Racial/Ethnic Diversity in Health Services Research:

Pockets of Progress but a Long Way to Go

Final Report Submitted to the W.K. Kellogg Foundation
Grant Reference No. P0099072

AcademyHealth Staff: Marie Briones-Jones, Virginia Van Horne
Consultants: Kelly Devers, Sarah Manes

AcademyHealth
Advancing Research, Policy and Practice

Discussions, comments, and conclusions are those of the authors and do not necessarily represent the views of AcademyHealth or its Board of Directors.

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Table of Contents

Appendices

Racial/Ethnic Diversity in Health Services Research: Pockets of Progress but a Long Way to Go

Section A: The Project

I. Introduction

AcademyHealth received a grant from the W.K. Kellogg Foundation to explore how to increase diversity in the field of health services research[1] (HSR) by addressing these four goals:

1. Identify whether there are barriers to underrepresented students (African Americans, Hispanics, Native Americans, and Asians who are either U.S. citizens or permanent residents) entering the field, and if so, what they are;
2. Learn what HSR programs and the universities in which they exist are doing to address any barriers and identify "best practices" for student recruitment, retention, and placement;
3. Explore and evaluate whether the creation of a fellowship would have a significant impact, over time, in increasing the numbers of underrepresented individuals choosing HSR as their career option; and
4. Evaluate the need for and identify possible major components of a national strategy promoting HSR as a viable career option to students, especially to the underrepresented students.

With the guidance and support of an advisory committee, AcademyHealth staff and its study advisors conducted qualitative and quantitative studies to address these goals. (Please refer to Appendices 1 and 2 for a listing of the committee members and advisors, respectively.)

Interviews were conducted with graduate students, post-docs, faculty, and the department or program chair in a purposive sample of 10 academic institutions with HSR doctoral programs.[2] Additional interviews took place with minority summer program directors. Focus groups were also conducted with graduate students at two of the 10 institutions and at the AcademyHealth 2004 Annual Research Meeting. Staff administered an online survey to collect application, admission, and enrollment data and to gather information on underrepresented individual (URI) graduate student/postdoctoral recruitment and retention programs from health services research departments. Additionally, staff did an internet review on diversity initiatives undertaken in the fields of medicine and public health. Detailed analyses of the interviews and focus groups—addressing the above four goals—can be found in Sections B and C of this

[1] Health services research is the multidisciplinary field of scientific investigation that studies how social factors, financing systems, organizational structures and processes, health technologies, and personal behaviors affect access to health care, the quality and cost of health care, and ultimately our health and well-being. Its research domains are individuals, families, organizations, institutions, communities, and populations. (AcademyHealth, 2000.)

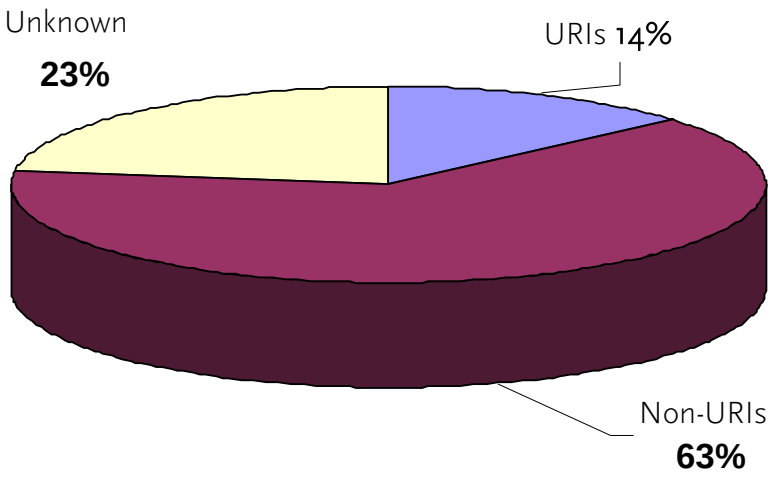
[2] At one institution, a doctoral program administrator was also interviewed.

report. Discussion on our survey findings and recommendations for best practices can be found in Sections D, E, and F.

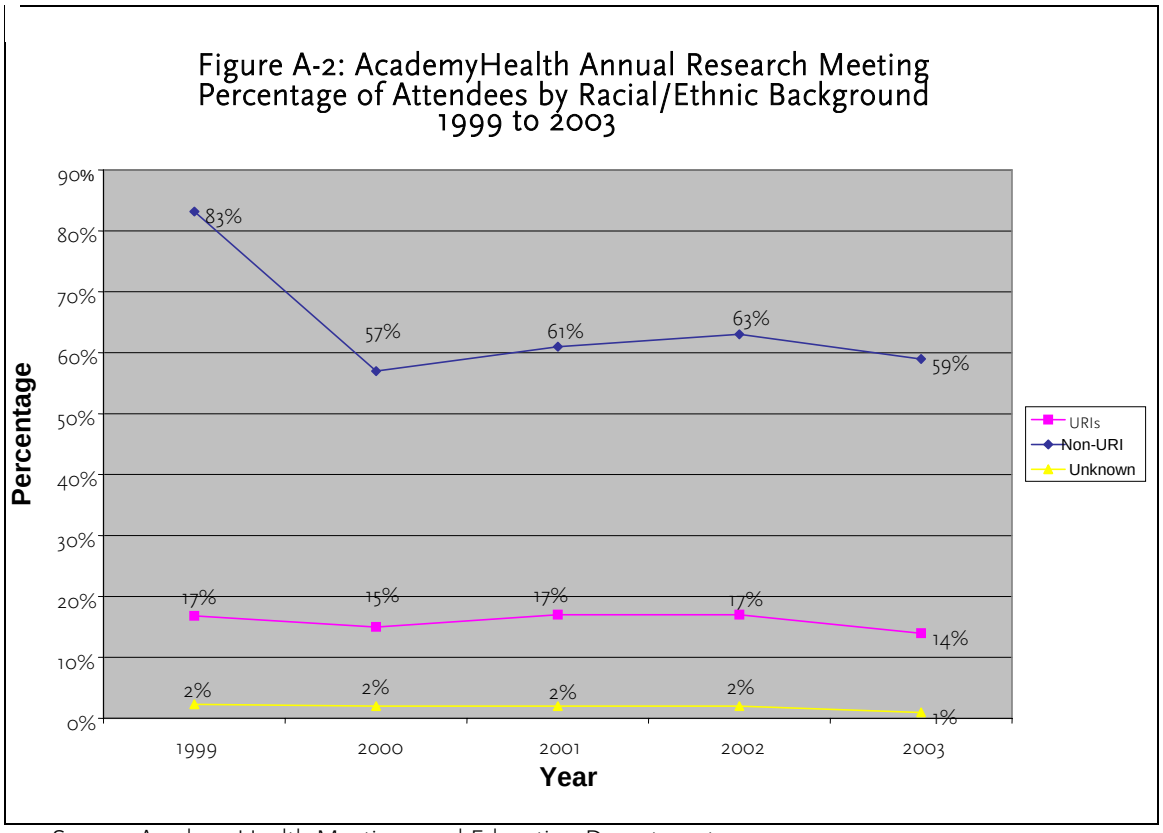
A. Background

According to 2002 U.S. Census data, ethnic minority groups comprise nearly 29 percent of our country's population. These ethnic minority groups—African Americans, Hispanics, Asians, American Indians/Alaskan Natives—are disproportionately underrepresented in professional and managerial occupations in general, and in HSR in particular. There are scarce data assessing the ethnic makeup of individuals who work in HSR. To estimate the proportion of minority groups in these fields, AcademyHealth membership and Annual Research Meeting attendees data were examined. Only 14 percent of AcademyHealth members reported that they were from a minority group, while 63 percent were white (the remainder did not report their ethnic background). (See Figure A.) An average of 16 percent of our Annual Research Meeting attendees from 2000 to 2003 are URIs. (See Figure B.)

Figure A-I: AcademyHealth Membership by Race/Ethnicity as of 8/1/04



Source: AcademyHealth Membership Department, 2004



Source: AcademyHealth Meetings and Education Department, 2004

The U.S. population is likely to become more racially and ethnically diverse in the future because the Hispanic and Asian American population are growing more rapidly than non-Hispanic whites. Although Asian Americans as a whole are not underrepresented in most health professions, this may belie tremendous heterogeneity among Asian subgroups, such as those from Southeast Asia and the Philippines, who are not well represented in the health professions. (Grumbach, et al, 2003; Institute of Medicine, 2004). Because of these and our membership and Annual Research Meeting data, we have included Asians when we refer to URIs in this project.

Approximately 1.2% of the U.S. adult population age 25 and over has a doctoral degree. The United States produces approximately 45,000 doctoral degree recipients each year. In some fields, very few degrees are awarded annually, and particularly to members of underrepresented groups (Nettles, 2004). Public health programs have the highest proportion of URI applicants and enrollees of the health professions (Grumbach, Muñoz, Coffman, Rosenoff, Gándara, and Sepulveda, 2003.) Through the 1990s URIs represented 19 percent to 21 percent of applicants to public health programs. URIs represent 15.3 percent of public health students in 1990 and 19.5 percent in 1999. Of the more than 16,000 new students who entered medical school in 2003, only 2,197 (or 14 percent) were Black, Hispanic or Native American (*The Sullivan Commission, 2004*). African Americans, Hispanic Americans, and American Indians comprise less than nine percent of nurses, six percent of physicians, and only five percent of dentists.

In an effort to address these disparities, AcademyHealth project staff envisioned a pre-doctoral health services research fellowship that would enable URIs to enter and remain engaged in the field of health services research. The fellowship would fill a void by providing opportunities for non-M.D. underrepresented individuals to pursue doctoral degrees in health services research by supporting them financially, through mentorship, and by providing an ongoing network with whom they can collaborate. Further, the intent was to create a pool of underrepresented health services researchers who would eventually become mentors and role models, increasing the participation of URIs at every level of the health services research enterprise. Ultimately, it is our hope that as minority representation increases, more minorities will have the opportunity to ascend to leadership at the national, state and local levels in both the public and private sectors, thereby influencing the health services research and health policy agendas that shape the nation's health care system. It is important that the racial/ethnic diversity at the leadership level reflect the national racial/ethnic demographics because evidence demonstrates that racial/ethnic diversity is associated with improved access to care for URI patients, greater patient choice and satisfaction, better patient-provider communication, and better educational experience for all students while in training (IOM, 2004)

II. Methodology

To meet the project goals, we addressed the following questions:

a. What is the trend over the last five years of underrepresented individuals applying to and enrolling in health services research programs?
b. How and why did students enter into a health services research program, in particular underrepresented individuals?
c. Are students enrolled in certain undergraduate tracks and/or Master's tracks more predisposed to pursuing doctoral and/or postdoctoral studies in health services research?
d. Do faculty and students perceive barriers to entering the field?
e. What do faculty and students think the field should have in place to attract underrepresented individuals, e.g., formal mentoring programs, financial aid policies? What, if anything, is missing from their current program?
f. Are there any university-wide and department-wide health services research and health services research-related fellowships aimed at underrepresented student recruitment at the doctoral and postdoctoral levels?
g. Do programs make an effort to communicate with their underrepresented student alumni and current students and offer them fellowships/scholarships to pursue doctoral studies?

To address these research questions, data were collected in a variety of manners:

- Interviews of graduate students and faculty were conducted with 10 health services research doctoral programs based at U.S. academic institutions.
- Focus groups were held at two of the 10 institutions and at the AcademyHealth June 2004 Annual Research Meeting.

- An online survey of 34 health services research programs was conducted.
- An internet search was undertaken on diversity initiatives in medicine and public health.

The use of interviews and focus groups enabled project staff to examine how individuals enter into the health services research field, whether barriers exist to entering this field, and determine if those barriers, if any, were influence by an individual's race. The interviews and focus groups also allowed us to determine what is being done in the field to address any identified barriers and to assess the need and feasibility of a fellowship program and/or a summer program. The notion of a summer program became apparent as the project unfolded. All interviewees were U.S. citizens or permanent residents. For purposes of our project, URIs are African Americans, Native Americans, Hispanics, and Asians.

The online survey was designed to provide information on what health services research programs are doing to recruit and retain underrepresented students, assisting us to identify recruitment and retention best practices in HSR. It was also a tool to collect data on the number of applicants, admits, enrollees, and graduates in HSR. This information supplemented our interview data and helped us determine if there is a need to diversify HSR.

