Primary Care Physicians' Collection, Comfort, and Use of Race and Ethnicity in Clinical Practice in the United States

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Abstract

Purpose: The clinical utility of race and ethnicity has been debated. It is important to understand if and how race and ethnicity are communicated and collected in clinical settings. We investigated physicians' self-reported methods of collecting a patient's race and ethnicity in the clinical encounter, their comfort with collecting race and ethnicity, and associations with use of race in clinical decision-making.

Methods: A national cross-sectional study of 787 clinically active general internists in the United States. Physicians' self-reported comfort with collecting patient race and ethnicity, their collection practices, and use of race in clinical care were assessed. Bivariate and multivariable regression analyses were conducted to examine associations between comfort, collection practices, and use of race.

Results: Most physicians asked patients to self-report their race or ethnicity (26.5%) on an intake form or collected this information directly from patients (26.2%). Most physicians were comfortable collecting patient race and ethnicity (84.3%). Physicians who were more comfortable collecting patient race and ethnicity ($\beta = 1.65$; [95% confidence interval; CI 0.03–3.28]) or who directly collected patients' race and ethnicity ($\beta = 1.24$ [95% CI 0.07–2.41]) were more likely to use race in clinical decision-making than physicians who were uncomfortable.

Conclusions: This study documents variation in physician comfort level and practice patterns regarding patient race and ethnicity data collection. As the U.S. population becomes more diverse, future work should examine how physicians speak about race and ethnicity with patients and their use of race and ethnicity data impact patient–physician relationships, clinical decision-making, and patient outcomes.

Keywords: clinical decision-making; collection of race and ethnicity; physician behavior; physicians' use of race; RACE scale

Introduction

Race and ethnicity, along with a battery of other demographic data, are used by insurers, healthcare organizations, and clinicians as a means of monitoring quality of care and identifying and addressing healthcare inequi-ties.[1,2] Patient race and ethnicity are also used by clinicians in decision-making for prescribing medications (e.g., Isosorbide dinitrate/hydralazine, Carbamazepine, and ACE inhibitors),[3–5] ordering diagnostic tests (e.g., lung function and coronary heart disease),[6,7] and determining when to

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initiate screening (e.g., colorectal cancer and diabetes).[8,9] Self-identified race and ethnicity (SIRE) are also used as a surrogate for other information, such as culture and social experiences.[10–15]

The concepts of race and ethnicity have varying definitions and both terms are often conflated and used interchangeably.[16,17] Race is a social construct; the Institute of Medicine (IOM) report *Unequal Treatment: Confronting Racial and Ethnic Disparities in Healthcare* defined race as "a socioeconomic concept wherein groups of people sharing physical characteristics are treated differently based on stereotypical thinking, discriminatory institutions and social structures, a shared worldview, and social myths."[2,17,] In addition, race is often used as a biological metric to infer genetic ancestry between different population groups.[18,19] In the United States, it has been used since the 17th century to subdivide humans from one another phenotypically.[20,21] However, race is a fluid construct; a person's racial identity can change over time and self-ascribed race can differ from assigned race.[22] Contrastingly, ethnicity, used as a sociocultural construct,[9,16] often refers to shared cultural identification, religion, and language.[18]

Some researchers have investigated whether genetic ancestral informative markers (AIMS) may provide a more "objective and accurate method" of study of racial and ethnic groups in population disease studies.[23] Burchard and colleagues conducted a study of lung-function predictions and concluded that current predictive equations, which rely on self-identified race alone, may misestimate lung function among subjects who identify themselves as African American and that, including AIMS in the equation may improve lung-function estimates.[6] AIMS, however, will not replace the collection of SIRE in the clinical encounter. Genetically quantifying ancestry does not always appropriately capture racial and ethnic social identity and their influence on health.

