

Checking the Pulse of Diversity among Health Care Professionals: An Analysis of West Coast Hospitals

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What factors are associated with variation in the racial/ethnic composition of hospital health care professionals? Institutional theories suggest that organizations react to external environmental and internal structural pressures for the racial/ethnic integration of workers. Using an institutional framework, we bring to bear new insight into how hospitals respond to such pressure for diversity. Models estimated with original data from 328 U.S. West Coast hospitals provide evidence that establishment size and a hospital's minority patient base promote diversity among health care professionals. The state legal environment is also associated with the racial/ethnic composition of professional hospital workers, indicating the importance of fair employment laws and court decisions in signaling expectations about workplace diversity. Last, the findings show that factors within hospitals' competitive and internal environments have positive consequences for diversity among health care professionals. We discuss implications for our findings, especially in the context of health care worker shortages and ongoing health care reform.

Keywords: organizational diversity; professions; occupations; health care industry

The U.S. health care workforce is expanding, but it remains the domain of white workers; African Americans, Hispanic Americans, and Native Americans account for roughly only 10 percent of the physician workforce (Council on Graduate Medical Education [COGME] 2005; Saha and Shipman 2008). The absence of minority professionals in the health care field represents more than an uneven distribution of workers along race/ethnic lines; it is also an important factor contributing to racial and ethnic

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disparities in access to health care, diagnosis, and treatment (U.S. Department of Health and Human Services [DHHS] 2009, iii; Agency for Healthcare Research and Quality [AHRQ] 2000).¹ Minority patients tend to prefer and more closely identify with health care professionals with whom they share a racial/ethnic background (see Saha et al. 1999; Cooper-Patrick et al. 1999). Hence, in the absence of a diverse workforce, patients may avoid or put off necessary treatment, recommended screenings, and other preventive health care measures.

In addition, minority health care professionals may increase access to health care for racial/ethnic minority populations. Compared to their white counterparts, racial/ethnic minority health care professionals are more likely to serve minority populations and enter primary care and practice in health profession shortage areas (see Saha et al. 2008; COGME 2005). For example, in 2009, African American physicians in California were five times more likely than their white peers to practice in predominantly African American communities (see DHHS 2009, 9). Nationally, African American physicians composed only 4 percent of the health care workforce in 2005, yet they served more than one-fifth of African American patients (see COGME 2005).

The diversification of health care providers along racial/ethnic lines may provide a partial solution to the persistent health disparities of race and ethnic minorities. Agencies ranging from the American Medical Association (2009) to the DHHS (2009) agree that racial/ethnic minority health care providers fill a critical void for minority patients. If the benefits of the current health care reform are to reach the growing minority population in the United States, scholars must understand the factors that lead to racial/ethnic diversity among health care professionals. To this end, this article sheds light on key mechanisms in an organization's institutional, legal, competitive, and internal environment alleged to be at work in shaping racial/ethnic minority representation among health care professionals employed in hospitals.² Specifically, we examine the impact of factors such as organizational size, managerial workforce demographics, state location, and patient demographic composition. To do so, we draw on an original dataset of more than three hundred hospital establishments in the western

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United States, which includes the racial/ethnic composition of hospital professionals as annually reported to the Equal Employment Opportunity Commission (EEOC).

We developed an institutional framework to explain how organizations—namely, hospitals—react to external environmental and internal structural pressures for professional racial/ethnic integration (Stainback, Robinson, and Tomaskovic-Devey 2005; Scott 2003). Our research question is straightforward: what factors are associated with variation in the racial/ethnic composition of hospitals' health care professional workers? Our contribution is to bring to bear new insights into how workplaces situated within a long-standing core service industry respond to pressures for increased racial/ethnic diversity among an essential group of workers.³ As health care reform has become an increasingly important topic, we believe that improved racial/ethnic matching of professionals to patients is a critical factor in providing greater access to disadvantaged groups. Without sufficient attention to diversity within health care facilities, policy efforts are likely to be limited. To this end, we theoretically distinguish four areas linked to professional worker racial/ethnic composition and show that to varying degrees, pressures from hospitals' institutional, legal, competitive, and internal environments shape health care professional diversity.

Theoretical Background

The health care industry has been the target of attempts to racially/ethnically diversify for more than a decade. The 1998 Presidential Initiative on Race and Health was the first national commitment to eliminate health disparities between whites and racial/ethnic minorities. Since the initiative, the American Medical Association, the Joint Commission on the Accreditation of Hospitals, the Kaiser Family Foundation, the DHHS, the AHRQ, and the Institute of Medicine at the National Academy of Sciences, among others, have commissioned reports documenting the disparity and advising the health care industry on how to eliminate it. Among the solutions from these reports was a call for the racial/ethnic diversification of health care workers who serve minority populations. Hospitals—a primary employer of health care professionals—are clearly under pressure to alter their workforce composition.