The internet search provided information on the diversity initiatives being undertaken by the fields of medicine and public health and helped us ascertain if these initiatives are different from and/or can be imported into HSR.

Information on the methodologies employed are provided below.

A. Interviews

Interviews of graduate students and faculty were conducted in a purposive sample of 10 academic institutions with a health services research program. At one institution, a doctoral program administrator was also interviewed. A purposive, rather than random sample is best suited to discovering best practices, lessons learned, and unmet needs (Patton, 1994 and Sofaer, 1999). Specifically, we felt we would gain the most valuable information from health services programs that are enrolling and graduating underrepresented students. With the assistance of our advisory committee, study advisors, Stephen Mick at Virginia Commonwealth University, Norman Weissman at University of Alabama, Birmingham, and James Romeis at St. Louis University, we identified nine programs for our qualitative assessment.

Initially, we selected nine institutions that were located in various regions across the U.S. and reflected a mix of private and public institutions. Based on feedback from our advisory committee, a Historically Black College and University (HBCU) was added to our sample to enrich the data collection. Institutions selected also met the following criteria:

- Offered a doctoral and/or postdoctoral training program in health services research based at an academic institution.
- Had, at a minimum, three underrepresented students enrolled in their doctoral health services research program.

Department chairs or directors of the doctoral programs, select faculty, doctoral students, and postdocs in health services research programs were interviewed. Typically, three faculty members (the department chair and two faculty) and four doctoral students and postdocs were interviewed at each institution. Slightly less than half of the faculty interviewed were URIs and approximately 75 percent of the students were URIs. We interviewed at least one non-underrepresented student and, to the extent possible, we interviewed one underrepresented faculty at each of the non-HBCU sites. With the exception of the HBCU site, all department chairs or directors we spoke with were white.

The project Co-Principal Investigators, Marie Briones-Jones and Virginia Van Horne, worked with faculty intermediaries and their staff at each of the 10 academic sites to identify interview and focus group participants. Faculty intermediaries were identified through the Co-PIs' network of contacts. To the extent possible, AcademyHealth staff made sure that the interviewees at each site were at different stages in their program (first year, second year, etc.), a mix of female and male students, and representative of the URI categories. Since interviews were private and confidential and conducted on a one-on-one basis, interviewees were able to speak candidly and provide more in-depth responses to our questions. See Table 1 on page __ for interviewees' profile information.

Of the 10 academic sites, in-person interviews were conducted at seven sites, via telephone at two sites, and via video conference at one site. Dr. Kelly Devers led five of the seven interviews at the first site we visited. The Co-PIs shadowed Dr. Devers and each conducted one interview during this visit. Thereafter, all other interviews were conducted by the Co-PIs.

Interview notes were transcribed in Microsoft Word by either one of the project co-principal investigators or the research assistant, Tamar Klaiman. These notes were transcribed using the hand written notes of the interviewers and interview audiotapes.[3] Dr. Devers loaded the transcribed interviews into Atlas.ti (computer assisted qualitative data analysis software), coded, and analyzed these interviews using a range of well-established qualitative techniques developed to minimize bias and enhance reliability and validity (Devers, 1999; Miles and Huberman, 1994). Section B of this report contains the analysis of these interviews. The findings highlight general themes in the data across the 10 sites, and also note whether there is variation by interviewee types (e.g., faculty vs. students, underrepresented vs. non-underrepresented individuals). Insert sentence from Kelly on codes.

B. Focus Groups

We conducted underrepresented graduate student focus groups at two of the 10 institutions. An additional focus group was conducted at the AcademyHealth Annual

[3] With the exception of one individual, all interviewees agreed to be taped.

Research Meeting (ARM), June 6-8, 2004, in San Diego, CA. Focus groups provided additional data for the study, in particular the ability to get input from a wide range of students within a very short time period. In addition, both the project and focus group participants benefited from the information exchange that resulted from assembling a group of people who face similar challenges.

We conducted one focus group at an east coast institution and the other at a west coast institution. Focus group participants at the two academic sites were recruited through the same faculty intermediaries contacted for the interviews. The ARM focus group participants were recruited by AcademyHealth project staff. Staff sent an e-mail to all ARM student registrants in mid-May, providing an overview of the project and its goals. The first ten respondents were chosen as ARM focus group participants. AcademyHealth staff made sure that participants were at different stages of their program, a mix of female and male students, and representative of the URI categories. See Table 2 on page __for focus group participants' profile.

Ms. Briones-Jones and Ms. Van Horne conducted the focus groups. Sarah Manes transcribed and analyzed the focus group data. Detailed information on the focus groups can be found in Section C of this report.

C. Online Survey

We conducted an online survey of 34 programs, based in U.S. academic institutions, granting doctoral degrees in health services research (HSR) to:

- Gather information on each program's URI recruitment and retention guidelines and existing university-wide or department-wide fellowships aimed at underrepresented individuals.
- Collect unduplicated counts on their applicants, admits, enrollees, and graduates from 1998-1999 to 2002-2003, disaggregated by race and ethnicity. The programs surveyed were identified from the AcademyHealth's *Directory of Training Programs in Health Services Research and Health Policy*.

Program directors/coordinators were sent an e-mail directing them to the online survey and were given one month to respond. An e-mail reminder was circulated a week before the deadline date. Detailed findings from and discussion on the online survey can be found in Section D of this report. (Appendix 5 contains the survey forms.)

D. Diversity Initiatives in Medicine and Public Health Internet Search

To inform our work, we looked at diversity initiatives in the fields of medicine and public health. Specifically, we searched for initiatives employed by these two fields to increase opportunities for URIs.

Due to limited resources, staff used Google and Yahoo! search engines to search the internet for diversity initiatives in the fields of medicine and public health with the following keywords: "diversity medicine," "diversity public health," "minorities medicine,"

and “minorities public health.” Web pages returned from these searches were reviewed for relevance to increasing educational opportunities for URIs in medicine and public health, and diversity in general.

Section B: Interviews

I. Participants

A total of 77 semi-structured interviews were conducted with department chairs, faculty and students from the 10 targeted institutions between February and July, 2004. The institutions (in alphabetical order) and the dates of our interviews are as follows:

- Case Western Reserve University, March 3;
- Johns Hopkins University, February 17;
- Harvard University, February 23-24;
- Morgan State University, July 21-22;
- University of North Carolina-Chapel Hill, March 23-24;
- University of California-San Francisco, April 5-6;
- University of California-Los Angeles, May 3-4;
- University of Michigan, April 28;
- University of Texas-Houston, March 17 and 22; and
- University of Washington, April 12-13.

Of the 77 interviews, 35 were conducted with department chairs and faculty (15 from underrepresented groups), and 42 students (35 from underrepresented groups). See Table 1 below for interviewees' profile.

Table 1: Gender and Race Distribution of Interviewees

	White		African American		Asian		Hispanic		URI**	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Faculty*/ Administrator	12	8	5	6	1	1	1			1
Students	2	5	7	12	2	1	1	5	2	5

* Includes department chairs and program directors.
**URI: Individual is an underrepresented individual, either a Native American or someone who belongs to more than one race. Native American information was included in this category to avoid possible identification of the individual(s).

Note: This table does not provide the graduate level distribution of the students interviewed to avoid possible identification of the individuals.

II. Findings

A. The Number of Underrepresented Students Currently in HSR: A Problem?
Two underlying issues related to the question of whether or not there are barriers to underrepresented groups entering the HSR field that were raised by interviewees from the direct questions we asked are :(1) what the ideal mix of students in HSR should be, and (2) whether the current number of underrepresented students is too low and should be increased (i.e., is this a problem that needs to be addressed?).

The majority of interview respondents felt the field of HSR should reflect the diversity in the wider population and that there were too few underrepresented students. They noted multiple ways in which having a diverse student population, and ultimately a more diverse profession, enhanced the field. For example, many respondents felt that having a diverse student population resulted in new topics being pursued and research questions asked, the use of more diverse theoretical perspectives and methods, greater capacity to understand and work with underrepresented people and the communities in which they live, and a richer learning environment.

> *"When we are not at the table, discussions tend to look very different. There tends to be little focus, lip service, given to diversity, disparities, cultural orientations that are non-Euro centric. It's not just about ethnicity; it's also about class. They are inextricably linked. We have to start grappling with socio-economic issues. Having people at the table, it puts those issues into the discussion."*
>
> Faculty, URI

> *"It's always crucial to bring more than one type of thinking to the table. What I have noticed is that as an African American female... it is so sad that I am the only person of color in the meeting."*
>
> Faculty, URI

> *"I always have to tell people this. A lot of people just don't understand that your way of giving out the information is not the way other people receive the information. It's important to have people who understand that not everyone thinks like you; not everyone will navigate the system you will."*
>
> Faculty, URI

> *"Different issues get raised...and there are different interpretations of them. Having diversity of racial/ethnic backgrounds and disciplines, one sort of hears different languages in a sense. The intonations and different meanings that people gives to the same words that make things much richer, makes me more sensitive and a better researcher because it means that I have become more attuned that I may ask a question and somebody else may be answering a different question."*
>
> Faculty, Non-URI

> *"I think it's similar to how having people of different backgrounds will affect any discipline. It is probably best to have different background, different views on things so you don't get tunnel vision. I think it will just add to the richness of people's research."*
>
> Student, URI

> *"I think diversity in general is absolutely necessary. In terms of socio-economic background, immigrant experience, we have racially white immigrants who have a very different experience."*

Student, Non-URI

However, there was a group of faculty and students (primarily members of non-underrepresented groups) that said that they were unsure if there were too few underrepresented individuals in HSR. Many of these same individuals said they did not know what would be an ideal mix of students. Some noted that they had not seen good statistics on the issue, including how HSR compared with other professions and fields. Others noted that it was sometimes difficult to discern how many underrepresented students (as defined by this project) were in their program and the wider field because of the increasing enrollment of foreign students or what they perceived to be the increasing difficulty of discerning who was an underrepresented student and who was not. Finally, a few interview respondents stated that they assumed that the most qualified individuals, regardless of their racial and ethnic background, were being admitted to HSR programs and that some minority fellowship programs might be having negative consequences for students and programs (e.g., echoing concerns about affirmative action programs and "reverse discrimination" arguments). As several faculty members noted:

> *"I like diversity but the question is what does the affirmative action approach do to both to the applicants and the other people's perception of the applicants? It's very hard to tell. I was struck by one candidate in one of our programs. He looked very good on paper and was African American. However, at the interviews three individuals gave this person a thumbs-down. He was late and inappropriately dressed. I felt that this candidate walked in feeling that he had it [the fellowship]. There was another underrepresented minority applicant who was casually dressed but very straight, very on target. So, one moved up on the internal ranking and other moved way down."*
>
> Faculty, Non-URI

> *"I pushed to get minority students into our program, and several did not do well. It was very painful for them, me and our program. It also made some faculty in the department feel that we had let someone in that shouldn't have been let in..."*
>
> Faculty, Non-URI

Students commented on the issue as well.

> *"I don't know how strong the people of color are compared to the white students that enter the program. I wonder if sometimes minority students are thought of as not as qualified as white students because we are thought of as the affirmative action students."*
>
> Student, URI

> *"There are some fellowship opportunities that I couldn't compete for or didn't get, in part because I felt they were reserved for minorities."*
>
> Student, Non-URI

B. Barriers to Underrepresented Groups Entering and Staying in HSR

Interview respondents identified a range of barriers to underrepresented individuals entering, staying, and succeeding in HSR, some of which are barriers to non-URI students as well. These barriers can be grouped into five categories:

- Many points of entry to HSR;
- Competition between HSR and other fields;
- Program and/or university-wide constraints;
- Student qualifications; and
- Other individual characteristics or capabilities.

In general, the most frequently mentioned and significant barriers identified by faculty were competition between HSR and other fields and student qualifications. Some faculty also noted program and university-wide constraints as well, particularly lack of funding, underrepresented faculty and role models, and time to recruit and mentor students. Other program or university-wide barriers mentioned, particularly by underrepresented faculty, included the current social, political, and legal climate (e.g., efforts to repeal affirmative action programs) and the impact it has had on university and/or program admissions policies and practices and a lack of leadership around the issue.

