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United States Government Accountability Office  
Washington, DC 20548

May 4, 2009

The Honorable George Miller  
Chairman  
The Honorable Howard P. "Buck" McKeon  
Ranking Member  
Committee on Education and Labor  
House of Representatives

The Honorable Robert Andrews  
Chairman  
Subcommittee on Health, Employment, Labor  
and Pensions  
Committee on Education and Labor  
House of Representatives

The Honorable Charles W. Boustany, Jr.  
The Honorable Joe Courtney  
The Honorable Tom Price  
House of Representatives

Subject: *Graduate Medical Education: Trends in Training and Student Debt*

The federal government invests significantly in medical education through various programs to help ensure that the anticipated supply of new physicians meets the nation's health care needs. Medicare, the federal health care program for elderly and certain disabled people, subsidizes training for medical school graduates in hospitals and other teaching institutions by helping to support the increased costs associated with postgraduate medical training. These subsidy payments provided hospitals and other teaching institutions with an additional \$8.76 billion<sup>1</sup> for postgraduate medical training in fiscal year 2008.<sup>2</sup> In addition, Medicaid, a joint federal and state program that finances health care for certain low-income individuals, provides funding for graduate medical education.<sup>3</sup> In order to pay for medical school tuition

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<sup>1</sup>These payments include direct and indirect Medicare graduate medical education payments. Direct payments are provided to teaching institutions for costs directly related to medical training, such as teachers' salaries and administrative costs, while indirect payments are provided for the increased patient care costs associated with medical training. For fiscal year 2008, indirect payments were about 71 percent of total Medicare graduate medical education payments. In addition, Medicare graduate medical payments also subsidize podiatric and dental training.

<sup>2</sup>In part to constrain costs, Congress limited the number of postgraduate medical training positions supported by Medicare with the 1997 Balanced Budget Act. Medicare support for podiatric and dental training positions was not affected by this legislation.

<sup>3</sup>According to the Congressional Research Service, federal and state Medicaid payments for graduate medical education were estimated to be about \$3.2 billion in 2005. This estimate was based on 2005

and related fees, students often rely on loans to finance their education. The Department of Education (Education) administers loan programs that are available to medical school students.<sup>4</sup> These loans may be made by private lenders and guaranteed by the federal government or made directly by the federal government through a student's school. The Health Resources and Services Administration (HRSA) administers various scholarships, loans, and loan repayment programs for disadvantaged students and those committing to practice in underserved areas or train in specific specialties.<sup>5</sup> In addition, the Department of Veterans Affairs provides funding and training opportunities for new physicians in its medical facilities.<sup>6</sup>

Students must complete an undergraduate education and typically 4 years of medical school, at which point they earn a medical degree and become physicians. By their last year of medical school, students typically choose a specialty in which they will undertake required postgraduate medical training, known as residency, in order to practice medicine without supervision. Most specialties can fall into three general categories: primary care, surgical, and procedural. Most students apply for residency through the National Resident Matching Program (NRMP),<sup>7</sup> which matches applicants with residency programs based on the preferences of both parties.<sup>8</sup> However, because more students apply for some specialties than positions are available, some students may not receive a position in their preferred specialty. Residency can last 3 to 5 years, depending on the specialty. After residency, some physicians may decide to pursue further postgraduate medical training, known as a fellowship, in order to become a subspecialist. For example, to become a cardiologist, a medical school graduate must complete an internal medicine residency followed by a cardiology fellowship. In some cases, depending on the specialty or subspecialty, a physician could spend 7 or more years in postgraduate medical training.

You asked us to provide information on graduate medical education. Specifically, we focused on (1) trends in postgraduate medical training, (2) factors that influence medical students' specialty choice, and (3) trends in the amounts of student debt incurred by medical school graduates. Enclosure I contains information on graduate medical education. You also asked us to provide information on trends in postgraduate dental education and student debt and thoracic surgery fellowships; that information can be found at enclosures II and III, respectively.

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survey data. There is no formal federal reporting mechanism to document Medicaid graduate medical education payments by state.

<sup>4</sup>Medical students received over \$1.8 billion in federal guaranteed or direct student loans during the 2006-2007 school year, according to a survey of financial aid offices conducted by the Association of American Medical Colleges.

<sup>5</sup>Program spending totaled about \$183 million in fiscal year 2007. This number excludes funding for HRSA student loans, which utilize revolving loan funds derived generally from premium charges, and includes programs for health professionals other than medical school students and graduates, such as physician assistants and dentists.

<sup>6</sup>Department of Veterans Affairs' spending towards medical education in its facilities totaled about \$800 million in fiscal year 2008.

<sup>7</sup>The NRMP is affiliated with the Association of American Medical Colleges.

<sup>8</sup>In addition to a matching service for residency programs, the NRMP also administers a matching service for fellowship programs.

To examine trends in postgraduate medical training, we reviewed relevant academic and professional literature and analyzed data on residency offered, student preferences, and residency placements from 1998 to 2008.<sup>9</sup> We also interviewed officials and reviewed information or documents from the Centers for Medicare & Medicaid Services (CMS), the agency that oversees the Medicare program; the Medicare Payment Advisory Commission; HRSA; and professional organizations, including groups that represent medical schools, medical students, and physicians. To examine factors that influence medical students' specialty choice, we reviewed relevant academic and professional literature and examined a survey of 4th year medical students developed by the Association of American Medical Colleges (AAMC).<sup>10</sup> We also interviewed officials from professional organizations, including groups that represent medical schools, medical students, and physicians. To examine trends in medical student debt, we analyzed self-reported student indebtedness data from the AAMC survey of 4th year medical students from 1998 to 2008. We also examined data on medical school tuition and fees from an AAMC survey of medical schools and physician salaries collected by the Medical Group Management Association (MGMA). We also interviewed federal officials and reviewed relevant agency guidance to identify the types of federal loans and repayment plans that are available to medical students.

We discussed the NRMP, AAMC, and MGMA data sources with knowledgeable officials and determined that the data were sufficiently reliable for our purposes. (See encl. IV for a more detailed description of our scope and methodology.) We conducted our work from September 2008 to April 2009 in accordance with all sections of GAO's Quality Assurance Framework relevant to our objectives. The framework requires that we plan and perform the engagement to obtain sufficient and appropriate evidence to meet our stated objectives and discuss any limitations in our work. We believe that the information and data obtained, and the analysis conducted, provide a reasonable basis for any findings and conclusions.

In summary, we found that medical students prefer surgical and procedural specialties, and physician subspecialization is increasing. Relative to the number of available residency positions, more medical students have preferred surgical and procedural specialties over primary care specialties since 1999, according to national data. As a result, surgical and procedural specialties have been more competitive than primary care specialties. Students earning an MD degree from U.S. medical schools fill higher proportions of the more competitive surgical and procedural residency positions than students earning a DO degree and students graduating from international medical schools. In addition, the percentage of physicians pursuing subspecialty training grew from 2002 to 2007, according to national data.

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<sup>9</sup>Our review of postgraduate medical training trends focused on allopathic residency. Allopathic medicine is a system of medicine that aims to combat disease by using remedies such as drugs or surgery which produce effects that are different from or incompatible with those of the disease being treated; graduates of allopathic medical schools receive a Doctor of Medicine (MD) degree. In contrast, osteopathic medicine is a form of medical practice similar to allopathic medicine that also incorporates manual manipulation of the body as therapy; graduates of osteopathic medical schools receive a Doctor of Osteopathic Medicine (DO) degree. We excluded osteopathic residency because osteopathic residency positions make up less than 6 percent of all residency positions offered by the NRMP and the American Osteopathic Association, the organization that administers the matching service for osteopathic residency. However, osteopathic physicians are included in our review because over 35 percent of osteopathic physicians enter 1st year allopathic postgraduate medical training.

<sup>10</sup>Our review of factors influencing specialty choice focused on medical students enrolled in U.S. medical schools leading to an MD degree. Our literature review found only limited information on the factors that influence osteopathic and international medical school students' specialty choice and interviews we conducted with osteopathic and international medical student groups suggested that factors influencing these students may be similar to those influencing allopathic students.

