United States Government Accountability Office

GAO

Report to Congressional Requesters

February 2006

HEALTH PROFESSIONS EDUCATION PROGRAMS

Action Still Needed to Measure Impact

GAO-06-55

Highlights of GAO-06-55, a report to congressional requesters

February 2006

HEALTH PROFESSIONS EDUCATION PROGRAMS

Action Still Needed to Measure Impact

Why GAO Did This Study

For fiscal years 1999 through 2005, the Health Resources and Services Administration (HRSA), an agency within the Department of Health and Human Services (HHS), spent about $2.7 billion to fund the more than 40 health professions education programs authorized under title VII and title VIII of the Public Health Service Act. These programs include those providing grants to institutions, direct assistance to students, and funding for health workforce analyses. Title VII includes programs related to the education of providers, such as primary care physicians. Title VIII includes programs related to nursing education. Most of these programs were last reauthorized in 1998. GAO reviewed changes in funding and in the number of these programs since 1998, HRSA's goals and assessment of the programs, and HRSA's national health professions workforce projections.

GAO reviewed relevant laws and agency documents and data, and interviewed HRSA officials and representatives of health professions education associations.

What GAO Recommends

GAO recommends that HRSA develop a strategy and time frames to regularly update and publish national health professions workforce projections. HRSA agreed with GAO's conclusion that updated workforce supply and demand projections are vital for informed decision making about health professions programs.

www.gao.gov/cgi-bin/getrpt?GAO-06-55.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Leslie G. Aronovitz at (312) 220-7600 or aronovitzl@gao.gov.

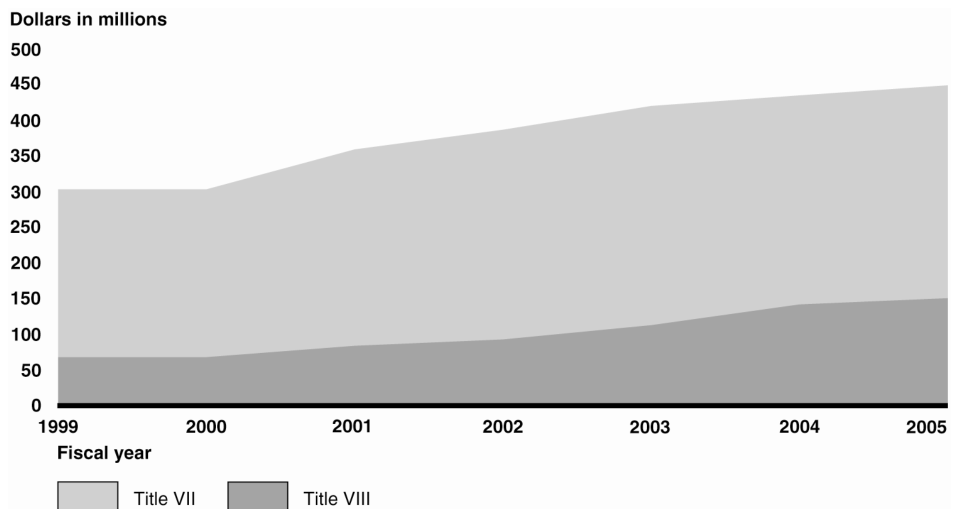
What GAO Found

Funding for title VII and title VIII programs increased from about $300 million in fiscal year 1999 to more than $450 million in fiscal year 2005, and the overall number of these programs also increased since reauthorization in 1998. From fiscal years 1999 through 2005, funding for title VII programs rose by about one-fourth, while that for title VIII programs more than doubled. The overall numbers of title VII and title VIII programs administered by HRSA increased from 46 in fiscal year 1998 to 50 in fiscal year 2004. The number of title VII programs remained the same, while the number of title VIII programs increased.

HRSA has published performance goals for title VII and title VIII health professions education programs but cannot fully assess the programs' effectiveness because the goals do not apply to all the health professions education programs, and the data for tracking progress are problematic. Recognizing the need for a better means of measuring the results of title VII and title VIII programs, HRSA is developing new performance goals and measures for them. The effectiveness of these efforts will depend upon the agency's ability to collect complete and timely data to assess progress toward these new goals.

HRSA has published few recent national workforce projections. In the past decade, the agency has published national supply and demand projections for the nurse and pharmacist workforces but no national projections for the physician and dentist workforces. Yet regular reassessment of future health workforce supply and demand is key to setting policies as the nation's health care needs change.

Funding for Title VII and Title VIII Programs, Fiscal Years 1999–2005



Source: GAO analysis of HRSA data.

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Abbreviations

AMA	American Medical Association
CMS	Centers for Medicare & Medicaid Services
COGME	Council on Graduate Medical Education
GPRA	Government Performance and Results Act
HHS	Department of Health and Human Services
HRSA	Health Resources and Services Administration
NELRP	Nursing Education Loan Repayment Program
OMB	Office of Management and Budget

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United States Government Accountability Office
Washington, DC 20548

February 28, 2006

The Honorable Michael B. Enzi
Chairman
Committee on Health, Education, Labor, and Pensions
United States Senate

The Honorable Judd Gregg
United States Senate

An appropriate supply, mix, and distribution of health professionals—today and in the future—is vital to ensuring that all Americans have adequate access to health care. For fiscal years 1999 through 2005, the Health Resources and Services Administration (HRSA), an agency within the Department of Health and Human Services (HHS), spent about $2.7 billion to fund health professions education programs authorized under title VII and title VIII of the Public Health Service Act. Administered by HRSA, the many title VII and title VIII programs include those providing grants to institutions training health professionals; direct assistance to students in the form of scholarships, loans, or repayment of educational loans; and funding for health workforce analyses. Title VII programs include those related to the education of providers, such as primary care physicians, physician assistants, general dentists, pediatric dentists, and allied health practitioners;[1] programs related to education of the public health workforce; and programs related to the analysis of health workforce issues, such as estimates of supply and demand. Title VIII programs include those related to basic and advanced nursing education programs, which are designed to increase nursing workforce diversity, promote career advancement, and improve retention. Most of the health professions education programs were last reauthorized in 1998.[2]

[1]Allied health practitioners include, for example, audiologists, dental hygienists, clinical laboratory technicians, occupational therapists, physical therapists, medical imaging technologists, and speech pathologists.

[2]Most title VII and title VIII programs were last reauthorized by the Health Professions Education Partnership Act of 1998, Pub. L. No. 105-392, 112 Stat. 3524. Some nursing programs were authorized or reauthorized by the Nurse Reinvestment Act of 2002, Pub. L. No. 107-205, 116 Stat. 811.

For more than a decade, our reviews of title VII and title VIII programs have raised questions about HRSA's ability to assess the programs' effectiveness.[3] For example, before the 1998 reauthorization, we noted that the programs' effectiveness would remain difficult to measure as long as the health professions education programs were authorized to support a broad range of health care objectives.[4] For fiscal years 2002 through 2005, HRSA's budget justifications have questioned the need for continued federal support of many of these health professions education programs, and a review by the Office of Management and Budget (OMB) for the fiscal year 2004 budget questioned their effectiveness.[5]

In preparation for congressional consideration of the next reauthorization of title VII and title VIII programs, you asked us to review the programs, including changes after the 1998 reauthorization. In this report, we provide information on (1) changes in funding and in the number of title VII and title VIII health professions education programs since the 1998 reauthorization; (2) HRSA's stated goals for the programs and the agency's efforts to measure progress toward meeting them; and (3) national health professions workforce projections developed by HRSA.

To conduct our work, we analyzed pertinent agency documents and interviewed HRSA officials. We also analyzed data from HRSA's grants management system, reviewed relevant laws, and interviewed representatives of the Health Professions and Nursing Education Coalition and the Federation of Associations of Schools of the Health Professions. We examined funding for title VII and title VIII programs for fiscal years 1999 through 2005.[6] To analyze the number of title VII and title VIII programs HRSA administered, we counted (1) programs that awarded funds competitively through grants or cooperative agreements[7] and that

[3]See "Related GAO Products" at the end of this report.

[4]GAO, *Health Professions Education: Clarifying the Role of Title VII and VIII Programs Could Improve Accountability*, GAO/T-HEHS-97-117 (Washington, D.C.: Apr. 25, 1997).

[5]Office of Management and Budget, *Program Assessment Rating Tool*, http://www.whitehouse.gov/omb/budget/fy2006/pma/hhs.pdf, downloaded Aug. 9, 2005. The most recent OMB assessment of the health professions programs took place for the fiscal year 2004 budget.

[6]We excluding funding for one title VII program—Health Education Assistance Loans—because the program was not authorized to guarantee new loans to student borrowers during that period.

[7]Referred to as "grants" in this report.

announced funding availability separately or had a separate selection panel[8] and (2) programs providing direct assistance, such as student loans to individuals, regardless of whether the loan program was using current appropriations.[9]

For information on HRSA's stated goals and measures of performance in meeting these goals and on the agency's plans for the future, we reviewed HRSA's annual performance plans, budget justifications, and strategic planning documents, and we attended HRSA's Bureau of Health Professions' first all-grantee conference in June 2005. Regarding the workforce supply and demand projections HRSA developed, we focused on the most recent projected estimates of national supply and demand for physicians, dentists, nurses, and pharmacists.[10] We also reviewed physician workforce reports published by the Council on Graduate Medical Education (COGME),[11] which based its physician workforce projections on HRSA-developed methodologies. We assessed the reliability of grants and other funding data used in our review by discussing with agency officials validation and internal controls for HRSA grants data and comparing the aggregate data with similar aggregate data from other sources. We determined that the funding data were sufficiently reliable for our purposes. Although we identified problems with the reliability of other agency data, such as those used to measure program performance, we included them for illustrative purposes. We conducted our work in

[8]We used the separate selection panel criterion only for programs funded in fiscal year 2004.

[9]We excluded advisory groups authorized under title VII or title VIII from our counts of programs.

[10]In addition to the national workforce projections discussed in this report, HRSA and its six regional centers issue reports—such as state health workforce profiles for each state, the District of Columbia, Puerto Rico, and the Virgin Islands—containing information about the supply; demand; distribution; education; and use of physicians, nurses, dentists, and 20 other health professionals. The scope of our review was limited to HRSA's estimates of national supply and demand.