The most frequently mentioned barriers by students were institutional and/or program constraints and individual characteristics or capabilities. They did not directly mention the issues of competition between HSR and other fields; however, their personal histories and narratives about their decision to enter the field suggest that these are issues even for those that ultimately choose HSR over another profession or field (or were pursuing it in tandem, such as an M.D./Ph.D. program). Students also focused less on the issue of qualifications, although a few white students felt that this was an issue.

Below we describe these five barriers in more detail.

(1) Many Points of Entry. Faculty and students' professional biographies show that there are many possible points of entry into HSR. People come to HSR from many different:

- Academic disciplines (e.g., physical and social sciences);
- Graduate or professional programs (e.g., M.P.H., M.B.A., Dr.P.H., Ph.D., M.D., J.D.); and
- Work experiences (e.g., worked in a health care organization or on a research project).

There is no "common pathway" into HSR.

Because of these diverse points of entry into HSR, significant resources are required to identify and recruit potential students generally. Efforts to increase the number of underrepresented students may make recruiting even more challenging. As we discuss below, HSR departments or programs have developed different strategies for recruiting students.

(2) Competition. Many interview respondents (particularly faculty) noted the significant challenges that HSR faces in recruiting students, in general, and underrepresented students, in particular. First, many students do not know what HSR is, what kinds of jobs

and career paths are possible, and what kinds of training and degrees they would need to successfully work in the field. While this can be a problem for recruiting students generally, underrepresented students may be even less familiar with this potential career option. Second, HSR has to compete with many other professions (e.g., medicine, law, business) and advanced degree programs (e.g., Ph.D. in basic physical or social sciences, or business). Even when URI and non-URI students become aware of HSR, they and/or their family may feel it is a less prestigious or wise choice since relatively little information is available about HSR jobs, career paths and associated salaries.

Capturing the sentiments of other faculty and students, one non-URI administrator, who works to recruit URIs, noted:

> *"We recently admitted three underrepresented individuals. One of the students we're having a tough time convincing as his family doesn't want him to come here. He's at the x medical school right now. His parents don't want him to come here. His parents don't understand what HSR is. His parents think it's ridiculous that he'd take time out from medical school; he should just stay at medical school and become a doctor."*

(3) Institutional and/or Program Constraints. Respondents noted many program specific and/or university-wide conditions hindered their ability to more effectively recruit and retain underrepresented students. These included:

- A lack of leadership around the issue at the university and/or department level;
- Concern that the current social, political and legal environment made it difficult to aggressively advocate for programs to increase the number of underrepresented students;
- Questions about how best to help underrepresented individuals succeed while ensuring that everyone felt that they were equally qualified and not getting special treatment;
- Not enough funded positions or sufficient level of support through the entire doctoral training period;
- Insufficient resources to conduct effective education and outreach activities;
- Insufficient resources to conduct additional qualifications and skill training for those in need of them;
- Too little time for faculty to mentor given professional incentives (e.g., research not teaching), particularly for underrepresented faculty who often get inundated with students;
- No, or too few, faculty with substantive and methodological research interests that fit with underrepresented students interests (e.g., disparities, community based research, qualitative as well as quantitative methods); and
- No, or too few, underrepresented faculty and advanced graduate students to serve as mentors or role models in a range of professional and personal arenas.

Several URI faculty expressed their sentiments on being a URI, mentoring, and professional incentives.

"I was the only URI faculty here and I was surrounded by every African American and Latino…from all programs! I'm often told I'm the first underrepresented male teacher they have ever had."

Faculty, URI

"If a mentoring relationship works in the context of my research, great. But, there's the black tax, the brown tax. Minority faculty are called upon a ridiculous amount, and people wonder why you're not here when you go up for promotion. When my promotion goes thru, then maybe I will do more of that. But, the reality is that I need to do the job I was hired to do if I want to make sure that I'm here."

Faculty, URI

"When you are the only one that is an issue. Certainly, there's burnout as a mentor, when everyone comes to your door. It can be a lot."

Faculty, URI

"It was interesting to see my face on every publication that's connected with this university. I mean, I understood what the deal was. I have to say that I wasn't committed to death. As a result of being put out there, I did get lots of demands on my time. But it worked for them and worked for me…Understand that I certainly understood pre-tenure there were certain things I had to do, and post-tenure I can say no. I've said a lot more no's in the past couple of years than I did previously."

Faculty, URI

(4) Student Qualifications. With respect to qualifications, faculty respondents felt that in general underrepresented individuals tended not to be as qualified using traditional admissions criteria. They noted that underrepresented students tend to have lower entrance exam scores and grades. Many faculty, both white and underrepresented, also felt that underrepresented students did not have sufficient math or statistical training to do well in their programs (which were often solely focused on quantitative methods) and key courses (e.g., statistics or biostatistics, epidemiology). They also felt that underrepresented students were more interested in qualitative and community-based research, which were not well aligned with their program focus.

"Somewhere in the teens are the numbers of minorities in the program; approximately 100 minority applicants. [It is] Hard finding competitive minority applicants: lower GRE score (at law school, lower LSATs), less quantitative background in terms of the course they have taken; grades are worse. They sometimes can be less clear as to why they are doing what they are doing; at least more frequently than non-minorities. Less of an idea of what the PhD degree means. Of what life will be like after they get their degree."

Faculty, Non-URI

"…It's not just quantitative experience; verbal GREs are lower; they don't write as well. It all downstream—going back in the pipeline."

Faculty, Non-URI

"When we do get applicants from underrepresented students, we do often find that their quantitative (GRE) scores are not strong. It puts us into a quandary because our program is very quantitative."

Faculty, Non-URI

"Someone with a health administration background would be admitted into the MPH program with the possibility of petitioning for the DrPH program. For minority students, this often feels like a put down. These students already have a Masters degree and feel it is unfair to be accepted to another Masters program, but not a PhD program."

Faculty, URI

"I don't have statistics on that. I can tell you that in the 8 years I have been here we lost one Native American woman. Quite frankly she did not belong here. Her writing skills were awful. We tried to work with her. It just wasn't going to work."

Faculty, URI

"I was worried about it. I looked at the statistics class I had to take here. My perception of here was that the quantitative course work was pretty rigorous and probably more rigorous than other places. I took calculus the summer before I transferred here."

Student, URI

"When I got here and was doing research, I had a good understanding of the issues, but the quantitative skills needed some boosting. It was all part of the plan to take a course or two here to make up for the deficit. It was all by choice to do what I wanted."

Student, URI

A substantial number of underrepresented students' views were consistent with faculty's perspective about their skills and interest in qualitative methods and community-based research. Many indicated and believed that quantitative methods were necessary to becoming outstanding researchers, but they felt that they did not have adequate training to excel in this area (without a lot of additional work at the graduate student stage). Some underrepresented students also discussed why they were drawn to qualitative and community based research methods. These students felt that quantitative methods were very useful but, could be at times, too abstracted and disconnected from every day life, and limited the kinds of questions they could address because of the constraints of secondary datasets (e.g., data usually collected for other purposes and sometimes relatively old, poor or missing race/ethnicity data). In contrast, they felt qualitative methods and community based research was an essential complement to quantitative research, not only helping them to better understand the lives of people they cared about most (e.g., poor, various minority groups) but identify real-world factors that affected their health and well-being and develop and implement strategies to improve them. Several URI students and URI faculty captured the sentiment of many respondents in the following way:

"...I would like to see more anthropological perspective integrated into health services research. Or, more application based courses. Or, more population based courses. Approaches particularly relevant to the population we are serving."

Student, URI

"I've been trying to figure out what is the grant process—how do I do a behavioral intervention in a community, how do I evaluate that intervention. Where do I get the assistance or staffing to help to do this? I have been around my department actively seeking mentorship with several people who are always willing to help but are non-minority. These people do not really understand the need or really understand how to do work in a population. 'It's kind of what you read vs. what you live' and so some of the things I propose they don't necessarily understand enough to offer assistance. I'll meet with people and we'll speak in a different language for hours. For example, they'll talk about the conceptual model, theoretical framework, various quantitative methods—but, I always end up feeling 'how does this help me?' It doesn't. They are willing to help but they just can't. So, I came across an African woman who is already doing a lot of intervention in the community. She has an all African American staff. She took me to her office and I talked to everyone. Within three hours of being with these people, I understood the whole process. They just gave me a straight answer, an answer specific to the population I would like to study, and realistic in focus with this particular group of people. But, I was never able to get a straight answer form anyone who did not look like me."

Student, URI

"I think underrepresented students feel isolated and not appreciated as much. People are talking too much about the quantitative stuff, forgetting what it's all for."

Faculty, URI

(5) Other Individual Characteristics or Capabilities. In addition to student qualifications, many respondents (faculty and students) noted a number of other individual characteristics or capabilities that facilitated success. Three characteristics frequently noted were the ability to be very proactive, advocate for oneself, and work autonomously. Many felt that HSR graduate programs required students to be "self-starters" and "self-directed." For example, while faculty would be helpful if you sought them out, they would not come to the students to make sure they were getting the help they needed.

The majority of interviewees felt that these characteristics or capabilities were more a matter of personality, and that underrepresented students were just as likely as white students to have them. However, some interview respondents felt that this requirement disadvantaged underrepresented students. For example, they often felt that underrepresented students were more academically and socially isolated and "we rather than me" (group rather than individual) oriented. As one underrepresented student stated:

> *"I think what affects us the most is the concept of "me" vs. "we." Because there are people with different world views. There are people who truly are here because they want to help—they want to help their community. It is more a sense of "we." In most university setting —the cultural norm is about "me," about me getting ahead. It's about my research."*
>
> Student, URI

As a result, underrepresented students more frequently found it more difficult to advocate on their own behalf and get what they needed.

> *"You should still need to be willing to take the initiative to access those resources. Maybe that is just the nature of being a Ph.D. student. You have to be autonomous. No one will hold your hand. So, if there are students who do not come from the same background, having been raised and taught to take that proactive stance like non-minority students, they just find themselves lost.*
>
> Student, URI

C. Strategies for Overcoming Barriers

Efforts were underway to address these barriers in all HSR departments and the wider universities of which they were a part. Many of these efforts and strategies were designed to address the program and/or institutional barriers described above, as they were viewed as more under the control of HSR program faculty.

As previously, noted, larger social, political, and legal developments may make it more difficult to advocate for increased diversity in HSR at all levels of the institution (e.g., challenges to affirmative action programs). However, other developments in the wider society (e.g., demographic trends) and the field (e.g., increased interest in racial/ethnic disparities, funders' requiring more progress in this area) may provide new opportunities and impetuses to improve in this area.

The major strategies that HSR departments or programs and their faculty used to address the five major barriers to more underrepresented students in the field are outlined below:

(1) Dealing with Many Points of Entry. HSR departments or programs had developed a range of strategies for recruiting students generally, which varied in breadth (i.e., the number of different points of entry targeted and geographic range, such as local/regional, national, international) and depth (i.e., how intensely they can recruit at any one location or point of entry). For example, one strategy is to try to recruit students from various disciplines, graduate and professional levels of training, and experiences on a national and international level. Another strategy is to identify only a few points of entry that have been most fruitful to date or hold the most promise for the future in the local area and region.

An HSR department or programs' size, resources, reputation, and areas of expertise seemed to affect which general strategy it pursued. For example, the largest HSR

departments or programs seemed to have more resources to recruit from a wider variety of sources. They also enjoyed outstanding national and international reputations that results in students contacting them (rather than the department or program working to contact students). In contrast, relatively small departments or programs often had fewer resources, so they tended to limit where they recruited, targeting only their "best bets." While national directories and the Internet help HSR departments and programs market themselves to more potential students, the most effective recruitment still seems to occur through personal contacts, limiting the points of entry that can be effectively covered by any given program or departments faculty.

HSR programs and departments must often build new relationships outside their traditional network to recruit more underrepresented students. While underrepresented individuals frequently attend universities or work in organizations that HSR programs and departments have traditionally had relationships with, they also study and work in organizations that have not traditionally had ties with such programs or departments. For example, several universities forged ties with a nearby HBCU. Another example is using URI alumni to help with the recruitment process.

