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Not me! Doctors, Decisions, and Disparities in Health Care

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Abstract and Introduction

Abstract

Racial and ethnic disparities in health have been well described, with data showing that minority Americans suffer disproportionately from cardiovascular disease, diabetes, asthma, cancer, and human immunodeficiency virus/acquired immunodeficiency syndrome, among others. Several factors lead to these disparities, including the fact that minority Americans suffer from adverse social determinants (such as poverty and lower levels of education) at greater rates and are more likely to be uninsured. A recent Institute of Medicine report has also highlighted that minorities tend to receive lower-quality care even when they have insurance and access to the health system. The Institute of Medicine report identified various sources that contribute to racial/ethnic disparities in health care; among them was health care providers' susceptibility to stereotyping minority patients, leading to disparate clinical decision making. This review dissects the process of clinical decision making—and the environment in which decisions are made—to present a model for understanding how even well intentioned physicians may be susceptible to stereotyping and unknowingly contribute to racial/ethnic disparities in health care. Several strategies to counteract this process, both systematically and individually, are also described.

Introduction

Racial and ethnic disparities in health have been well described, with data showing that minority Americans suffer disproportionately from cardiovascular disease, diabetes, asthma, cancer, and human immunodeficiency virus/acquired immunodeficiency syndrome, among other illnesses.^[1] Several factors lead to these disparities. First, research has demonstrated the adverse effect of social determinants such as lower levels of education, inadequate and unsafe housing, higher levels of unemployment, and overall lower socioeconomic status on the health of minorities.^[2-6] Second, minorities tend to be uninsured at greater rates than majority Americans, which also leads to poorer health status.^[7,8] The prolonged effect of historical segregation and racism, both in society and in the health care system, also contributes to this problem.^[9,10] Within the past few decades there has been a focus on racial/ethnic disparities in quality of care for those patients with access to the medical system. Research has demonstrated that minorities, compared with whites, receive fewer cardiac diagnostic and therapeutic procedures,^[11-15] less analgesia for pain control when in an emergency department with long bone fractures,^[16-18] less surgical treatment of operable lung cancer,^[19] fewer referrals to renal transplantation when on hemodialysis,^[20] poorer quality of care when hospitalized for pneumonia and congestive heart failure,^[21] and have lower use of general services covered by Medicare (i.e., immunizations and

mammograms)^[22] even when controlling for insurance status, income, age, comorbid conditions, and symptom expression, among other possible confounders.

As a result of these findings, the Institute of Medicine (IOM) was commissioned to study the issue of racial/ethnic disparities in the health care system and released the report, *Unequal Treatment: Confronting Racial/Ethnic Disparities in Health Care*^[23] in March 2002. In addition to finding that racial and ethnic disparities in health care exist and are associated with worse health outcomes, the report states that many sources—including health systems, health care providers, patients, and utilization managers—may contribute to racial and ethnic disparities in health care.^[23] In addition, the report states that bias, stereotyping, prejudice, and clinical uncertainty on the part of health care providers may contribute to racial and ethnic disparities in health care.

In discussing this last point, the IOM report describes that sociocultural differences between patients and health care providers, in addition to other nonmedical factors, directly influence communication and clinical decision making.^[24,25] The failure of health care providers to take this into account may lead to stereotyping of patients, and in the worst cases, biased or discriminatory treatment based on a patient's race, ethnicity, culture, or class.^[23]

Several studies were presented in the IOM report to support this claim; three are described here. First, a study by van Ryn et al.^[26] attempted to identify physicians' perceptions of both African-American and white patients (i.e., personal characteristics such as intelligence, likelihood to comply with recommendations) following a postcardiac catheterization visit. The study found that physicians tended to associate African Americans and patients of low socioeconomic status as being less intelligent, more likely to engage in risky behaviors, and less likely to adhere to medical regimens, even when controlling for the patients' true socioeconomic status, personality attributes, and degree of illness. A study by Weisse et al.^[27] presented physicians with vignettes of African-American and white patients suffering from identical symptoms of kidney stone pain, low back pain, and sinusitis, then examined prescribing of pain medication. The authors found that male physicians (80% white) tended to prescribe more pain medication for whites than for African Americans. Schulman et al.^[14] assessed physicians' recommendations for management of chest pain after viewing videos of patients (who varied in race, but whose age, gender, socioeconomic status, and level of education were equally matched) describing cardiac symptoms. The authors demonstrated differential referral patterns for cardiac catheterization based on race and gender, with African-American women being referred least for the procedure compared with white men. In all of these cases, a variety of hypotheses for the findings were presented and ranged from discrimination to stereotyping on the part of physicians.