[11]COGME, established under title VII, is required to make recommendations to the Secretary of HHS and Congress on several issues, including the supply and distribution of physicians in the United States; current and future shortages or excesses of physicians in medical and surgical specialties and subspecialties and appropriate federal policies with respect to such supply, distribution, shortages, or excesses; and deficiencies in and needs for improvement in databases concerning the supply and distribution of physicians in the United States. Public Health Service Act § 762 (codified at 42 U.S.C. § 294o). The views expressed in COGME's reports are solely those of the council and do not necessarily represent the views of HRSA or the U.S. government.

accordance with generally accepted government auditing standards from June 2004 through January 2006.

Results in Brief

After reauthorization in 1998, overall funding for title VII and title VIII programs increased from about $300 million in fiscal year 1999 to more than $450 million in fiscal year 2005, and the overall number of these programs also increased. From fiscal years 1999 through 2005, funding for title VII programs rose by about one-fourth, while that for title VIII programs more than doubled. The overall number of title VII and title VIII programs administered by HRSA increased from 46 in fiscal year 1998 to 50 in fiscal year 2004; this overall increase was due to an increase in the number of title VIII programs.

HRSA has published performance goals for the title VII and title VIII health professions education programs, but these goals do not apply to all the health professions education programs, and the data for tracking progress are problematic. These performance goals, prepared as part of HHS's annual reporting under the Government Performance and Results Act (GPRA) process,[12] are spelled out in HRSA's fiscal year 2006 budget justification. In measuring progress toward meeting these goals, the agency relies on data we and others have found to be problematic. For example, although one performance goal is to increase the proportion of health professionals supported by title VII and title VIII programs who enter practice in underserved areas, HRSA does not have complete data that track the practice locations of these health professionals. Recognizing the need for a better means of measuring the results of title VII and title VIII programs, HRSA has since 2002 been developing a new strategic plan for the health professions education programs, which includes program goals and information on how the agency proposes to measure performance.

Although HRSA is responsible for providing health professions workforce information to policymakers, HRSA has in the past decade published national supply and demand projections for the nurse and pharmacist workforces but no national projections for the physician and dentist workforces. According to HRSA officials, the agency is preparing a report

[12]The Government Performance and Results Act of 1993 requires executive agencies to develop agencywide performance goals and indicators and to report progress annually. Pub. L. No. 103–62, § 4, 107 Stat. 285, 286.

to Congress that will provide information about the health workforce for 30 health professions, including national supply and demand projections for physicians, pharmacists, and nurses. Estimating future health workforce supply and demand on a regular basis is important because estimates need to be revised periodically to reflect changes in the health care environment. In 2005, an HHS advisory council strongly recommended that the nation develop systems to track physician workforce supply, demand, and distribution and undertake a comprehensive reassessment within the following 4 years to guide future decisions on medical education capacity.

We are recommending that HRSA develop a strategy and time frames to regularly update and publish national health professions workforce projections. In commenting on a draft of this report, HRSA agreed with our conclusion that updated workforce supply and demand projections are vital for informed decision making about health professions programs.

Background

In response to a shortage of health care providers, Congress amended title VII of the Public Health Service Act in 1963[13] and established title VIII in 1964.[14] These titles have been amended over time and now authorize funding for a variety of programs with diverse objectives. As noted in the Senate report accompanying the 1998 reauthorization legislation, by the mid-1970s, two specific areas of need had emerged: overall shortages in rural and inner-city communities and an imbalance in the supply of primary care providers as compared with specialists. Subsequent revisions to title VII focused on encouraging health care workers to practice in underserved areas, increasing the number of primary care providers, increasing enrollment of minority and disadvantaged students, and developing faculty. Revisions to title VIII focused on training advanced practice nurses; enrolling disadvantaged students; strengthening basic nurse education and practice; and, most recently, fostering nurse retention by promoting career development and improving patient care delivery systems.

[13]Health Professions Educational Assistance Act of 1963, Pub. L. No. 88-128, 77 Stat. 164. See S. Rep. No. 88-485, at 3 (1963).

[14]Nurse Training Act of 1964, Pub. L. No. 88-581, 78 Stat. 1035. See S. Rep. No. 88-1378, at 3 (1964).

The 1998 reauthorization resulted in the grouping of the more than 40 programs in existence at the time into seven clusters. The Senate report accompanying the reauthorization legislation stated that "the bureaucracy required to administer the existing programs should be simplified and reduced" and also stated the purpose for each cluster (see table 1).[15] According to the Senate report, one purpose of five of the seven clusters was to provide administrative flexibility and simplification. The report also stated that one objective of the reauthorization was to allow for "better targeting of limited resources to address national health workforce training and distribution deficits."

Table 1: Title VII and Title VIII Programs in Existence Before, and Organized into Clusters After, 1998 Reauthorization

Programs in place before 1998 reauthorization[a]	Cluster name[b]	Cluster purpose[c]
Title VII		
Health Education Assistance Loans Health Professions Student Loans Loans for Disadvantaged Students Primary Care Loans	Student Loans	Continue (1) loan programs that do not require federal appropriations or guarantee the availability of loans for health professions students and (2) a loan program for the disadvantaged[d]
Centers of Excellence Exceptional Financial Need Scholarships Faculty Loan Repayment Program Financial Assistance for Disadvantaged Health Professions Students Health Careers Opportunity Program Minority Faculty Fellowship Program Cooperative Agreements for Partnerships for Health Professions Education Scholarships for Disadvantaged Students Program	Health Professions Training for Diversity	Provide for the training of minority and disadvantaged health professionals to improve health care access in underserved areas and to improve representation in the health professions[d]
Departments of Family Medicine Faculty Development in Family Medicine Faculty Development in General Internal Medicine and General Pediatrics Graduate Training in Family Medicine Physician Assistants Training Pre-doctoral Training in Family Medicine Residencies and Advanced Education in the Practice of General Dentistry Residency Training in General Internal Medicine and General Pediatrics	Training in Family Medicine, General Internal Medicine, General Pediatrics, Physician Assistants, General Dentistry, and Pediatric Dentistry	Provide for the training of family physicians, general internists, general pediatricians, physician assistants, general dentists, and pediatric dentists to improve access to and quality of health care in underserved areas and to assure outside input regarding primary care training programs[d]

[15]Senate Report No. 105-220 at 13 and 19 (1998) (accompanied legislation that became Health Professions Education Partnership Act of 1998, Pub. L. No. 105-392, 112 Stat. 3524). The Senate report is the only congressional report accompanying Pub. L. No. 105-392.

Programs in place before 1998 reauthorization[a]	Cluster name[b]	Cluster purpose[c]
Title VII		
Allied Health Project Grants Basic/Core Area Health Education Centers Chiropractic Demonstration Project Grants Geriatric Education Centers Geriatric Fellowships Health Education and Training Centers Podiatric Primary Care Residency Training Grants for Interdisciplinary Training for Health Care for Rural Areas State-Supported Model Area Health Education Centers	Interdisciplinary, Community-Based Linkages	Provide support for (1) training centers remote from health professions schools to improve and maintain the distribution of health providers in underserved areas, (2) geriatric education and geriatric faculty fellowships, and (3) interdisciplinary training projects[d]
Center for Health Workforce	Health Professions Workforce Information and Analysis	Provide for (1) the development of information on the health professions workforce and the analysis of workforce-related issues, (2) the development of necessary information for decision making regarding future directions in health professions and nursing programs, and (3) continued analysis of issues affecting graduate medical education
Cooperative Agreement to Support Innovative Projects Relating to Public Health Education and Services[e] Dental Public Health Specialty Training Grants Health Administration Traineeships and Special Projects Residency Training in Preventive Medicine Public Health Special Project Grants Public Health Traineeships to Schools of Public Health and Other Public and Nonprofit Private Institutions	Public Health Workforce	Provide for an increase in the number of individuals in the public health workforce and enhance the quality of this workforce
Title VIII		
Advanced Nurse Education Nurse Anesthetist Program: Program Grants Nurse Anesthetist Program: Fellowships Nurse Anesthetist Program: Traineeships Nurse Practitioner/Nurse Midwifery Nursing Education Loan Repayment Program Nursing Education Opportunities for Individuals from Disadvantaged Backgrounds Nursing Special Projects Nursing Student Loans[f] Professional Nurse Traineeships	Nursing Workforce Development	Provide for the training of basic and advanced-degree nurses to improve access to and quality of health care in underserved medical and public health areas[d]

Source: GAO analysis.

[a]Include (1) programs that awarded funds competitively through grants or cooperative agreements and that announced funding availability separately and (2) programs providing direct assistance, such as student loans to individuals, regardless of whether the loan program was using current appropriations. Table does not include two advisory groups, COGME and the National Advisory Council on Nurse Education and Practice, operating in fiscal year 1998. Names for grant and cooperative agreement programs reflect those used in the *Federal Register* or other program announcements.

[b]Cluster names reflect headings of parts and subparts of title VII and of title VIII of the Public Health Service Act, as amended by Pub. L. No. 105-392, and in some cases differ slightly from those in Senate Report No. 105-220.

[c]Cluster purposes as provided in Senate Report No. 105-220.

[d]Another purpose for this cluster, cited in Senate Report No. 105-220, was to provide administrative flexibility and simplification.

[e]This program includes a cooperative agreement with the Association of Schools of Public Health (ASPH) to provide information to, and coordinate with, the schools of public health that inquire about grant funding opportunities under this program. HRSA has discretion to determine whether projects are funded.

[f]Senate Report No. 105-220 included the Nursing Student Loans program in the student loans cluster. Because this program is authorized under title VIII, however, we included it in the nursing workforce development cluster.

The programs within each cluster are tied to similar purposes. For example, one cluster—Health Professions Training for Diversity—includes programs targeting minorities or disadvantaged individuals. Another cluster—Health Professions Workforce Information and Analysis—includes work conducted by and for HRSA on health workforce issues, including HRSA's National Center for Health Workforce Analysis, which received less than $1 million per year in fiscal years 1999 through 2005.[16] Title VII also authorizes COGME, which provides advice and recommendations to the Secretary of HHS and Congress on the supply and distribution of physicians in the United States and other issues.[17] According to COGME's charter, "the Council periodically shall prepare and transmit a report, to the Secretary and to the Committee on Health, Education, Labor and Pensions (formerly the Committee on Labor and Human Resources) of the Senate, and the Committee on Commerce (formerly the Committee on Energy and Commerce) of the House of

[16]The national center also supports work by six regional centers, which conduct cross-disciplinary assessments of the health workforce, focusing on issues at the state and regional levels. In addition, the national center facilitates research projects contracted and funded by programs within other clusters; for example, the national center facilitates nursing workforce research. The congressional conference agreement for the Department of Health and Human Services' appropriation for fiscal year 2006 did not include funding for the Health Professions Workforce Information and Analysis cluster. H.R. Conf. Rep. No. 109-337 at 135 (2005).