Demographic change in the health care field is also timely. As states implement health care reform, providers within this industry may soon be in a position to reform their practices. Part of this may include the revision of hiring and retention policies that target racial and ethnic minorities. At the same time, the currently debated national health plan provides access to insurance for more individuals, which will undoubtedly increase the demand for health care professionals. To meet these demands, health care providers will need to broaden their labor pool. Indeed, President Obama's Economic Recovery Act of 2009 allotted \$500 million to pay for the training of future health care workers (White House 2009).

Using hospitals to study organizational response to external environmental and internal structural pressures for professional racial/ethnic integration is appropriate for three additional reasons. First, although no industry is recession-proof, demand remains high for health care professionals, particularly in an aging society. Thus, it is expected that recruitment and hiring of qualified candidates, along with efforts to increase workforce diversity, will remain a priority within the health care industry. With high demand for their services, hospitals are not greatly affected by downturns in the economy that subsequently reduce pressure for diversity (see King, Knight, and Hebl 2010). Second, employment within the health care and social service industries (of which hospitals are a part) is projected to increase by more than 4 million by 2016, making it one of the fastest-growing industries in the country (U.S. Bureau of Labor Statistics 2007). Consequently, hospital hiring will continue to grow at a steady rate over the next decade. Third, the health care and social assistance industry is the third largest employer in the United States, offering about 12 percent of all private-sector jobs (U.S. Bureau of Labor Statistics 2007). Thus, the prominence of the health care industry and hospital care in particular, along with an increasingly diverse population, demands a diverse workforce, and health care professionals provide a strong basis for examining professional diversity within this organizational context.

External Pressures for Racial/Ethnic Workforce Diversity

Organizations are located within and responsive to their environmental contexts (Scott 2002; for a review, see Stainback, Skaggs, and Tomaskovic-Devey 2010). Institutional theorists argue that organizations are embedded within a context of legal rules and normative practices that shape their structures, routines, and practices (DiMaggio and Powell 1983; Meyer and Rowan 1977), which, in turn, influence their demographic composition. Organizations' environmental forces push them toward similarity in form and structure so that over time, policies and practices across fields or industries become increasingly homogeneous, reflecting a set of institutional expectations and rules (see DiMaggio and Powell 1983). The similarity in structure, routine, and practice among organizations stems from the tendency to gain and maintain legitimacy among industry peers as well as from the legal, political, and public spheres (Suchman 1995).

While an organization's demographic composition is the result of a variety of factors, such as labor supply, employment practices, and political pressures, external pressures influence variation in the racial/ethnic composition of its professional workforce. That is, whom an organization employs is the result of organizational response to expectations, rules, and practices in the institutional (industry) environment. In the sections that follow, we discuss pressures for health care professional diversification stemming from organizations' external institutionalized, legal, and competitive environments.

Institutional environment

Institutional theory suggests that the normative environment within an industry will influence the internal organization of work, including policies and practices that shape workforce demographic composition. As Stainback, Skaggs, and Tomaskovic-Devey (2010) suggested, workforce diversity tends to reflect a more general set of established norms rather than a specific set of mandates from more powerful entities outside of institutional fields (e.g., oversight agencies, courts). We anticipate that several key factors within the external environment will influence hospital racial and ethnic diversity among health care professionals.

Establishment size. Previous research has demonstrated the importance of organizational size in shaping workforce composition. Size shapes workforce demographics in two particular ways. First, large organizations have more jobs and a greater number of hierarchical layers than smaller ones. As job opportunities expand, employers are likely to cast a broader net to fill positions, particularly when labor is in high demand, as in the case of health care professionals. Second, and more important, large organizations tend to be more visible than smaller ones. This visibility subjects them to greater public (Salancik 1979; Suchman 1995; see also Huffman 1999) and government scrutiny. With growing societal and business expectations for employment diversity (see Herring 2009), large organizations are likely to increase the racial/ethnic composition of their workforce as a way to signal their compliance with social norms about diversity to the public, other organizations, and the government. Furthermore, increased visibility often corresponds with greater pressures from government regulatory agencies to comply with civil rights laws (Edelman 1992). Thus, large hospitals may take proactive steps in the employment process to attract, employ, and retain a diverse professional workforce. We subsequently predict:

Hypothesis 1: The larger the hospital, the more racially/ethnically diverse its health care professional workforce.

Patient demographic composition. Customers place demands on organizations to act in ways consistent with their needs and preferences. In hospitals, patients may exert an above-average level of control over whom a hospital hires since patients report improved care when they share the same race/ethnicity as their health care providers (Collins et al. 2002; Cooper-Patrick et al. 1999), greater adherence to prescribed treatments (Cooper-Patrick et al. 1999), and a general preference for being cared for by demographically similar providers (Gray and Stoddard 1997; LaVeist and Nuru-Jeter 2002; LaVeist and Carroll 2002). As a result, hospitals with a racially diverse patient base may have an incentive to employ racial/ethnic minority health care workers, especially if satisfied patients return to the hospital for their elective medical needs. This leads to the following hypothesis:

Hypothesis 2: A racially/ethnically diverse patient base will be associated with a more racially/ethnically diverse health care professional workforce.