This trend was observed in fields such as orthopedic surgery (a surgical subspecialty), anesthesiology (a procedural specialty), and family medicine (a primary care specialty).

Multiple factors and demographic characteristics influence students' specialty choice. While there is no consensus on the most influential factors affecting specialty choice, students consider various factors either individually or in concert when selecting a specialty, according to multiple sources, including published literature, a 2008 AAMC survey, and experts we interviewed. For example, students may consider their intellectual interest in the specialty, their exposure to the specialty, or the prestige of the specialty when making their specialty choice. Some factors may also lead students to pursue certain specialties while avoiding others. For example, the desire for a controllable lifestyle—a predictable schedule and fewer on-call hours<sup>11</sup>—and high salary may lead students to pursue procedural specialties such as anesthesiology, and avoid other specialties such as primary care. Demographic characteristics such as gender and marital status are associated with students being more likely to enter certain specialties. For instance, married students are more likely to select primary care specialties and women are more likely to select obstetrics and gynecology and less likely to choose surgery.

Although medical student debt is rising, physicians are eligible for federal loan repayment relief plans during postgraduate medical training and can eventually earn high incomes that can be used to repay their loans. Medical school tuition and fees have increased significantly since 1998. Medical students can borrow up to \$40,500 per year through the federal Stafford loan program<sup>12</sup> with additional funding available through other federal loan programs; these loan programs can cover the full cost of medical school. The median amount of educational debt for indebted medical students graduating in 2008 was \$155,000—a 53 percent increase since 1998, controlling for inflation. Once out of medical school, residents earn stipends—on average about \$3,729 a month for a 1st year resident. With \$155,000 in debt, a resident's monthly loan payment could reach over \$1,700 (about 48 percent of pretax income). However, residents have repayment options that can reduce their monthly debt payment until they complete postgraduate training. One option that will be available to borrowers after July 1, 2009, would cap the average 1st year resident's loan payments at about \$364 month while a second option—*forbearance*—allows for a temporary postponement or reduction in loan payments. Physicians generally do not qualify for these options once postgraduate training is complete because, although they incur more debt than other advanced degree holders, they also earn higher incomes.

We provided a draft of this report to the Department of Health and Human Services (HHS), the department that oversees CMS and HRSA; Education; and AAMC. HHS's written comments are reprinted in enclosure V. HHS, Education, and AAMC also provided technical comments, which we incorporated as appropriate.

HHS remarked that GAO reported an increase in the specialty choice of family medicine by U.S. medical school graduates. However, we did not state this in our report; rather, we noted that physician subspecialization was generally increasing and that this trend was observed within several specialties, including family medicine. In other words, the incidence of

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<sup>11</sup>On-call hours refer to hours when a physician can be contacted outside of regularly scheduled work hours, such as for an emergency.

<sup>12</sup>These loans may be made by private lenders and guaranteed by the federal government or made directly by the federal government through a student's school.

physicians who have already chosen family medicine as their specialty but pursue additional training beyond initial residency has increased. As we noted in our analysis of U.S. MD student preferences relative to positions available, primary care specialties, which include family medicine, have been less popular than surgical and procedural specialties.

HHS also commented that service obligation—that is, a requirement that physicians practice in a specific field of medicine under certain conditions in exchange for benefits, such as educational scholarships or loan repayment—is an additional factor that potentially influences specialty choice.<sup>13</sup> For example, medical students can apply to HHS’s National Health Service Corps (NHSC) Scholarship Program to receive funds<sup>14</sup> if they agree to complete a primary care residency and practice in an underserved area after residency. The NHSC also offers a loan repayment program for primary care physicians practicing in an underserved area. In our report, we focused on broad, underlying factors that affect students’ specialty choice rather than specific contractual obligations.

Providing oral comments on a draft of this report, the AAMC largely agreed with our findings and noted that the report captured the complexities of medical students’ decision making in choosing a specialty. It also added several relevant points. First, additional demographic characteristics, such as the geographic background (e.g., urban or rural) and the socioeconomic status of the medical student and his or her family, are associated with specialty choice. It added that debt does not appear to significantly influence specialty choice, which is consistent with our findings. Second, entry rates for various specialties are influenced by numerous factors, including the prevailing market conditions and environment. As a result, it noted, trends in specialty choice often shift and have been cyclical over time. For example, primary care specialties were more popular in the mid 1990s when managed care was introduced and the anticipated demand was high. And third, there is an emerging trend of physicians who provide general medical care only in hospitals where they may often work set shifts instead of being on call. The trend, which is particularly associated with physicians specializing in internal medicine (but not subspecializing), limits the number of physicians providing primary care services in traditional settings, such as physicians’ offices and health clinics.

In addition, the AAMC raised concerns about including neurology and pathology in our procedural specialties category. It suggested that we consider categorizing them as “cognitive” or “other” specialties. While we did not create another category for these specialties, when we conducted an additional analysis that removed them from the procedural specialties category in our preferences-to-positions ratio analysis, we found that their exclusion did not change the trend for procedural specialties from 1998 to 2008.

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<sup>13</sup>HHS also noted that service obligation influences where physicians practice and the period for which they remain in their practice location. We acknowledge that specialty choice, service obligation, practice location, and duration of practice in a specific location can be interrelated, but for the purposes of this report, the issue of physician practice location and its duration were outside our scope.

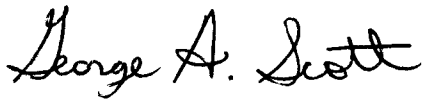
<sup>14</sup>The NHSC Scholarship Program pays for up to 4 years of support, including tuition, a monthly stipend, and other costs.

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If you or your staff have questions about this report, please contact Kathleen M. King at (202) 512-7114 or KingK@gao.gov, or George A. Scott at (202) 512-7215 or ScottG@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 members who made key contributions to this report are listed in enclosure VI.



Kathleen M. King  
Director, Health Care



George A. Scott  
Director, Education, Workforce, and  
Income Security Issues

Enclosures – 6



# Graduate Medical Education: Trends in Training and Student Debt

**Briefing for the Staff of:**

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## Overview

- Introduction
- Objectives
- Scope and Methodology
- Background
- Results





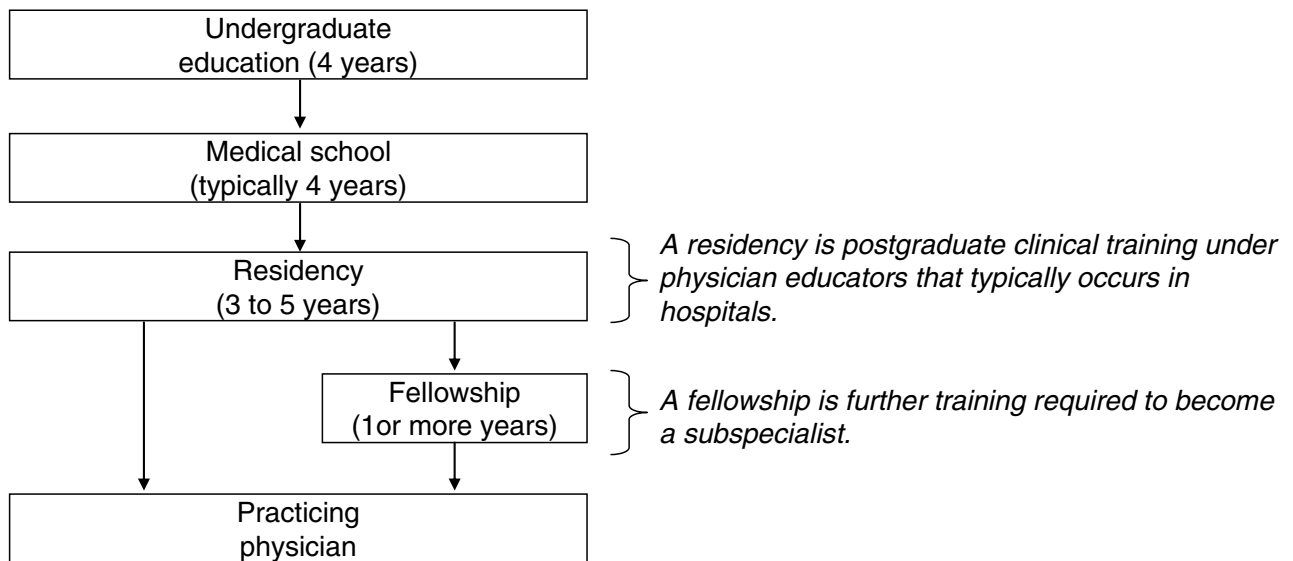
## Introduction

- The federal government invests significantly in medical education to help ensure that the anticipated supply of new physicians meets future health care needs.
  