(2) Successfully Competing with Other Fields. There were some examples of effective strategies for educating and recruiting potential students about the field of HSR and competing with other disciplines that are perceived to be more prestigious and less risky. These included:

- Highlighting aspects of HSR that are appealing to students generally and underrepresented students particularly, such as: the focus on people and improving their health and health care; particular sub-areas of interest (e.g., access, disparities); fellowships and awards that ease the financial burden and increase the visibility and prestige of the field (see below); and, future career opportunities.
- Linkages with HBCU's, tribal colleges, other minority serving institutions, and institutions located in areas with predominantly large populations of URIs.[4]
- Summer programs or internships that expose white and underrepresented students (high school, undergraduate, and graduate or professional) to the field of HSR.
- Fellowships supported by the department, federal agencies (e.g., AHRQ, CDC, NIH), or foundations that reduce the financial burden associated with pursuing a career in HSR.
- Fellowships and awards sponsored by the department or outside organizations (e.g., AHRQ's Predoctoral Fellowship Awards for Minority Students, W.K. Kellogg Foundation Fellowship in Health Policy Research, and AcademyHealth's Dissertation Award) that increase the prestige of a career in HSR.

However, most departments felt they lacked the resources to adequately address this barrier. Respondents felt that a much broader, concerted, and long-term effort was needed.

[4] As noted earlier, URI focused institutions have a strong knowledge of, and connection with, the communities they serve.

Many suggested that a concerted national effort should be undertaken to address these critical needs. For example:

1) More effectively "marketing" HSR to students (white and underrepresented) at earlier stages in their career (e.g., undergraduates in their sophomore or junior year);
2) Increasing the supply or "pipeline" of highly qualified applicants; and
3) Helping HSR programs, faculty, and underrepresented students locate each other and find the best "match."

(3) Overcoming Program and/or Institutional Constraints. HSR programs had developed a range of strategies to overcome institutional and/or program constraints. These strategies included:

- Effectively making the case for diversity in the university generally and in HSR specifically. Some of the benefits faculty mentioned were: studying new topics and questions; new ways to address these questions via more diverse theories and methods; increased ability to conduct research with underrepresented individuals and communities; scholars interested in community based research and more applied HSR; and, the ability to meet funders' requirements and requests for greater diversity.
- Working at the department or program, and individual faculty level, to better understand the concerns and needs of underrepresented students by developing cultural competency programs and/or initiatives.
- Finding or developing financial and non-financial resources to help underrepresented students succeed.
- Offering more methodological and substantive courses of great interest to underrepresented students, or including in existing courses more content and examples of great interest to such students. However, both underrepresented faculty and student respondents cautioned against assuming underrepresented students are only interested in certain methods or substantive areas.
- Helping faculty become effective mentors and rewarding them for being good mentors to all students. Effective mentors involves helping students:
    - Select courses, research topics, and other mentors or committee members;
    - Develop the full range of required professional skills (e.g., writing articles, presenting research);
    - Access, or competing for, resources within the department or university or outside organizations; and
    - Address any particular professional issues or challenges underrepresented students might have. While some faculty are also comfortable helping students address personal issues or challenges that arise (e.g., family or work constraints), other faculty felt they should not discuss these issues with students.
- Developing relationships with other underrepresented faculty and students in other universities and departments.

- Building a "critical mass" of underrepresented faculty and students to address issues of isolation.

Some of the most actionable practices stem from key individuals–both URIs and non-URIs–particularly the ways they garnered department faculty and university-wide support to make progress and successfully mentor underrepresented students. For example, several departments had one or two key faculty members who consistently raised the issue of diversity and worked in both the program and university-wide to find creative ways to improve. Successful practices were then institutionalized to some extent through things like the departments' mission, policies and practices, and culture. There were also numerous examples of faculty members (URIs and non-URIs) serving very effectively as mentors, which all respondents agreed could make a very significant and positive impact on students' learning process and career trajectory. Highlighting the importance mentors can play, one non-URI student noted:

> *"My mentor does it all it terms of key supports. She is almost a friend. She helped me select courses and a dissertation topic and now has completely integrated me into her research agenda. I participate as a peer within her research groups' process and planning. This has been an invaluable learning experience and will help me going forward."*
>
> Student, Non-URI

Other potential promising practices may not be within other department or institutions' reach in the near future. For example, developing a large endowment to support students or a history and national reputation for welcoming and helping underrepresented students succeed, will take time.

Several URI and non-URI faculty and students recounted stories of attempts to help underrepresented students that ultimately failed, and the difficulty it created for the student as well as the faculty who supported their admission. Finding a good "fit" between a department/program and any student is very difficult, and occasionally a white or underrepresented student may not meet standards of performance. However, the difficulty or failure of an underrepresented student may be interpreted differently and take on greater significance than that of a white student, particularly when explicit efforts to increase the number of underrepresented students first gets underway. For example, the difficulty or failure of an underrepresented student in a department can be viewed as a problem with that particular student, or the department's general recruitment process and retention mechanisms, or "proof" that unqualified minority students are being admitted and efforts to increase underrepresented students in the department are harmful, and hence, should be altered or abandoned. One underrepresented faculty member noted how difficult it was to discern what was "really going on" in these types of situations generally (e.g., concern for department, adherence to student and professional standards, and/or racism?).

(4) Improving Student Qualifications. Most HSR departments and programs had no mechanisms for improving student qualifications prior to admittance. However, some respondents noted that much more frequent and clear communication with faculty and students at the undergraduate or masters level about expectations (e.g., grades, test

scores), abilities (e.g., facility with math, statistics, computer software packages), and future requirements (e.g., series of quantitative courses) would help them better prepare. In addition, some of the initiatives that help HSR compete with other fields (e.g., developing linkages with HBCU's, tribal colleges, or other minority serving institutions, summer internship) also help students understand what courses they should take and what skills they will need to have to be admitted, and succeed.

HSR departments and program faculty indicated that improving student qualifications was another critical area where a national effort could make a major contribution. Given the many points of entry to HSR, and the limited resources that individual programs have, a national initiative to help students understand and develop student qualifications would be much more effective and efficient.

Once students were admitted, some HSR departments and programs used a variety of mechanisms to try to improve student qualifications and build other important professional skills not just for URIs but for non-URIs as well. Some efforts noted by respondents included:

- Encouraging students to take or re-take courses prior to starting their core curriculum;
- Providing tutors for particular subjects (e.g., epidemiology, statistics, health economics). Some noted that they provided tutors to anyone in the class, not just underrepresented students, which actually was helpful since the criteria for tutoring was need and white students could take advantage of it as well;
- One-on-one assistance from advisors/committee members; and
- Providing or directing students to seminars or workshops on other important professional skills, such as writing, making presentations, and grant writing.

(5) Other Individual Characteristics or Capabilities

Other individual characteristics that may be a barrier to success (e.g., being relatively less of a self-starter or less self-directed) were primarily viewed as something to be assessed during the recruitment process. Those students without these characteristics were simply not admitted. Although some faculty felt these attitudes and behaviors could be developed through mentoring and professional skill development, most felt they were less subject to change.

D. Fellowship or Summer Program: Reactions

All the interviewees and focus group participants were asked to provide their reactions to the following fellowship overview:

> The proposed Fellowship will consist of a two-tiered structure. In tier I up to three individuals, who are U.S. citizens or permanent residents, will be selected each year and provided with tuition and stipend support for a period of two years. The stipend will be paid directly to the fellow's institution and will be administered by the participating institution. In order to qualify for this tier, the candidate must be accepted into a fulltime accredited health services research-related doctoral program in the United States.

> Tier II will nurture fellows from the first tier to ensure that they develop the necessary skills and relationships to remain engaged in health services research. Its goal is to develop a national network of underrepresented health services researchers and to provide training in the translation of research into policy and practice.
>
> The ultimate goal of the proposed fellowship will be to provide a steady stream of skilled underrepresented health services researchers into the workforce.

With respect to their reactions to this overview, the majority of respondents would like to see a range of programs designed to increase the visibility of HSR and number of underrepresented individuals in the field. However, when asked which of these programs would be most effective given scarce resources, there was not a strong consensus. Many respondents felt a fellowship at the doctoral level was the best way to accomplish the goal, while others felt that a summer program or internship would potentially have a greater impact.

(1) Fellowship Program: Pros. Overall, reaction to the proposed fellowship program was very positive. The major pros of a fellowship program at the doctoral level mentioned by respondents included:

- Familiar mechanism.
- Ability to assist underrepresented students in existing HSR programs, or those soon to be in admitted, at key points in their education and training. One of the main benefits of assisting underrepresented students already enrolled in HSR programs is increasing their graduation rates, thereby increasing the number of underrepresented researchers who would be competitive for faculty positions.
- Ability to get universities and HSR departments and programs to compete for the fellowship program. Such competition could potentially lead to leveraging the fellowship with other university funds or fellowship programs. It also could foster greater attention to improving education, training, and the wider environment for underrepresented students.
- Provides visibility and prestige to the field and institutions and/or individuals awarded the fellowship.
- Helps develop a network and critical mass of underrepresented students in the field.
- Helps attract more underrepresented students to the field in the future.

(2) *Fellowship Program: Cons.* The major cons of a fellowship program mentioned by respondents included:

- Not a very innovative mechanism or program.
- Does not help increase the supply of well-qualified underrepresented individuals interested in the field.
- Does not directly help HSR compete more effectively with other disciplines.

- May not be at the right time, or for a long enough period of time, to really make a difference. Worse yet, receiving the fellowship may make students ineligible for other fellowships.
- If a relatively small number of HSR programs and/or individual scholars are funded, a "critical mass" might not be achieved.

(3) *Fellowship Improvements*: There were also many suggestions about how to refine or improve the program. Suggestions were made in the following areas:

- *Length and timing of the fellowship*. Almost all respondents viewed the two year fellowship as a minimum, and three to five years as much more desirable. Given the length of time required to complete a doctorate in HSR, two years would be very helpful but too short to provide support for a student through their entire training. Two years of support also raised the question of timing: When in the student's training would the fellowship be available? For example, would it cover the first two years of coursework or the last two years of dissertation work? In general, programs and departments without significant financial support (e.g., scholarships) already available suggested the fellowship be made available for the first two years, so students could get started and they could then begin to try to secure grant funds for completing the dissertation. In contrast, programs and departments with some financial support suggested the fellowship be made available during the dissertation period.
- *Ways the program should be completed and/or administered* For example, should universities and their HSR departments or programs pre-compete to house the fellowship for a specified period of time (e.g., 5 years), and then only individuals attending those universities be allowed to apply? Alternatively, should the fellowship be awarded to an individual who could use it at any accredited program? Faculty saw many benefits to universities and HSR departments and programs competing for the fellowship program. In general, they felt that competition would provide a strong incentive for universities and departments to leverage funds and develop critical program features (described below). Once these universities and departments were selected, students could apply for the fellowship either upon entry into the doctoral program (e.g., if support were made available for the first two years) or at the appropriate stage in their doctoral education (e.g., dissertation).
- *Leveraging the fellowship within universities and departments and with other possible federal and private foundation funders'*. Faculty respondents encouraged the designers of the fellowship to consider mechanisms to leverage the fellowship. For example, there could be a pre-competition among universities and departments for the fellowship. Through that pre-competition, the Kellogg Foundation could require the universities and/or departments to match funds or to support the student for the remaining portion of their doctoral training if the award was for 2 years only. Similarly, there may be other ways for the Kellogg Foundation to partner with federal agencies or other foundations with similar programs or goals. For example, universities and departments that already have doctoral training programs and relatively greater success in attracting and successfully graduating underrepresented individuals might be given more points in the pre-competition. Many respondents noted that several existing fellowship

programs, such as the Agency for Healthcare Research and Quality (AHRQ) training grants, are successful models that have strengthened some HSR departments or programs capacity to train URIs and could be built upon and leveraged.

- *Program features that would be critical for success.* Many respondents felt that in order for the fellowship program to be effective, there also needed to be efforts to develop:
    - Greater awareness of the issues that underrepresented students face;
    - Better mentors (from underrepresented and white groups) with time who could help students address these issues;
    - More mechanisms for underrepresented students to build essential technical (e.g., quantitative methods) and professional skills (e.g., writing);
    - More willingness to study topics of greatest interest to underrepresented students and to use a range of methods to study them;
    - Networking opportunities between programs and fellowship winners via an annual meeting or conference, web-site, etc.; and
    - Over time, a critical mass of underrepresented faculty and students.

Again, universities and departments competing for a fellowship would have to describe in their applications to what extent they had these critical program features in place and strategies for strengthening them. The Kellogg Foundation could work with the universities and departments on networking through a variety of mechanisms (e.g., annual meetings, list-serves, etc.)