Legal Environment

The laws governing organizations and how they recruit workers—and the threat of sanction for law violations—are likely to impact the racial/ethnic composition of a hospital's health care professional workforce. Below we identify several sources of legal pressure that may increase employment diversity among hospitals.

State location. Since states provide the legal environment in which organizations operate, it is likely that the level of pressure to promote employment diversity, particularly among vital professionals, will vary by state location. Some state climates are more conducive to equity than others. For instance, Beggs (1995) found employment equality among racial and gender groups to be higher in states with strong support for equal opportunity. Similarly, a study by Sutton and his colleagues (1994) showed adoption rates of due-process governance to be higher in California, a state with progressive judicial and legislative histories, than in states with historically more conservative legal and judicial environments.

The three states in our sample—California, Oregon, and Washington—have different state-level regulation and laws governing equal employment. Washington and California have each adopted legislation prohibiting government agencies from granting preferential treatment to any individual or group on the basis of race, gender, color, ethnicity, or national origin in the operation of public employment (Washington State Department of Personnel 2004; California Fair Employment and Housing Commission 2009); Oregon has no such policies. All three states have policies that address comparable worth/gender pay equity for state employees (Nelson and Bridges 1999). However, California has very specific state-level laws that are designed to provide protections to female and minority workers who have historically been disadvantaged (California Fair Employment and Housing Commission 2009). Sutton and colleagues (1994) noted that California's progressive environment has yielded a legal environment favorable toward workers. In light of these state-level differences, we predict:

Hypothesis 3: Hospitals located in California will have a more racially/ethnically diverse health care professional workforce than Washington and Oregon hospitals.

Competitive environment

Organizational competition may influence the racial/ethnic composition of a hospital's professional workforce. Becker (1975) has argued that status-based

discrimination should be eliminated in competitive markets; discriminating organizations cannot survive if they are willing to hire only white workers at a higher wage than nonwhite workers. That said, we might expect to see a more diverse workforce in competitive markets.

Establishment competition. A greater concentration of hospitals in a given geographic area means greater competition for an already small pool of available minority health care professionals. Such competition might compel hospitals to implement hiring and recruitment strategies that attract minority applicants. Likewise, a competitive environment may encourage hospitals to implement strategies to retain minority employees once they are hired. Consequently, we hypothesize:

Hypothesis 4: The greater the competition for a health care professional workforce, the more racially/ethnically diverse a hospital's professional workforce.

Internal Pressures for Racial/Ethnic Workforce Diversity

Internal pressures are also responsible for shaping organizational demographic composition. In this section, we discuss two internal organizational structures that are presumed to affect the demographic composition of an organization's workforce: (1) managerial racial/ethnic diversity and (2) nurse unions.

Managerial racial/ethnic composition. The racial/ethnic makeup of an organization's managerial ranks may shape the diversity of its professional workforce. Although we know of no study specifically examining this type of relationship, or the effects of managerial diversity on an establishment's racial/ethnic workforce composition more generally, researchers have found a connection between the share of women managers and gender integration. In particular, findings from a study by Huffman, Cohen, and Pearlman (2010) show that the greater the share of female managers, the greater the gender integration of nonmanagerial workers over time. While these researchers were unable to identify a mechanism whereby female managers increased gender integration, one possibility is that the presence of women in high-level positions not only creates opportunities for similar others at lower levels through hiring, recruitment, and promotions but also has the effect of reducing discriminatory practices that keep women out of management. Similarly, it may be the case that minority managers reduce barriers—either perceived or real—to the employment and retention of minority workers, particularly those in professional positions who are more similar in status. We argue that because managers make many of the hiring decisions, especially at the higher levels, diversity within the top ranks will have a trickle-down effect on the racial/ethnic diversity for professionals. We hypothesize that:

Hypothesis 5: The more racially/ethnically diverse a hospital's managerial workforce, the more diverse its health care professional workforce.

Nurse unions. Registered nursing is the largest occupation in hospitals (American Association of Colleges of Nursing 2004), and in recent times, hospitals in the three states we examine, similar to those in much of the nation, are facing significant nursing shortages (Healthcare Personnel Shortage Task Force 2002; Oregon Center for Nursing 2005; American Society of Registered Nurses 2007). In response, health care labor unions have developed strategic plans to alleviate labor shortages (Washington State Strategic Plan for Nursing 2002; Healthcare Personnel Shortage Task Force 2002; Lawton 2002). In fact, one of the foremost priorities of the Washington State Nurses Association is to address the nursing shortage (Washington State Nurses Association 2004). A key component of unions' strategic response to labor shortages involves the recruitment and hiring of a diverse health care workforce. Accordingly, unions representing registered nurses, particularly in a time of labor shortage, likely exert pressure on hospitals to create greater diversity within their workforce. Therefore:

Hypothesis 6: The presence of a nurse union in a hospital will be positively associated with racial/ethnic diversity among health care professionals.

Additional Factors Affecting Professional Racial/Ethnic Composition

We examine several additional factors that may affect organizations' workforce demographic composition.