Within the last 10 years, health plans and medical practices have increased their collection of patients' race and ethnicity data to analyze differences in healthcare utilization and assess the quality of care across different populations.[24–29] The electronic health record meaningful use program[30,31] created financial incentives for providers to collect patient demographics, including race and ethnicity. Thus, collection of patient race and ethnicity within health practices has also increased,[24,25] and various methods have been used to collect these data.[32,33]

Examining how healthcare providers collect patient race and ethnicity and their comfort with data collection provides valuable insights into the different ways that physicians understand race and ethnicity. We hypothesize that physicians' behaviors related to the collection of patient's race and ethnicity will affect how the physicians judge the relevance of the information in the clinical encounter and their comfort with the collection of race and ethnicity. We contend that physicians who directly collect or have patients self-report their race and ethnicity believe it has more clinical utility and are more comfortable with the collection than physicians who report race and ethnicity based upon the physician's or staff's perception of the patient's race and ethnicity or, alternatively, than those who do not collect the information at all.

Methods

Study design and sample

We conducted a cross-sectional study using data from the Health Professionals' Genetics Education Needs Exploration survey, which was administered from April to December 2010 through the Internet and mail to a United States' sample of 1738 eligible and clinically active general internists.[34] The sample was drawn from the SK&A company's physician database, which has more than 87,000 office-based internists.[35] The sample members were selected in two batches. First, a general random sample ($n = 1929$) of general internists from all racial and ethnic backgrounds was selected from the overall database. This was supplemented by a sample of physicians who graduated from historically black medical schools ($n = 193$) to increase the representation of black physicians in the overall sample and improve the study's ability to detect differences between black physicians and other physicians. Physicians were excluded if they did not have a current (USA) mailing address and/or were not currently clinically active internists per their own self-report or by report of their office staff. Of the overall sample, 787 responded (a 45% response rate). The survey included validated measures, which examined physicians' knowledge of genetic variation, use of race in the clinical setting, and beliefs about race and ethnicity. The measures included the Racial Attributes in Clinical Evaluation (RACE) Scale. Further information regarding sampling methodology, scale development, and survey implementation is reported in Bonham et al.[34] This study was reviewed and approved by the Institutional Review Boards at the National Human Genome Research Institute (#05-HGN196), Johns Hopkins University, and Miami University of Ohio.

Study variables

Method of collecting data on patient race and ethnicity.

The first predictor variable was collection practices related to patient race and ethnicity. Respondents reported how race or ethnicity was collected in their clinical setting: (1) by a patient's self-report on an intake form; (2) directly from the patient by a clerk; (3) directly from the patient by a nurse or physician's assistant; (4) directly from the patient by the physician respondent; (5) by the physician respondent's judgment; or (6) by a clerk's judgment. Respondents could also report that data related to patient race or ethnicity were not collected. For analysis, these responses were grouped into three categories: self-report (response 1), direct collection (asking the patient) (responses 2, 3, and 4), and perception-based collection (provider or staff inference) (responses 5 and 6).

Comfort with collecting data on patient race and ethnicity.

The second predictor variable was physicians' comfort with the collection of patient racial and ethnic information. This information was assessed through the survey question, "How comfortable are you collecting racial and ethnic data from your patients?" There were five responses: (1) very comfortable; (2) somewhat comfortable; (3) somewhat uncomfortable; (4) very uncomfortable; and (5) never collect racial and ethnic data. For analytical purposes, categories were collapsed and coded as follows: comfortable (responses 1 and 2), uncomfortable (responses 3 and 4), and never collect racial data (response 5).

Physician use of race in clinical decision-making (RACE score).

The RACE scale, used as the outcome variable in our multivariable linear regression, measured domains of physicians' explicit use of race in the clinical setting.[34] The RACE scale consists of seven items and examines the extent to which the respondents consciously employ patient race in clinical decision-making. Each item was rated on a five-point Likert scale from 0 (none of the time) to 4 (all of the time). Examples of items include, "I consider my patient's race when determining age of initiation of screening for certain diseases," and "I consider my patient's race when making decisions about which medications to prescribe." Responses to each item were summed, with higher RACE scores indicating greater explicit use of race in clinical decision-making. The lowest score obtainable is 0, with the highest score possible being 28 (Supplementary Table S1).