What do these studies—and these hypotheses—mean for the majority of doctors in practice, who when presented with this data and the results of the IOM report tend to say, "Not me! I don't contribute to disparities—I treat all my patients the same." The goal here is to dissect the process of clinical decision making—and the environment in which decisions are made—to present a model for understanding how even well intentioned physicians may be susceptible to stereotyping and may unknowingly contribute to racial/ethnic disparities in health care.

How Are Doctors Taught to Make Decisions?

Over the course of medical education, doctors are taught the "prescriptive theory of clinical decision making." Simply put, this theory states that clinical decisions should rely on the detailed exploration of two variables: the presentation of symptoms and the probability of disease (through the application of Bayes' theorem).^[25] Simultaneously, doctors are taught a set of heuristics or "clinical gestalts" with the premise that there are certain hallmark symptoms for conditions. These heuristics then become shortcuts for clinical decision making (e.g., cough and fever likely equals bronchitis or pneumonia). Although this runs counter to what we are taught about generating a detailed review of symptoms and a broad differential diagnosis, as physicians practice under greater stress and time pressure they become more susceptible to using these shortcuts in clinical decision making. Finally, doctors are taught that their own personal background, and the characteristics of the patient and the clinical setting, should be excluded from consideration in the

formulation of clinical decisions. This is central to both the prescriptive theory of decision making and the science of Bayes' theorem.

How Do We Really Make Decisions?

To answer this question, we turn to social cognitive theory. Social cognitive theory is a subfield of psychology that explores how we develop perceptions and judgments of others, what factors influence the way we form beliefs, and how we use "social knowledge" to make decisions. Social cognitive theory focuses on how the underlying social assumptions we hold shape our decisions and how our perceptions regarding "group characteristics" affect our judgment. From this body of research we have learned two very important things. First, many nonmedical factors influence the clinical decision-making process. Second, we are all susceptible to stereotyping, which directly influences the way we make decisions.

Nonmedical Factors That Influence Clinical Decision Making

Many nonmedical factors, ranging from the patient's physical appearance to the organizational setting in which medical care is delivered, may have as much influence on clinical decisions as the actual signs and symptoms of disease.^[25,26] Our decisions, in addition to being shaped by symptoms and probability of disease, are shaped by the characteristics of the patient, including patient age, gender, socioeconomic status, race/ethnicity, language proficiency, and insurance status; the characteristics of the doctor, including the specialty, level of training, clinical experience, age, gender, and race/ethnicity; and the features of the practice setting, including location, organization of practice, form of compensation, performance expectations, and incentives.^[14,24,26,27,29,30-35]

McKinlay et al.^[25] summarizes, "Medical decision making can be as much a function of who the patient is as much as what the patient has." Recent literature supports this and challenges the prescriptive theory of decision making. For instance, there is significant geographic variations in procedure utilization for the same clinical condition across the country.^[35]

Stereotyping and Clinical Decision Making

The social cognitive literature has also brought to our attention the ways in which natural tendencies to stereotype might influence clinical decision making. Every day we are faced with enormous amounts of information that we must sift through to make decisions. As a result, we all share the subconscious strategy of attempting to simplify our decision-making process and lessen our cognitive effort by using "categories" or "stereotypes" in which we apply beliefs and expectations about groups of people to individuals from that group.^[36-38] Interestingly, we may not be aware of our attitudes or consciously endorse stereotyping. Nevertheless, when individuals are mentally assigned to a particular class or group, the characteristics assigned to that group are subconsciously and automatically applied to the individual. It should be emphasized that this is a normal, functional, adaptive, cognitive process that is often automatic and most likely centered on (in rank order) race, gender, and age—characteristics that manifest visually.^[37] Most importantly, we tend to activate stereotypes most when we are stressed, multitasking, and under time pressure—the hallmarks of a clinical encounter.