Urban location. Based on several key factors, we anticipate that differences in diversity of health care professionals exist between rural and urban hospitals. In general, rural hospitals tend to experience greater difficulty than urban facilities in recruiting and retaining health care professionals due to such factors as lower salaries, fewer career opportunities, limited resources, and higher workloads (Rural Assistance Center 2009). Furthermore, because physicians and other health care professionals are typically trained and educated in urban areas, they are likely to be attracted to the cultural and social life of urban areas. These factors, combined with the fact that racial/ethnic minority populations tend to be larger in urban settings, suggest a potential gap in the diversity of minority health care professionals within rural and urban hospitals.

Health system membership. Affiliation with a health system, one that coordinates health coverage and operates multiple hospitals or clinics, indicates interconnectedness and a shared governing structure with other hospitals. The

interconnectedness of a health system might be linked to the racial/ethnic composition of the professional workforce because linked hospitals may be able to share the cost of implementing affirmative action plans, an equal employment office/manager, or an equal opportunity policy, all of which are linked to minority recruitment.

Organization type. Distinctions between types of hospital organizations may also affect diversity of health care professionals. For example, it could be argued that the racial/ethnic composition of health care professionals is more diverse among general hospitals than their specialty counterparts. At least part of this difference may reflect variation in career opportunities, with general hospitals offering a wider range of departments and greater resources associated with these departments. On the other hand, with the growth of specialty hospitals, particularly those in financially lucrative areas, such as cardiac and orthopedic care (Tynan et al. 2009), general hospitals may be viewed as less attractive to minority health care professionals who seek to quickly recoup educational costs. Similarly, teaching hospitals could be viewed as an attractive option for minority health care professionals who seek extensive career opportunities within some of the most advanced medical facilities. Teaching hospitals have long been recognized as the source of specialized medical care involving cutting-edge treatments and surgeries (American Association of Medical Colleges 2009). They not only serve as training centers for many new physicians and health care professionals but continually strive to increase knowledge through research and development of new life-saving treatments. Conversely, given that teaching hospitals represent a much smaller percentage of medical facilities than their nonteaching counterparts and often provide medical care to the millions of Americans without health insurance (American Association of Medical Colleges 2009), they may attract a less diverse labor pool.

Sector. The sector in which hospitals operate may be related to the demographic composition of its health care professionals. Nonprofit hospitals are the most common type of facilities in the United States. In general, nonprofit organizations are often marked by bureaucratic operating procedures (Grotsky and Pager 2001) and well-developed affirmative action procedures that have been found to increase the employment of racial/ethnic minorities (see Harper and Reskin 2005; Kalev, Dobbin, and Kelly 2006). Nonprofits are also more publicly visible and subject to greater pressures to implement fair employment practices than are private-sector organizations (Meyer and Scott 1983; Dobbin et al. 1988; Kelly and Dobbin 1999). What is more, compared to for-profit hospitals, the public may judge nonprofits more by their activities and policies than their economic performance and expect nonprofits to provide employment opportunities for racial/ethnic minorities (see Dobbin et al. 1988; Marsden, Cook, and Knoke 1994).

Organizational age. The literature on organizational founding suggests that internal practices and policies are often shaped by factors within a firm's external

institutional environment such as local or regional social and cultural norms, laws, and even standard business practices (Stinchcombe 1965). Because internal structures, particularly those related to recruitment, hiring, and promotions, are often difficult to change once established, organizations founded in the pre-civil rights era are likely to have informal, and even some formal, policies that are less consistent with antidiscrimination legislation than those organizations founded since the 1970s. Thus, we expect that younger hospitals will have greater diversity and will more closely reflect progressive social norms and attitudes about fair employment opportunities.

Data and Methods

Our primary data come from hospitals located in three Western states—California (CA), Oregon (OR), and Washington (WA)—that filed an annual EEO-1 report in 2005. Under an Intergovernmental Personnel Act agreement with the EEOC, the authors obtained access to a list of EEO-1 reporting hospitals in these states. Annually, private employers with one hundred or more employees or federal contractors with fifty or more employees (or first-tier federal subcontractors involving agreements worth \$50,000) are required to file an EEO-1 report describing the racial/ethnic and gender composition of employees in nine of the establishment's occupational categories. The EEOC uses these reports to ensure employer compliance with federal laws prohibiting employment discrimination. We supplemented the EEO-1 data with establishment-level data collected through Internet searches and telephone calls to hospitals (see the appendix for sources of data).

We selected these three states because they differ in terms of the population's racial/ethnic composition and, as a result, have different levels of an available racial/ethnic minority health care labor pool. In 2000, 13 percent of Oregon's population was nonwhite (U.S. Census Bureau 2005a), 18 percent of Washington's population was nonwhite (U.S. Census Bureau 2005b), and roughly 40 percent of California's population was nonwhite (U.S. Census Bureau 2009).

The final sample consists of 328 hospitals. Analyses for this study are conducted at the *establishment* level and so allow for the examination of racial/ethnic diversity of health care professionals across individual worksites. Such detail would be lost with organizational-level analyses.⁴ So, although practices and policies may be relatively uniform across organizationally linked hospital facilities, factors within a hospital's local environment, including state laws and local labor market characteristics, may create significant variation in health care professional segregation.

