health disparities may be greatest if policy makers address the systemic structures that produce inequities in opportunity. Solutions for the health outcomes discussed in this article—including obesity and tobacco use—have often emphasized personal choice. We certainly agree that people have the responsibility to maximize their health outcomes. However, a large body of research has documented that these public health problems are complex and multifaceted, influenced by myriad factors interacting at the individual, family, community, and societal levels. Strategies to eliminate health disparities require solutions that address multiple levels, not just individual responsibility.

Even if we assume that the eradication of racial segregation is beyond the reach of policy prescriptions, we can pursue strategies that lessen the impact of place in producing race disparities. This can be done through the adoption of policies that redress the inequitable distribution of power and resources across communities.

HEALTH IN ALL POLICIES

Adopting a "health in all policies" approach is one such strategy. This approach recognizes that health is affected by policies that do not explicitly address health, including those in the

arenas of housing, agriculture, and the environment. Thus, to improve population health, policy makers need to consider sectors outside the strict confines of "health."[31] Internationally, the health-in-all-policies approach has been described as having the potential to contribute to population health and reduce health inequalities.[32]

One tool to use in achieving health in all policies is the health impact assessment. It is a process whereby the wide-ranging health impacts of a proposed policy, especially those outside the realm of health, are evaluated in order to inform decision making.[33] For example, the City of Baltimore conducted a health impact assessment of its proposed zoning code, which would certainly influence the character of its neighborhoods.[34] As a result of the health impact assessment, city leaders proposed several recommendations that sought not only to mitigate disparities in land use, but also to create healthy environments for all residents.[34] This is an example of how, in practice, a health-in-all-policies approach can be used to create equitable environments for all racial and ethnic groups and to create healthy and safe communities.

Another possible way to address social determinants of health associated with place is to improve health care resources in disadvantaged communities. The goal of interventions should be to lessen risk, increase resilience among individuals and communities, and ensure access to medical care. These steps would address health needs associated with living in a high-risk community.

The Affordable Care Act of 2010 attempts to address problems associated with health care financing and delivery systems that are heightened by residential segregation. The organization and financing structure of US health care puts people of low socioeconomic status and their communities at a disadvantage. Disparities in reimbursement rates between Medicaid and other third-party payers create "medical deserts" in some minority communities.

Health reform increases Medicaid payments to primary care physicians, but these increases are temporary. Federal and state policy makers should make efforts to further eliminate disparities in reimbursement rates, thus encouraging more physicians to practice in minority communities.

Finally, some existing policies appear promising, including those that foster access to affordable and nutritious food, enforce bans on smoking, and limit the location and number of outlets selling alcohol. Similar place-based policies should be formulated and disseminated so that their uptake is wide and far-reaching. The health in-all-policies approach recognizes that individuals exist in the context of their interpersonal networks; overarching community organizations; and public policies at the local, state, and federal levels that affect the various tiers of social organization.[35,36] Scholars have proposed that the ecological model be applied to public policies for some of the health conditions described in this article, which would yield opportunities for people to make healthy choices easily.[37–40]

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Biography

Thomas LaVeist is director of the Center for Health Disparities Solutions, Johns Hopkins Bloomberg School of Public Health.

In this month's *Health Affairs*, Thomas LaVeist and coauthors report on their investigation to determine whether the health disparities typically reported in national studies remain the same when black and white Americans live in integrated settings. Their previously published studies on a racially integrated low-income neighborhood of Southwest Baltimore, Maryland, led them to conclude that most disparities vanished or substantially narrowed under such circumstances and that the economic and other resources that different neighborhoods have are therefore a bigger determinant of health than race.

LaVeist, director of the Johns Hopkins Center for Health Disparities Solutions, is also the William C. and Nancy F. Richardson Professor in Health Policy at the Johns Hopkins Bloomberg School of Public Health, where the disparities center is located. He has been on the Hopkins faculty since 1990, focusing mainly on health inequalities and health policy. He received the Knowledge Award from the Department of Health and Human Services Office of Minority Health and the Innovation Award from the National Institute on Minority Health and Health Disparities.

LaVeist received a doctorate in medical sociology from the University of Michigan.

Keshia Pollack is an assistant professor at the Johns Hopkins Bloomberg School.

Keshia Pollack is an assistant professor in the Bloomberg School's Department of Health Policy and Management, where she works on policies to create safe and healthy environments. Before coming to the Bloomberg School in 2006 as faculty development chair of the Department of Injury Prevention, she completed a postdoctoral fellowship in evaluation at the University of Pennsylvania and the Robert Wood Johnson Foundation. She has a doctorate in health policy from Hopkins.

Roland Thorpe Jr. is a research scientist at the Johns Hopkins Bloomberg School.

Roland Thorpe Jr. is a research scientist in the Department of Health Policy and Management and a faculty associate at the Hopkins disparities center. His research focuses on the association of race, socioeconomic status, and housing segregation with health and functional outcomes among middle-age to elderly adults. He was a postdoctoral fellow in gerontology and health disparities at the Johns Hopkins School of Medicine. He earned a doctorate in epidemiology at Purdue University.