[17]Three advisory groups besides COGME have received contract and staff support from HRSA and have produced a series of reports on workforce issues. These groups, authorized by title VII or title VIII of the Public Health Service Act, are the National Advisory Council on Nurse Education and Practice; the Advisory Committee on Training in Primary Care Medicine and Dentistry; and the Advisory Committee on Interdisciplinary, Community-Based Linkages.

Representatives" with respect to supply and distribution of physicians in the United States and other issues.

For fiscal years 2002 through 2005, HRSA's budget justifications proposed reducing overall funding for the health professions education programs—reducing or eliminating funding for most of the title VII clusters while requesting increased funding for the title VIII nursing cluster. The agency's budget justification for fiscal year 2005 cited a number of reasons for reducing or eliminating federal funding for many title VII programs.[18] These reasons included the availability of alternative sources of funding, such as larger federal programs and state, local, and private programs. For example, when discussing the reason for not requesting funds for geriatric education and training under title VII, HRSA's fiscal year 2005 budget justification stated that recipients of geriatric education grants can secure support from other sources, including other federal sources. As part of the Medicare program, HHS's Centers for Medicare & Medicaid Services (CMS) makes payments for graduate medical education totaling billions of dollars each year—nearly $8 billion in fiscal year 2004.[19] The Department of Veterans Affairs and the Department of Labor administer additional programs that support health professions education. (See app. I for information on other federal sources of funding for health professions education.)

Funding for and Overall Number of Title VII and Title VIII Health Professions Education Programs Increased

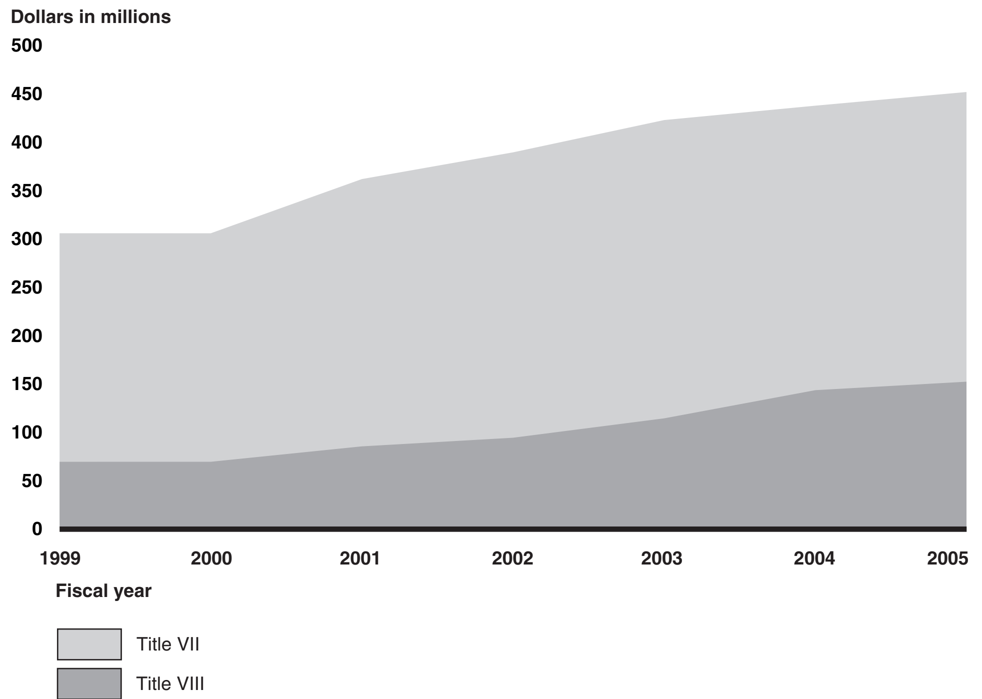
After the 1998 reauthorization, overall funding for title VII and title VIII programs generally increased, as did the total number of programs. From fiscal years 1999 through 2005, overall funding for these programs rose by 48 percent, from about $304 million to slightly more than $450 million. The overall number of title VII and title VIII programs administered by HRSA also increased, from 46 programs before reauthorization to 50 programs in fiscal year 2004, because of an increase in the number of title VIII programs. The allocation of funding for these programs is affected by factors such as statutory formulas and commitments of future funding to grant recipients.

[18]Department of Health and Human Services, Health Resources and Services Administration, *Fiscal Year 2005 Justification of Estimates for Appropriations Committees*, vol. I, *Budget* (Washington, D.C.: n.d.).

[19]Medicare's graduate medical education payments are made to teaching hospitals for both direct and indirect graduate medical education costs on the basis of factors such as the number of physicians being trained, Medicare's share of patient days in the hospital, and the hospital's ratio of residents to beds.

Over the period from fiscal years 1999 through 2005, funding for both title VII and title VIII programs increased (see fig. 1). Title VII funding increased from about $236 million to about $300 million, or 27 percent, and title VIII funding increased from about $68 million to about $151 million, or 122 percent.

Figure 1: Funding for Title VII and Title VIII Health Professions Education Programs, Fiscal Years 1999–2005

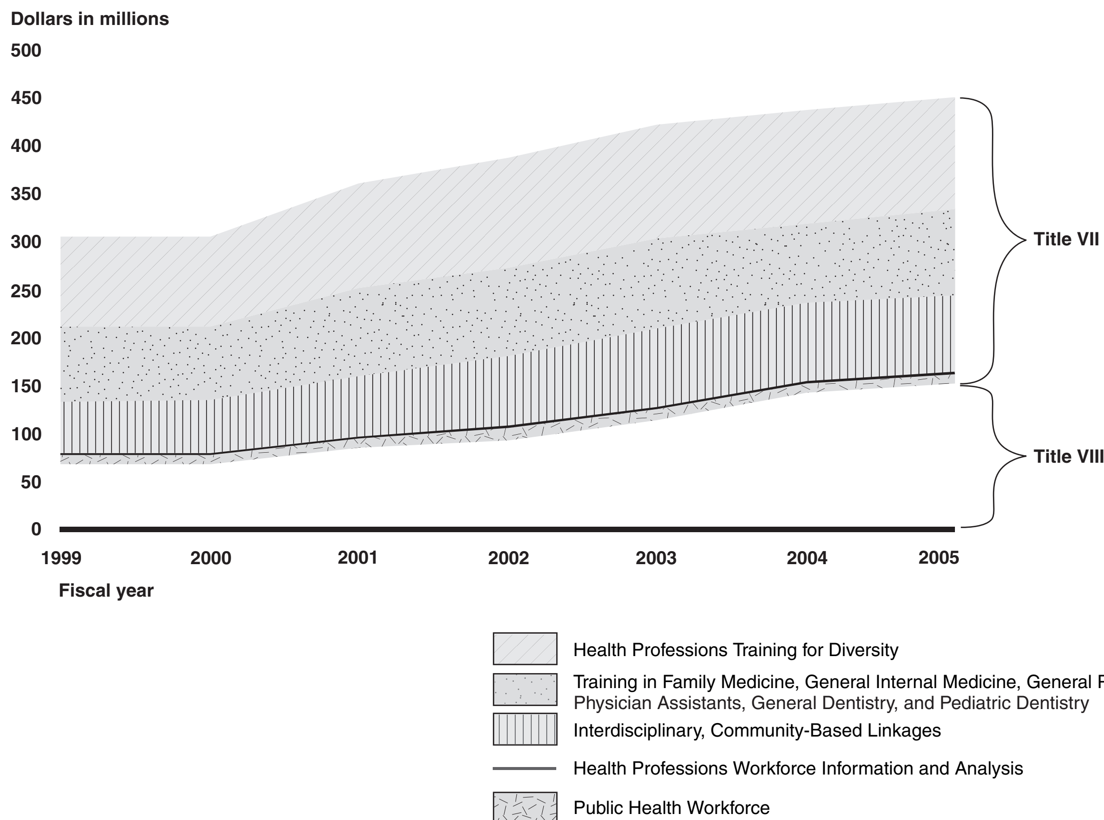


Source: GAO analysis of HRSA data.

Note: Graph excludes student loan programs. The Health Education Assistance Loans program was not authorized to guarantee new loans to student borrowers during this period. The remaining loan programs have received no new federal funds since fiscal year 1998.

Among title VII's five program clusters—those other than the cluster for student loans[20]—the proportion of funding allocated to each cluster changed little from fiscal year 1999 through 2005. Throughout this period, one of the clusters—Health Professions Training for Diversity—received the largest share (around 39 percent annually) of title VII funding (see fig. 2).

Figure 2: Funding for Title VII Health Professions Education Programs, Fiscal Years 1999–2005



Health Professions Training for Diversity

Training in Family Medicine, General Internal Medicine, General Pediatrics, Physician Assistants, General Dentistry, and Pediatric Dentistry

Interdisciplinary, Community-Based Linkages

Health Professions Workforce Information and Analysis

Public Health Workforce

Source: GAO analysis of HRSA data.

Note: Graph excludes student loan programs. The Health Education Assistance Loans program was not authorized to guarantee new loans to student borrowers during this period. The remaining loan programs have received no new federal funds since fiscal year 1998.

[20]We excluded the student loan cluster from this analysis. The Health Education Assistance Loans program was not authorized to guarantee new loans to student borrowers during this period. The remaining loan programs have received no new federal funds since fiscal year 1998, although HRSA continues to administer them.

Although the Senate report accompanying the 1998 reauthorization legislation indicated that one of the purposes of five of the seven clusters was to provide administrative flexibility and simplification, the 1998 reauthorization may not have had this effect. The overall number of title VII and title VIII programs administered by HRSA increased. The number of title VII programs HRSA administered (36) was the same in fiscal year 1998 before reauthorization as in fiscal year 2004. Over the same period, the number of title VIII programs HRSA administered increased from 10 to 14.[21] (App. II lists programs that HRSA administered in 2004.[22]) Regarding flexibility, several factors—including provisions of the Public Health Service Act that specify how some program funds must be allocated and commitments of future funding to grant recipients—affect how HRSA allocates available funds among and within the health professions programs.

- *Statutory formulas for allocating funding:* The Public Health Service Act, as amended by the 1998 reauthorization, specifies how funds are to be allocated among the institutions and individuals that apply for and receive certain health professions education program grant awards. For example, the act authorizes funding for grants within the cluster for training in family medicine, general internal medicine, general pediatrics, physician assistants, general dentistry, and pediatric dentistry by allocating it among programs within various disciplines according to a specified formula.[23]

[21]The Nurse Reinvestment Act of 2002 authorized additional title VIII programs. Pub. L. No. 107-205, §§ 103, 201, 202, 116 Stat. 811, 813, 815, 816 (2002).

