Conceptualizing and Categorizing Race and Ethnicity in Health Services Research

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Objectives. Veterans Affairs (VA) patient populations are becoming increasingly diverse in race and ethnicity. The purpose of this paper is to (1) document the importance of using consistent standards of conceptualizing and categorizing race and ethnicity in health services research, (2) provide an overview of different methods currently used to assess race and ethnicity in health services research, and (3) suggest assessment methods that could be incorporated into health services research to ensure accurate assessment of disease prevalence and incidence, as well as accounts of appropriate health services use, in patients with different racial and ethnic backgrounds.

Design. A critical review of published literature was used.

Principal Findings. Race is a complex, multidimensional construct. For some individuals, institutionalized racism and internalized racism are intertwined in the effects of race on health outcomes and health services use. Ethnicity is most commonly used as a social-political construct and includes shared origin, shared language, and shared cultural traditions. Acculturation appears to affect the strength of the relationships among ethnicity, health outcomes, and health services use.

Conclusions. Improved and consistent methods of data collection need to be developed for use by VA researchers across the country. VA research sites with patients representing specific population groups could use a core set of demographic items in addition to expanded modules designed to assess the ethnic diversity within these population groups. Improved and consistent methods of data collection could result in the collection of higher-quality data, which could lead to the identification of race- and ethnic-specific health services needs. These investigations could in turn lead to the development of interventions designed to reduce or eliminate these disparities.

Key Words. Race and ethnicity, measurement, health disparities

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The appropriate assessments of race and ethnicity are crucial to health services research. Data based on racial and ethnic classifications are used by many federal and state agencies, public and private organizations, and the private business sector to allocate resources to needed areas, develop interventions

designed to improve health outcomes, and to develop marketing plans (Sillitoe and White 1992; Sondik, Lucas, Madans, and Smith 2000; Wallman, Evinger, and Schecter 2000). In addition, most health services research studies include race or ethnicity as a descriptive variable, and many include race or ethnicity as a covariate, primary or secondary outcome. In order for instrument-based categorizations of race and ethnicity to be most meaningful, they should (1) produce consistent data over time, (2) allow comparability across populations and surveys, and (3) use terms that are widely understood by the groups completing the instruments (Sawyer 1998). This paper reviews the evolution of the definitions of "race" and "ethnicity," describes how these social constructs are currently assessed in health services research, and provides suggestions for improving measurement of these constructs.

RACE AS A SOCIAL CONSTRUCT

The validity of race as an indicator of distinct, genetically different population groups has been widely questioned (Chaturedi and McKeigue 1994; McKenney and Bennett 1994; Senior and Bhopal 1994; Williams, Lavizzo-Mourey, and Warren 1994; Beutler et al. 1996). Greater genetic variation exists within racial groups than between them (Senior and Bhopal 1994; Williams, Lavizzo-Mourey, and Warren 1994). In fact, the variation in gene frequency is approximately 85 percent within racial groups, and only 15 percent between racial groups (Freeman 1998).

For these reasons, many researchers have shifted paradigms, defining race as a social construct based on phenotypic genetic expression rather than as a biological construct (Sheldon and Parker 1992; LaVeist 1994; Senior and Bhopal 1994; Williams, Lavizzo-Mourey, and Warren 1994; Freeman 1998; Jones 2001). As Beutler et al. (1996) argue, while race as a biological construct is illusory, its function as a social-psychological and social-political construct is very real. In fact, the U.S. Bureau of the Census uses race as a social-political construct rather than a biological one.

Within the framework of race as a social-political construct, race is used to understand the health consequences of variations in factors such as health

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care quality and utilization, adequate housing, education, and nutrition. Race, in this sense, is a multidimensional construct and a predictor of exposure to external health risks posed by environmental, social, and behavioral factors (Fullilove 1994; Hahn and Stroup 1994; LaVeist 1994; Freeman 1998). Freeman (1998) argues that biologic expressions of race result in social interactions, which in turn produce racial and ethnic disparities in morbidity and mortality (i.e., discrimination). Indeed, Kent et al. (2001) contend that the best way to understand race is to view it as a social construct that is influenced by social and political factors. From this perspective, much of the racial differentiation in cardiovascular disease can be explained by social-environmental factors influencing susceptibility and access to medical care (Manson and Ridker 1990). For example, members of racial minority groups may have dietary and lifestyle habits and socioeconomic status that might lead to predispositions for cardiovascular disease and less access to preventive and emergency medical care and advice.