Before proceeding with the analyses, it is necessary to mention data-related caveats. First, the sample represents hospitals in a limited geographical area. Thus, our intent is not to draw inferences about the racial/ethnic composition of hospital health care professionals across the entire industry. It is possible that the racial/ethnic composition patterns we observe differ in regions with more or less

diverse labor pools, different local racial/ethnic composition, or different state regulations governing employment. Second, we lack data on the race/ethnicity of actual job applicants. We know of no publicly available multiestablishment dataset that includes characteristics of job applicants, especially those who applied and were not hired. Consequently, our measures of labor supply will provide conservative estimates of the actual number of minority applicants. Despite these limitations, the data at hand are well suited for testing theories of environmental influences on race/ethnic workforce diversity. This study is also among the first to use EEO-1 reports that accurately capture the demographic composition of employees much more precisely than self-reports of demographic composition in other surveys (Robinson et al. 2005).

Measures

Dependent variable

Our outcome of interest is the log odds that hospital health care professionals are nonwhite. Odds are calculated as the proportion of professionals from that group divided by the proportion not from that group (proportion/[1 – proportion]). We calculated these measures from the yearly EEO-1 reports filed by hospitals. Professional workers in hospitals include dietitians and nutritionists, optometrists, pharmacists, physicians and surgeons, physician assistants, podiatrists, registered nurses, audiologists, occupational therapists, physical therapists, radiation therapists, recreational therapists, respiratory therapists, speech-language pathologists, all other therapists, and all other health diagnosing and treating practitioners (EEOC 2009).

Independent variables

We measure our predictor variables at the establishment level. Data sources are listed in the appendix.

Institutional environment. *Hospital size* is measured as the number of beds in a facility, a typical industry indicator of size. To capture potential differences in hospital professional workforce diversity, based on customer or patient demand, we include a measure of the *minority patient base* calculated as the African American, Hispanic, Asian, and Native American population in a particular hospital service area (HSA) divided by the corresponding total population in the hospital's zip code. Following the EEOC (2005), we obtained HSA data from the Dartmouth Atlas of Healthcare (2003), which classifies health care markets according to an established zip code scheme. We used zip codes from the 2000 U.S. Census to create matches between HSAs and California, Washington, and Oregon population data.

Legal environment. Models include a set of dichotomous variables denoting hospital state location, coded 1 if the hospital is located in Oregon or Washington (California is the reference category).

Competitive environment. Hospital *competition* is a variable denoting the number of hospitals within twenty miles of the sampled hospital, top-coded to 2.

Internal pressures for diversity. We measure *managerial racial/ethnic composition* as the percentage of racial/ethnic minorities in managerial occupations in the hospital. We also include a dichotomous variable indicating the presence of a *nurse union*. The effects of this measure are of particular interest given that registered nurses represent the largest group of hospital employees (American Association of Colleges of Nursing 2004).

Controls. Models include a dichotomous variable noting whether a hospital is located in an *urban* area (rural is the reference category, coded 0). Following industry practice, a hospital is urban if it is located within twenty-five miles of another hospital in an area with a population of at least thirty thousand. To capture the contextual influence of membership in a *health system*, we include a continuous measure indicating the number of hospitals that are members of a particular health care system (e.g., Group Health Cooperative, Providence Health System). If a hospital was not part of a health system, we coded this variable 0. We also control for *hospital classification* based on the primary specialty and purpose of the facility. Given the small number of specialty facilities, including acute care, children's, psychiatric, urgent, trauma, naval, and respiratory, we collapsed these classifications into one group. Comparisons are then made between general hospitals, coded 1, and specialty hospitals, coded 0. We also include a dichotomous measure to examine potential differences in racial and ethnic diversity among health care professionals in *teaching* (coded 1) and nonteaching hospitals (coded 0). A dichotomous variable is included measuring hospital sector, coded 1 if a hospital is nonprofit (i.e., a community-based nonprofit hospital with no stockholders whose profits are reinvested into the hospital) and 0 if either a for-profit or government (state- or county-run) hospital. Due to the small number of government-run hospitals in our sample ($n = 11$), we combined all publicly funded facilities (i.e., district, county, state/federal) with for-profit hospitals. Finally, a measure of organizational *age* (in years) is included and calculated by subtracting the founding year from the study year (2002). The natural logarithm of hospital age is used for the primary analysis to create a more uniform distribution of the measure. This is particularly appropriate given the relatively large standard deviation of 29 years.⁵

Method of Analysis

Because our outcome—the log odds that hospital professionals are nonwhite—ranges from 0 to 1, we estimate logistic regression models. Tests verify that