[22]We used HRSA's database to identify the title VII and title VIII grant programs that received funding in fiscal year 2004. Fiscal year 2004 was the most recent year for which data were available at the time of our analysis. We also contacted HRSA officials to obtain information on other title VII and title VIII programs, such as scholarship programs, that HRSA administered in those years. We counted (1) programs that awarded funds competitively through grants or cooperative agreements and that announced funding availability separately or had a separate selection panel and (2) programs providing direct assistance, such as student loans to individuals, regardless of whether the loan program received any new appropriations.

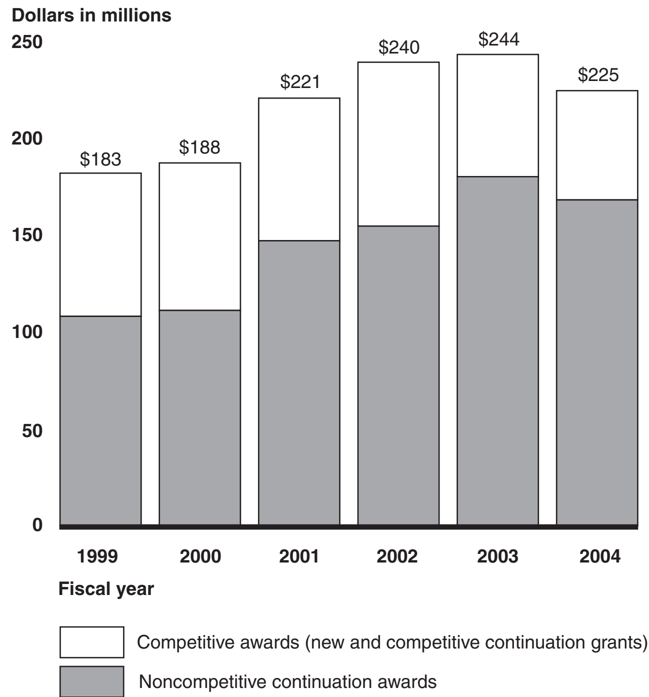
[23]The act specifies that, of the $78.3 million authorized to be appropriated for fiscal year 1998, not less than $49.3 million be made available to programs of family medicine, of which not less than $8.6 million be made available for family medicine academic administrative units, not less than $17.7 million be made available to programs of general internal medicine and general pediatrics, not less than $6.8 million be made available to programs related to physician assistants, and not less than $4.5 million be made available to programs of general or pediatric dentistry. If the amounts appropriated in subsequent fiscal years are less than the amount authorized to be appropriated for 1998, the act directs the secretary to reduce the amounts made available to the programs on a proportional basis. See Public Health Service Act, § 747, as amended (codifed at 42 U.S.C. § 293k).

Another example is the formula for allocating grant funding among recipients of one of the programs—Centers of Excellence—within the Health Professions Training for Diversity cluster. This program assists schools in supporting health professions education for underrepresented minorities. The Public Health Service Act specifies formulas for allocating funding among (1) centers of excellence at certain historically black colleges and universities, (2) Hispanic centers of excellence, (3) Native American centers of excellence, and (4) centers of excellence at other institutions.[24]

- *Commitments of future funding to noncompetitive continuations of existing grants:* There are three types of health professions education grant awards: (1) new grants, which are awarded to institutions that do not have a current grant under a given program for a particular purpose; (2) noncompetitive continuations of existing grants, which provide funding for the second and subsequent years of projects approved for several years, such as for the second and third years of a 3-year project period; and (3) competitive continuations, which are awarded competitively to current grantees that have applied for additional funding for subsequent years. According to a HRSA official responsible for grants management, annual appropriations are applied to noncompetitive continuations of existing grants first; the remaining grant program funds are available for new and competitive continuation grant awards. In fiscal year 2004, for example, the share of funds committed to noncompetitive continuations amounted to about 75 percent of title VII grant funding, leaving about 25 percent for new and competitive continuation grants (see fig. 3). From fiscal years 1999 through 2004, the proportion of the funds available for new and competitive continuation grants ranged from a high of about 41 percent in fiscal year 1999 to a low of about 25 percent in fiscal year 2004.

[24]See Public Health Service Act, § 736, as amended (codified at 42 U.S.C. § 293).

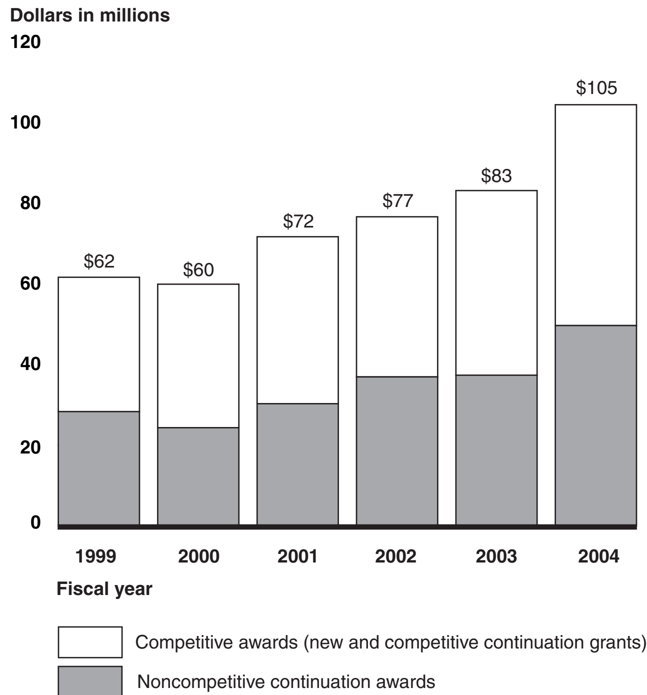
Figure 3: Title VII Funding for New and Competitive Continuation Grants and for Noncompetitive Continuations, Fiscal Years 1999–2004



Source: GAO analysis of HRSA data.

The share of title VIII grant funding awarded to noncompetitive continuations was smaller (approximately 48 percent) in fiscal year 2004 than that of title VII, leaving about 52 percent of title VIII funds available for new and competitive continuation grants (see fig. 4). From fiscal years 1999 through 2004, the proportion of the title VIII grant funds available for new and competitive continuation grants ranged from a high of about 59 percent to a low of about 52 percent.

Figure 4: Title VIII Funding for New and Competitive Continuation Grants and for Noncompetitive Continuations, Fiscal Years 1999–2004



Source: GAO analysis of HRSA data.

HRSA's Goals Do Not Apply to All Title VII and Title VIII Programs, and Data Are Problematic, but Agency Is Developing Alternatives

HRSA has stated goals but they are not comprehensive, and data for tracking progress toward meeting them are problematic. Recognizing these shortcomings, HRSA is developing new performance goals and measures. The effectiveness of these efforts will depend on the agency's ability to collect complete and timely data that it can use to assess its success in meeting these new goals.

HRSA's Goals Are Not Comprehensive, and Data to Assess Performance Are Problematic

Although HRSA has published program goals and performance measures for the health professions and nursing education and training programs, these goals are not comprehensive, in that they cannot be used to assess the performance of all title VII and title VIII programs. Set forth in the budget justification for fiscal year 2006 (see table 2 and app. III), the current goals and performance measures were prepared as part of HHS's annual reporting under the GPRA process.[25] For example, one published performance goal is to increase the proportion of health professionals completing title VII– and title VIII–supported health professions education programs who are underrepresented minorities or from disadvantaged backgrounds. The budget justification also lists a long-term target for this goal of 50 percent by the year 2010 and targets for a number of interim years, such as 43 percent by 2005 and 44 percent by 2006. HRSA officials stated that the agency's published goals and measures cover only a subset of title VII and title VIII programs; they do not, for example, apply directly to programs designed to develop curriculums or to recruit and retain faculty.

[25]Department of Health and Human Services, Health Resources and Services Administration, *Fiscal Year 2006 Justification of Estimates for Appropriations Committees* (Washington, D.C.: n.d.). In addition to the broad performance goals for health professions and nursing education and training programs shown in table 2, the budget justification also lists goals and performance measures for specific programs, such as Health Education Assistance Loans, Health Professions Workforce Information and Analysis, and the Nursing Education Loan Repayment and Nursing Scholarship Programs (see app. III).

Table 2: Performance Goals and Targets for the Health Professions and Nursing Education and Training Programs Funded under Title VII and Title VIII

GPRA performance goals	Long-term and interim targets	Available data for year[a]
Increase the proportion of health professionals graduating from or completing title VII– and title VIII–supported health professions education programs who are underrepresented minorities or from disadvantaged backgrounds	50% in 2010: 44% in 2006[b] 43% in 2005[b] 40% in 2004[b]	42% for 2001 (baseline)[c]
Increase the proportion of persons in the United States who have a specific source of ongoing care	96% in 2010	87% in 1998 (baseline) 88% in 2003 (estimate)
Increase the proportion of health professionals trained in programs supported by titles VII and VIII who are *serving* in medically underserved communities	40% in 2010:	Average, 19% for 1999–2001 (baseline)[d]
Increase the proportion of trainees in programs supported by titles VII and VIII who are *training* in medically underserved communities	54% in 2006[b] 53% in 2005[b] 30% in 2004[b]	Average, 52% for 1999–2001 (baseline)[d]
Increase the proportion of health professionals in programs supported by titles VII and VIII programs who *enter practice* in underserved areas	21% in 2006[b] 20% in 2005[b] 30% in 2004[b]	Average, 19% for 1999–2001 (baseline)[d]

Source: Department of Health and Human Services, Health Resources and Services Administration, *Fiscal Year 2006 Justification of Estimates for Appropriations Committees* (Washington, D.C.: n.d.).

Note: All years are fiscal years.

[a]According to HRSA officials, HRSA has historically counted graduating students as belonging to the year in which their institution began receiving funding under a specific grant, not to the year in which the students graduated. For example, according to HRSA officials, data listed in the table as the baseline for 2001 pertain to grants awarded in 2001, although the data were collected in 2003.

[b]The target for fiscal year 2004 was set before baseline data were available. Fiscal year 2005 and 2006 targets were adjusted to reflect the baseline.

[c]The baseline estimate is a partial one based on data submissions for fiscal year 2001.

[d]Grantees in programs not designed to increase health professionals in underserved areas are not required to submit these data. HRSA's fiscal year 2006 budget justification indicates that the Bureau of Health Professions within HRSA intends to propose an alternative measure after work on a new strategic plan has been completed.