- Federal government support includes:
  - Medicare payments, which provided about \$8.7 billion to hospitals and other institutions for medical training in fiscal year 2008.
  - Medicaid payments, which provided nearly \$3.2 billion in 2005.
  - Student loans, tuition assistance, and student loan repayment.
  - Training opportunities at federal facilities.



## Introduction (cont.)

The road to becoming a doctor can be long and costly



Source: GAO.



## Objectives

1. Describe the trends in postgraduate medical training.
2. Describe the factors that influence medical school students' specialty choice.
3. Describe the trends in the amounts of student debt incurred by medical school graduates.



## Scope and Methodology

- We reviewed relevant literature published from 1998 to 2008 from:
  - 16 research databases
  - 162 articles on residency trends, factors affecting specialty choice, and student debt
  
- We interviewed officials and reviewed information or documents from:
  - Centers for Medicare & Medicaid Services
  - Health Resources and Services Administration
  - Department of Education
  - Medicare Payment Advisory Commission
  - Professional organizations, including groups that represent medical schools, medical students, and physicians



## Scope and Methodology (cont.)

- We reviewed and analyzed publicly available data, including:
  - National Resident Matching Program (NRMP) data for 1998-2008 on residency positions offered, student preferences, and placements.
    - The NRMP matches applicants with residency programs.
  - Association of American Medical Colleges (AAMC) survey of 4<sup>th</sup> year medical students, called the Graduation Questionnaire, which covers factors that may affect specialty choice. It also contains information on student debt.
  - Medical Group Management Association (MGMA) Physician Compensation and Production Survey data on median annual earnings for various medical specialties.

# Background

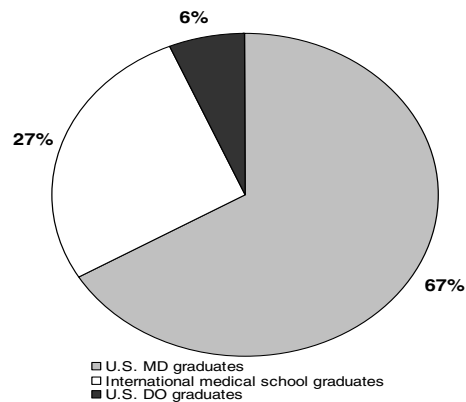
## Medical education

- U.S. medical school enrollment has grown.
  - In 2008, over 22,500 1<sup>st</sup> year students were enrolled, an all-time high.

- Eligible applicants for U.S. postgraduate medical training programs include:

- **Doctor of Medicine (MD)** students graduating from a U.S. medical school.
- **Doctor of Osteopathic Medicine (DO)** students graduating from a U.S. osteopathic medical school.
- **International medical school students**, who can be U.S. citizens or non-U.S. citizens graduating from a foreign medical school.

**Percentage of Physicians in Postgraduate Medical Training by School Type -2007**



Source: AAMC and the American Medical Association (AMA)



## Background

### Medical education (cont.)

- The length of residency training varies depending on the specialty chosen.
  - Three years for primary care fields, such as family medicine, general internal medicine, and general pediatrics.
  - Five years for general surgery.
- Fellowship training to become a subspecialist can add one or more years.
  - To become a cardiothoracic surgeon, a medical school graduate must complete a general surgery residency followed by a cardiothoracic surgery fellowship.
  - To become a cardiologist, a medical school graduate must complete an internal medicine residency followed by a cardiology fellowship.
- Postgraduate medical training generally occurs at hospitals, medical centers, and Veterans Affairs facilities.
  - Each program determines how many residents or fellows it would like to train.
  - Most postgraduate training programs are accredited by the Accreditation Council for Graduate Medical Education (ACGME), which evaluates a program's ability to adequately train the desired number of residents by considering the program's facilities, faculty size, and other factors.

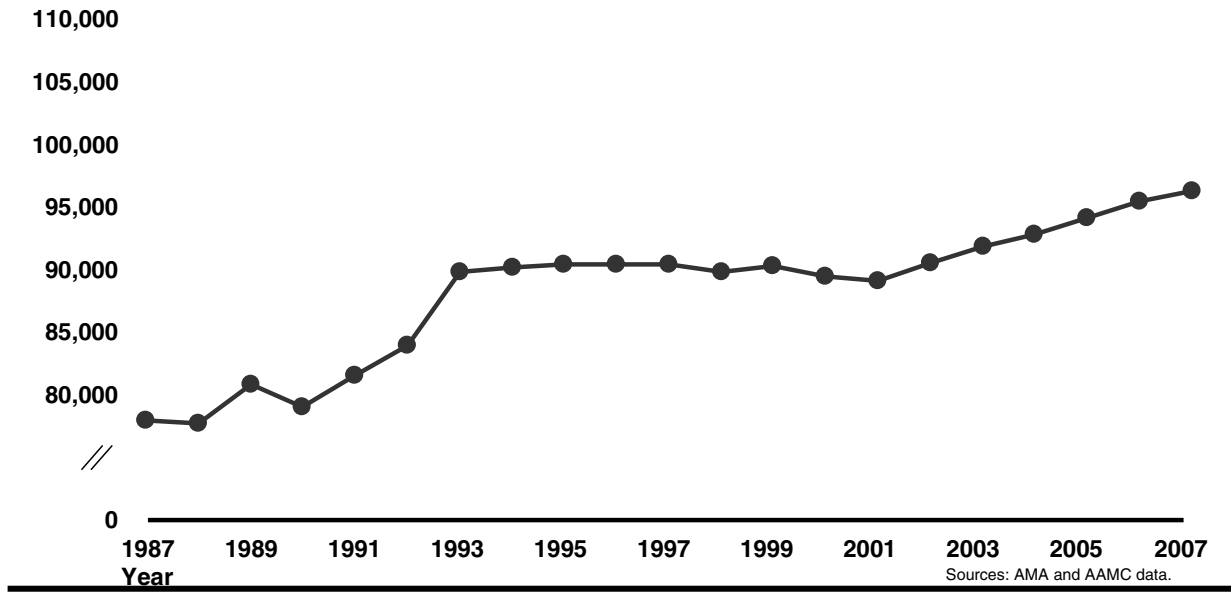


# Background

## Medical education (cont.)

**Total Number of Residents and Fellows in ACGME Accredited Postgraduate Training Programs, 1987-2007**

Total Residents and Fellows







## **Background**

### **Key Policy Changes in Postgraduate Medical Training**

- In part to constrain costs, Congress limited the number of postgraduate medical training positions supported by Medicare with the 1997 Balanced Budget Act.
- In 2003, ACGME implemented a limit on resident and fellow duty hours during postgraduate medical training due to concerns regarding residents' and fellows' work schedules and patient safety.
  - Duty hours must be limited to 80 hours per week and 1 day out of 7 days must be free from all educational and clinical obligations.



## Background

### Federal student loans

- **Loans available to students pursuing higher education:**
  - **Stafford Loans**—the government’s largest student loan program.
    - Depending on the student’s financial need, these loans can be subsidized (the government pays interest while the student is in school) or unsubsidized.
  - **PLUS Loans**—provide more funding for graduate students who have met their maximum Stafford loan eligibility.
  - **Perkins Loans**—low-interest rate loans for students with exceptional financial need.
- **Low-interest rate loans available to students in health professions:**
  - **Loans for Disadvantaged Students**—for students from disadvantaged backgrounds.
  - **Primary Care Loans**—for students who agree to practice in primary care.