Covariates of interest

The survey collected demographic characteristics of the physicians (e.g., sex, age, years in practice, ethnicity, and race) as well as the estimated racial and ethnic composition of each physician's patient population and the respondent's percentage of time spent seeing patients. For analytical purposes, we grouped the physicians into majority and minority; white physicians were identified as majority physicians, with all other physicians being classified as minority. In addition to this information, respondents were asked the meaning they ascribed to race through the question, "What does the term 'race' mean to you?" and were instructed to make one selection from 10 responses: (1) biological group; (2) cultural group; (3) genetic ancestral group; (4) lifestyle/behavioral group; (5) population group; (6) religious group; (7) social identity group; (8) species; (9) none of the above; or (10) other. Similarly, respondents were asked, "What does the term 'ethnicity' mean to you?" and received similar instructions as above. We recoded and collapsed the responses into four categories: biological group (responses 1 and 8), genetic ancestral group (response 3), sociocultural group (responses 2, 4, 5, 6, and 7), and none of the above groups/other (responses 9 and 10).

Statistical analysis

We used descriptive statistics to examine the frequency with which physicians reported collecting race and ethnicity data and which method they used. We also used descriptive statistics to examine the comfort with collecting this data. Bivariate logistic regression and multinomial logistic regression were used to determine whether the demographic characteristics of the physicians, meanings of race and ethnicity, and patient panel were associated with respondents' comfort with and method of collecting patient race and ethnicity, respectively. Finally, multivariable linear regression was used to examine the associations of our two predictor variables—method of collection and comfort with collecting data on patient race and ethnicity—with the use of race in clinical decision-making, while adjusting for potential confounders, including physician demographics, practice characteristics, and meanings of race and ethnicity. All analyses were performed using SAS version 9.3.

Results

As previously reported, this sample of physician respondents represented a range of practice settings

(Table 1).[34,36] The sample of 787 general internists was predominately male (65.3%), white (67.1%), and had graduated from a United States medical school (75.4%). United States medical graduates attended a broad range of medical schools, including schools in the District of Columbia, Puerto Rico, and 44 states. Most respondents reported a clinical location that was urban (96.4%) and had a patient panel that was >20% non-white (74.0%). In addition, the study sample self-identified race as white (67.1%), black or African American (6.4%), Asian (20.9%), American Indian or Alaska Native (1.2%), Native Hawaiian or Other Pacific Islander (0.3%), and/or other (7.1%) and ethnicity as Hispanic or Latino (3.5%) (Table 1).

More than half of the respondents either had their patients self-report their race and/or ethnicity on an intake form (26.5%) or collected race and/or ethnicity directly from their patient (26.2%) (Table 2). Of the respondents, 84.3% reported being comfortable collecting patient race and ethnicity, 10.3% were uncomfortable, and 5.4% did not collect this information.

Table 1. Physician Characteristics and Use of Race in Clinical Decision-Making Scores