TABLE 1
Descriptive Statistics

Variables	Mean/Percentage	Range
Dependent variables		
Minority health care professional	33.35% (24.18)	0.00–96
Minority health care professional logit	-1.182 (2.098)	-9.21–3.11
Institutional environment		
Hospital size (number of beds)	203.10 (132.36)	20.00–875.00
Minority patients	39.42% (26.10)	0.00–97.34
Legal environment		
California	84.76%	Dichotomous
Oregon	4.27%	Dichotomous
Washington	10.98%	Dichotomous
Competitive environment		
Competition	1.72 (0.57)	0.00–2.00
Internal environment		
Percent minority managers	20.65% (17.93)	0–90.90
Nurse union	30.18%	Dichotomous
Controls		
Urban	88.11%	Dichotomous
Health care system	8.35 (11.01)	0.00–33.00
General hospital	82.93%	Dichotomous
Teaching hospital	13.41%	Dichotomous
Nonprofit	73.48%	Dichotomous
Age	60.21 (29.34)	5.00–144.00
N = 328		

NOTE: Standard deviations in parentheses.

multicollinearity is not a problem in models. To facilitate coefficient interpretation, we transformed unstandardized beta coefficients to odds ratios with the formula $(e^{\beta} - 1) \times 100$. Odds ratios of 1 reflect total racial/ethnic workplace equality among health care professionals. Values less than 1 denote underrepresentation of minority professionals, and although rare, values greater than 1 indicate that health care professionals are more likely to be minority than white.

Results

Table 1 displays descriptive statistics for the 328 hospitals examined. On average, racial and ethnic minorities compose 33 percent of hospitals' health care professional workforce. The average hospital examined has 203 beds, with a range

TABLE 2
 Logistic Regression Predicting Minority Health Care Professional Representation

Variables	Coefficient	Odds Ratio	Standard Error
Institutional environment			
Size (ln # beds)	0.292**	1.339	0.106
Minority patients	0.018***	1.018	0.003
Legal environment			
Oregon	-0.181	0.834	0.350
Washington	-0.759**	0.468	0.255
Competitive environment			
Competition	0.330*	1.391	0.153
Internal environment			
Racial/ethnic managers	0.049***	1.050	0.005
Nurse union	0.440**	1.553	0.153
Controls			
Urban	0.548*	1.730	0.253
Health care system	-0.0002	0.999	0.006
General hospital	0.969***	2.635	0.181
Teaching hospital	0.217	1.242	0.192
Nonprofit	-0.088	0.916	0.151
Age (ln)	-0.297*	0.743	0.122
Intercept = -5.097***			
Adjusted R ² = .742			
F = 73.32***			

* $p < .05$. ** $p < .01$. *** $p < .001$.

between 20 and 875. On average, hospitals in the sample have a patient base that is 39 percent minority, with values ranging from 0 to 97 percent minority. Approximately 85 percent of hospitals in our sample are located in California; a much smaller percentage are located in Washington and Oregon (11 and 4 percent, respectively). On average, the hospitals in our sample compete with two other facilities within a twenty-mile area. Roughly 30 percent of hospitals have a nurse union. On average, racial and ethnic minorities compose 21 percent of managerial workers in hospitals. Roughly 88 percent of the sampled hospitals are located in urban areas. Only around 13 percent are classified as teaching institutions, while about 80 percent are classified as general hospitals. Hospitals in the sample are part of a health care system of ownership with approximately eight other hospitals. Just over 73 percent of hospitals in our sample are classified as nonprofit organizations. Finally, hospitals in the sample are, on average, 60 years old.

Results of our primary analysis are presented in Table 2. First, we find that among the three institutional factors examined, hospital size and minority patient

base have a significant and positive influence on the racial/ethnic composition of hospitals' health care professional workforce. Increased hospital size (as measured by number of beds) is associated with increased net odds that a health care professional is a racial/ethnic minority. The percent minority of a hospital's patient base is also significantly related to health care professional worker racial/ethnic diversity, although the effect is quite small; for every 1 percent increase in a hospital's minority patient base, it experiences a roughly 2 percent increase in the net odds that a health care professional is a racial/ethnic minority.

An organization's legal environment, captured by variation in state-level fair employment legislation, appears to matter, at least in part, for hospital health care professional diversity. We find that diversity is greater in California than in Washington; however, there is no significant difference between California and Oregon hospitals. The results show that hospitals located in Washington are less than half as likely to have minority professionals as California hospitals included in our sample. We also find a positive association between hospital competition and minority representation among health care professionals; a unit increase in competition (having one or two or more hospitals within a twenty-mile area) increases the net odds of minorities in professional health care positions by 39 percent.

The results also reveal that internal pressures matter for promoting greater diversity among health care professionals. In particular, we find that the coefficient for managerial diversity is significant, although the effect is small; a 1 percent point increase in nonwhites' share of managerial positions is associated with a roughly 5 percent increase in the net odds that a health care professional is a racial/ethnic minority. Our findings also show that professional health care diversity is approximately 1.6 times greater in hospitals with a nurse union than in facilities without this form of internal pressure. Controls for both urban location and type of hospital based on specialty have a positive effect on minority representation among health care professionals. Specifically, we find that the odds a racial/ethnic minority is in a professional position are 1.7 times greater at urban compared to rural hospitals. Furthermore, the results indicate that the odds a minority is in a professional position when employed in general hospitals are more than two and a half times greater compared to the odds at specialty hospitals. However, we find no evidence of variation in professional workforce diversity between teaching and nonteaching hospitals, or between facilities that are part of a health care system and those that are independently owned. The results further reveal no difference between the demographic composition of minority health care professionals in nonprofit and other hospital types. However, we find that the older a hospital, the lower the net odds of employing minority health care professionals.