## Background

Most specialties can fall into three categories

- **Primary care specialties** include family medicine, general internal medicine, and general pediatrics.
- **Surgical specialties** include general surgery, and subspecialties in orthopedic, plastic, and thoracic surgery.
- **Procedural specialties** include radiology, dermatology, and anesthesiology, as well as subspecialties in cardiology, rheumatology, and immunology.



## Summary of Findings

1. Medical students prefer surgical and procedural specialties, and are more likely to subspecialize.
2. Multiple factors and demographic characteristics influence specialty choice.
3. Although medical student debt is rising, federal loan repayment relief plans offer assistance during training and physicians can earn high incomes that can be used to repay their loans.

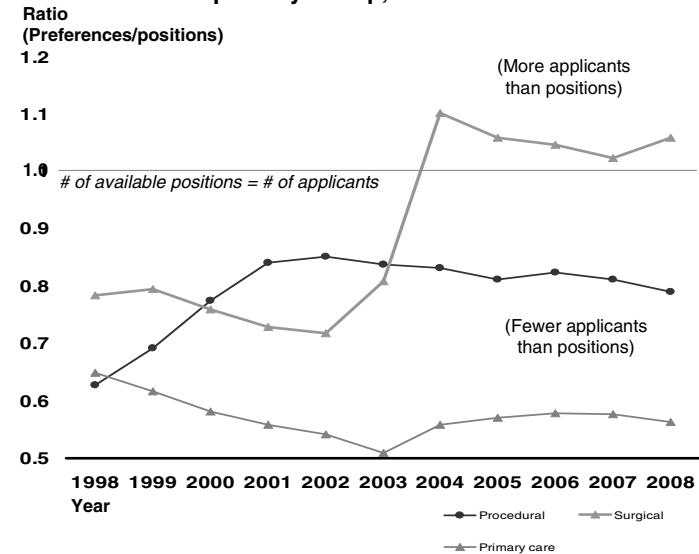


# 1: Surgical and Procedural Specialties Preferred, and Subspecialization Increasing

## Surgical and Procedural Specialties Have Been More Competitive

- Since 1999—after accounting for the number of positions available—more U.S. MD students have preferred surgical and procedural specialties over primary care specialties, according to national data.
- Because more students prefer surgical and procedural specialties relative to the number of available positions, these specialties have been more competitive.
- Since 2004, surgical specialties have been the most competitive.

**Number of U.S. MD Student Applicants who Prefer the Specialty Group Relative to the Number of Available Positions in the Specialty Group, 1998-2008**



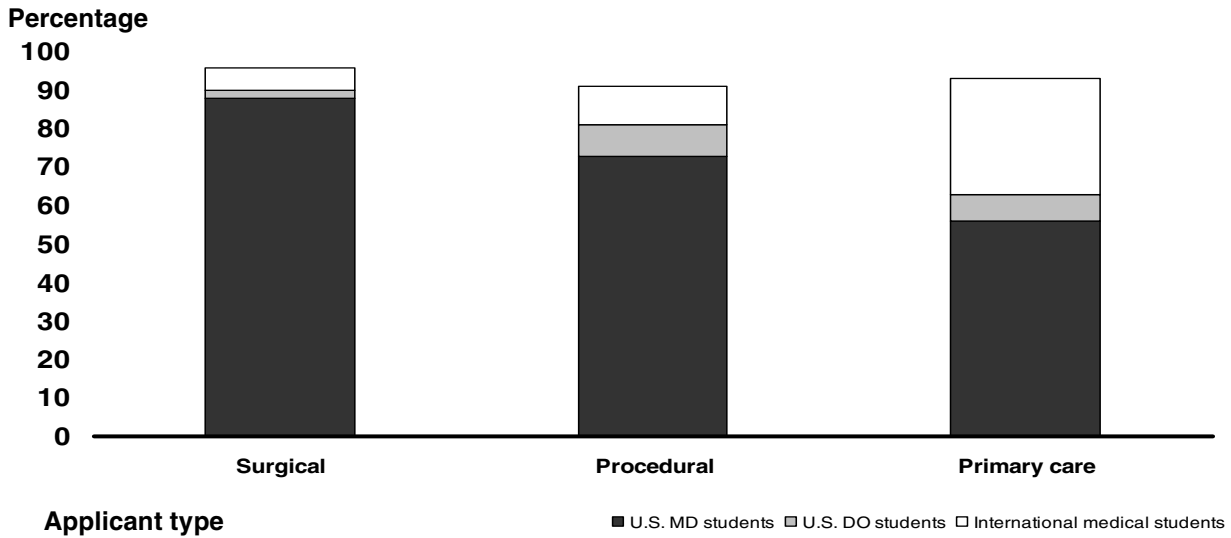
Source: GAO analysis of NRMP data.



# 1: Surgical and Procedural Specialties Preferred

U.S. MD students fill higher proportions of available surgical and procedural positions

**NRMP Positions Filled by Applicant Type, 2008**



Note: Bars do not add to 100 percent because other student groups, such as previous U.S. MD graduates and Canadian students, are not included.

Source: GAO analysis of NRMP data.

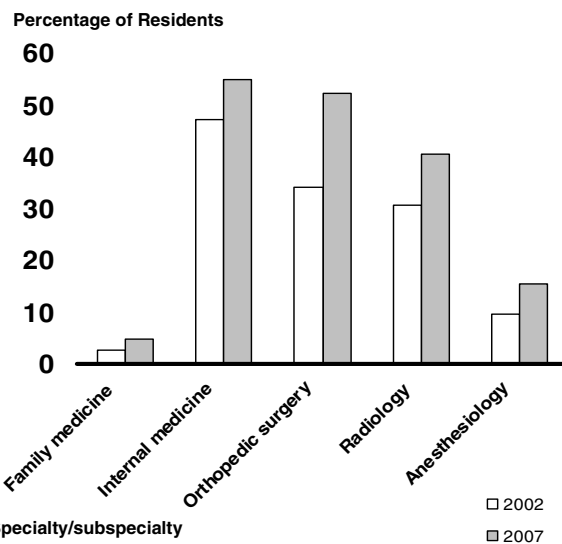


# 1: Surgical and Procedural Specialties Preferred

## More doctors are pursuing training to become subspecialists

- Across selected specialties, the percentage of physicians subspecializing grew from 2002 to 2007, according to national data. This trend was also observed for family medicine.
- The majority of newly accredited programs in recent years are for training in subspecialties, according to ACGME officials. In contrast, the number of newly accredited programs for initial residency training has been relatively stable.

**Change in Subspecialization Rates for Selected Specialties or Subspecialties**



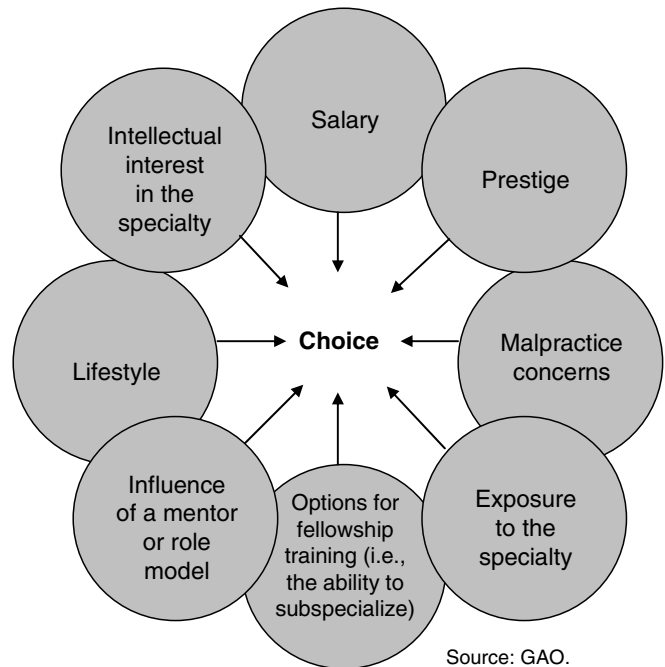
Source: AAMC and AMA.