Sample characteristics	N	%	Mean (SD)	Mean RACE score (SD)	p[a]	AMA[b] (%)
All physicians	787	—	—	13.53 (5.57)		
Mean age	767	—	48.6[c] (9.60)	—	—	—
Sex (total, N = 774)					0.27	
Male	505	65.25	50.37[c] (9.89)	13.36 (5.72)		67.2
Female	269	34.75	45.31[c] (8.33)	13.82 (5.25)		32.8
Ethnicity (total, N = 767)						
Hispanic/Latino	27	3.52	—	14.30 (5.32)	—	4.9
Race (total, N = 767)[d]						
White	515	67.14	—	12.87 (5.45)		44
Black or African American	49	6.39	—	14.56 (6.11)		3.9
Asian	160	20.86	—	15.24 (5.53)	<0.001	17.4
American Indian/Alaska Native	9	1.17	—	11.00 (—)[e]		0.1
Native Hawaiian/Pacific Islander	2	0.26	—	12.50 (3.54)		—
Other	54	7.04		14.30 (5.42)		2.3
Practice setting (total, N = 777)						
Academic health center	89	11.45	—	12.66 (6.03)		—
Federally qualified health center	23	2.96	—	13.14 (6.08)		—
Group or staff model practice HMO	62	7.98	—	13.85 (6.19)		—
Hospital based	105	13.51	—	13.25 (5.69)	0.34	—
Office based	459	59.07	—	13.86 (5.27)		—
VA healthcare system	15	1.93	—	12.79 (5.28)		—
Other	24	3.09	—	11.88 (6.14)		—
Patient population >20% minority (total, N = 720)	533	74.03	—	14.00 (5.54)	<0.001	
Practice location (total, N = 725)						
Rural setting	26	3.59	—	15.27 (7.02)	0.20	—
Urban setting	699	96.41	—	13.43 (5.46)		—
Percentage of work time seeing patients	772	—	85 (19.41)	—	—	
Meaning of race (total, N = 775)[d]						
Biological group	155	20.00	—	13.91 (6.14)		—
Genetic ancestral group	477	61.55	—	13.78 (5.32)	0.03	—
Sociocultural group	125	16.13	—	12.48 (5.63)		—
None of the above groups/other	18	2.32	—	11.35 (5.50)		—
Meaning of ethnicity (total, N = 775)						
Biological group	31	4.00	—	13.77 (5.35)		—
Genetic ancestral group	125	16.13	—	14.16 (5.51)	0.37	—
Sociocultural group	609	78.58	—	13.44 (5.60)		—
None of the above groups/other	10	1.29	—	11.50 (4.67)		—

[a]p Values are from *t* tests or analysis of variance (if more than two groups) to compare mean scores for RACE score across physician characteristics.
[b]N = 160,107. Data taken from the AMA's Physician Characteristics and Distribution in the US book, 2010 Edition.
[c]Denotes the mean age.
[d]The *p* values for the global F test of these analyses of variance (ANOVAs) indicate that at least one of the categories in each of the variables (physicians' race and meaning of race) has a mean RACE score that is significantly different from another category within the same variable.
[e]SD was not measurable because there was only one reported RACE score in this racial group.
—, Data not available.
RACE, Racial Attributes in Clinical Evaluation; SD, standard deviation; HMO, Health Maintenance Organization.

Table 2. Frequencies of Race and Ethnicity Data Collection Methodologies and Comfort with Collection

Item	Frequency	%
Race and ethnicity data collection methodologies[a]		
Patient reports		
The patient reports race or ethnicity on an intake form	205	26.45
Direct collection		
A clerk collects the patient's race or ethnicity data directly from the patient	73	9.42
A nurse or physician's assistant collects race or ethnicity directly from the patient	21	2.71
I (physician) collect race or ethnicity data directly from the patient	203	26.19
Perception-based collection		
I (physician) report patient's race or ethnicity based upon my judgment	121	15.61
A clerk reports patient's race or ethnicity based on his/her judgment	6	0.77
A nurse or physician's assistant reports patient's race or ethnicity based on his/her judgment	6	0.77
Not collected		
These data are not collected	140	18.06
Comfort with collecting race and ethnicity data[b]		
Comfortable	654	84.30
Uncomfortable	80	10.30
Never collect	42	5.40

[a]Twelve physicians are missing from the count.
[b]Eleven physicians are missing from the count.

Associations between physician characteristics with collection method and comfort collecting race and ethnicity

Compared to minority physicians, respondents who self-reported as non-Hispanic white were less comfortable collecting patient race and ethnicity ($\beta = -0.27$ [95% CI -0.52 to -0.00]) (Table 3). No other physician characteristics were significantly associated with collection method or comfort in the bivariate analysis.

Association between method of and comfort with collecting data and use of race in clinical decision-making

In the final multivariable regression model, physicians who used direct questioning collection of data on patient race and ethnicity compared with those who collected data using perception-based methods had significantly higher RACE scores ($\beta = 1.24$ [95% CI $0.07–2.41$]) (Table 4). This finding does support our hypothesis that physicians who affirmatively collected race and ethnicity would be more likely to explicitly use it in clinical care.