This evidence suggests a new taxonomy for racial identification is needed, focusing on socio-environmental effects of phenotypic characteristics of patients, rather than on the characteristics themselves. Proponents of this view might suggest that, instead of classifying a patient's "race," we should classify "racism" inherent in the patient's immediate and broader environments. As Jones (2000) argues, while race as a variable only roughly approximates socioeconomic status, culture, and genetic history, it is precisely related to social classification, which significantly impacts daily life experiences. This argument suggests that race is a social construct that includes the effects of racism on an individual. Jones (2000) further asserts that differences in health outcomes associated with race are a direct result of the effects of racism. According to Jones (2001), racism encompasses elements of institutionalized racism and internalized racism. Each of these elements is discussed in the following sections.

Institutionalized racism is defined as having differential levels of access, based on race, to societal goods, services, and opportunities (Jones 2000). Williams (1999) argues that institutionalized racism negatively affects access to educational attainment, employment opportunities, and attainment of higher levels of socioeconomic status. We propose two types of institutionalized racism as most important in the context of health services research: educational racism and access racism. A person living in an environment characterized by institutionalized educational racism would have little exposure to health education materials, instruction, or preventive medical advice. This shortcoming is attributable to institutional factors: racism resulting in illiteracy, and racism

causing a dearth of racial minority members being able to acquire medical education, get licensed to practice medicine, and return to their communities to practice. In the Veterans Affairs (VA) health services setting, educational racism manifests itself as, for example, veterans who are fully qualified to receive services but primarily because of lack of health education and information, fail to utilize the services available to them.

Someone living in an environment characterized by institutionalized access racism would have difficulty obtaining urgent medical assistance (e.g., medical visits without an appointment, emergency care) in a timely manner. In this case, racism causes delays by way of overload: too many patients in a low-socioeconomic status (SES) geographic area for the meager urgent care/emergency care equipment available from the institution(s) and government(s) for that area.

Residential segregation is an example of access racism. In fact, Williams (1999) argues that residential segregation is the single most important type of racism that negatively affects health, primarily because it affects access to adequate educational systems and medical care. Ernst (1999) has documented access racism, showing that biologic expressions of race result in discriminatory social interactions that produce racial disparities in morbidity and mortality. Experiencing institutionalized access racism has been linked with experiencing poorer health status, and this association appears to be strongest with mental health outcomes (Williams, Neighbors, and Jackson 2003). Another example of access racism in health services emerges from stories of “economic profiling” of minority patients, such as the following: several years ago, the African American wife of a preeminent medical scientist in Houston (also African American) visited a particular health clinic for the first time and, before being given the opportunity to identify her health insurance, was “profiled” and brusquely routed to a financial office and forced to fill out forms—to see whether she could qualify for Medicaid!

In contrast to these two types of institutionalized racism, Jones (2000, 2001) defines internalized racism as feelings of resignation, helplessness, and hopelessness. These feelings may manifest themselves in risky health behaviors. One example of internalized racism is cultural racism. A person living in an environment characterized by cultural racism could, for example, possess a lifestyle steeped in unhealthy habits, most of which are the result of longstanding institutional racism (e.g., the higher proportion of fast-food restaurants located in minority neighborhoods, the lack of easy accessibility to fitness centers and playgrounds, and the lack of safe neighborhoods in which to walk or jog for exercise) and impoverishment. Individuals exposed to

cultural racism may decide that a healthier lifestyle, even if desirable, is simply too difficult to achieve in their (unhealthy) home environment. This lack of health self-efficacy may often be accompanied by broader doubt about achieving a brighter future for themselves in general. In a VA health services context, the effects of cultural racism on patients may, for example, be seen in veterans who visit their VA facility for an illness, then fail to adhere to their provider's treatment recommendations, or simply give up further treatment altogether, not because of lack of access or lack of knowledge of the illness and what treatment can do to cure it, but rather because they cannot envision themselves being able to succeed in changing their health habits in their home environment.