According to HRSA officials, a number of HRSA's previous performance goals were deleted, and others added, in response to an OMB assessment of title VII and title VIII programs for the fiscal year 2004 budget. In its review, OMB noted a lack of consensus among various parties regarding the purpose of the health professions programs, stating, "The Administration has tended to focus on diversity and distribution [of health professionals]. Congressional committees often focus on the program as a means of helping rural areas. Advocates also emphasize the financial vulnerability of funded institutions." Further, OMB found little evidence that HRSA used performance data to adjust program priorities, to allocate resources, or to take other management actions.

In reporting on progress toward meeting its published goals, HRSA relies in part on grantees' self-reported data, which HRSA acknowledges are problematic. The agency requires grantees to submit an annual progress report on accomplishments and movement toward achieving the objectives described in the original grant agreement.[26] For example, some title VII and title VIII grantee institutions are required to determine the proportion of their graduates who go on to practice in certain areas, such as medically underserved communities. HRSA officials stated, however, that obtaining data on where graduates go after leaving training programs is not easy. For example, according to the officials, grantees rely on their graduates to voluntarily provide practice location information, and some do not do so. HRSA officials also said that some grantees do not provide information because of concerns related to state privacy laws.

Problems with HRSA's data to measure progress toward meeting its stated goals are longstanding. For example, in 1997, we reported that data provided to HRSA by grantees about graduates placed in medically underserved communities were not necessarily complete or comparable among schools, and the agency had not established a way to validate the data provided.[27] Five years later, these problems remained. In 2002, an evaluation of grantees' data collection processes prepared for HRSA found that 56 percent of grantees collected and submitted data on the number of their graduates who were employed in medically underserved

[26]To collect these data, HRSA developed its comprehensive performance management system and uniform progress report.

[27]GAO/T-HEHS-97-117.

communities in fiscal year 2000.[28] Although almost all the grantees that were not collecting these data reported that they planned to do so in the future, a few reported that they had no plans to do so because they lacked the staff, their students were not yet employed, or their program was too new. Of grantees able to report the information, 36 percent relied in part on their former students to "self-report" whether they were employed in a medically underserved community. The 2002 evaluation also reported that grantees had difficulties understanding or interpreting the definition of "medically underserved community" and recommended that HRSA clarify the term in its instructions to grantees. As a result, HRSA could not be sure that the self-reported data followed consistent criteria, making the results unreliable.

HRSA Is Developing New Goals and Performance Measures

Since fall 2002, HRSA has been developing a new strategic plan that includes goals for title VII and title VIII programs and a description of how the agency proposes to measure performance. The HRSA official overseeing this effort noted that reviews by both GAO and OMB made it clear that HRSA needed to come up with an effective means of measuring the results of title VII and title VIII programs and communicating these results to the public. According to HRSA, implementing the new strategic plan will enable the agency to " better . . . capture the accomplishments of title VII's and title VIII's diverse portfolio of programs." HRSA released a draft of its new strategic plan and its proposed performance measures during a June 2005 all-grantee conference attended by title VII and title VIII grant recipients. According to officials in HRSA's Bureau of Health Professions, a primary purpose of the conference was to introduce the draft of the newly revised strategic plan and proposed performance measures to grantees and receive feedback as to whether the proposed revised measures were practicable. The plan contained 118 proposed program measures (specific performance measures for each title VII and title VIII program); 17 proposed core measures (performance measures common to a number of health professions programs with similar goals); and 14 national measures (national indicators sensitive to access to

[28] Mia Cahill et al., *Evaluation of Data Collection Processes Used by the Bureau of Health Professions' Grantees to Determine the Number of Graduates and Program Completers Practicing in Medically Underserved Communities*, final report prepared for HRSA (Princeton, N.J.: Mathematica Policy Research, Mar. 31, 2002).

primary care, such as the immunization rate among children 19–35 months old or mammography rates among women 40 years old or older[29]).

Once HRSA has finalized the updated goals and performance measures, identifying and obtaining the necessary data will be key. The quality, completeness, and timeliness of the data used to calculate baseline values, as well as to measure actual performance and track the progress the programs are making in meeting their goals, will be critical. Without comprehensive goals, performance measures, and data, the agency will be unable to target federal resources to the most effective programs.

As of October 2005, a performance measurement working group in HRSA had begun to catalog the data needed to implement the proposed performance measures; to reconcile these needs with the data HRSA currently collects from its grantees; and, according to the group's lead official, to recommend improvements to the agency's grantee data collection and monitoring system. HRSA officials said that their schedule called for finalizing and testing the new measures, developing forms for collecting the data, and updating the data collection and monitoring system by October 2006.[30] According to agency officials, the new approach would improve the quality, timeliness, and relevance of the agency's performance data.

HRSA Has Published Few National Workforce Projections in Recent Years

One of HRSA's tasks is to supply information to policymakers on a broad range of health workforce issues, including forecasts of supply and demand for physicians, dentists, nurses, and pharmacists. The agency has, however, published few recent national health professions workforce projections. For example, its projections for the physician and dentist workforces are more than a decade old. Yet regular reassessment of health workforce supply and demand is key to setting policies as health care needs change.

[29]HRSA officials acknowledged that such proposed national indicators are driven by a number of factors other than funding support from title VII and title VIII programs.

[30]HRSA officials noted that the agency must seek approval from OMB for any change in reporting requirements for grantees, and that they expected to submit their plans to OMB by spring 2006.

HRSA Has Not Regularly Published National Health Professions Workforce Projections

HRSA's fiscal year 2006 budget justification states that a goal of the Health Professions Workforce Information and Analysis cluster is to "provide health workforce information and analyses to national, state, and local policymakers and researchers on a broad range of issues, such as shortages of registered nurses, shortages of pharmacists, and the distribution of health care workers in underserved areas."[31] Although HRSA maintains a variety of indicators and statistics on the health care workforce, in the past decade the agency has published no national supply and demand projections for the physician or dentist workforces.[32] The most recent HRSA national nursing workforce projections were published in 2002, and the latest HRSA report containing national pharmacist workforce projections was published in 2000. The agency's most recent national physician and dentist workforce projections were published in 1991. Table 3 summarizes HRSA's latest publications containing national workforce projections for physicians, dentists, nurses, and pharmacists.

[31]Other goals include federal-state collaborative efforts directed at assessing the adequacy of the current and future heath care workforce from federal, state, and local perspectives and developing strategies for improving the diversity and distribution of the health workforce. See Department of Health and Human Services, Health Resources and Services Administration, *Fiscal Year 2006 Justification of Estimates for Appropriations Committees*.

[32]In addition to national workforce projections and other reports issued by HRSA and its six regional centers, HRSA supports a database, the Area Resource File, containing statistics on health professions, health training programs, health facilities, measures of resource scarcity, and health status. This information is derived from existing data sources, such as the National Center for Health Statistics and American Hospital Association.

Table 3: HRSA's Most Recent Reports Containing National Workforce Supply and Demand Projections for Physicians, Dentists, Nurses, and Pharmacists

Health profession	Latest workforce projections published by HRSA	Discussion of models and data used to make projections
Physicians	*Health Personnel in the United States: Eighth Report to Congress* (1991)	HRSA developed physician supply and demand models. HRSA's current supply model uses data from sources such as the American Medical Association (AMA) Physician Masterfile[a] to project national estimates of physician supply by 36 medical specialties through the year 2020. HRSA's current physician demand model uses Census Bureau population projections, plus data from sources such as the National Ambulatory Medical Care Survey[b] and the Nationwide Inpatient Sample,[c] to project demand for physicians in 18 medical specialties to the year 2020.
Dentists	*Health Personnel in the United States: Eighth Report to Congress* (1991)	According to HRSA officials, the supply and demand models for dentists are out of date, and HRSA plans to update them. HRSA has a cooperative agreement with the American Dental Association to develop dentist supply and demand estimates.
Nurses	*Projected Supply, Demand, and Shortages of Registered Nurses: 2002–2020* (2002)	HRSA collects data on the nurse workforce through its National Sample Survey of Registered Nurses, which is conducted every 4 years, and generally publishes nurse workforce projections after the most recent survey. The agency's nursing supply model projects the state-level registered nurse supply through 2020. The nursing demand model projects state-level demand for registered nurses, licensed practical nurses, and nursing and home health aides through 2020 in a number of employment settings, such as hospitals, nursing facilities, and doctors' offices. As of December 2005, the nursing supply and demand models were being updated to incorporate data from the most recently completed National Sample Survey of Registered Nurses (2004).[d]
Pharmacists	*The Pharmacist Workforce: A Study of the Supply and Demand for Pharmacists* (2000)	HRSA created a pharmacist supply model to generate estimates of pharmacist numbers in the United States through 2020. But because the pharmacy profession lacks a comprehensive database like the physician database maintained by AMA, the pharmacist model uses a base-year count of active pharmacists from a 1992 pharmacist census. The model then projects the number of practicing pharmacists into the future by adding, each year, the projected number of new entrants and subtracting, each year, the projected number of pharmacists who will die or retire. For the pharmacist projection published in 2000, HRSA did not develop a pharmacist demand model per se but instead described issues affecting the demand for pharmacists, such as the number of retail prescriptions dispensed and the growth in demand for pharmacists in hospitals. According to HRSA officials, as of 2005, the agency had begun updating the pharmacist supply model.

Source: HRSA.

Note: Table lists most recent reports as of October 2005. In addition, the agency published a report containing preliminary forecasts, developed using the agency's physician and nursing demand models, of the impact of changing demographics on the demand for physicians, nurses, and other health professions. See Department of Health and Human Services, Health Resources and Services Administration, *Changing Demographics: Implications for Physicians, Nurses, and Other Health Workers* (Rockville, Md.: 2003).

[a]The AMA Physician Masterfile is a computer database of physicians that includes current and historical data on physicians, including AMA members and nonmembers and graduates of foreign medical schools who reside in the United States and who have met the educational and credentialing requirements necessary for recognition as physicians.

[b]Administered by the Centers for Disease Control and Prevention's National Center for Health Statistics, the National Ambulatory Medical Care Survey is a nationwide survey based on a sample of visits to nonfederally employed office-based physicians who are engaged primarily in direct patient care. The survey was conducted annually from 1973 to 1981, in 1985, and annually since 1989.

[c]The Nationwide Inpatient Sample, part of the Healthcare Cost and Utilization Project sponsored by the Agency for Healthcare Research and Quality, is a database of hospital inpatient stays. It contains data on about 7 million hospital stays taken from a sample of about 1,000 U.S. community hospitals.