Besides the proposed fellowship program, other possible options were discussed. Specifically, a summer program or internship for college or masters' level students, that would expose them to the field of HSR and/or or improve their understanding of the requirements and skills necessary to succeed. In general, respondents also viewed these potential programs very favorably and had a variety of suggestions about how they could be improved.

(4) Summer Program or Internship: Pros. The major pros of a summer program or internship identified by respondents included:

- Helps increase the supply of underrepresented individuals interested in the field, a critical need.
- Helps increase the supply of well-qualified, underrepresented students by helping them understand expectations and requirements and build necessary skills (e.g., statistics).
- Helps HSR compete more effectively with other disciplines by exposing underrepresented students to the field at a time when they are making critical career choices.
- Is likely to be less expensive, so could support more students.
- Ability to get universities and HSR departments and programs to compete for summer program or internship, which is likely to foster more outreach to undergraduate, masters and professional programs with a relatively high proportion of underrepresented individuals that "feed into" HSR.

- Potential to create a network of underrepresented students in HSR program very early on in their educational and professional careers.

(5) *Summer Program or Internship: Cons.* The major cons of a summer fellowship program identified by respondents included:

- Up front and ongoing investment to develop and maintain program and ties with universities.
- Not much competition among HSR departments and programs for participation, as students would be participating in the program for a relatively short period and may not have the necessary skills as a health services researcher.
- More student "leakage" than a fellowship program, in that some students at the undergraduate or masters' level may participate and decide NOT to pursue a career in HSR.
- A longer-term strategy in that it would take longer to assess the first cohort of summer program participants or interns ultimate career success (e.g., graduation from a Ph.D. program, first position). However, important intermediate outcomes could potentially be evaluated, such as successful application to a HSR doctoral program, better levels of funding upon entry, higher rates of Ph.D. completion.
- Lack of continuity, if not combined with follow-up programs.

(6) *Summer Program or Internship Improvements:* There were also many suggestions about how to refine or improve a summer or internship program. Suggestions were made in the following areas:

- *Length and timing.* Most respondents felt that a relatively short, intensive summer program could be very effective at generating URI student interest in the field and helping them understand the requirements for admission to advanced degree programs and success in the field. They believed that undergraduates entering their junior and senior year would be the best group to target. Several respondents felt that an even better model would be a full summer or one-year internship for recent graduates in the core social and physical sciences to see how they could apply their disciplinary degree in the health services research arena. If they were interested in the field, they could then apply to doctoral programs.
- *Ways the program should be competed and/or administered*. Like the fellowship program, many respondents saw substantial benefits to universities and HSR departments competing for the summer or internship program. The individual student would then apply to the fellowship program office and/or the specific university that they were interested in. (See discussion above about the potential benefits of the Kellogg Foundation and its program office in retaining a role in this process).
- *Leveraging the fellowship with other possible Federal funders*. As with a fellowship program, there may be other ways to partner with federal agencies or other funders with similar programs or goals, such as the National Science Foundation (NSF).
- *Program features that would be critical for success which can be more clearly described or enhanced.* Many respondents felt that in order for the summer program or internship to be effective, they must have:

    - An effective outreach strategy to URI undergraduates and the universities they attend.
    - Information about what HSR is, including what kinds of careers are possible after training
    - An individual assessment at the beginning and end of the program or internship to identify what skills and abilities they have and those they need, and what they must do to obtain them.
    - Intensive skill-building sessions either through the program or internship itself (e.g., interviewing or presentation skills) or through linkages with other summer courses the university might offer (e.g., summer session in various quantitative methods).
    - Education and guidance about how to successfully apply for master's or Ph.D. programs, including how to apply for funding.
    - Informational resources and networking via program web-site or newsletter and "alumni"
- Other potential summer program or internship features that individual universities and departments might consider developing include:
    - Organizing a speaker series, particularly one that would showcase URI researchers work and who might also be willing to discuss their career trajectory and personal experiences with students
    - Requiring summer or internship program participants to give several presentations to their college peers or high school students about HSR and career possibilities
    - Developing over time "marketing materials" for undergraduates about HSR and career possibilities. This could include a web-site with information about the summer program or internship, resources about masters and doctoral training programs, funding opportunities, etc.
    - Providing a clearly defined, and substantively important role on a research project (i.e., not just working the copier)

III. Discussion

Based on our interviews, we learned that efforts are being undertaken toward increasing racial/ethnic diversity, both at the department and university levels. However, there is still a long way to go. A range of barriers are slowing if not stopping further progress, despite the range of strategies described. In addition, the current social, political, and legal climate will require HSR programs and universities to find even more innovative ways to increase the number of underrepresented students.

Data from our interviews suggest that the need for a national initiative to increase diversity in HSR is great. While there are things individual HSR programs and universities can do, there are several major barriers they are unable or unlikely to overcome alone. There are some efforts beyond individual programs and universities led by federal agencies and foundations, such as AHRQ's training grants and various Robert Wood Johnson Foundation funded scholarship programs.

Interviewees were extremely positive about the proposed fellowship. However, they ideally wanted to see a range of programs developed to meet several critical needs of the field, including: more effectively "marketing" HSR to students at earlier stages in their

career; increasing the supply or "pipeline" of highly qualified applicants; and, helping HSR programs, faculty, and underrepresented students locate each other and find the best "match." Toward that end, interviewee respondents not only offered their comments and suggestions regarding the fellowship, but other possible mechanisms to achieve these goals (i.e., summer program or internship, leveraging and networking among existing fellowship funders). In addition, they provided their perspectives on the pros and cons of a fellowship and summer program or internship.

Section C: Focus Group

I. Focus Group Characteristics

Three URI student focus groups were conducted as part of the data collection process. The goal was to obtain students' feedback on their choices and experiences regarding the study of HSR and their programs. While there are four project goals, the focus groups speak primarily to two of those goals: identify barriers to URIs entering the field; and to explore and evaluate whether the creation of a fellowship would have a significant impact, over time, in increasing the numbers of underrepresented individuals choosing HSR as their career option.

A total of 22 students participated in the focus groups which took place at two academic institutions and one at the annual meeting of AcademyHealth, where students from various institutions were represented. Most of the participants were Asian, which included Southeast Asians, followed by African American, then Hispanic, and Native American. The majority of students were women.[5] The educational background of the participants was varied but included the fields of pre-medicine, nursing, public health, public policy, economics, urban planning, and psychology. Previous professional experiences included work at community based organizations/clinics, local health departments, HMOs, biotechnology companies, pediatric training, and international work. All of the participants shared an interest in helping people, specifically by working in community health, with at-risk populations, and with minority health issues. Table 2 below provides further details.

Table 2: Gender, Race and Graduate Level Distribution of URI Student Focus Group Participants

	African American		Asian (includes Indian)		Hispanic		Native American	
	Female	Male	Female	Male	Female	Male	Female	Male
Masters			4		1			
1st Year Doctoral			2			1	1	
2nd Year Doctoral		1	2			1		
3rd Year Doctoral	3		1					
4th Year Doctoral	2		1	1	1			

The focus groups covered questions relating to students' choice of an HSR career, their choice of institution, HSR program characteristics, their mentors, future plans, the

[5] At one of the focus groups there were only female student participants.

importance of diversity in HSR, and opinions about a fellowship and/or a summer program.

II. Data Limitation

Data from the focus groups is limited to URI students' perspectives. A control focus group of non-URI students was not held.

III. Student Feedback about HSR Studies

Participants were asked how they decided to pursue a degree in HSR. Most responded that they found HSR almost accidentally. They did not know HSR existed until they started looking at health-related programs; and many realized that they were in fact already working in the field but did not know it was called HSR. Most said they never thought of the field as HSR, but rather as public health. Said one student,

> *"Health Services Research is a big esoteric topic that you learn about later on only through the application process."*

One of the younger students became aware of HSR through an undergraduate internship experience. Even though he/she are now in an HSR program, he/she still did not yet consider him/herself a health services researcher; one participant said she considers herself a community health practitioner. One participant was drawn to the academic program because it brought together aspects of several fields like population studies and sociology. A few students were pursuing clinical medicine and decided it was not right for them and were looking for something that was more applicable to their interests in community health issues. One woman had been working in health management and realized that the work she was contracting out was what she really wanted to do.

Only one student said they had a previous employer who was a health services researcher and recommended that they look into a graduate program. Another woman worked with people in the field but no one in particular stood out as a role model and she came to the decision on her own.

Students provided information about what factors were important to their decision to attend the HSR program. They generally cited diversity in the faculty, students and community; faculty outreach; accessibility of advisors; funding; institutional support and attitude toward people of color; program/class size; location of school; resources; faculty working area of interest; and the reputation of the program. One student admitted that if she was accepted into any other program she would have gone somewhere else. Another student said she was given a bonus of $1,000 to attend her program. Students pointed out that funding is important not just as a resource to make it possible to enter a program but it also demonstrates that the school values their participation in the program enough to make it possible for them to attend. Though most of the students received at least some funding (and some received generous financial packages), a few students said they were actually quite disappointed by their institution's lack of funding. A few students had already attended the institution they chose, for undergraduate studies

or for masters programs, making it more comfortable for them to stay. In addition, they may have had contacts there that were influential in their decision.

Regarding their level of preparation for the program, many students indicated they did not anticipate how much quantitative studies were involved and were not prepared for that. One woman said she lacked the computer skills necessary to be able to perform research electronically. Another student said she did not have the verbal skills necessary to contribute to classroom conversations or have her voice heard. This sentiment was echoed by others who indicated that these programs can be very competitive and classroom environments often reflect that "combative" debate style. A few students confessed they were not sure that they made the right decision and are still not sure if they will finish the program. One student was hoping for more community-based course work. Another woman responded, *"Where are the people? There are too many numbers."* Lastly, someone added that although the faculty are experts, that does not necessarily translate into quality teachers.

When asked, students agreed that they needed someone to act as a mentor. This role is critical especially when the academic program "has no home," and is a mix of several programs. Because of this, students reported feelings of isolation and would benefit from having someone to "watch out for them." Most of the schools represented did not have a formal mentor program but did provide students with an advisor. Students indicated that the advisor was someone who helped them with the logistics of the institution, for example, making sure they had their requirements met. However, these advisors often did not have the time or personal connection with students (due to tenure pressures, etc.) and as a result several students used previous employers or undergraduate mentors for career advice and encouragement. One woman explained that her first advisor suggested she talk to a colleague who might have a better fit with her needs. As a result, she ended up with someone who got her invited to meetings and conferences and provided her with helpful feedback, both negative and positive, which she cited as critical to getting through a PhD program. Similarly one of the men has been fortunate to have a very involved mentor with whom he has regular weekly meetings, of sometimes up to two hours. He also explained that his institution works hard to foster teamwork and the idea that even junior faculty and students are part of the team. Younger students said that they have different needs and face different challenges from older more experienced students; peer mentors are very helpful with alleviating anxieties and providing help with navigating the systems.

Everyone agreed that diversity is important to HSR. Students responded that diversity influences course selection; generates research questions; and provides a perspective largely absent. However, a couple of students asserted that minority students do not want to be "pigeon-holed" and may not want to study issues just because they are related to minority health.

IV. Fellowship or Summer Program: Reactions

Many students felt that it is important to target potential students who are already working in the field but might not otherwise know that HSR as a field exists, or for that matter that they are already working in that field. They also suggested that the funding be

used for people who might otherwise not pursue an HSR program due to financial or logistical barriers, thereby reaching a new group of potential students. Further, it was suggested that the fellowship not be tied to acceptance in the school first. Since students in HSR come from varied educational and professional backgrounds, they suggested that funders be savvy with marketing the fellowship. Not only should funders try to market the fellowship to a broad array of fields, but one student suggested that admissions officers be made aware of funding opportunities as well so they can relay them to applicants. Though it is important to provide adequate funding, it is perhaps more critical to be flexible regarding the use and timing of funds. Graduate programs may offer funding to students but it must be used during certain years of study. Students agreed that allowing fellowship recipients to use the funds to "fill in the gaps" would be more useful. Equally, rather than stipulating the funds be used for courses, it might be more helpful to allow the funds to be used for books or conference attendance, for example[6]. Finally, the selection criteria should consider factors like amount of student loans an applicant already has.