We contend, therefore, that it would be a useful pursuit for health services researchers to endeavor to develop measures—even crude ones—of the prevalence of the above-described forms of racism in patients' lives, with a goal for the near future of having this information collected reliably from patients along with the conventional categorizations of race. The real and potential impacts of these forms of racism could then be estimated for each patient and, optimally, interventions to minimize these impacts could be taken by health care providers. This type of strategy is already being used with some degree of success in the context of mitigating health illiteracy in racial minority patient populations (Rudd, Goldberg, and Dietz 1999).

ETHNICITY AS A SOCIAL CONSTRUCT

Many researchers have recently argued that the terms "race" and "ethnicity" should not be used synonymously (Sheldon and Parker 1992; Hahn and Stroup 1994; McKenney and Bennett 1994; Senior and Bhopal 1994; Warren et al. 1994). Writings on this issue have suggested that one's race and/or ethnicity should be treated as an affiliation rather than a genetic predisposition, and individuals should be extended the respect of being allowed to specify the affiliation(s) of their choosing, in a way that suits them (Bhopal, Rankin, and Bennett 2000).

Race, as it is used in health-related research, consists of personal identity and group identity facets as well as the more familiar biological indicators. Ethnicity, in contrast, is most commonly used as an entirely social-political construct, referring to the sharing of a common culture, including shared origin, shared psychological characteristics and attitudes, shared language, religion, and cultural traditions (Sheldon and Parker 1992; Chaturedi and

McKeigue 1994; LaVeist 1994; Senior and Bhopal 1994; Beutler et al. 1996; Freeman 1998). Thus, ethnicity refers to cultural identification, which is fluid and may change over time. For example, Sillitoe and White (1992) report that while in the early 1980s individuals in Britain responded with no comment to an item assessing their ethnicity as West Indian, in more recent years, Britons of this background have successfully lobbied for the term “black British” to be used instead. The reason for this change is that many “West Indians” now currently residing in Britain are Britain-born.

The concept of ethnicity has evolved to its current conceptualization as being a construct separate from a person’s race, although in many cases the two co-occur. This growing recognition has led to the realization that each of the racial groups of Asian American, African or black American, American Indian or Native American, and Caucasian or white American includes a series of ethnic groups. For example, persons of Hispanic ethnicity include white, black, and Asian races (phenotypes), while persons of sub-Saharan African ethnicity(ies) are almost exclusively of black race (phenotype) and persons of Pacific Island ethnicity are almost exclusively of Asian race (phenotype). This raises a critical point: boundaries of ethnicity are not precise, and may be fluid across geopolitical boundaries. This is true not only at the international level, but at the intranational level as well. As a result, the term “ethnicity” is not always understood by study participants, even across adjacent local communities, and likely requires further interpretation in a relevant local context. Ethnicity may have an indirect effect on health outcomes by influencing health beliefs, the manner in which symptoms are expressed, physical functioning, entry into health service delivery systems, and medical treatment processes (Atkinson, Casas, and Abreu 1992; Marin, Gamba, and Marin 1992; Williams and Jackson 2000). In fact, some researchers suggest that ethnicity (i.e., cultural identification) be assessed as part of the clinical encounter, in order to make sense of patients’ responses to treatment.