Note: Internal medicine excludes the sub-specialties of clinical cardiac electrophysiology and interventional cardiology.

## 2: Multiple Factors, Demographic Characteristics Influence Specialty Choice

Students consider multiple factors

- Students consider multiple factors—individually or in concert—when choosing a specialty, as suggested by published literature, a 2008 AAMC survey, and experts.
  - While there is no consensus regarding the most influential factors, there are several commonly cited factors, including...



Source: GAO.





## **2: Multiple Factors Influence Specialty Choice**

Factors lead students to pursue or avoid certain specialties

- **Intellectual interest in the specialty**
  - Students are attracted to rheumatology because they are interested in the complexity of diseases treated by rheumatologists.
  - Some students do not choose primary care specialties because they prefer to focus in a specialized area of medicine.
- **Exposure to specialties in medical school**
  - Students who had a community-based primary care experience during medical school were more likely to select a primary care specialty.
  - Students may be less likely to select surgery because they found their surgical work repetitive during medical school.



## **2: Multiple Factors Influence Specialty Choice**

Factors lead students to pursue or avoid certain specialties

- **Prestige**
  - Students view surgery as prestigious while primary care specialties may not be considered as prestigious.
- **Salary and lifestyle**
  - Procedural specialties, with generally higher salaries and a more controllable lifestyle, may be more attractive.
    - An anesthesiologist earns about \$400,000 a year, according to the MGMA, and can have a predictable schedule with fewer on-call hours.
  - Primary care specialties, with generally lower salaries and a less controllable lifestyle, may be less attractive.
    - A family medicine physician earns about \$174,000 a year, according to the MGMA, and can have a less predictable schedule with more on-call hours.



## **2: Multiple Factors Influence Specialty Choice**

Demographics and personality traits are important

- Demographics—such as marital status and gender—and personality traits may be associated with specialty choice, according to published studies.
  - Married students are more likely to enter primary care specialties such as pediatrics and family practice.
  - Women are more likely to choose primary care and obstetrics and gynecology, but less likely to choose surgery.
  - Personality traits, such as altruism, may lead some to select primary care specialties, while students who have competitive personalities may select surgery.

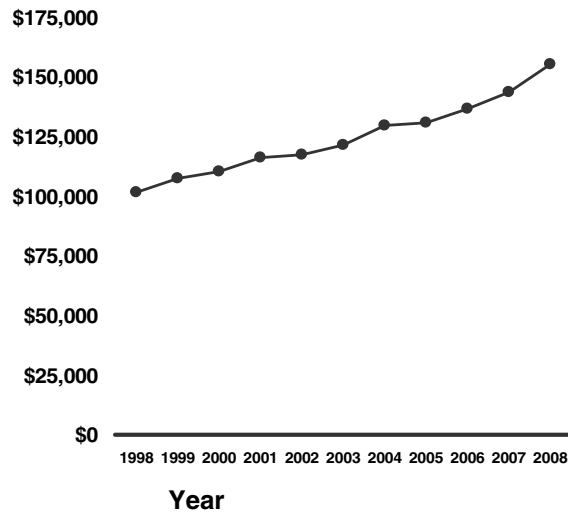


### 3: Debt Is Rising but Federal Assistance Is Available and Physicians Can Earn High Incomes

- Median debt of indebted graduating U.S. MD students has increased by 53 percent since 1998, controlling for inflation.
- The median level of debt among indebted U.S. MD students graduating in 2008 was \$155,000.

Median Educational Debt for Indebted Graduating U.S. MD Students, 1998-2008

2008 constant dollars



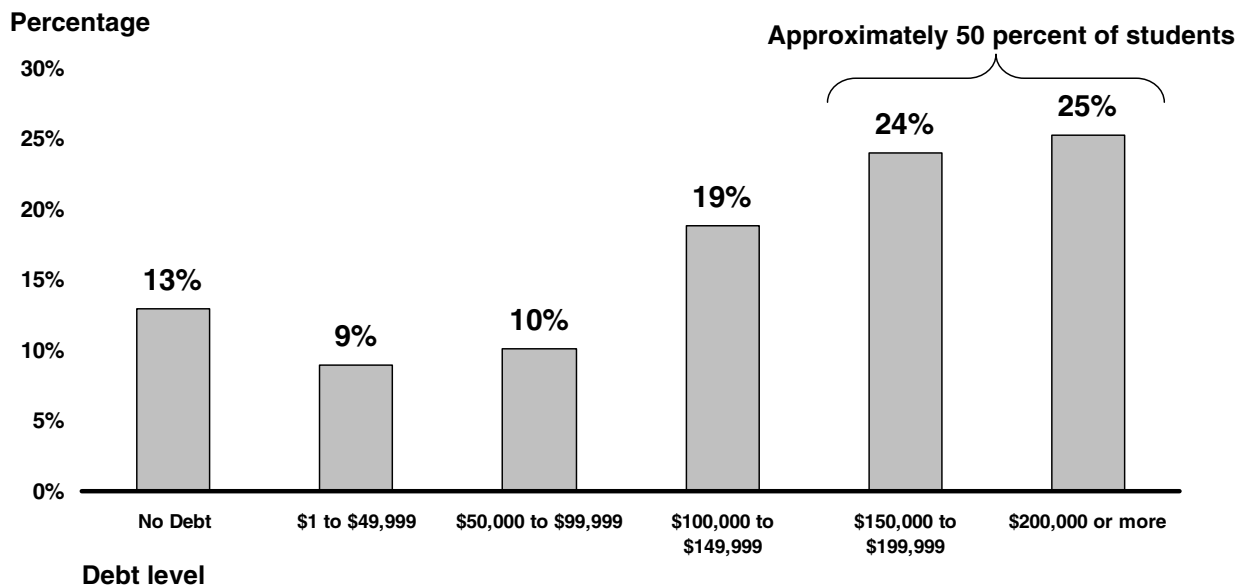
Source: AAMC.



### 3: Debt, Federal Assistance, Physician Income

Nearly half of graduating medical students are at least \$150,000 in debt

Distribution of Student Debt Among U.S. MD Students Graduating in 2008



Source: AAMC.



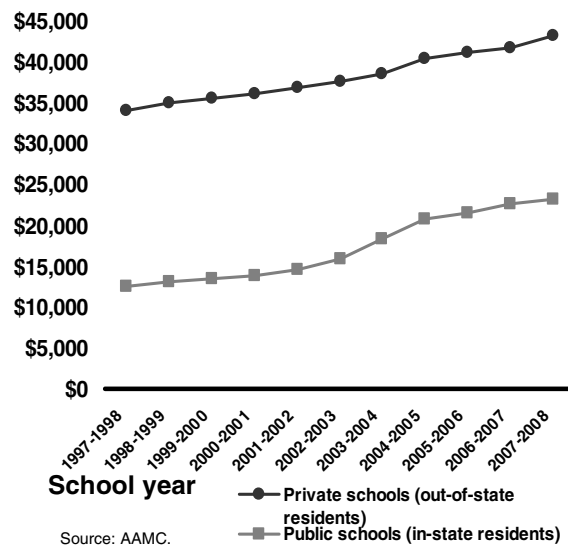
### 3: Debt, Federal Assistance, Physician Income

#### Medical school tuition is also increasing

- Median tuition and fees for 1<sup>st</sup> year U.S. MD students have increased by about \$9,100 at private schools (27 percent) and about \$10,500 at public schools (83 percent) since the 1997-1998 school year, controlling for inflation.
  - Undergraduate tuition and fees have also increased.
- In the 2007-2008 school year, median tuition and fees for 1<sup>st</sup> year U.S. MD students ranged from approximately:
  - \$23,000 at public schools (in-state residents) to
  - \$43,000 at private schools (out-of-state residents)

**Median Tuition and Fees for First-Year U.S. MD Students, 1998-2008**

2008 constant dollars





### 3: Debt, Federal Assistance, Physician Income

Federal loans are available to cover the full cost of medical education

- Stafford loans—medical students can borrow up to \$40,500 a year, with an aggregate limit of \$224,000 (including undergraduate loans).
  - The annual limit is \$20,000 more than other students can borrow.
  - The aggregate limit is \$85,500 more than other students can borrow.
  - The Department of Education increased the aggregate loan limit for medical students from \$189,125 to \$224,000 in April 2008.
  