[d]The seventh National Sample Survey of Registered Nurses was conducted in 2000, and the results were published on February 22, 2002. The eighth National Sample Survey of Registered Nurses was conducted in 2004; as of December 2005, HRSA had posted preliminary results on its Web site but had not published any updated national nursing supply or demand projections. The survey collects information on the number of registered nurses; their educational background and specialty areas; their employment status, including type of employment setting, position level, and salaries; their geographic distribution; and their personal characteristics, including gender, racial or ethnic background, age, and family status.

Although HRSA has not published national projections for the physician workforce in the past decade, agency officials noted that individual HRSA staff members have contributed articles to journals,[33] and COGME, which advises the Secretary of HHS and congressional committees, used HRSA's models to develop physician workforce projections through 2020 for COGME's January 2005 report.[34] HRSA officials said they have not contributed to any similar national projections for the dentist workforce in the past decade.

From the 1970s through the early 1990s, HRSA periodically provided health professions workforce information by producing a series of legislatively mandated reports to Congress on the supply and distribution of health personnel, including recommendations for improving health care in the nation. Some but not all of these reports included original national workforce supply and demand projections. For example, the eighth report, dated 1991, did include such projections, but the ninth report did not. The

[33]See, for example, Jack M. Colwill and James M. Cultice, "The Future Supply of Family Physicians: Implications for Rural America," *Health Affairs*, vol. 22, no. 1 (2003), and Robert M. Politzer et al., "Matching Physician Supply and Requirements: Testing Policy Recommendations," *Inquiry*, vol. 33: 181–194 (1996).

[34]Council on Graduate Medical Education, Department of Health and Human Services, Health Resources and Services Administration, *Physician Workforce: Policy Guidelines for the United States, 2000–2020* (Rockville, Md.: January 2005). The views expressed in COGME's report are solely those of the council and do not necessarily represent the views of HRSA or the U.S. government.

mandated reporting requirement was eliminated by the Federal Reports Elimination and Sunset Act of 1995, which took effect in December 1999; the last of HRSA's reports, however, was issued 4 years earlier, in 1995.[35]

According to a HRSA official involved in reporting on workforce issues, the agency began work on a tenth report to Congress in 1995 after releasing the ninth report, but because of passage of the Federal Reports Elimination and Sunset Act, the report effort was given few resources. HRSA officials said that the tenth report would provide information about the health workforce for 30 key health professions, including national supply and demand projections for physicians, pharmacists, and nurses. Information on dentists would be more limited. While HRSA has not planned to include supply or demand projections for other health professions, such as dental hygienists, dental assistants, and physical or occupational therapists, agency officials said they planned to report on issues and trends relevant to those health professions. As of October 2005, HRSA officials said they were revising major sections of the tenth report. According to the officials, the agency had no specific plans to publish reports like the tenth report in the future, but the National Center for Health Workforce Analysis did plan to continue publishing analyses of selected health professions, including profiles of the health workforce within a state at a given time.[36]

Regular Reassessment of Health Workforce Predictions Is Critical Because of a Changing Health Care Environment

Estimating future health workforce supply and demand on a regular basis is important because estimates need to be updated as circumstances change. For example, estimates prepared in the 1980s and early 1990s led to concern about an impending surplus of physicians overall but a shortage of physicians trained in primary care. This anticipated shortage of primary care physicians resulted in part from an assumption that the nation would need fewer specialty physicians because of an increase in

[35]The Public Health Service Act required that HRSA report to Congress in 1993 and every 2 years thereafter; see §792, codified at 42 U.S.C. §295k. After submitting the ninth report to Congress in 1995, HRSA did not submit additional biennial reports before the requirement was eliminated in 1999 by the Federal Reports Elimination and Sunset Act of 1995. Pub. L. No. 104-66, §303, 109 Stat. 707, 734.

[36]The most recent state profiles compiled 2000 data on levels of employment, projected growth, and key environmental factors affecting demand for health care. Because these profiles did not include national workforce projections, they were outside of the scope of our review. See http://bhpr.hrsa.gov/healthworkforce/reports/profiles/, downloaded September 7, 2005.

managed care, which makes use of primary care "gatekeepers." The assumption was that the gatekeepers would limit patients' use of specialist care. Partly because the assumption about growth in managed care proved incorrect, however, the projected shortage of primary care physicians failed to materialize.[37]

COGME's January 2005 report recognized the uncertainty inherent in any effort to forecast the physician workforce many years into the future. COGME's report showed, for example, that physician supply and demand could shift because changing lifestyles may prompt new physicians to work fewer hours than their predecessors, an increase in the nation's wealth could contribute to continued increases in the use of medical services, or an increased supply of nurse practitioners and other nonphysician clinicians could reduce the demand for physicians. Given this uncertainty, as well as the costs to expand medical education and training capacity, COGME strongly recommended that the nation develop systems to track physician workforce supply, demand, and distribution and undertake a comprehensive reassessment within the next 4 years to guide future decisions on medical education capacity.

Conclusions

Our work continues to point to the need for better information to assess the performance of title VII and title VIII programs. The agency's current published goals and measures are not comprehensive, and the data to measure performance in meeting them have been problematic. As a result, HHS cannot fully inform Congress or the public about the value of title VII and title VIII health professions education programs. It remains to be seen whether HRSA's current strategic planning and associated data collection efforts will remedy these shortcomings.

In addition, the ability of HHS and Congress to target federal resources to appropriate health professions education programs will remain limited without useful information on future health workforce needs. Updated workforce supply and demand projections are vital for informed decision making about health professions programs. Without relevant goals and performance measures, coupled with key data, HHS and Congress will

[37]More recent workforce research has again raised concerns that the nation is likely to face a shortage of physicians. For example, in October 2003, AMA noted that several published studies have demonstrated that the expected oversupply had not appeared. COGME, in a January 2005 report, has also acknowledged that the nation may face a physician shortage by the year 2020.

lack information that would enable them to target federal funds effectively to those health professions education programs most critical to meeting the nation's anticipated need for health professionals.

Recommendation for Executive Action

We recommend that the Administrator of HRSA develop a strategy and establish time frames to more regularly update and publish national workforce projections for the health professions.

Agency Comments

In written comments on a draft of this report (see app. IV), HRSA agreed with the need for clear, relevant goals and performance measures backed by timely and complete data, and it agreed with the importance of updated workforce supply and demand projections. HRSA stated that completing development of the agency's new performance goals and measures and integrating these new goals and measures into the agency's data collection systems are a top priority. HRSA also agreed with our conclusion that updated workforce supply and demand projections are vital for informed decision making in the changing health care environment.

The agency commented, however, on the scope of our work. First, HRSA commented that the draft report did not include the many objectives authorized for funding under title VII and title VIII of the Public Health Service Act. Although we reviewed the act's provisions for background purposes, our scope was to examine HRSA's stated goals for the title VII and title VIII programs and the agency's efforts to measure progress toward meeting those goals. According to HRSA officials, the GPRA goals in the fiscal year 2006 budget justification were the agency's published goals for the programs at the time of our review. While we were aware of, and reported on, the agency's efforts to develop a new strategic plan and associated goals, measures, and data, they were in draft form at the time of our review, and HRSA had yet to formally adopt or finalize them. Since the agency provided technical comments including time frames associated with these efforts, we removed a recommendation that the agency establish such time frames.

Second, regarding workforce analyses, the agency commented that our draft report did not discuss the considerable body of work produced by regional workforce centers and advisory committees that receive title VII and title VIII funding from HRSA. Because the scope of our review regarding workforce issues was limited to the most recent projected estimates (completed and published) of national supply and demand for physicians, dentists, nurses, and pharmacists, we did not include other

reports produced or drafted by or for HRSA, its regional workforce centers, or its advisory groups. We did, however, acknowledge that HRSA's National Center for Health Workforce Analysis conducts a variety of activities other than national supply and demand projections. We incorporated HRSA's technical comments as appropriate.

As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution of it until 30 days after its issue date. At that time, we will send copies to the Secretary of HHS, the Administrator of HRSA, and appropriate congressional committees. We will also provide copies to others upon request. In addition, the report is available at no charge on the GAO Web site at http://www.gao.gov.

If you or your staff have any questions regarding this report, please contact me at (312) 220-7600 or aronovitzl@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix V.

Leslie G. Aronovitz
Director, Health Care

Appendix I: Examples of Additional Sources of Federal Funding for Health Professions Education

Table 4: Examples of Federal Funding Sources, besides Title VII and Title VIII Programs, for Postsecondary Education and Training Specifically Targeted for Health Professions

Agency	Program	2004 funding (millions of dollars)
Department of Health and Human Services	Centers for Medicare & Medicaid Services: Medicare payments for graduate medical education[a]	$7,900
	Centers for Medicare & Medicaid Services: Medicaid payments for graduate medical education	[b]
	Health Resources and Services Administration: Children's Hospitals Graduate Medical Education Payment Program	$303
	Health Resources and Services Administration: National Health Service Corps	$170
	Health Resources and Services Administration: Bioterrorism Training and Curriculum Development Program	$28
	Indian Health Service: Loan Repayment Program	$12
Department of Defense	Defense Health Program: health professions scholarship program and education and training	$318
Department of Labor	Employment and Training Administration: President's High Growth Job Training Initiative (health care)	[c]
Department of Veterans Affairs	Veterans Health Administration: education and training programs for health professions students and residents	$493

Source: GAO.

[a]Medicare's graduate medical education payments are made to teaching hospitals for both direct and indirect graduate medical education costs on the basis of factors such as the number of physicians being trained, Medicare's share of patient days in the hospital, and the hospital's ratio of residents to beds.

[b]Citing a 50-state survey conducted for the Association of American Medical Colleges, COGME reported that Medicaid provided teaching hospitals between $2.5 and $2.7 billion in 2002. See Council on Graduate Medical Education, Department of Health and Human Services, Health Resources and Services Administration, *State and Managed Care Support for Graduate Medical Education: Innovations and Implications for Federal Policy* (Rockville, Md.: July 2004).

[c]This initiative focuses on 14 targeted sectors, one of which is health care. As part of this initiative, the Secretary of Labor announced awards of more than $24 million in grants to counter health care labor shortages in 2004.

Table 5: Examples of Federal Funding Sources for General Postsecondary Education and Training Including, but Not Exclusive to, Health Professions

Agency	Source	2004 funding (millions of dollars)
Department of Education	Federal student aid programs[a]	$20,544
Department of Health and Human Services	National Institutes of Health: NIH Extramural Loan Repayment Programs	$73
Department of Labor	Employment and Training Administration: Job Corps[b]	$1,537

Source: GAO.