The strength of relationship between ethnicity and health outcomes appears to be influenced by “acculturation,” that is, the extent to which members of an ethnic group have adopted the beliefs and practices of another ethnic group. Acculturation occurs when individuals from one ethnic group come into contact with individuals from another ethnic group (Redfield, Linton, and Herskovits 1936). Acculturation may be assessed in a variety of ways, such as by examining individuals’ language and food preferences, social activities, or political identification (Padilla 1980). In some cases, higher levels of acculturation are correlated with the adaptation of negative health behaviors and subsequent poorer health outcomes (Hubert, Snider, and Winkleby 2005;

Rosenberg, Raggio, and Chiasson 2005; Vaeth and Willett 2005), while in other cases lower levels of acculturation are correlated with poorer health outcomes (Rahman et al. 2005; Zsembik and Fennel 2005). These associations appear to be related to the specific ethnic groups examined (i.e., Mexican Americans versus Latinos from Caribbean islands) (Zsembik and Fennel 2005) and to the outcomes being measured (i.e., dietary practices versus health services use and self-perceptions of health) (Lara et al. 2005).

MEASURING RACE AND ETHNICITY AS VARIABLES

Next, we present a brief overview of the U.S. Government's official policy for categorizing race and ethnicity. The key role of such a policy cannot be over-emphasized; the 2003 Institute of Medicine Report, *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care* (Institute of Medicine 2003, pp. 31–35), highlights the importance of accurately measuring race and ethnicity as variables in health services research. Therefore, having a unified, federal policy in place for guiding the collection of race and ethnicity data is critical.

Revised Directive Number 15

The revised Directive Number 15 of the Office of Management and Budget (OMB) presents rules for classifying individuals into categories of race and ethnicity. For race, a minimum of five separate categories is mandated. Individuals self-identify their racial status by selecting one or more of the five categories to indicate their parentage. These categories are: (1) American Indian or Alaska Native (defined as a person having origins in any of the original peoples of North and South America [including Central America], and who maintains tribal affiliation or community attachment); (2) Asian (defined as a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent, including people from Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam); (3) black or African American (defined as a person having origins in any of the black racial groups of Africa); (4) Native Hawaiian or Other Pacific Islander (defined as a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands); and (5) white (defined as a person having origins in any of the original peoples of Europe, the Middle East, or North Africa) (Bennett 2000). The policy also provides for two alternatives for identifying Hispanic ethnicity.

Of particular importance for health services researchers is the fact that, under revised Directive Number 15, respondents are to be permitted to mark more than one racial identification category. This provision enables analyses that compare survey responses between individuals who choose a single race and those who choose multiple races (e.g., African American race only versus African American race plus another race).

Next, we briefly describe three different approaches for measuring race and ethnicity as variables. While we do not advocate any one of these approaches, we think it is appropriate to highlight them. These approaches are particularly important in VA health services research, because we know that issues related to utilization of health services and treatment efficacy are closely tied to racial and ethnic health disparities.

Census 2000

The U.S. Census Bureau now obtains information on race through respondent self-identification. While this process more closely aligns data collection policy with the principle of respect for choice of affiliation, self-identification itself creates a perennial classification problem, in that peoples' self-concept of their race and/or ethnicity may change over time, leading to unpredictable classification variability within geographic areas. Techniques for minimizing the impact of this variability on Census data have been developed (e.g., averaging, oversampling certain areas), but their use is politically controversial. The 2000 Census allowed multiple responses to the "race" item. Interestingly, data from Census 2000 show that multiple responses had only a slight impact on the relative distributions of the main racial populations of the U.S. (Hirschman, Alba, and Farley 2000; Kent et al. 2001). However, this outcome may change if the proportion of individuals who self-identify as being of multiple racial background increases. Current Census Bureau policy assigns newborns the race and ethnicity of the birth mother, although data on the father's race and ethnicity are also collected. The Social Security Administration, meanwhile, combines race and ethnicity into a single data item. The category of "other race" has been replaced with three new categories: "Asian, Asian American, or Pacific Islander," "Hispanic," and "Northern American Indian or Alaskan Native."