- PLUS loans—graduate and professional degree students can borrow up to the full cost of attendance minus other federal assistance.

<b>Sample Annual Budget for Student Attending Private Medical School</b>	
<b>Cost of attendance*</b>	
Tuition and fees	\$48,000
<u>Expenses</u>	<u>+\$19,000</u>
<b>Total cost</b>	<b>\$67,000</b>
<b>Federal loans available</b>	
Stafford loan	\$40,500
<u>PLUS loan</u>	<u>+\$26,500</u>
<b>Total borrowed</b>	<b>\$67,000</b>
<p>Students can also receive financial aid from scholarships, grants, and other loan programs.</p> <p><small>* Based on average costs reported by the five medical schools with the highest tuition and fees according to AAMC. Expenses include such costs as books, supplies, housing, food, and transportation.</small></p> <p><small>Source: GAO.</small></p>	



### **3: Debt, Federal Assistance, Physician Income**

#### **Options for reducing repayment burdens until after training**

- Borrowers generally must start repaying their loans within 6 months of graduation.
  - With \$155,000 in debt, a resident's monthly loan payment could reach over \$1,700 per month. Since the average 1<sup>st</sup> year resident stipend is \$3,729, these payments would account for about 48 percent of pretax income.
- Repayment relief options:
  - 20/220 Pathway (available until June 30, 2009)—a temporary deferment of loan payments for students with high debt relative to income.
    - Eligible residents can defer all federal loan payments without accruing interest on subsidized loans.
  - Income-based repayment plan (available after July 1, 2009)—a graduated repayment plan for students with high debt relative to income.
    - Caps the average 1st year resident's loan payments at \$364 per month (about 10 percent of pretax income).
  - Forbearance—a temporary postponement or reduction in loan payments.
    - Residents are automatically eligible, but interest continues to accrue on all loans and is added to the principal. As a result, the amount due on the loans is larger than it would be if residents had not sought forbearance.
- After postgraduate training is complete, physician income typically increases significantly. At this higher income level, borrowers generally do not qualify for repayment relief options.

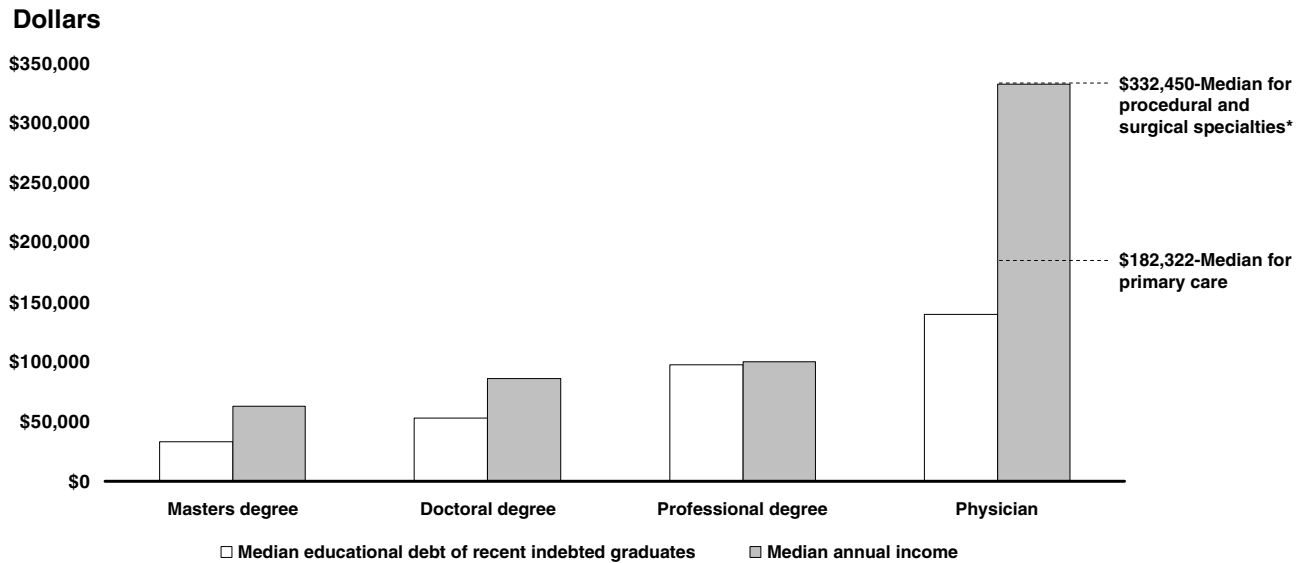




### 3: Debt, Federal Assistance, Physician Income

Physicians incur more debt but can earn high incomes to repay it

Median Income and Debt by Degree, 2007



Source: GAO analysis based on data from the AAMC, MGMA, National Postsecondary Student Aid Study, and Census Bureau.  
 \*Due to the way MGMA data is reported, the specialties included in this calculation are somewhat different from the procedural and surgical categories used in earlier slides.

## Enclosure II

### **Trends in Postgraduate Dental Education and Student Debt**

Unlike physicians, dentists are generally not required to complete postgraduate training, but may instead practice after graduating from a 4-year dental school and completion of licensure requirements, according to the American Dental Association (ADA). However, dentists may choose to pursue postgraduate training through a general or specialty dental program.

General dentistry programs last 1 or 2 years and are affiliated with dental schools, which typically offer advanced education in general dentistry (AEGD) programs, or hospitals, which typically offer general practice residency (GPR) programs. Specialty dental programs allow a dentist to train in one of several specialties—endodontics, orthodontics and dentofacial orthopedics, oral and maxillofacial surgery, oral and maxillofacial radiology, oral and maxillofacial pathology, periodontics, pediatric dentistry, prosthodontics, or public health dentistry. Many of these programs last from 1 to 3 years.<sup>15</sup> Some specialty programs also include graduate-level coursework leading to an additional degree.

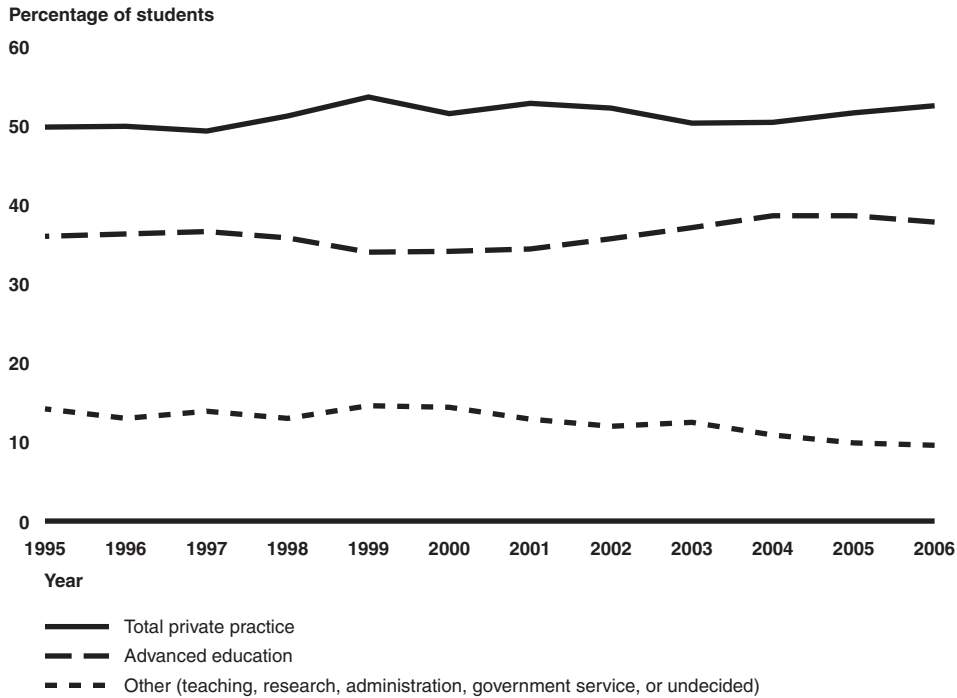
This enclosure describes: (1) trends in postgraduate dental training, (2) factors that influence dental school graduates' choice to pursue postgraduate training, and (3) trends in debt for graduating dental students. We relied on multiple methodologies to conduct our work, including data analysis, literature review, and interviews with experts in dental education, such as the ADA and the American Dental Education Association (ADEA). (See encl. IV for a detailed description of the scope and methodology.)