It is important to differentiate stereotyping from prejudice and discrimination, both conscious processes. Prejudice is a conscious, knowledgeable prejudgment of individuals that may lead to disparate treatment; discrimination is conscious and intentional disparate treatment.^[37] Physicians all stereotype naturally and often subconsciously despite their best intentions to treat every patient equitably and as an individual. It is thus no mystery that doctors respond, "Not me!" when presented with data that puts them among the potential "contributors" to racial/ethnic disparities in health care. The challenge is that if left unchecked, stereotyping has a detrimental clinical effect on certain groups that fall into specific categories deemed less worthy of diagnostic or therapeutic procedures or resources.^[39,40] Einbinder and Schulman^[30] describe how this process, along with other factors, may lead to differential referral to invasive cardiac procedures based on the race of the patient.

What Processes in Medicine Contribute to Stereotypes?

Several processes may contribute to the development of stereotypes, even among those physicians who consider themselves well intentioned and egalitarian. These can be divided into two categories: the "formal" curricula, which is what doctors are taught during medical education; and the "informal" curricula, which is what doctors observe during training and practice.

The Informal Curricula: Clinical Training and Practice Environment

Based on training or practice location, doctors may develop certain perceptions about race/ethnicity, culture, and class that may evolve into stereotypes.^[41] For example, many medical students and residents are often trained—and minorities cared for—in academic health centers or public hospitals located in socioeconomically disadvantaged areas. As a result, doctors may begin to equate certain races and ethnicities with specific health beliefs and behaviors (i.e., "these patients" engage in risky behaviors, or "those patients" tend to be noncompliant) that are more associated with the social environment (like poverty) than a patient's racial/ethnic background or cultural traditions. This conditioning phenomenon may also occur if doctors are faced with certain racial/ethnic patient groups who don't frequently choose aggressive forms of diagnostic or therapeutic interventions. The result over time may be that doctors begin to believe that "these patients" do not like invasive procedures and thus they may not offer them as options very ardently, if at all. In the case of African Americans, for example, one could understand how this interaction can become a cyclical and self-fulfilling prophecy. Based on historical factors of segregation and medical experimentation, African Americans have been shown to be more mistrustful of the health care system than any other racial or ethnic group (with Latinos not far behind).^[42] This mistrust may contribute to wariness in accepting or following recommendations, undergoing invasive procedures, or participating in clinical research. This in turn may lead doctors to continually believe the African-American population is less adherent or less interested in aggressive treatments. Again, this stereotyping is a natural and expected—but no less dangerous—phenomenon that may affect the way doctors make decisions and offer specific interventions to different patients based on their race or ethnicity.

The Formal Curricula: Medical Education, Race, Ethnicity, and Culture

The formal curriculum plays a role, but to a lesser extent. In medical schools, for the most part, teachings about race, ethnicity, and culture—if done at all—focus on providing knowledge regarding the attitudes, values, beliefs, and behaviors of certain groups of patients.^[43] For example, methods to care for the Asian, African-American, or Hispanic patient might present a list of common health beliefs, behaviors, and key clinical practice do's and don'ts. Given intragroup diversity, it is impossible to teach a set of unifying facts or cultural norms (such as fatalism among Hispanics, or passivity among Asians) about any particular population that can be applicable in every clinical setting, everywhere.^[44,45] Although well meaning, these efforts can lead to stereotyping of patients and oversimplification of culture.^[46] Research has shown that teaching such "cultural knowledge," when not done carefully, can be more detrimental than helpful.^[47]

Clinical Scenarios: How Can Stereotypes Lead to Disparities?