Importantly, on the 2000 Census, individuals self-identified as being Hispanic or non-Hispanic. This item preceded the racial identification item in an effort to reduce confusion on the part of respondents (Sawyer 1998). Table 1 shows the wording and structure of the Hispanic ethnic identification item,

Table 1: Racial and Ethnic Identification Items from Census 2000

→ **NOTE: Please answer BOTH Questions 5 and 6.**

5 Are you Spanish/Hispanic/Latino? Mark ☒ the "No" box if *not* Spanish/Hispanic/Latino.

☐ No, not Spanish/Hispanic/Latino

☐ Yes, Mexican, Mexican Am., Chicano

☐ Yes, Puerto Rican

☐ Yes, Cuban

☐ Yes, other Spanish/Hispanic/Latino — *Print group.* ↗

6 What is your race? Mark ☒ one or more races to indicate what you consider yourself to be.

☐ White

☐ Black, African Am., or Negro

☐ American Indian or Alaska Native — *Print name of enrolled or principal tribe.* ↗

☐ Asian Indian	☐ Native Hawaiian
☐ Chinese	☐ Guamanian or Chamorro
☐ Filipino	☐ Samoan
☐ Japanese	☐ Other Pacific Islander — <i>Print race.</i> ↗
☐ Korean	
☐ Vietnamese	
☐ Other Asian — <i>Print race.</i> ↗	

☐ Some other race — *Print race.* ↗

which includes Mexicans, Mexican Americans, Chicanos, Puerto Ricans, and Cubans as Hispanics, and allows the respondent to write in another Hispanic identification. The only versions of Census 2000 that did not include this categorization were the forms used in American Samoa, the Commonwealth

of the Northern Mariana Island, Guam, individual forms used in the Pacific Island and the U.S. Virgin Islands, and military forms used in the Pacific Islands.

Sillitoe Survey

Another approach to measuring race and ethnicity as variables was introduced in a survey conducted by Sillitoe and White (1992). These investigators ascertained whether including a survey item pertaining to South Asian religions would influence the responses of British South Asians to the main ethnicity item. Two census forms were used, one of which contained the religion item while the other did not. It was discovered that the addition of the religion item did not change the responses to the ethnicity item. The wording of the ethnicity item is shown in Table 2.

Stephenson Multigroup Acculturation Scale (SMAS)

Stephenson (2000) presented an approach to measuring ethnicity as a variable by assessing the degree of acculturation among individuals with different levels of immigrant status. Acculturation may be measured when an outcome is anticipated to be related to the degree of ethnic identification. For example, if a nutrition study were conducted using a sample that included first-, second-, and third-generation Japanese Americans, it might be suspected that diet could be related to generational status. That is, individuals born in Japan who later emigrated to the U.S. (first-generation Japanese) might have different dietary practices than individuals of Japanese heritage who were born in the U.S. to U.S.-born parents (third-generation Japanese). Therefore, the effects of acculturation on dietary practices might be assessed in such a study.

The SMAS (Stephenson 2000) was developed and validated to assess the degree of ethnic identification (extent of acculturation) among individuals from five ethnic groups. Acculturation was defined as the degree of immersion in dominant and ethnic societies (Stephenson 2000). Immersion was defined as language, interaction, food, media, and level of acceptance by the dominant culture. The SMAS was not designed to measure cultural change among acculturating individuals. This instrument was developed using an ethnically diverse research team including community professionals and consultants, and was tested among African Americans ($n = 6$), individuals of African descent ($n = 18$), Asian Americans ($n = 6$), caucasian (European) Americans ($n = 14$), and Hispanic Americans ($n = 10$) (Stephenson 2000).

Table 2: Racial, Ethnic, and Religious Identification Items Used in the Sillitoe and White (1992) Study