Respondents who demonstrated increased levels of comfort collecting patient information were more inclined to use race in the clinical setting. In the bivariate analysis, the RACE score for physicians who were comfortable collecting race and ethnicity (14.06, standard deviation [SD] = 5.49) was significantly higher than those who were uncomfortable collecting race and ethnicity (11.64, SD = 4.75) and those who never collected patient race and ethnicity (9.00, SD = 5.83). This association persisted in the final multivariable model. After adjusting for physician demographic characteristics, it was found that physicians who were comfortable collecting data on patient race and ethnicity had somewhat greater use of race in clinical decision-making than those who were uncomfortable ($\beta = 1.65$ [95% CI $0.03–3.28$]) (Table 4). In addition, other variables that were significantly associated with higher use of patient race in the multivariable model included increased physician age, increased percent of time spent seeing patients, physician race (non-white vs. white), and patient panel (>20% minority vs. nonminority). Physician sex was not significantly associated with use of patient race.

Discussion

This study presents new knowledge on the collection of patient race and ethnicity by general internists and how this specific type of collection is related to and may impact clinical decision-making. Using data from a national survey of general internists, we found that more than half of the sample either asked patients to self-report their race or ethnicity on an intake form or collected this information directly from patients during the clinical encounter. However, 35.3% of the study sample either collected race and ethnicity data using deductive methods (e.g., perception-based/observer report) (17.2%) or did not collect such information at all (18.1%). Our results support our first hypothesis regarding the notion that certain physician characteristics are associated with comfortability in collecting patient race or ethnicity data. Specifically, non-white physicians were more comfortable collecting race and ethnicity than white physicians. In addition, several characteristics were associated with an increased use of race in clinical decision-making, including physician race, age, comfort with collecting race and ethnicity, years in practice, percent of time spent seeing patients, and mode of collection of patient information. Our second hypothesis was also supported; there was no association between direct collection of race and its use in clinical care. We found in this study that physicians who used perception-based collection of data on patient race and ethnicity were more likely to use race in clinical care. Our third

Table 3. Characteristics Associated with Method of and Comfort with Collecting Patient Race and Ethnicity Data