Discussion and Conclusions

We examined the influence of a set of external institutional, legal, and competitive factors and internal pressures expected to increase hospital racial/ethnic

diversity among health care professionals. Previous research suggests that organizations respond to such demands as a way to maintain legitimacy within institutional fields or industries. The findings of this study indicate that hospital size, patient diversity, geographic location (including state and urban location), market competition, establishment managerial minority representation, nurse unionization, and hospital specialty increase the racial/ethnic diversity of health care professionals.

We argued that larger hospitals, because of their greater visibility and more extensive jobs structures, would provide more employment opportunities for nonwhite health care professionals. The results of this study support our prediction; increased size has a net positive effect on diversity among professionals. We suspect that because large hospitals experience greater scrutiny from the public and government regulatory agencies, they have developed practices and established human resource supports that expand recruitment and retention of minority professionals. It is also likely that large hospitals provide more attractive benefits and employment opportunities that help to recruit and retain minority professionals. Less important seems to be the influence of a hospital's minority patient base. We find only a negligible positive effect for this measure, which suggests that hospitals may pay only minimal attention to the matching of demographic characteristics between health care professionals and patients. This is somewhat surprising given evidence from the literature indicating a greater need and demand to provide minority patients, particularly those with limited English language skills, with health care professionals who can close cultural and language gaps. It could be that such matches are more important for physicians in private practices, because of long-term patient-doctor relationships, than in hospitals, where patients predominantly seek treatment for acute illnesses or those that require only limited care.

The results of our study show that the legal environment matters, particularly in relation to hospitals' state location. Although we predicted that Oregon hospitals would be significantly less likely to hire racial/ethnic minority professionals than California hospitals, we find no evidence of this. It is possible that the small number of Oregon hospitals in our sample obscures significant differences within this legal context. However, as predicted, we find that California hospitals are more likely to hire racial/ethnic minority professionals than are those located in the state of Washington. We believe this is largely a factor of the extensive fair employment legislation established in California. While Washington and Oregon have clearly established laws that address both gender and race/ethnicity-based discrimination, California's laws not only exceed those of many states throughout the United States, but the courts within this state have tended to take a strong stance against employment discrimination (CCH Legal Database 2011). In general, this suggests the importance of the legal environment, broadly defined, in regulating and promoting employment equality.

We initially hypothesized that hospitals operating in more locally competitive markets would have greater racial/ethnic professional diversity. Our findings

support this prediction and show a substantial advantage for minority health care professionals as local competition increases. Consistent with the literature, we suspect that having more hospitals with which to compete not only increases opportunities for minorities in a given area but also improves working conditions, pay, and benefits. This is particularly likely as hospitals attempt to attract the highest-quality professionals and respond to public demands for fair employment opportunities.

In regard to hospitals' internal environment, our results show a significant effect of diversity among hospital managers on the racial/ethnic composition of health care professionals. We predicted that greater diversity in upper-level positions might influence the racial/ethnic composition of health care professionals as managers look to their same-race networks to recruit and hire workers. While the overall effect in our study is relatively small, it may be that having more minority managers affects diversity among professionals by signaling a hospital's commitment to fair employment practices and policies, which are likely to reduce perceived or real discrimination (see Elliott and Smith 2001). The analyses also provide support for our hypothesis that predicted a positive relationship between nurse unionization and diversity among health care professionals. We suspect that although nurse unions may largely seek to improve working conditions, they also place some emphasis on hospital recruiting and retention strategies that may increase the racial/ethnic diversity of all health care professionals.

Last, our results point to a significant difference in the racial/ethnic composition of health care professionals between urban and rural hospitals and between general and specialty facilities. Hospitals located in urban areas not only have the advantage of expanded cultural and social experiences but also tend to have a more diverse labor pool than do those in rural areas. These factors, along with the generally higher pay, expanded career opportunities, and lower workload demands, are likely to make urban hospitals attractive to a wider range of workers. Likewise, general hospitals—the majority of hospitals in our sample—may draw a wider labor pool through increased job opportunities for a wide range of health care professionals. We also find that the age of a hospital has a significant effect on the diversity of health care professionals. Older hospitals employ fewer racial/ethnic minority professionals than their more recently established counterparts. The implication of this is that founding period matters by shaping the types of internal practices and policies that either discourage or ignore issues of discrimination. Newer hospitals are likely to reflect more progressive public views about fair employment opportunities and may even be pressured to adopt comprehensive and restrictive policies that promote workplace equality. We suspect that both of these processes operate, at least to some degree, to shape diversity not only among health care professionals, but also among the more general hospital workforce.