Ethnic group To which of the groups listed on the card do you consider ..... belongs?	(List of groups on card) White West Indian or Guyanese Indian Pakistani Bangladeshi Chinese African Arab Mixed Origin Other	Design I Ethnicity question used in General Household and Labour Force surveys
10 Race or ethnic group please tick the appropriate box. If the person is descended from more than one group, please tick the one to which the person considers he or she belongs, or tick box 12 and describe the person's ancestry in the space provided. If of Indian, Pakistani, Bangladeshi, or Sri Lankan origin or descent, please also tick one of these boxes	1 ☐ White 2 ☐ Black British (i.e., born in England, Wales, Scotland, or Northern Ireland, of African or Afro-Caribbean descent) 3 ☐ British Asian 4 ☐ West Indian or Guyanese 5 ☐ Indian 6 ☐ Pakistani 7 ☐ Bangladeshi 8 ☐ African 9 ☐ Chinese 10 ☐ Arab 11 ☐ Turkish or Turkish Cypriot 12 ☐ Any other race or ethnic group or if of mixed descent. Please describe below ..... Religion Muslim Hindu Sikh Other None 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐	Design II Ethnicity question used in the first field trial Religion question included on one version only in first field trial
For all persons aged 3 years or over 11 Languages Does this person speak a language other than English at Home? If YES What is this language? (If more than one language other than English is spoken, please write the one used most often) How well does this person speak English?	1 ☐ Yes 2 ☐ No, only speaks English (Go to Question 12) Other Language spoken at home - please write below ..... 1 ☐ Very well 2 ☐ Well 3 ☐ Not well 4 ☐ Does not speak English	Design III Language question used in the first field trial

The psychometric properties of the SMAS were assessed using exploratory factor analysis. The 32-item SMAS was found to include two factors. These are ethnic society immersion (ESI, Factor 1) and dominant society immersion (DSI, Factor 2). The ESI factor includes 17 items and the DSI factor includes 15 items. Coefficient α 's were 0.86 for the entire scale, 0.97 for Factor 1, and 0.90 for Factor 2. The range of item-total correlations was 0.51–0.87 on Factor 1, and 0.57–0.83 on Factor 2. In terms of validity testing of Factors 1 and 2, it was discovered that both ESI and DSI were significantly correlated with ethnic group affiliation ($r = -0.39$, $p < .001$ for ESI and $r = 0.46$, $p < .001$ for DSI) (Stephenson 2000). In addition, Factors 1 and 2 of the SMAS have been found to correlate significantly with two other widely used instruments designed to measure ethnic identification/acculturation, the Acculturation Rating Scale for Mexican Americans-II (ARMSMA-II) (Cuellar, Arnold, and Moldonado 1995) and the Bidimensional Acculturation Scale for Hispanics (BAS) (Marin and Gamba 1996).

Our intent in providing the instruments described above is to draw attention to the variety of approaches available for measuring race and ethnicity as variables. These approaches may be particularly applicable for use in health services research conducted with VA patient populations, which are becoming increasingly more racially and ethnically diverse.

Summary

We have presented definitions of the terms “race,” “ethnicity,” and “acculturation,” and provided an overview of different approaches to assessing these constructs. Specific examples include Census 2000, an international study, and the SMAS. A discussion of race as a social construct based on phenotypic genetic expression was presented. In addition, two types of racism resulting from this phenotypic expression were described. These were institutionalized racism (which includes access racism and educational racism) and internalized racism (which includes cultural racism).

We expect that this commentary communicates the need for researchers to rigorously explore reasons for the associations among racial and ethnic group status, socioeconomic status, and health outcomes. Understanding these associations is critically important for health services delivery. As Sheldon and Parker (1992) note, the inconsistencies in the measurement of race and ethnicity across many research studies would not be tolerated in the measurement of other study variables. The importance of this work for health services research is highlighted by the fact that without some standard means of

measurement, the validity of comparisons of health-related data based on these constructs is questionable.

Suggestions for Health Services Researchers

One of the papers included in this special issue (Morgan et al. 2005) highlighted the racial and ethnic diversity of users of VA health services. As noted in another paper included in this special issue, members of different racial and ethnic groups may respond to data collection instruments differently (Ramirez, Ford, Stewart, and Teresi 2005). For example, as Lee et al. (2002) postulate, members of some racial and ethnic groups may leave more responses unanswered on Likert scales, and may be more likely to give responses outside of the range provided on Likert scales, compared with members of other racial and ethnic groups. Scale scores based on Likert responses may show less evidence of reliability and construct validity in some racial and ethnic groups.