Outcome	Characteristic	Unadjusted parameter estimate [95% CI][a]	p
Method of collection			
Patient reports vs. perception based	White, non-Hispanic vs. minority	−0.04 [−0.27 to 0.20]	0.77
	Age	−0.32 [−2.45 to 1.80]	0.76
	Female vs. male	−0.03 [−0.27 to 0.21]	0.82
	Years in practice	−0.50 [−2.64 to 1.63]	0.64
	% Time seeing patients	−3.22 [−7.39 to 0.95]	0.13
	Patient panel >20% minority: yes vs. no	−0.01 [−0.30 to 0.27]	0.94
	Meaning of race: biological vs. sociocultural group	−0.27 [−0.67 to 0.13]	0.19
	Meaning of race: genetic ancestral vs. sociocultural group	−0.22 [−0.56 to 0.12]	0.21
	Meaning of race: other/none vs. sociocultural group	−0.88 [−1.94 to 0.18]	0.10
	Meaning of ethnicity: biological vs. sociocultural group	0.25 [−0.29 to 0.80]	0.36
	Meaning of ethnicity: genetic ancestral vs. sociocultural group	−0.02 [−0.33 to 0.28]	0.88
	Meaning of ethnicity: other/none vs. sociocultural group	0.32 [−0.58 to 1.21]	0.49
	Practice location: rural vs. urban	−0.11 [−0.71 to 0.49]	0.72
Directly asking vs. perception based	White, non-Hispanic vs. minority	−0.07 [−0.29 to 0.15]	0.51
	Age	−1.38 [−3.37 to 0.61]	0.17
	Female vs. male	−0.01 [−0.23 to 0.21]	0.95
	Years in practice	−1.51 [−3.50 to 0.48]	0.13
	% Time seeing patients	−2.23 [−6.13 to 1.67]	0.26
	Patient panel >20% minority: yes vs. no	−0.19 [−0.45 to 0.06]	0.14
	Meaning of race: biological vs. sociocultural group	−0.23 [−0.60 to 0.15]	0.23
	Meaning of race: genetic ancestral vs. sociocultural group	−0.21 [−0.53 to 0.11]	0.19
	Meaning of race: other/none vs. sociocultural group	0.03 [−0.78 to 0.83]	0.95
	Meaning of ethnicity: biological vs. sociocultural group	−0.16 [−0.70 to 0.38]	0.56
	Meaning of ethnicity: genetic ancestral vs. sociocultural group	−0.09 [−0.37 to 0.19]	0.52
	Meaning of ethnicity: other/none vs. sociocultural group	−0.79 [−1.85 to 0.27]	0.14
	Practice location: rural vs. urban	0.00 [−0.54 to 0.54]	0.99
Comfort collecting race and ethnicity			
Comfortable vs. uncomfortable	White, non-Hispanic vs. minority	−0.27 [−0.52 to −0.00]	0.05
	Age	1.29 [−0.97 to 3.53]	0.26
	Female vs. male	−0.10 [−0.34 to 0.14]	0.42
	Years in practice	0.91 [−1.37 to 3.18]	0.44
	% Time seeing patients	0.52 [−3.94 to 4.98]	0.82
	Patient panel >20% minority: yes vs. no	0.11 [−0.20 to 0.43]	0.47
	Meaning of race: biological vs. sociocultural group	0.49 [−0.12 to 1.10]	0.12
	Meaning of race: genetic ancestral vs. sociocultural group	0.16 [−0.32 to 0.64]	0.52
	Meaning of race: other/none vs. sociocultural group	−0.22 [−1.36 to 0.92]	0.71
	Meaning of ethnicity: biological vs. sociocultural group	0.37 [−0.84 to 1.58]	0.55
	Meaning of ethnicity: genetic ancestral vs. sociocultural group	−0.05 [−0.82 to 0.73]	0.91
	Meaning of ethnicity: other/none vs. sociocultural group	−0.15 [−1.76 to 1.45]	0.85
	Practice location: rural vs. urban	0.19 [−0.54 to 0.92]	0.61

[a]The unadjusted parameter estimate gives the probability for either comfort with or method of collection for every 1 unit increase (e.g., every 1 year increase in practice) or between the indicated group and the reference group (e.g., female vs. male). The reference group for method of collection was perception based. The reference group for comfort collecting race and ethnicity was uncomfortable.

hypothesis was supported; there was an association between comfort with collection and use of race, such that physicians who reported increased comfort with collecting patient information also used patient race more in decision-making.

The use of perception-based strategies to collect racial and ethnic data could be due to physicians' lack of comfort in discussing race and ethnicity with their patient, and thus greater reliance on inference, or due to racially and ethnically homogenous patient panels, which might deter collecting this information. We also theorize that physicians who employ this method are using a shortcut and are making fast, assumptive judgments. Physicians' communication style and comfort level with collecting patients' race or ethnicity data may also be related to their attitudes regarding the importance of race, culture, or social determinants of health in identifying patients' risk of disease, understanding patients' attitudes toward care, and addressing potential barriers to engaging in healthy behaviors. Comfort levels may also reflect interpersonal cultural competence, which includes understanding the meaning of culture, appreciation of diversity, awareness of health disparities and discrimination affecting minority groups, and the ability to communicate effectively with patients of different racial and ethnic groups.[37] Yet, comfort with collecting these data may not necessarily indicate competence. Although some programs have

Table 4. Associations Between Physician Characteristics and Use of Race in Clinical Decision-Making