One group of students came up with a different approach to the fellowship idea. It was suggested that targeting students at the Master's level would be most effective since doctoral students generally have more sources for funding and have greater funding security by the time they get into the program. Students suggested that rather than a traditional fellowship, designing a program that looked at the entire pipeline of education from undergraduate studies to PhD completion would be beneficial. This would begin with a summer program for undergraduate students, a fellowship for Master's students, and cultivated network of HSR peers at the PhD level. Further, the program would specifically target second year Master's students in fields that tend to feed into HSR.

Regarding the summer program, most participants agreed that it should target undergraduate students with an interest in health issues. However, the fellowship was generally favored over the summer program concept because students need to have professional experience before pursuing a graduate degree in HSR.

V. Discussion

As was the intention, the focus groups provided important information about the barriers that exist for minorities in HSR. First, knowledge of HSR is limited both as a degree and as a field of work. This has implications for the size and diversity of the field. Second but related, role models are limited both within the education context and within the field; as a result, HSR is not being recommended to potential students. Third, institutional connections are inconsistent. Faculty connections to a student's area of interest are important to admissions but also to the level of support received during the program. Lastly, the institutional support system varies. Underrepresented students feel it is easy to "fall through the cracks" and while it helps for students to be proactive, self-starters, mentors would likely be able to provide much needed support.[7]

[6] This situation pertains to those students who have other sources of support for their tuition.
[7] Since only underrepresented students were in the focus group, we can not determine if this issue is more severe for underrepresented students vs. white students.

In addition to the information about the barriers, the focus groups illustrated the different pathways to HSR. Students come from varied degrees and professional experiences. When looking to diversify and widen the reach of HSR, it is important to consider this recruitment issue.

Section D: Online Survey

I. Data Limitations

We received information from 17 of the 34 programs, based in U.S. academic institutions, granting doctoral degrees in HSR. This is a 50 percent response rate. Two program directors communicated to us that it was an onerous task to fill out the survey because they do not routinely track data in these areas and hence opted not to participate. We had hoped for a higher response rate to collect better national data on health services research programs.

Of the 17 programs that responded, one submitted information on applicants, admits, and graduates all under the "unknown" race/ethnic category. This same program also submitted its 1998 enrollees data under the "unknown" category; thereby, significantly increasing our unknown counts in the applicants, admits, and graduates categories for each year by 53 percent to 87 percent.[8]

For those programs that responded to our survey, data were not always available for all the years requested because some of the HSR doctoral programs were either new or did not have the information available.

While it would have been ideal to collect data on the number of new enrollees each year and to examine retention rates, we felt these would have been very difficult to obtain.

Given that our data pool is small, data are reported as numbers and not as percentages.

II. Online Survey Results

A. URI Recruitment Guidelines, Retention Programs, and Fellowships

In Table 3, responses gathered from the 17 programs are shown based on the number of HSR doctoral programs with URI recruitment guidelines, retention programs, and fellowships.

Table 3: Number of HSR Doctoral Programs with Recruitment Guidelines, Retention Programs, and Fellowships Aimed at URI Doctoral Students

	Number of HSR Doctoral Programs (Out of N=17 possible)
Recruitment Guidelines	12
Retention Program	6
Fellowships	15
Recruitment Guidelines, Retention Program, **and** Fellowship(s)	5
Recruitment Guidelines **and** Retention Program	1
Recruitment Guidelines **and** Fellowship(s)	6

[8] We confirmed the unknown entries with the individual who filled out the survey on behalf of this program. We were informed that this program only collects racial/ethnic data on its enrollees.

Retention Program **and** Fellowship(s)	1

Recruitment Guidelines. The key points of doctoral recruitment activities undertaken by the programs that responded to our survey include one or more of the following:

- Mail recruitment letters to prospective URI students;
- Provide staff and faculty representation at recruiting events organized by the university and/or departments;
- Work with Multicultural or Diversity Student Office or Committees in their institutions to offer seminars geared toward the diverse community; and consult with the same office or committees on outreach and retention efforts;
- Establish links with Historically Black Colleges and Universities and other institutions serving underrepresented groups;
- Target promotional activities to schools with high percentage of minority undergraduates;
- Participate in national minority scholarship programs;
- Offer fellowship programs geared toward URIs;
- Establish relationships and/or tuition discount programs with local health and human services organizations;
- Offer summer programs and/or summer research programs[9];
- Match prospective URI students with current URI students and alumni;
- Exhibit at and/or supporting various professional association annual meetings;
- Establish relationships with minority caucusing groups of national, professional associations;
- Utilize URI alumni networks for referrals;
- Host informal networking events for alumni and local professionals to build program awareness; and/or
- Advertise on the internet and utilize existing e-mail lists from minority programs.

Retention Program. Retention activities, regardless of whether they are URI or non-URI may include one, a combination of, or all of the following:

- seminars;
- workshops;
- group activities organized either at the university level of the department/college/school level;
- brown bag lunches;
- tutoring; and/or
- writing seminars.

It should be noted that some of the above recruitment and retention activities echo the strategies we heard in our interviews.

Fellowships. Funding sources cited come from federal training grants, private fellowships, institutional and/or departmental fellowships, and stipends.

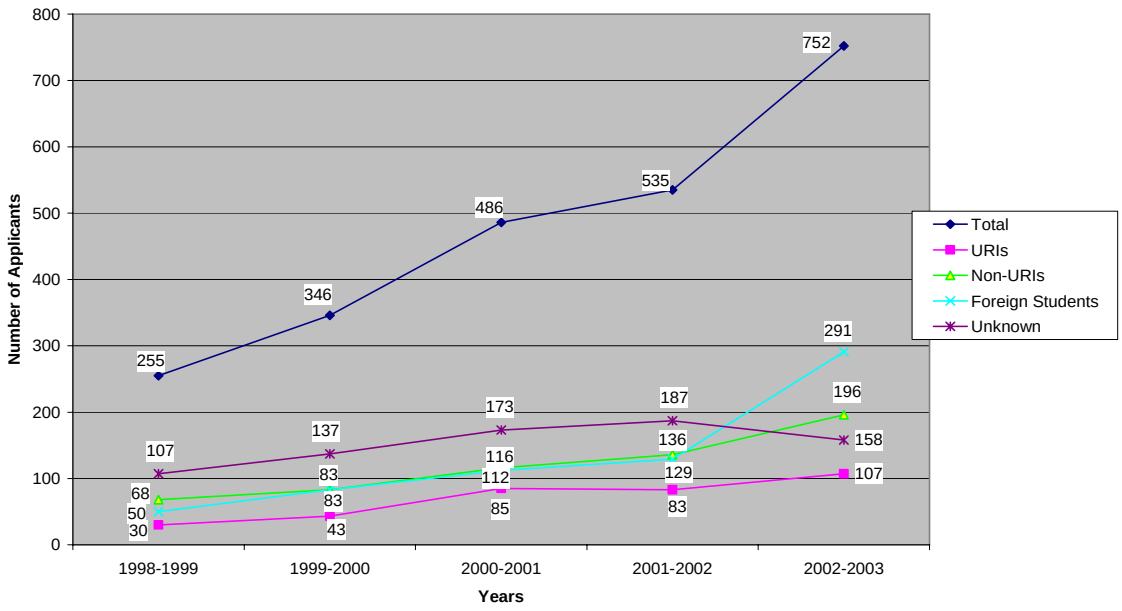
[9] Note that theses summer programs are not strictly health services research programs. If at all included, health services research is a small component of the summer program(s).

B. Applicants, Admits, Enrollees, and Graduates Data

The data we gathered from 17 programs granting doctoral degrees in HSR that are based in U.S. academic institutions are presented below.

Applicants. The number of URIs who applied to an HSR doctoral program has increased by slightly more than three-fold from 30 in 1998 to 107 in 2002. From 1998 to 2002, the highest percentage increase in the number of URIs applying to the field occurred between the periods of 1999-2000 to 2000-2001 – a dramatic increase of 98 percent.[10] See Figure D-1.

Figure D-1: Doctoral Programs in Health Services Research Applicants, 1998-2002



Source: AcademyHealth, Racial/Ethnic Diversity in Health Services Research On-line Survey, 2004

The number of non-URIs applying to the field climbed from 68 in 1998 to 196 in 2002, reflecting an almost three-fold increase. The highest percentage rise in the number of non-URIs applying to HSR occurred between the periods of 1999-2000 to 2000-2001 as well, showing an increase of 40 percent.

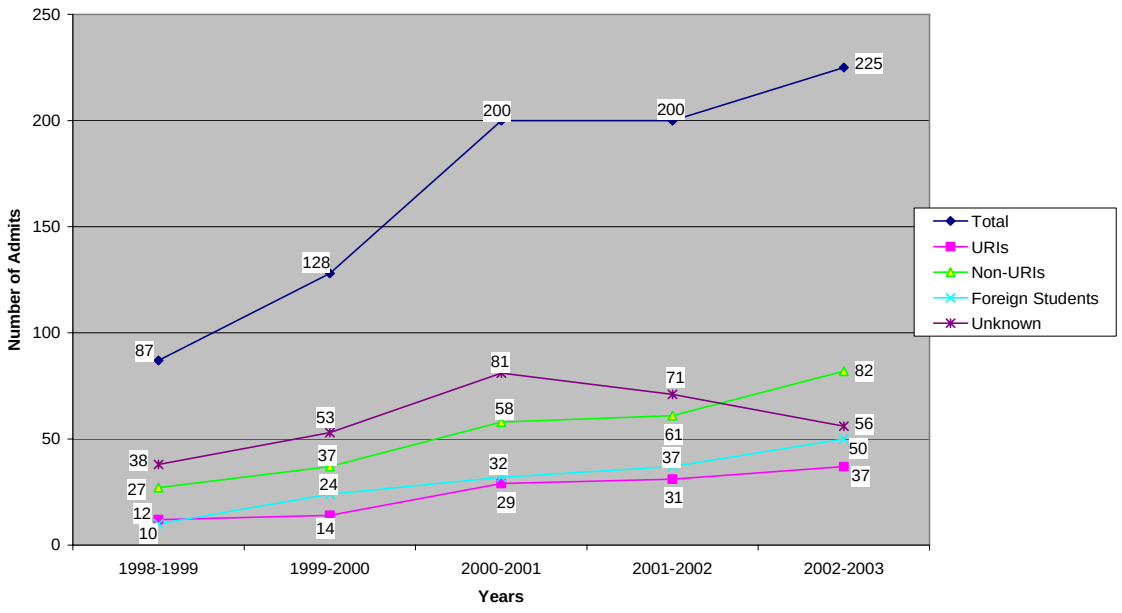
Note that in Figure D-1, for each year, the number of foreign students applying to HSR outpaced the number of URIs applicants. This finding echoes the comments we heard in our interviews on how difficult it is to really know or understand whether and how diverse health services research is by traditional definitions, as the number of foreign student applicants increases.

[10] Although these percentage increases are large, it should be noted that the base numbers are quite small.

Admits. URIs and non-URIs admitted to an HSR doctoral program show a steady rise. See Figure D-2. The number of URI admits were 12 in 1998 and 37 in 2002. URI admits tripled from the periods of 1999-2000 to 2000-2001 and rose by 19 percent from 2001-2002 to 2002-2003. Non-URIs admitted increased by 57 percent from 1999 to 2000 and rose by 34 percent from 2001 to 2002.

Figure D-2 also shows that, with the exception of 1998, there were more foreign students than URIs admitted to an HSR doctoral program.