Ruth Fesahazion is a doctoral candidate at the Johns Hopkins Bloomberg School.

Ruth Fesahazion is a doctoral candidate in the Department of Health Policy and Management and has worked as a research assistant at the disparities center. Her research examines the impact of economic conditions on health disparities. In 2010 she was named an AcademyHealth/Aetna Foundation minority scholar.

Darrell Gaskin is an associate professor at the Johns Hopkins Bloomberg School.

Darrell Gaskin is an associate professor of health economics in the Department of Health Policy and Management and deputy director of the disparities center. As a researcher, he strives to identify barriers to care for vulnerable populations and to develop policies and practices aimed at improving access to care among the poor. He was recently appointed vice chair of the Maryland Health Benefits Exchange Commission and is a member of an Institute of Medicine committee that addresses nonclinical prevention activities in communities.

Gaskin received his doctorate in health economics from Hopkins.

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Exhibit 1

Variables Related To Characteristics Of Black And White Residents, Southwest Baltimore Study Compared With National Studies, Selected Years 1999–2004

	EHDIC-SWB[a] (2003)		NHIS[b] (2003)		NHANES[c] (1999–2004)		MEPS[d] (2002)	
Variable	**Black**	**White**	**Black**	**White**	**Black**	**White**	**Black**	**White**
Age, years (mean)	38.4	43.9	44.8	47.3	42.3	46.9	43.7	45.1
SEX (%)								
Male	43.1	45.6	38.0	44.4	46.4	49.0	40.4	47.2
Female	56.9	54.4	62.0	55.6	53.6	51.0	59.6	52.8
EDUCATION (%)								
Less than high school	35.4	47.5	22.93	19.2	50.4	28.7	28.9	27.9
High school/GED	36.4	23.6	30.7	29.0	18.7	23.5	37.5	31.6
More than high school	18.5	18.3	46.4	51.8	30.7	47.7	33.2	39.9
INCOME (%)								
Less than $10,000	25.2	22.1	40.4	33.5	14.9	5.9	37.8	29.2
$10,000–19,999	34.6	33.1	12.7	8.1	30.5	21.7	23.3	21.9
$20,000–34,999	19.7	22.6	15.5	14.4	14.1	11.3	21.8	22.7
$35,000–54,999	11.2	11.6	15.3	16.1	16.9	19.8	11.5	14.7
$55,000 or more	9.1	10.3	15.8	27.7	23.6	41.3	5.6	11.5
HEALTH INSURANCE (%)								
Private	42.3	42.2	51.9	67.1	66.9	84.6	57.8	42.9
Public	60.4	69.8	32.3	27.1	33.1	15.4	28.1	42.3
Uninsured	34.9	40.2	20.1	17.2	15.0	10.0	14.1	14.8

SOURCES See below. **NOTES** EHDIC-SWB is Exploring Health Disparities In Integrated Communities–Southwest Baltimore. NHIS is National Health Interview Survey. NHANES is National Health and Nutrition Examination Survey. MEPS is Medical Expenditure Panel Survey. GED is general equivalency diploma.

[a] Note 6 in text.

[b] Note 10 in text.

[c] Note 12 in text.

[d] Note 14 in text.

Exhibit 2

Summary Of Previously Published Findings From The Exploring Health Disparities In Integrated Communities–Southwest Baltimore Study

	EHDIC-SWB		National survey		
Health-related outcome	**Odds ratio**	**95% CI**	**Odds ratio**	**95% CI**	**Major finding**
Hypertension[a]	1.42	1.09–1.86	2.01	1.63–2.48	Racial disparity related to hypertension prevalence smaller in EHDIC-SWB than in NHANES, but still significant
Diabetes[b]	1.07	0.71–1.58	1.61	1.26–2.04	Racial disparity related to diabetes found in NHIS but not in EHDIC-SWB
Obesity[c]	1.25	0.90–1.75	1.99	1.71–2.32	Racial disparity related to obesity found in NHIS but not in EHDIC-SWB
Smoking[d]					Blacks have lower odds of being a current smoker and smoke fewer cigarettes per day compared to whites in EHDIC-SWB, but no racial disparity in smoking in NHIS
Lifetime smoker	0.55	0.41–0.72	0.62	0.49–0.79	
Current smoker	0.71	0.56–0.90	0.93	0.72–1.21	
Cigarettes smoked per day	0.68	0.61–0.75	0.86	0.74–1.01	
Use of health services[e]	1.44	1.00–1.87	0.74	0.51–1.07	No disparity in having a medical care visit in MEPS, but more likely to have a visit in EHDIC-SWB

SOURCES See below. **NOTES** All odds ratios are black:white. EHDIC-SWB is the Exploring Health Disparities in Integrated Communities–Southwest Baltimore Study. CI is confidence interval. NHANES is National Health and Nutrition Examination Survey. NHIS is National Health Interview Survey. MEPS is Medical Expenditure Panel Survey.

[a] Note 11 in text.

[b] Note 9 in text.

[c] Note 7 in text.

[d] Note 8 in text.

[e] Note 13 in text.