Characteristic ($N = 564$)	Parameter estimate [95% CI][a]	p
Method of collection vs. perception based		
Direct questioning	1.24 [0.07–2.41]	0.04
Patient self-reports	0.72 [−0.52 to 1.95]	0.26
Comfort collecting race and ethnicity		
Comfortable vs. uncomfortable	1.65 [0.03–3.28]	0.05
Sex		
Females vs. males	0.41 [−0.56 to 1.38]	0.40
Age	0.17 [0.05–0.30]	0.005
Race		
Minority vs. white, non-Hispanic	1.13 [0.13–2.13]	0.03
Years in practice	−0.13 [−0.25 to −0.01]	0.04
Percent time seeing patients	0.03 [0.00–0.05]	0.04
Patient panel >20% minority		
Yes vs. no	1.54 [0.47–2.60]	0.005
Definition of race vs. sociocultural group		
Biological group	1.44 [−0.15 to 3.03]	0.08
Genetic ancestral group	0.97 [−0.37 to 2.31]	0.16
Other/none	1.18 [−2.61 to 4.98]	0.54
Definition of ethnicity vs. sociocultural group		
Biological group	0.14 [−2.17 to 2.44]	0.91
Genetic ancestral group	0.48 [−0.76 to 1.72]	0.45
Other/none	−0.26 [−4.60 to 4.08]	0.91

[a]The parameter estimate gives the change in RACE score for every 1 unit increase (e.g. every additional year for age) or between the indicated group and reference group (e.g. comfortable vs. uncomfortable).

been developed to train hospital, health system, and community health center staff in data collection methods, few cultural competence programs train physicians to discuss the impact of race and ethnicity on their patient's health in routine medical visits.[1,27,38–42] Future work should examine these attitudes over time among physicians from different specialties and settings and investigate how communication style, methods of, and comfort with collecting race and ethnicity influence decision-making, disparities in healthcare delivery, and patient outcomes.

Given persistent disparities in healthcare and the importance of patient–physician relationships, studies that further explore the associations of provider communication style and comfort with collecting patient race and ethnicity with healthcare delivery in patients of different racial and ethnic groups could inform the development of interventions to improve quality of care and reduce disparities in treatment.

Race and ethnicity will continue to serve as important variables with which to measure quality of care in clinical practice and understand health disparities. For example, current law requires race, ethnicity, and language data collection for federally funded healthcare programs.[43] It is important to note, however, that the use of race and ethnicity to measure quality of care and document health disparities in clinical care for populations differs from the use of race and ethnicity as proxies for disease risk or expected response to therapy in clinical decision-making for individual patients.

There are some limitations of this study. First, the surveyed general internists may not be representative of U.S. physicians from other specialties. Second, with the near-uniform use of electronic medical records today, there might be a shift in how patient race and ethnicity are collected by providers, which can influence their decision-making behaviors.[44] Third, although we were able to find correlations (e.g., higher comfort was associated with higher RACE scores), it is unclear what factor(s) contributed to these relationships.

Conclusion

This study provides insights into physicians' comfort with collecting race and ethnicity and how these two classifications are currently used. Understanding how physicians engage patients in collecting sociodemographic information (e.g., race, ethnicity, and gender) can inform health equity research and medical education. While the concepts of race and ethnicity are socially meaningful, perceptions of their clinical utility vary[45] and will likely evolve with the growth of genomic and precision medicine.[46] Historically, race and ethnicity are concepts that have been used as heuristics. Studies of implicit bias suggest that physicians may use race as a heuristic to make medical decision-making more efficient, especially under conditions of high cognitive load.[47] When used as a heuristic, however, race can obscure the use of other critically relevant clinical information needed for appropriate treatment because it may be based on a belief that racial groups are biologically discrete and/or culturally homogeneous, leading to the assumption that all individuals within these groups will react similarly to a therapy or treatment.[48] Although the role of race and ethnicity in medicine is complex and contentious, race and ethnicity can be important for shaping healthcare experiences and access to care[49] for individual patients and for socially at-risk groups, making the collection of these data important and impactful for clinical practice, systems change, and policies aimed at improving health equity.

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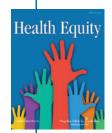
Abbreviations Used

AIMS = ancestral informative markers
CI = confidence interval
RACE = Racial Attributes in Clinical Evaluation Scale
SD = standard deviation
SIRE = self-identified race and ethnicity