Our findings are relevant to policy-makers concerned with laws governing the workplace. In particular, our findings indicating differences in diversity among health care professionals by state location illuminate the role that the legal

environment plays in shaping fair employment opportunities in this workplace context and for organizational-level processes more generally (see also Beggs 1995; Skaggs 2009). Policy-makers must pay closer attention to how state laws, regulations, and court decisions influence diversity both within and across workplaces.

Second, our findings with regard to patient demographics suggest policy-makers should pay close attention to the importance of demographic matching between patients and health care providers. As the minority population in the United States continues to grow, so will demands for quality health care and health care providers within these racial/ethnic groups. Given this, policy-makers should note that institutional pressures may not be the best way to increase professional diversity. If improved health care quality and increased preventive care are truly issues at the forefront of policy, hospital administrators and private-practice practitioners must be mindful of creating strategies that will address the common demographic mismatches between health care professionals and patients.

Third, policy-makers should also take note of the positive relationship between minority managers and racial/ethnic minority health care professionals. This finding suggests that one pathway to increased racial/ethnic diversity among hospital professionals may be through establishing policies and guidelines that increase managerial diversity, perhaps by enforcing best practices (see Kalev, Dobbin, and Kelly 2006).

Our findings also have implications for scholarly research. First, the use of establishment-level data in this study has provided an opportunity to explore how external and internal organizational factors influence workplace diversity. Rarely are such data available, yet as we have demonstrated, an organization's reaction to internal and external pressures has real implications for the demographic composition of high-status professional workers. Second, the results related to market competition also have implications for how researchers think about diversity and workplace practices. This seems particularly relevant in an economy where competitive forces play a major role in the birth and death of organizations. Understanding how organizations respond to these types of external forces is likely to shape theory about organizational resource sharing and dependency as well as research in the areas of diversity and organizational profits.

This study also highlights the importance of understanding how managers influence key decisions related to workforce diversity. Our results suggest that managers from diverse racial/ethnic backgrounds may not only be invested in increasing their professional workforce and better able to accomplish this through social network ties to other minorities, but they may also ensure that equal opportunity policies are established and enforced. Future research should consider *how* managers shape internal fair employment policies and the extent to which numerical representation plays a role in carrying out these policies.

As with any research, this study has some limitations worth noting. The first involves the absence of data on the share of minority applicants to health care

professional positions. If student diversity within medical and professional schools is limited, then this, in turn, has strong implications for the diversity of hospital applicant pools. Second, it has been more than a year since the passage of the Affordable Care Act, and states continue to debate the implementation of the law. In this uncertain legal environment, pressures for diversifying the health care workforce may come second to pressures for compliance with the law. The act also changes the relationship between health care providers and health insurers, yet we are not able to speak to how, if at all, insurance companies exert pressure for diversity on hospitals. Finally, the act increased patients' rights. As time passes, hospitals may see increasing pressures for diversity from minority patients. Given the cross-sectional nature of our data, we are unable to capture this possible change. Limitations aside, this article is among the first to demonstrate, with the most accurate demographic data available, what shapes workforce diversity in the United States' crucial health care industry.

Appendix A

Data Sources

Variable	Source
Racial/ethnic minorities in health care professional occupations	EEO-1 reports
Sector (public versus private)	Various hospital websites
Hospital size (# beds)	Various hospital websites
Minority patient base	Dartmouth Atlas of Healthcare (2003)
Hospital competition	Location and address matches using the MapQuest website
Nurse union	State nursing associations (e.g., Washington State Nurses Association, Oregon Nurses Association, California Nurses Association)
Racial/ethnic minorities in managerial occupations	EEO-1 reports
Urban location	State hospital directories (e.g., Washington State Department of Health, Oregon Office of Rural Health, California Rural Hospitals)
Membership in health care system	Various hospital websites
Hospital type	Hospital Soup website
Age	Various hospital websites

Notes

1. About 30 percent of Hispanic and 20 percent of black Americans lack a usual source of health care, compared with less than 16 percent of whites. Meanwhile, 16 percent of African Americans and 13 percent of Hispanic Americans rely on hospitals or clinics for their usual source of care, compared with 8 percent of white Americans (Agency for Healthcare Research and Quality 2000).

2. Hospital health care professionals include dietitians and nutritionists, optometrists, pharmacists, physicians and surgeons, physician assistants, podiatrists, registered nurses, audiologists, occupational therapists, physical therapists, radiation therapists, recreational therapists, respiratory therapists, speech-language pathologists, all other therapists, and all other health diagnosing and treating practitioners.

3. Throughout the text, we use the terms “racial/ethnic diversity” and “diversity” interchangeably.

4. An *establishment* refers to the specific place where workers carry out job tasks, while an *organization* refers to the parent company that encompasses all affiliated worksites.

5. Although not shown, we also tested separate models with a control for racial/ethnic minority representation in the local (county) and state labor markets. Because these measures are highly correlated with a hospital’s minority patient base, we opted, based on theoretical importance, to include only the institutional measure of minority patient base.

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