Thus, a need exists to develop ethnically competent instruments that function equivalently in different ethnic groups. However, in order to ascertain the function of instruments in different ethnic groups, it is first imperative to develop consistent measures of race and ethnicity that can be used in health services research and medical care interventions. Other aspects of health services research related to the valid assessment of race and ethnicity include assessments of racial- and ethnic-associated use of specific types of health services and procedures, disease incidence and prevalence, differences in health outcomes, and mortality rates.

Our recommendations for health services researchers build upon a call for consistency by Ford et al. (2002), who suggested that all investigators use a core set of basic demographic items while also using expanded, population-specific modules. This would allow data pertaining to members of these population groups to be described in greater detail, while retaining a core set of items that could be used in a consistent manner in many different studies. More than one expanded module could be used per site, in addition to the core set of items. For example, research sites in Southern California could use an expanded module for Asian Americans, which could contain categories such as Korean, Chinese, Japanese, Vietnamese, etc. Research sites in New York could use an expanded module for blacks, which could include categories such as Barbadian, Haitian, Jamaican, Nigerian, Panamanian, Senegalese, Trinidadian, etc. (Ford et al. 2002). Individual researchers using existing data could combine these data into core demographic categories based on the

Census 2000 classification scheme. This would make possible a comparison of researchers' collected data with Census-based population estimates. Improved and consistent methods of data collection could result in higher-quality data being collected, which could lead to the identification of race- and ethnicity-specific health services needs. Jones (2001) suggests that investigators explicate the reasons for any racial and ethnic health disparities they find in their data. These investigations have the potential to lead to the development of interventions designed to reduce or eliminate these disparities.

In addition, individual researchers could need the following suggestions related to the use of race and ethnicity data in health services research. First, race- and ethnicity-related differences in quality of care, access to care, treatment efficacy, and other outcomes related to health services research could be vigorously investigated and explicated (Jones 2001; Institute of Medicine 2003; Betancourt and Maina 2004). Second, the effects of socioeconomic status on race- and ethnicity-related outcomes could be examined, with the purpose of disentangling these effects (Williams 1999; Jones 2001). Third, the effects of racism on study outcomes could be examined for members of different racial and ethnic groups. Fourth, investigators could provide a rationale for the collection of race and ethnicity data (i.e., collection of this information is related to a documented disparity) (Jones 2001). Fifth, the manner in which race and ethnicity data were collected could be reported (i.e., self-reported, observer rating, allowance for selection of multiple categories, etc.) (Jones 2001). Sixth, new data demonstrate the influence of geographic differences on quality of health care received (Baicker, Chandra, and Skinner 2005). Therefore, the interactive effects of geographic location, race, and ethnicity also need to be examined in future research.

It is imperative that health services researchers find ways to measure race and ethnicity more accurately. This is of great relevance to VA research, because the VA patient population is rapidly becoming more racially and ethnically diverse. In order to enhance the quality of VA health services research, we must now identify the best ways to measure race and ethnicity in a valid and reliable manner. In this way, the effects of race and ethnicity on assessments of quality of care, access to care, and treatment efficacy can be conducted with greater precision by VA health services researchers.

ACKNOWLEDGMENTS

The research reported here was supported by the Measurement Excellence and Training Resource Information Center (METRIC) of the U.S. Department

of Veterans Affairs, Health Services Research and Development Service. Dr. Kelly is supported by a career development award granted by the U.S. Department of Veterans Affairs, Health Services Research and Development Service. The views expressed in this manuscripts are those of the authors and do not necessarily reflect the views of the U.S. Department of Veterans Affairs.

This research was also supported by Department of Defense Grant No. DAMD 17-96-1-6246; National Institutes of Health R24 EXPORT Center Grant No. RFA-MD-04-002; and National Institutes of Health Resource Center for Minority Aging Research (RCMAR) Grant No. 1 P30 AG 21677. The authors thank Mr. Ken Kato, Ms. Ellen Matthiesen, and Ms. Shannon Hancock for their assistance with the manuscript preparation.

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