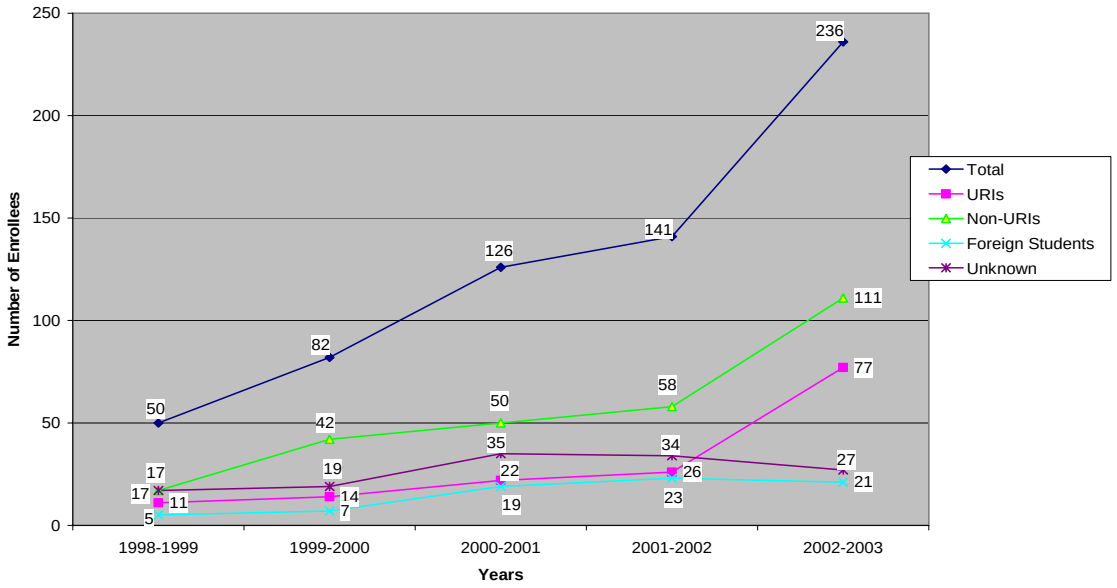
Figure D-2: Doctoral Program in Health Services Research Admits, 1998 to 2002



Source: AcademyHealth, Racial/Ethnic Diversity in Health Services Research On-line Survey, 2004

Enrollees. URI and non-URI enrollment in HSR show an increasing trend. See Figure D-3. The number of URIs enrolled in HSR was 11 in 1998 and reached a high of 77 in 2002. The number of URI enrollees grew from 26 in 2001-2002 to 77 in the following year – an almost three-fold increase. It is interesting to note that in between that same time period, the number of URI admits rose from 31 URIs to 37 URIs only. Could the dramatic rise in the number of URI enrollees from 2001-2002 and 2002-2003 be due to better recordkeeping and/or classification? This is a question we would have liked to pursue further with the 17 institutions that had responded to our survey. However, due to funding limitations, were unable to do so. Similarly, the largest increase in the number of non-URI enrollees occurred in the same time period. The number of URI enrollees rose by almost 100 percent from 58 to 111.

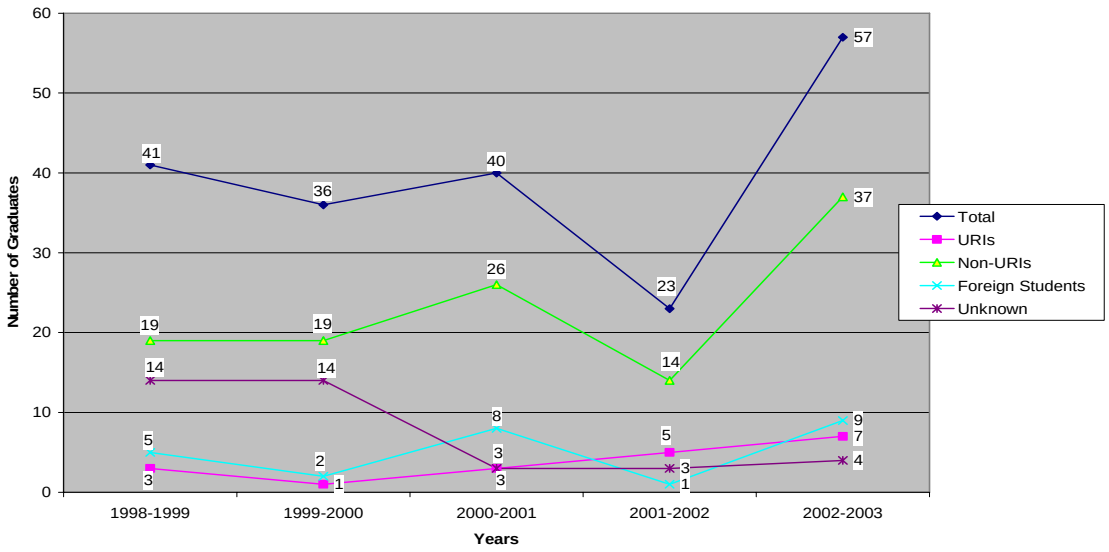
Figure D-3: Doctoral Programs in Health Services Research Enrollees, 1998 to 2002



Source: AcademyHealth, Racial/Ethnic Diversity in Health Services Research On-line Survey, 2004

Graduates. From 1998-1999 to 2002-2003, a total of 19 URIs (9.6 percent), 115 non-URIs (58 percent), 25 foreign students (13 percent), and 38 from the unknown race/ethnic group (19 percent) graduated from an HSR doctoral program. The highest number of URIs graduating from an HSR doctoral program was seven during the academic period of 2002-2003. Similarly, the largest number of non-URIs and foreign students graduating from the program—37 and 9, respectively—occurred during the same time period. See Figure D-4.

Figure D-4: Doctoral Programs in Health Services Research Graduates, 1998 to 2002



Source: AcademyHealth, Racial/Ethnic Diversity in Health Services Research On-line Survey, 2004

C. Enrollment Trends: Medical Schools, Public Health and Nursing

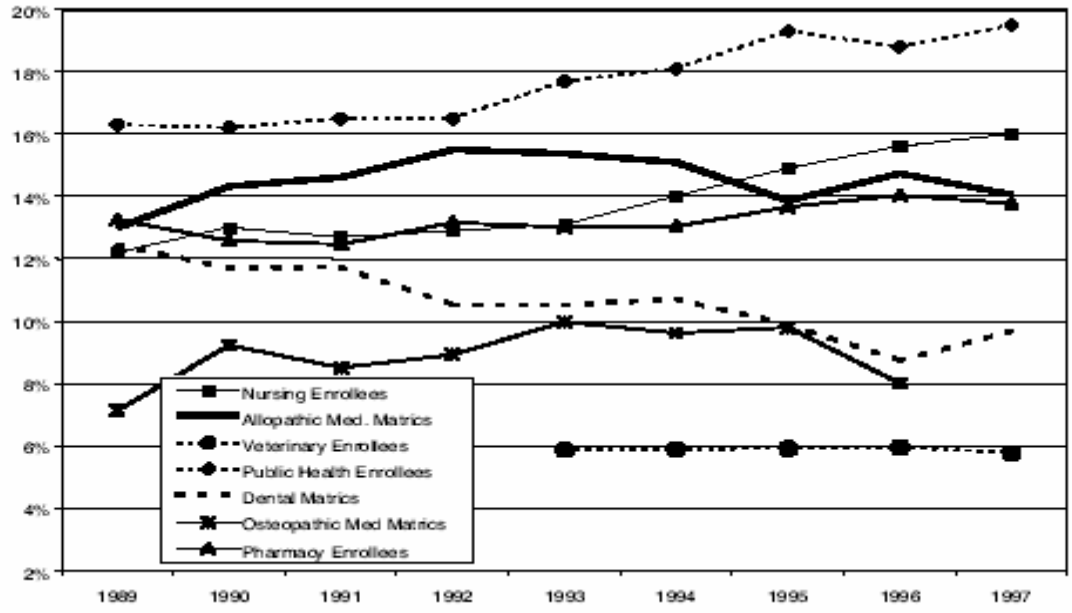
For comparison purposes, we researched and found URI enrollment trends in the other health professions, specifically in the fields of medicine, public health, and nursing.[11] See Figure D-5. From this chart, we see that the percentage of URIs enrolled in medical schools reached a high of about 15.5 percent in 1992 and dropped in succeeding years. The percentage of enrollment in 2000, which is not included in Figure D-5, was 13.8 percent and in 2003 it was 14 percent.[12]

The URI enrollment trend is different in public health and nursing—where an encouraging upward trend, beginning in 1993, is apparent. Despite this upward trend, however, it is evident in Figure D-5 that race/ethnic differences exists in the other health professions—with the highest percentage of URI enrollment at less than 20 percent. The percentage of URIs in the national population is 29 percent (U.S. Census, 2000).

[11] A study was conducted by Grumbach, Kevin et al. on the "Trends in Underrepresented Minority Participation in Health Professions Schools." Using national and state data, they looked at the unduplicated national counts of the number of applicants, acceptances, matriculants, and graduates from 1980 to 2000 in the fields of allopathic medicine, osteopathic medicine, dentistry, pharmacy, nursing, public health, and veterinary medicine. Their results appeared in "The Right Thing to Do, The Smart Thing to Do: Enhancing Diversity in Health Professions – Summary of the Symposium on Diversity in Health Professions in Honor of Herbert W. Nickens, M.D. (2001)," The National Academy of Sciences, and in the "Strategies for Improving the Diversity of the Health Professions," The California Endowment, August 2003.

[12] The 2003 enrollment information is from The Sullivan Commission Report, 2004.

Figure D-5: URMs* as % of Matriculants or Total Enrollees
All Professions



* Underrepresented Minorities

Source: "Strategies for Improving the Diversity of the Health Professions," The California Endowment, August 2003.

III. Discussion

Based on the information we have collected, it is difficult to determine whether there is a correlation between the existence of recruitment guidelines, retention programs, and fellowships on the numbers of URI students applying to, enrolling in, and graduating from HSR doctoral programs. The following scenarios, gathered from our online survey, illustrate the potential diversity in programs and their impact on URI graduation:

- Program A, a relatively new program, does not have any URI recruitment guidelines and retention programs, nor does it offer fellowships or stipends. Yet, it has comparable URI enrollments with those HSR programs that do have URI recruitment guidelines, retention programs, and fellowships/stipends. Although a small program, Program A is located in an area with a diverse community.
- Program B, a more mature program, has formal URI recruitment guidelines and a retention program but does not offer a URI fellowship. The number of URIs applying to and enrolling in the program reflects the diversity in its surrounding area. Graduates in the most recent years of our data collected shows increased diversity. From 2000-2001 to 2002-2003, six URIs, six non-URIs, and one foreign student have graduated from Program B. From 1998-1999 to 1999-2000, 10 whites and 2 foreign students graduated from the program. The six URI graduates from this program account for almost 11 percent of the total number of graduates in the data we collected. (See Figure 4.)
- Program C, a relatively new program, has extensive URI recruitment and retention guidelines, and offers a variety of funding sources. It has a relatively higher number of

URIs applying to and enrolling in its program compared to the other HSR program. It is interesting to note that Program C is not located in a diverse community. Could Program C's extensive recruitment and retention guidelines and its financing resources account for this institution's racially and ethnically diverse student population?

One of our project tasks was to determine if indeed there is a need to racially and ethnically diversify the field of HSR and to find out how we compared with the other health professions.

Despite the fact that our trend data cover a different time period from what is available from other health professions in Figure D-5, it is evident that racial and ethnic differences exist in the participation of the health workforce, in general, and in HSR, in particular. The racial and ethnic differences that exist in HSR are further evidenced by AcademyHealth's Annual Research Meeting attendance data and our membership data.

The lack of robust national data on health services research programs adds to our challenge of putting in perspective the issue of reducing racial and ethnic differences in HSR. To what extent does the field of HSR reflect the population it aims to serve? And the population of students successfully graduating from undergraduate, masters, or professional programs? Considering the difficulties encountered in collecting national information on health services research doctoral programs—a significant number of programs surveyed did not respond, incomplete data were submitted, and the presence of a significant number in the unknown race/ethnicity group—these underscore the importance and need for our field to collect race/ethnicity data more systematically, based on applicant or student self-report, with enough categories to make people feel comfortable making a choice.

Section E: Diversity Initiatives in Medicine and Public Health

In addition to learning what diversity initiatives are being undertaken in the fields of medicine and public health, we interviewed directors of two health-related minority programs.[13] While our original intent was to identify best practices, we note that there is limited high quality research evaluating the effectiveness of intervention programs and federal strategies to increase underrepresented individuals in the health professions (Grumbach, et al, 2003; Institute of Medicine, 2004). Instead, we compiled a sampling of associations, program initiatives, and Web sites intent on increasing opportunities for URIs in medicine and public health, and diversity in general. (Please refer to Appendix 3.) Our list is in no way exhaustive. For detailed information on all programs, we suggest the 2003 publication, *Strategies for Improving the Diversity of the Health Professions* by Kevin Grumbach, et al. The authors provide an overview of existing interventions and programs designed to increase URI educational achievement and entry into the health professions.

Of the initiatives we reviewed, all vary in scope and length. The initiatives we examined cut across several themes: academic preparation, funding, mentoring/networking, partnerships, and role models.