The percentage of graduating students planning to pursue postgraduate dental training was stable from 1995 to 2006, according to ADEA data (see fig. 1). While most dental school seniors planned to go directly into private practice, almost 40 percent planned to pursue postgraduate dental training. The rest planned to go into teaching, research, administration, government service, or were undecided.

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<sup>15</sup>Oral and maxillofacial surgery programs last 4 to 6 years.

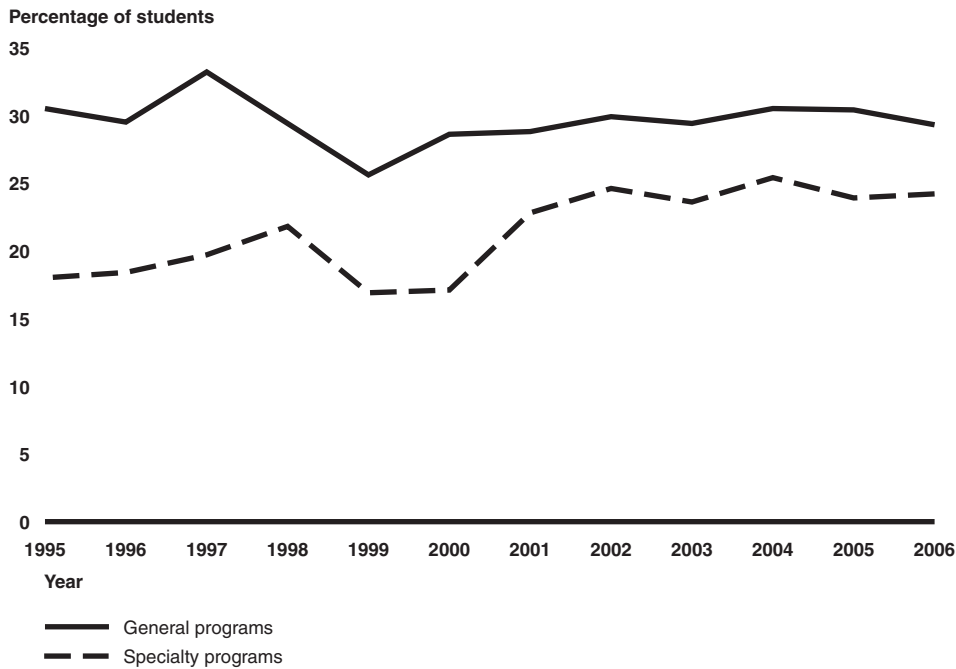
**Figure 1: Dental Students' Career or Academic Plans Following Graduation, 1995-2006**



Source: ADEA.

The percentage of graduating seniors applying to general programs remained stable at about 30 percent from 1996 to 2006. The percentage of those applying to specialty programs grew from about 18 percent in 1996 to about 24 percent in 2006—over a 30 percent increase in the percentage of students applying to specialty programs over a 10- year period (see fig. 2). Despite the increase in the percentage of students applying to specialty programs between 1996 and 2006, ADA data show that the proportion of specialists in the dental workforce remained close to 20 percent from 1991 through 2005. According to 2006 ADEA data, orthodontics was the most popular dental specialty (about 32 percent of specialty program applicants), followed by pediatric dentistry (about 24 percent) and oral and maxillofacial surgery (about 17 percent).

**Figure 2: Percentage of Dental Students Applying for General Programs or Specialty Programs, 1996-2006**



Source: ADEA.

Dentists often choose to pursue postgraduate dental training because of personal interest in the content of a program, according to research studies and experts. For example, dentists may be interested in the intellectual content, diagnostic challenges, or the skills and talents required for a particular specialty. Experts also indicated that competitiveness—the applicant’s ability to obtain a training position—influences whether a student applies for postgraduate dental training. Data from the 2006 ADEA survey of graduating dental school seniors show that debt influences their postgraduate plans—22 percent noted it as a major influence on their decision.

Dental student debt is rising. In 2006, the average indebtedness of all graduating dental students was \$145,465—up about 55 percent from 1996, after controlling for inflation—according to ADEA data. Average tuition and fees for 1st year dental students was \$29,717 for the 2006-2007 school year—up about 40 percent from the 1997-1998 school year, after controlling for inflation—according to ADA data. Average tuition and fees for the 2006-2007 school year were \$17,866 for public dental schools and \$41,568 for private dental schools. Average tuition and fees for the 1997-1998 school year were \$8,529 for public dental schools and \$25,798 for private dental schools.

## Enclosure II

Like physicians in residency, dentists can qualify for the same loan repayment relief options—income-based repayment plans and forbearance—while they are completing their postgraduate dental training.<sup>16</sup> In addition, like physicians, dentists can earn high incomes once their training is complete. In 2005, the average salary was \$198,350 for general dentists, and \$304,020 for dentists who specialized, according to the ADA.

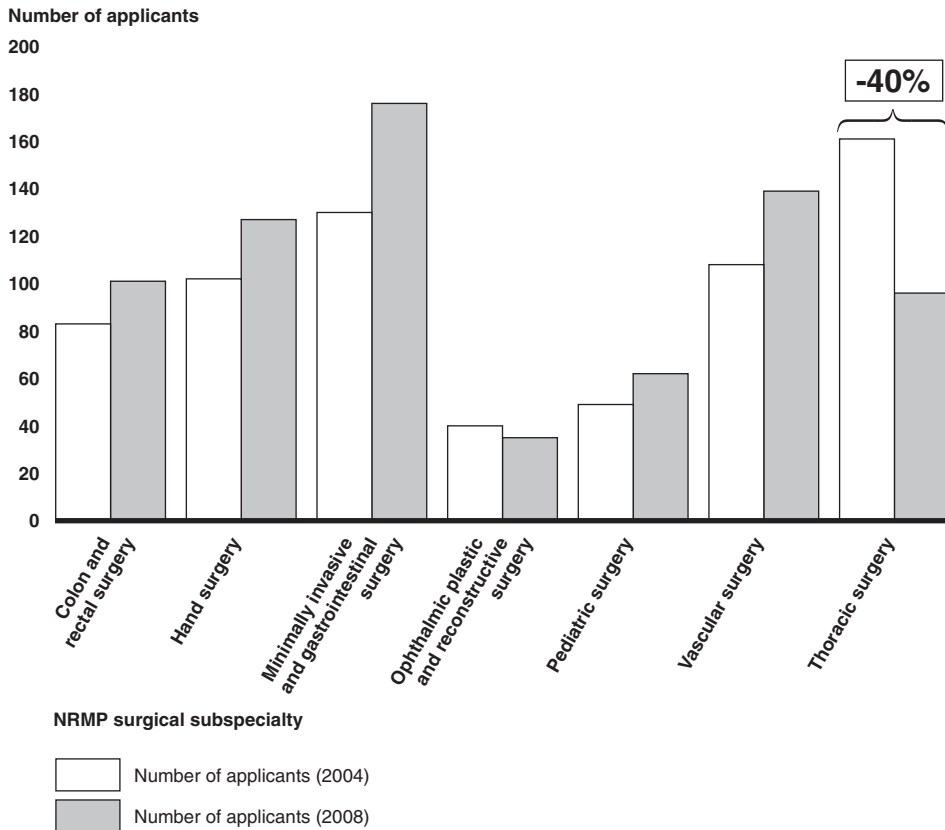
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<sup>16</sup>There is wide variation in the stipends provided to dentists in postgraduate training. Some postgraduate training programs do not provide dentists with stipends, while some may offer dentists over \$47,000 annually, according to the American Dental Association (ADA).