One can imagine a training environment where it was exceedingly difficult, for a variety of reasons, to convince African-American patients to undergo invasive surgical procedures. Perhaps it was because the patients were afraid they could not afford the procedure, they were not able to miss work, they were mistrustful of the health care system, or they had different conceptualizations of their conditions and did not think they required surgery. Whatever the case, the end result was that the doctors developed "priors" over time;^[23] that is, a pretest probability in their minds that led them to believe African Americans do not like invasive surgical procedures. How might this affect a doctor's choice to offer—or how aggressively to offer—an invasive surgical procedure to his or her 200th African-American patient who needed one? How about the

250th? Because we know that a patient's decision is very much dependent on the doctor's presentation of the treatment option, might it not be easier, with those priors, to choose medical management of a condition in favor of spending a lot of time trying to convince a patient to do something you really do not think they are going to agree to in the first place? Might the doctor then become susceptible to stereotyping African Americans as not being interested in invasive surgical procedures and thus sacrifice the optimal for the acceptable?

Although this is a hypothetical situation, consider closely the daily clinical experiences where doctors are constantly making choices on how much time and effort to spend on particular issues with patients. We should also consider how our own priors shape our actions, affect our clinical decision making, and make us susceptible to stereotyping. Could the process of stereotyping be a working hypothesis to explain the racial/ethnic disparities in referral rates of African Americans for catheterization, angioplasty, or bypass surgery when all the usual suspects (e.g., insurance status, socioeconomic status, comorbidities, appropriateness) are controlled for?^[23] Our first response might be that the doctor may have offered the patient the procedure yet the patient refused it. Although that is plausible, the IOM report went through various studies (e.g., renal transplantation)^[20] where patient preferences were examined and, although occasionally different by race/ethnicity, rarely did they account for the disparities identified. Both the IOM report and the social cognitive theory literature suggest that we give the stereotyping theory more than just a passing consideration in this instance.

What Can We Do?

There are several strategies that might allow us to counteract, both systemically and individually, our normal tendency to stereotype.

Systemic Interventions

Cooperation Toward a Common Goal: Diversity in Health Care. It has been shown that when racially/ethnically/culturally/socially diverse teams are assembled (in which each member is given equal power) and are asked to achieve a common goal, a sense of camaraderie develops that prevents the future development of stereotypes based on race/ethnicity, gender, culture, or class. This research supports the development of diverse clinical care teams as a method of promoting greater understanding among individuals from different sociocultural backgrounds.^[37]

Practice Setting Changes: Improving Our Environment. Certain incentives, such as those related to productivity or cost-control, could be adjusted or realigned to prevent an environment that leads to increased stereotyping (one in which doctors are forced to work under extreme time pressure, multitask without support, and participate in stressful environments), in favor of one that favors quality across racial/ethnic groups.^[37]

Individual Interventions

Education and Awareness: Improving Communication. As opposed to solely teaching the prescriptive theory of decision making in medical education and training, new curricula should include a more detailed analysis of how we make decisions and what nonmedical factors influence that process. Furthermore, curricula in cultural competence, which focus on preparing doctors to more effectively communicate and care for patients from diverse sociocultural backgrounds, may also be helpful.^[48,49] Because stereotyping develops from cognitive shortcuts, priors, and incomplete information, curricula that focus on teaching doctors how they make decisions, and how they can more effectively communicate with diverse patient populations, may be a useful preventive strategy against stereotyping.

Increased Self-Monitoring: Constantly Checking Ourselves. Research has shown that simply being aware of the operation of social cognitive factors allows one to actively "check" or "monitor" behavior. For instance, one can constantly make sure that the same things are being offered, the same ways, to all patients.

Conclusion

The fact that racial/ethnic disparities in health care exist is now undeniable, indisputable, and extremely well detailed in the IOM report. True progress in eliminating them will only occur when doctors get past the "Not me!" phase and begin to understand the role they play in the problem, and perhaps more importantly, in the solution. This is not an indictment of physicians, but instead a call to action and open-mindedness. Our review highlights that stereotyping is a normal process with potentially unfortunate consequences. We must do everything in our power to identify and avoid it if we hope to eliminate racial and ethnic disparities in health care.

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