I. Academic Preparation

The lack of educational opportunities and achievement for many URIs accounts for the underrepresentation of these groups in the health professions (Institute of Medicine, 2004). While admissions and recruitment processes vary by institution and discipline, academic preparation programs can help undergraduate and graduate students prepare for the application process for medical school and other health professional schools. Programs vary in scope, with some offering workshops, paid internships, and/or site visits. Some programs expose potential students to research, other students and mentors, while others focus on the admissions process. For example, the Association of American Medical Colleges sponsors the Summer Medical Education Program (SMEP), a six-week student preparatory program for the medical school admissions process. Another example is the Public Health Summer Fellows (PHSF) Program, an eight-week summer program designed to provide practical experience in public health to minority undergraduate juniors, seniors, and recent graduates.

II. Funding

The costs associated with health professions training pose a significant barrier to many URIs[14]. There are a variety of federal and private sources of funding for URIs in the health professions that are mostly geared toward the clinical sciences rather than health services

[13] Informal interviews were conducted with Dr. Rena Pasick, Associate Professor, Medicine, University of California, San Francisco (UCSF) and Associate Director of Education and Outreach, Minority Training Program in Cancer Control Research (MTPCCR), UCSF Comprehensive Cancer Center, and Dr. Joan Reede, Dean for Diversity and Community Partnership, Harvard Medical School.

[14] Cooter, R., et al in *Evaluation & The Health Professions* assess the performance, career choice, and educational indebtedness of medical college students whose educational pursuits were assisted by the provision of financial support. The study provides support for maintaining economic diversity in medical education.

research. For example, the Health Resources and Services Administration (HRSA) is a large public funder of health professions programs in which underrepresented individuals participation is a direct goal or a grant factor.[15] [16] [17] Other private groups, such as the California Endowment, Robert Wood Johnson Foundation and the W.K. Kellogg Foundation contribute toward scholarships, loan repayment, and stipend programs, as well as other support programs to increase diversity. Please refer to Appendix 3 for further information.

III. Mentoring/Networking and Role Models

The limited number of role models and mentors in the professoriate may act as a barrier to producing URI graduates. Along with the underrepresentation of minorities in medical school enrollment, there are also disparities in minority representation among medical school faculty and residency training directors (Nelson, 2003). Of the programs examined that focused on increasing racial/ethnic diversity, all had a strong mentoring component. They also exposed underrepresented students, and in some cases, faculty, to individuals with PhDs and shared careers/experiences, who looked like them. Students and URI faculty had an opportunity to build networks and forge strong relationships with others in their cohort. This helps URIs overcome feelings of isolation. Through these networks students acquire survival and professional skills by being exposed to real life and professional issues.[18] For example, the Minority Training Program in Cancer Control Research (MTPCCR) has a five-day summer institute designed to showcase the opportunities and need for minorities researchers in cancer control. To motivate participants, MTPCCR exposes URIs to minority PhDs (role models). Another example is the Starlab Project, a six-week program designed to encourage URIs to pursue careers in the public health sciences. In this program, students are exposed to laboratory demonstrations, hands-on laboratory experiments, and interact with minority scientists from local colleges, agencies, and laboratories

[15] Table PCB-1, pages 276-283 in the 2004 IOM report provides an overview of federal and state health professions funding that directly or indirectly affects diversity in the health professions.

[16] HRSA administers Title VII and Title VIII of the Public Health Service Act. As described in the 2004 IOM report, "these titles authorize funding, through a variety of programs for students and institutions, in order to increase the quality of the education and training of the primary care provider workforce, with special attention to the geographic, racial, and ethnic diversity of the United States health-care workforce. Title VII applies to medicine and dentistry (and in many cases mental health), while Title VIII pertains to nursing.

[17] Grumbach, et al, reviewed HRSA's programs and noted that most focus on "disadvantaged" students. They further addressed whether or not there is a correlation between "disadvantaged" and :underrepresented" and concluded "that lack of basic education opportunities for many minority groups leads fundamentally to the underrepresentation of these groups in the health professions. They also indicated that underrepresented students are more likely that non-URIs to come from low-income families, and are therefore disproportionably affected by the rising costs of higher education and adverse trends in the availability of financial aid." (Grumbach et al 2003, Institute of Medicine, 2004)

[18] As one interviewee noted, "money by itself will not solve the issues. Our program provides nurturing and seeks to strengthen the individual and teach him/her how to decrease the isolation."

IV. Partnerships

Medicine and public health have a variety of partnership programs. For example, the Junior Fellows Program is a Partnership between the New York Academy of Medicine, New York City public schools, and regional academic medical centers introduces urban middle and high school students to current issues in health, science, medicine and medical research and engages them in conducting independent research in these areas. Another example is the CDC's Public Health Summer Fellows Program. Representing the combined efforts of the Morehouse School of Medicine, the Rollins School of Public Health at Emory University, and the CDC, this is an eight-week summer program that provides practical experience in public health to minority undergraduate juniors, seniors, and recent graduates.

V. Discussion

As noted earlier, the above are a sampling of efforts currently in use in the fields of medicine and public health. While some of these efforts are already being employed in HSR, i.e., funding programs and, to a limited extent, partnership programs between major academic institutions and minority-serving institutions, we believe that it is important for our field to look into creating HSR academic preparation programs, forming a network of role models and mentors, and creating/expanding partnership programs.

Section F: Best Practices

Based on information gathered from our site visits, focus groups, interviews with program directors, and review of initiatives in medicine and public health, we suggest the following as best practices for HSR institutions:

Diversity Statement

- Encourage higher education institutions to develop a clear statement on the importance of diversity. This will help cultivate an institutional culture and climate that supports and enhances diversity. As noted in a recent Institute of Medicine report, health professions educational institutions can improve admissions policies and reduce barriers to URI admission by developing a clear statement of mission that recognizes the value of diversity in health professions education (Institute of Medicine, 2004).

  In making the case for diversity in the university generally and in HSR specifically.[19] Some of the benefits faculty mentioned were:

  - Studying new topics and questions;
  - New ways to address these questions via more diverse theories and methods;
  - Increased ability to conduct research with underrepresented individuals and communities;
  - Scholars interested in community-based research and more applied HSR; and
  - The ability to meet funders' requirements and requests for greater diversity.

- Encourage higher education institutions to make a case for diversity and establish measurable outcomes.

Racial/Ethnic Data Collection

- Collect data by race and ethnicity to report URI participation in HSR.

Faculty Recruitment and Involvement

- Encourage higher education institutions to recruit underrepresented faculty.
- Elevate URIs into visible and influential decision-making positions by creating an academic environment where in faculty can achieve tenure and stability.[20]
- Help faculty become effective mentors and rewarding them for being good mentors to all students by factoring mentoring when up for tenure. Effective mentors involves helping students:

[19] As noted in The Sullivan Commission report, "diversity should be a core value in the health professions. Health professions schools should ensure that their mission statements reflect a social contract with the community and a commitment to diversity among their students, faculty, staff, and administration."
[20] This also echoes the Sullivan Commission report which calls for "health professions schools to increase the representation of minority faculty on major institutional committees, including governance board and advisory counsels."

    - Select courses, research topics, and other mentors or committee members
    - Develop the full range of required professional skills (e.g., writing articles, presenting research)
    - Access, or competing for, resources within the department or University or outside organizations
    - Address any particular professional issues or challenges underrepresented students might have. While some faculty are also comfortable helping students address personal issues or challenges that arise (e.g., family or work constraints), other faculty felt they should not discuss these issues with students.
- Encourage faculty and students to link to URI associations such as the HBCU Health Services Research Network, the Society for the Analysis of African American Public Health Issues, Inter-University Program for Latino Research, etc.

<u>Student Recruitment and Involvement</u>

- Expose white and underrepresented students (high school, undergraduate, and graduate or professional) to the field of HSR by summer programs or internships.
- Build relationships outside of traditional networks, for example, establish linkages with non-academic institutions and recruit individuals who are already working in the health care field.
- Develop relationships with other underrepresented faculty and students in other universities and departments.
- Link with HBCU's and other universities and organizations that enroll and graduate a relatively large number of underrepresented individuals to educate and recruit potential URI students.
- Market HSR to students earlier on in their careers.
- Value all tracks/programs equally—i.e., community-based research is on par with secondary data analysis.
- Reach out to admissions officers about HSR funding opportunities, i.e., National Research Service Award (NRSA) awards.
- Recruit students from various disciplines, graduate levels of training, and experiences.
- Add online recruitment and retention guidelines that are currently in place in some HSR institutions.
- Offer more methodological and substantive courses of great interest to URIs or include in existing courses more content and examples of great interest to such students. (We, however, would like to caution against assuming that URIs are only interested in certain methods or substantive areas.) For example:
    - The focus on people and improving their health and health care;
    - Particular sub-areas of interest (e.g., access, disparities) and diverse methods (e.g., qualitative as well as quantitative, community based as well as more distanced research);
    - Fellowship and awards that ease the financial burden and increase the visibility and prestige of the field; and,
    - Future career opportunities.

- Encourage peer mentoring.

Other:

- Reduce the financial burden associated with pursuing a career in HSR by fellowships supported by the department, federal agencies, and foundations (e.g., AHRQ, CDC, NIH, RWJF).
- Find or develop financial and non-financial resources to help underrepresented students succeed.
- Work at the department or program, and individual faculty level, to better understand the concerns and needs of underrepresented students.
- Use a variety of mechanisms to try to improve student qualifications and build other important professional skills. Some efforts noted by respondents included:
    - Encourage students to take or re-take courses prior to starting their core curriculum;
    - Provide tutors for particular subjects (e.g., epidemiology, statistics, health economics). Some noted that they provided tutors to anyone in the class, not just underrepresented students, which actually was helpful since the criteria for tutoring was need and white students could take advantage of it as well;
    - One-on-one assistance from advisors/committee members;
    - Provide or direct students to seminars or workshops on other important professional skills, such as writing, making presentations, and grant writing.
- Increase the prestige of a career in HSR with fellowships and awards sponsored by the department or outside organizations (e.g., AHRQ's Dissertation Grant, AcademyHealth Dissertation Award).
- Build a "critical mass" of underrepresented faculty and students.

Section G: Next Steps and Conclusion

I. Next Steps

While many universities and HSR programs are intent on increasing opportunities for URIs, there is still a considerable lack of URIs in the health professions, in general, and health services research, in particular. There are also limited URI role models—as faculty and in positions of power within higher education institutions. While there are some efforts supported by the federal government and foundations to help address these problems, they are not sufficient to close the wide gap that currently exists.

Based on the data gathered from our analysis, we would like to explore with the Foundation the creation of a five-year fellowship and/or a one-week intensive summer program. It is our hope that as URIs attend graduate school to pursue a higher degree in health services research, the percentage of URIs actively involved in this field will increase. Aimed at highly competitive URIs who have demonstrated the ability and desire to pursue graduate careers in HSR, our proposed fellowship will provide a steady stream of researchers into the workforce, creating a pool of URIs who will eventually become mentors and role models.

In tandem with the fellowship, it is important to create a feeder program that will encourage individuals to pursue an advanced degree in HSR. This will include reaching out to qualified individuals who otherwise do not know that there is such a field as health services research.

As noted in this report, many study respondents noted they had found HSR almost accidentally, not knowing the field existed until they began to search for health-related programs. Others were unaware they were working in health services research. One interviewee noted, *"health services research is a big, esoteric topic that you learn about later on only through the application process."* We will expose individuals to health services research via our one-week intensive summer program.

Ideally, we would like to see both the fellowship and the summer program funded. From the short-term perspective, the benefit of a fellowship is that it will assist URIs already contemplating an HSR program, thereby increasing the probability of higher URI graduation rates and retention rates of URI researchers. From the long-term perspective, the summer program will create a steady stream of highly-qualified URI applicants.

Following this report, we will submit to the Foundation a short concept paper outlining the structure of a proposed fellowship and summer program.

II. Conclusion

This grant has enabled us to develop a very good understanding of the barriers to a diverse HSR workforce, but more importantly, concrete strategies for overcoming them. Applying the suggested best practices at both the program and university levels would increase the exposure of HSR as a viable career and would also make those involved in HSR more aware of the importance of diversity. As diversity increases in this field, more

underrepresented individuals will have the opportunity to ascend to leadership at the national, state, and local levels in both the public and private sectors, thereby creating more role models and influencing the research and policy agendas that shape the nation's health care system. This, in turn, will help address the problems of health disparities in the nation.

AcademyHealth is poised to assist in this endeavor and is committed to increasing the involvement of URIs in various facets of its activities.

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