[a]Include programs such as the Department's Federal Family Education Loan Program, Federal Pell Grant Program, Federal Perkins Loan Program, Federal Supplemental Educational Opportunity Grant Program, and Federal Work-Study Program.

[b]As of May 2004, according to an official in the Department of Labor's Employment and Training Administration, 105 Job Corps centers provided training in one or more of 12 different health-related training programs.

Appendix II: Title VII and Title VIII Clusters and Programs, Fiscal Year 2004

Cluster name[a]	Programs funded in fiscal year 2004[b]
Title VII	
Student Loans	Health Professions Student Loans Loans for Disadvantaged Students Primary Care Loans
Health Professions Training for Diversity	Centers of Excellence Faculty Loan Repayment Program Health Careers Adopt a School Demonstration Program Health Careers Opportunity Program Minority Faculty Fellowship Program Scholarships for Disadvantaged Students Program
Training in Family Medicine, General Internal Medicine, General Pediatrics, Physician Assistants, General Dentistry, and Pediatric Dentistry	Academic Administrative Units in Primary Care Cooperative Agreement to Plan, Develop, Implement and Operate a Continuing Clinical Education Program in the Pacific Basin Faculty Development in Primary Care Physician Assistant Training in Primary Care Predoctoral Training in Primary Care Residency Training in General and Pediatric Dentistry Residency Training in Primary Care Training in Primary Care Medicine and Dentistry
Interdisciplinary, Community-Based Linkages	Allied Health Projects Basic/Core Area Health Education Centers Chiropractic Demonstration Project Grants Geriatric Academic Career Awards Geriatric Education Centers Geriatric Training for Physicians, Dentists, and Behavioral and Mental Health Professionals Graduate Geropsychology Education Program Graduate Psychology Education Program Health Education and Training Centers Model State-Supported Area Health Education Centers Podiatric Residency Training in Primary Care Quentin N. Burdick Program for Rural Interdisciplinary Training
Health Professions Workforce Information and Analysis	Center for Health Workforce
Public Health Workforce	ASPH [Association of Schools of Public Health] Cooperative Agreement[c] Dental Public Health Residency Training Grants Health Administration Traineeships and Special Projects Preventive Medicine Residency Program Public Health Traineeships Public Health Training Centers Grant Program

Cluster name[a]	Programs funded in fiscal year 2004[b]
Title VIII	
Nursing Workforce Development	Advanced Education Nursing Program Advanced Education Nursing Traineeships Basic Nurse Education and Practice Grants Clinical Experience in Federally-Funded Community Health Centers for Nurse Practitioners and/or Nurse-Midwifery Students Comprehensive Geriatrics Education Program Nurse Anesthetist Traineeships Nurse Education, Practice, and Retention Grant Program: Grants for Career Ladder Programs Nurse Education, Practice, and Retention Grant Program: Grants for Enhancing Patient Care Delivery System Program Nurse Education, Practice, and Retention Grant Program: Grants for Internships and Residency Programs Nurse Faculty Loan Program Nursing Education Loan Repayment Program Nursing Scholarship Program Nursing Student Loans Nursing Workforce Diversity Grants

Source: GAO analysis.

[a]Cluster names reflect headings of parts and subparts of title VII and of title VIII of the Public Health Service Act, as amended by Pub. L. No. 105-392, and in some cases differ slightly from those in Senate Report No. 105-220.

[b]Include (1) programs that awarded funds competitively through grants or cooperative agreements and that announced funding availability separately or had a separate selection panel and (2) programs providing direct assistance, such as student loans to individuals, regardless of whether the loan program received any new appropriations. Table does not include four advisory groups—COGME, the National Advisory Council on Nurse Education and Practice, the Advisory Committee on Training in Primary Care Medicine and Dentistry, and the Advisory Committee on Interdisciplinary, Community-Based Linkages—operating in fiscal year 2004. Names for grant and cooperative agreement programs reflect those used in the *Federal Register* or other program announcements.

[c]This program, which allows schools of public health to apply for HRSA funding to support certain special projects, includes a cooperative agreement with ASPH to provide information to, and coordinate with, the schools of public health that inquire about grant opportunities under this program. HRSA has sole discretion to determine whether projects are funded.

Appendix III: Additional Performance Goals and Targets for Health Professions and Nursing Education Programs

GPRA performance goals	Long-term and interim targets	Available data for year
Health Education Assistance Loans Program		
Phase out the outstanding loan portfolio, resulting in a reduction in the federal liability associated with the Health Education Assistance Loans Program	$1.7 million in 2006 $1.9 million in 2005 $2.6 million in 2004 $2.7 million in 2003 $3.3 million in 2002 $3.4 million in 2001 $3.6 million in 2000	$2.0 million in 2004 $2.3 million in 2003 $2.7 million in 2002 $3.2 million in 2001 $3.5 million in 2000
Health Professions Workforce Information and Analysis		
Annually produce results of data collection and analysis activities to inform the market regarding issues relevant to health professions and nursing workforce (number of reports)	25 reports in 2006 25 reports in 2005 23 reports in 2004 23 reports in 2003 11 reports in 2002 10 reports in 2001	21 reports in 2004 23 reports in 2003 14 reports in 2002 10 reports in 2001
Nursing Education Loan Repayment Program (NELRP) and Scholarship Program		
Increase the number of individuals enrolled in professional nursing education programs	Baseline + 10% in 2010	Estimated 240,500 in 2004 (baseline)[a]
Increase the proportion of nursing scholarship recipients who, within 4 months of licensure, are working in a facility with a critical shortage of nurses	85% in 2006 80% in 2005 75% in 2004	23% in 2004[b]
Increase the proportion of NELRP participants working in shortage facilities, such as disproportionate share hospitals for Medicare and Medicaid, nursing homes, public health departments (state and local), and public health clinics within these departments	85% in 2010:[c] 90% in 2006[c] 85% in 2005[c] 65% in 2004[c]	100% in 2004 100% in 2003
Increase the proportion of states in which NELRP contract recipients work	93% in 2006 93% in 2005 85% in 2004 65% in 2003 50% in 2002	98% in 2004 88% in 2003 82% in 2002
Increase the proportion of NELRP participants who remain employed at a critical-shortage facility for at least 1 year beyond termination of their NELRP service	28% in 2010: 11% in 2006 11% in 2005 10% in 2004	40% in 2004[d]
Reduce the federal investment per year of direct support by increasing the proportion of program participants who extend their service contracts and commit to work at a critical-shortage facility for an additional year	45% in 2006 40% in 2005 22% in 2004	44% in 2004 18% in 2001 (baseline)

Source: Department of Health and Human Services, Health Resources and Services Administration, *Fiscal Year 2006 Justification of Estimates for Appropriations Committees* (Washington, D.C.: n.d.).

Note: All years are fiscal years.

[a]Number of students in all prelicensure registered nursing programs in the 2002–03 academic year.

[b]The target was based on the assumption that all scholars would complete programs and enter service at the same time. According to the Health Resources and Services Administration, 23 percent of the 2003 scholarship recipients had completed programs in fiscal year 2004 and entered into service.

[c]The actual performance greatly exceeded the original targets because a large number of applicants worked in facilities with the most critical shortages. As a result, the agency increased the targets for 2005 and 2006.

[d]Preliminary estimate. HRSA's fiscal year 2006 budget justification indicates that targets will be revised once the fiscal year 2004 data are finalized.

Appendix IV: Comments from the Health Resources and Services Administration

DEPARTMENT OF HEALTH & HUMAN SERVICES

Health Resources and Services Administration

Rockville MD 20857

DEC 30 2005

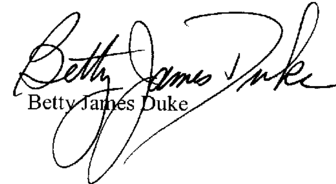
TO: Leslie G. Aronovitz
Director, Health Care

FROM: Administrator

SUBJECT: Government Accountability Office Draft Report: "Health Professions Education Programs: Action Still Needed to Measure Impact" (GAO-06-55)

Thank you for the opportunity to provide a response to the above titled draft report. Attached please find our comments.

Questions may be referred to Ms. Gail Lipton in HRSA's Office of Federal Assistance Management at (301) 443-6509.



Betty James Duke

Attachment

Health Resources and Services Administration's Comments on the Government Accountability Offices' Draft Report: "Health Professions Education Programs: Action Still Needed to Measure Impact" Code # GAO-06-55

The Health Resources and Services Administration (HRSA) appreciates the opportunity to comment on the Government Accountability Office (GAO) assessment of Title VII and Title VIII. We believe it is a worthy effort, however, in attempting to summarize this complex piece of legislation, GAO has overlooked some of the important differences and emphases among the many programs that are authorized within these sections of the Public Health Service Act. Additionally, we provide an update on Agency efforts to improve performance measurement and data collection systems, and expand on GAO's discussion of HRSA's role in the development of health workforce information and analysis.

The Goals of Titles VII and VIII of the Public Health Service Act

As GAO points out, Title VII was first enacted in 1963, and Title VIII in 1964, when there were concerns about impending shortages of physicians and nurses. Since then, the U.S. health care system has changed a lot. Advances in science have brought about new ways to treat disease. There have also been changes in economics and demographics. Economic changes have altered the incentives and the barriers to entering health careers. Demographic changes have altered the geographic distribution and racial/ethnic distribution of the population. Greater longevity and the aging of the population have also brought new challenges. And all of these changes have had implications for the education and training of physicians, nurses, dentists, and the increasing number of other types of health professionals, which Congress in the early 1960s could not have foreseen.

Over time, the law has been amended piecemeal to accommodate the changing environment of U.S. healthcare, but its interpretation often remains rooted in the language of physician, nurse, and dentist shortages for which it was originally created. A careful perusal of the law would specifically identify many purposes and objectives of the Title VII and Title VIII legislation beyond those identified by GAO in its report. In addition to the problems of supply, demand, and distribution of health care professionals, and the balance between generalist and specialist providers, the law also includes (but is not limited to) specific references to the following objectives:

- Developing a competitive applicant pool for health professions education programs;
- Enhancing the academic performance of underrepresented minorities;
- Improving recruitment and retention of minority faculty;
- Improving institutions' information resources as they relate to minority health issues;

- Facilitating faculty and student research on health issues affecting underrepresented minority groups;
- Expanding enrollments in allied health professions with the greatest shortages or whose services are most needed by the elderly;
- Providing rapid transition training programs in allied health fields to individuals who have baccalaureate degrees in health-related sciences;
- Establishing community-based allied health training programs that link academic centers to rural clinical settings;
- Providing career advancement training for practicing allied health professionals;
- Developing curriculum that will emphasize knowledge and practice in the areas of prevention and health promotion, geriatrics, long-term care, home health and hospice care, and ethics;
- Expanding or establishing interdisciplinary training programs that promote the effectiveness of allied health practitioners in geriatric assessment and the rehabilitation of the elderly;
- Expanding or establishing demonstration centers to emphasize innovative models to link allied health clinical practice, education, and research;
- Improving the training of health professionals in geriatrics, including geriatric residencies, traineeships, or fellowships;
- Developing and disseminating curricula relating to the treatment of the health problems of elderly individuals;
- Supporting the training and retraining of faculty to provide instruction in geriatrics;
- Supporting continuing education of health professionals who provide geriatric care;
- Providing students with clinical training in geriatrics in nursing homes, chronic and acute disease hospitals, ambulatory care centers, and senior centers.

It is worth noting, further, that while Title VII and Title VIII usually provide for preferences in awarding funds to institutions that tailor their programs to the care of the vulnerable and underserved, or to individuals committed to serving the underserved, these are explicitly *educational* rather than *service* objectives.

Data Collection and Performance Measurement
GAO also comments on HRSA's inability to provide data with which to measure the attainment of Title VII and Title VIII objectives dating back to an earlier GAO report, and speculates that this will continue to be an issue in the future.

We would like to point out that many changes have occurred since the publication of GAO's 1997 report: Health Professions Education: Clarifying the Role of Title VII and VIII Programs Could Improve Accountability.

HRSA immediately took vigorous steps to address the issues identified in the Report. These first efforts led to the development of a Comprehensive Performance Management System and Uniform Progress Report (CPMS/UPR), which has been continuously reporting data since 1999. HRSA has acknowledged that there were issues with the completeness and timeliness of the data, but progress has been steady. The 2005 CPMS/UPR data include a record 95% of all expected data submissions. Implementation of a web-based system drastically reduced the amount of time required to enter and process the data, which is more efficient for both grantees and HRSA staff. Performance measures developed by HRSA in tandem with the CPMS/UPR have been reporting data for 5 years. These measures were replaced with new ones at the request of the Office of Management and Budget in August 2002, for the FY 04 budget cycle. Since the CPMS/UPR was not optimally designed to address the new OMB-required measures, and to better capture the diverse objectives of Title VII and Title VIII programs, HRSA is currently working on a new Performance Measurement System (PMS). The new system was presented to HRSA program constituents and stakeholders in a conference that took place in June 2005. We are currently consolidating some of the measures, incorporating comments received at the conference, pilot testing the measures, and planning system changes. We expect to submit the PMS to OMB for Paperwork Reduction Act clearance by July 2006.

HRSA's Role in the Development of Health Workforce Information and Analysis

We would like to expand on GAO's discussion of HRSA's role in the development of workforce information and analysis.

In addressing workforce information and analysis, GAO focuses its attention on publications by HRSA's National Center for Workforce Information and Analysis (NCHWA) and finds that HRSA has not published many workforce projections for physicians, nurses, and dentists in recent years. GAO does not include in its discussion the considerable body of work produced by the Regional Workforce Centers that receive Title VII funding from HRSA, nor (with the exception of the Council on Graduate Medical Education – COGME), does it acknowledge the contributions of the various Advisory Councils and Committees specifically authorized by Title VII and Title VIII, funded out of Title VII and Title VIII appropriations, and which receive significant staff support from NCHWA and the programs.

Additional committees or councils performing valuable work in support of the Title VII and Title VIII program goals include:

- National Advisory Council on Nursing Education and Practice (NACNEP)
- Advisory Committee on Training in Primary Care Medicine and Dentistry (ACTPCMD)
- Advisory Committee on Interdisciplinary and Community-Based Linkages (ACICBL).

Each of these groups has produced a regular series of reports on pertinent workforce issues. For example, ACTPCMD (authorized by Section 748 [293l] of the Health Professions Education Partnership Act of 1998) issued a report in November 2004: Preparing Primary Healthcare Providers to Meet America's Future Healthcare Needs: The Critical Role of Title VII, Section

747. This is its Fourth Annual Report to the Secretary of Health and Human Services and to Congress. It contains a large number of references that support the role of Title VII, section 747 in guiding the content and capacity of primary care education and training in the United States to meet the healthcare needs of the future. A fifth report is nearing completion. NACNEP also released a report in November 2002 that focuses on the nursing workforce as well as the faculty shortage. Another ACTPCMD report entitled: "Evaluating the Impact of Title VII Section 747 Programs" is nearing completion. We believe that HRSA's role in the production of workforce analyses cannot be fully understood by limiting discussion solely to NCHWA, and we question the decision to exclude from consideration all Title VII and Title VIII advisory groups except for COGME.

Furthermore, we believe that the legislated goal of providing "health workforce information and analysis to national, State, and local policymakers and researchers on a broad range of issues, such as shortages of registered nurses, shortages of pharmacists, and the distribution of healthcare workers in underserved areas" is broader than what GAO's exclusive focus on supply and demand projections for physicians, nurses, and dentists would allow.

Since 1999, NCHWA and its regional centers have produced well over 100 reports. The following list of published reports documents the breadth of purpose of Title VII Section 762, and provides evidence of HRSA's accomplishments. HRSA has also made information widely available through staff-written articles in major health journals, reports on specific health professions, and special reports. This listing does not include all reports and studies conducted by the Regional Workforce Centers with Title VII funding. A comprehensive list of NCHWA reports is available at: http://bhpr.hrsa.gov/healthworkforce/reports

- The Clinical Laboratory Workforce: The Changing Picture of Supply, Demand, Education, and Practice (Published July 2005)
- State Health Profiles for 50 States, the District of Columbia, Puerto Rico, and the Virgin Islands that include information about the supply, demand, distribution, education and use of physicians, nurses, dentists and 20 other health professionals in each State and the District of Columbia (published 2004 and 2000)
- The Health Care Workforce: Education, Practice & Policy provides in-depth assessments of the health workforce in 26 selected States and an Interstate Comparison that assesses data and influences across the States. Both studies were conducted for HRSA by the National Conference of State Legislatures.
- A Comparison of Changes in the Professional Practice of Nurse Practitioners, Physician Assistants, and Certified Nurse Midwives: 1992 and 2000 (published February 2004)
- Effects of the Workforce Investment Act of 1998 on Health Workforce Development in the States (November 2004).
- Supply, Demand, and Use of Licensed Practical Nurses (Published November 2004)
- The Professional Practice Environment of Dental Hygienists in the Fifty States and the District of Columbia (published April 2004)

- Health Care Occupations – National and Local Workforce Shortages and Associated Data Needs (published February 2004)
- State Responses to Health Worker Shortages: Results of 2002 Survey of States, profiles of each state's response to health workforce shortages, details of current initiatives and links to Web sites and State contacts (published May 2003).

Some of the reports produced by HRSA are of special significance because they helped to change the landscape of health professional training nationally to promote the attainment of Title VII objectives. The following were particularly significant:

- Undergraduate Medical Education for the 21st Century (UME-21): A National Medical Education Project. Family Medicine 2004:36S: S1-150. This resulted from a project, the objective of which was to stimulate the introduction of new educational opportunities, focusing on nine content areas during the third year of the curriculum, with outcomes demonstrating that medical students acquire the knowledge, skills, and attitudes needed to perform effectively.
- Challenging Sociocultural Health Disparities: A Collaborative and Interdisciplinary Model Podogeriatric Curriculum Plan. This is a 154-chapter teaching module developed as part of a program to establish and disseminate an interdisciplinary graduate physician training program for podiatry, family practice, and internal medicine residents concerning foot care for older patients.

Topics for other reports and current research include:

- Racial and ethnic diversity of the workforce
- Provision of geriatric health care
- Implications of the aging of the U.S. population and the healthcare workforce
- Health workforce preparedness in genetics and emerging health technologies
- Health workforce preparedness for emergency response to terrorism
- U.S.-Mexico border health and Border Health Profiles
- Mental health
- Oral health
- State and regional health care system financing

In addition to the reports and projects listed above, NCHWA produces other resources that are valuable to analysts and researchers inside and outside of HRSA. An example is the Area Resource File (ARF) which is a regularly updated compilation of a national, county-level database on the health workforce. ARF is very widely used by national, State, regional, and local policymakers, researchers, and workforce analysts. A search for "Area Resource File" or "ARF" in the Web of Science database produced over 100 citations of the ARF in recently published medical and health literature.

NCHWA also supports evaluation studies on current workforce topics. Currently, HRSA is compiling an evaluation of the likelihood that physicians exposed to Title VII funded programs during training will practice in federally-designated health centers, including Community Health Centers.

A report on the Critical Care Workforce, which is based on the HRSA/NCHWA physician models, estimates the supply, need, and distribution of the critical care workforce and is currently in the clearance process.

We agree with GAO that in the changing health care environment, updated workforce supply and demand projections are vital for informed decision making about health professions programs. We also agree on the importance of clear and relevant goals and performance measures, backed by timely and complete data. Completion of the Performance Measurement System and its integration into data collection systems are a top priority for HRSA, and we thank GAO for this opportunity to comment and expand on some of these issues.

Appendix V: GAO Contact and Staff Acknowledgments

GAO Contact

Leslie G. Aronovitz at (312) 220-7600 or aronovitzl@gao.gov

Acknowledgments

In addition to the person named above, Kim Yamane, Assistant Director; George Bogart; Matt Byer; Ellen W. Chu; and Karlin Richardson made key contributions to this report.

Related GAO Products

Physician Workforce: Physician Supply Increased in Metropolitan and Nonmetropolitan Areas but Geographic Disparities Persisted. GAO-04-124. Washington, D.C.: October 31, 2003.

Health Care: Adequacy of Pharmacy, Laboratory, and Radiology Workforce Supply Difficult to Determine. GAO-02-137R. Washington, D.C.: October 10, 2001.

Nursing Workforce: Emerging Nurse Shortages Due to Multiple Factors. GAO-01-944. Washington, D.C.: July 10, 2001.

Health Professions Education: Clarifying the Role of Title VII and VIII Programs Could Improve Accountability. GAO/T-HEHS-97-117. Washington, D.C.: April 25, 1997.

Health Professions Education: Role of Title VII/VIII Programs in Improving Access to Care Is Unclear. GAO/HEHS-94-164. Washington, D.C.: July 8, 1994.

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