### Trends in Thoracic Surgery Fellowships

Thoracic surgery fellowships are an exception to the generally increasing rate of subspecialization among physicians. Forty percent fewer physicians applied for 2008 thoracic surgery fellowship positions than those applying for 2004 positions, according to national data (see fig. 3). Moreover, less than 67 percent of 2008 positions were filled, down from 94 percent of 2004 positions (see fig. 4). (See encl. IV for a detailed description of our scope and methodology.)

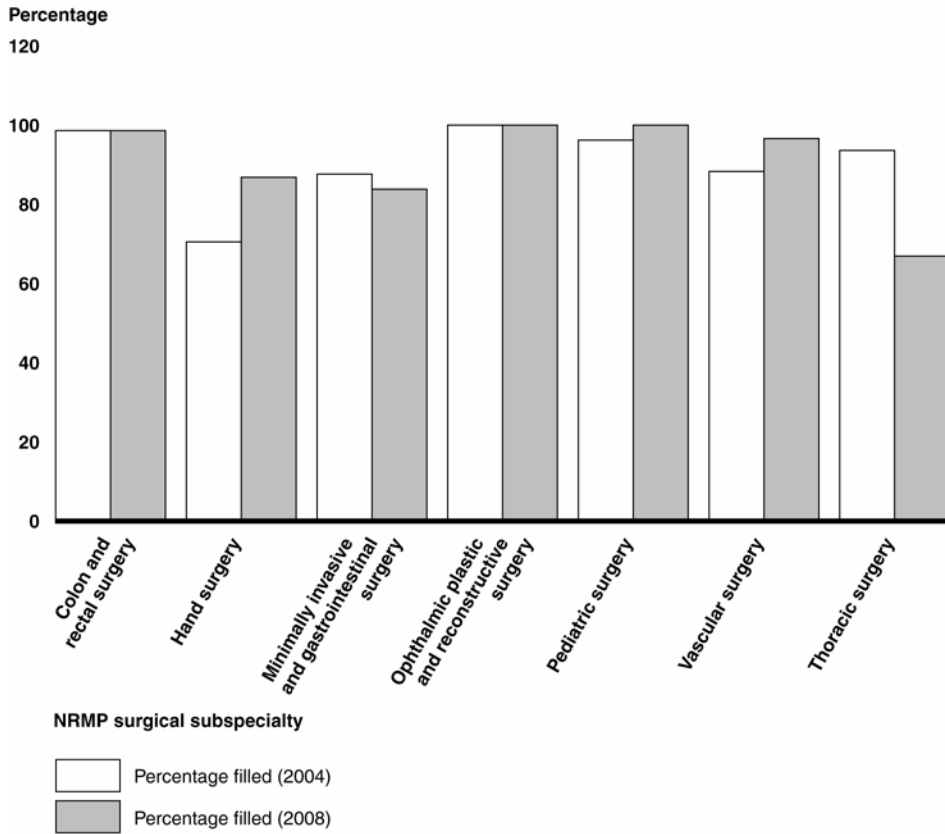
**Figure 3: Number of Fellowship Applicants for Selected National Resident Matching Program (NRMP) Surgical Subspecialties, 2004 and 2008**



Source: NRMP.

Notes: Years refer to the year of appointment, that is, the year the physician begins his or her fellowship. Includes only surgical subspecialties for which 2004 and 2008 data were available.

**Figure 4: Percentage of Fellowship Positions Filled for Selected NRMP Surgical Subspecialties, 2004 and 2008**



Source: NRMP.

Notes: Years refer to the year of appointment, that is, the year the physician begins his or her fellowship. Includes only surgical subspecialties for which 2004 and 2008 data were available.

Published articles suggest that fewer employment opportunities for thoracic surgeons may be contributing to the declining interest in thoracic surgery fellowships. For example, some thoracic surgeons may need an additional fellowship focusing on a narrower area of thoracic surgery, such as adult cardiac surgery, to secure employment. Another reason for the decline, according to experts, may be due to the growing use of nonsurgical treatments for cardiovascular disease, such as stents,<sup>17</sup> that are not performed by thoracic surgeons.

<sup>17</sup>Stents are small, permanent tubes placed in arteries to improve blood flow, keep arteries from narrowing or weakening, and prevent blockages.

## Scope and Methodology

Our review focused primarily on medical students enrolled in U.S. medical schools leading to the degree of Doctor of Medicine (MD) and allopathic<sup>18</sup> postgraduate medical training.<sup>19</sup> To conduct our work, we relied on multiple methodologies, including analyses of summary data, literature reviews, and interviews.

### Data Analysis

To examine trends in postgraduate medical training, we examined National Resident Matching Program (NRMP) data for 1998 to 2008. The NRMP administers a service—known as the match—that matches applicants with residency programs based on the ranked preferences of both parties.<sup>20</sup> The NRMP collects and maintains data on the number of applicants, the type of applicants' medical school,<sup>21</sup> the applicants' preferred specialty (their first or only choice), and the specialty in which the applicant placed. According to the NRMP, the match fills about 80 percent of all residency positions. NRMP is the most comprehensive data source on student preferences and available residency positions. In addition, U.S. MD students are required to enter the match when applying for residency.<sup>22</sup> In 2008, 28,737 applicants applied to the match and 23,674 were successfully matched to a position. NRMP data are publicly available on the NRMP Web site.

To examine trends in U.S. MD students' preferences, we calculated a ratio of the number of U.S. MD student applicants who preferred primary care, surgical, or procedural specialties to the number of 1st and 2nd year residency positions available in each specialty group. (See table 1 for the NRMP specialties and subspecialties categorized under the primary care,<sup>23</sup> surgical, and procedural specialty groups; the numbers of student preference and available positions; and the ratio of student preferences to positions.) To determine the proportion of U.S. MD students, DO students, and international medical students that filled surgical,

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<sup>18</sup>Allopathic medicine is a system of medicine that aims to combat disease by using remedies such as drugs or surgery which produce effects that are different from or incompatible with those of the disease being treated; graduates of allopathic medical schools receive an MD degree. In contrast, osteopathic medicine is a form of medical practice similar to allopathic medicine that also incorporates manual manipulation of the body as therapy; graduates of osteopathic medical schools receive a doctor of osteopathic medicine (DO) degree.

<sup>19</sup>We excluded osteopathic residency because osteopathic residency positions make up less than 6 percent of all residency positions offered by the National Resident Matching Program (NRMP) and the American Osteopathic Association, the organization that administers the matching service for osteopathic residency. In addition, we found only limited information on the factors that influence osteopathic and international medical school students' specialty choice and interviews we conducted with osteopathic and international medical student groups suggested that factors influencing these students' decisions may be similar to those influencing allopathic students.

<sup>20</sup>The NRMP is affiliated with the Association of American Medical Colleges (AAMC).

<sup>21</sup>For example, medical students can graduate from (1) a U.S. medical school leading to an MD degree, (2) a U.S. medical school leading to a DO degree, and (3) an international medical school.

<sup>22</sup>U.S. MD students do not have to enter the NRMP match if they enter the military or Canadian matches. According to 2007 data, most physicians in U.S. postgraduate medical training earned an MD degree from a U.S. medical school.

<sup>23</sup>There is some variation as to what specialties are included under primary care. While family medicine, general internal medicine, and general pediatrics are generally accepted as primary care specialties, other specialties that may also be considered primary care include obstetrics/gynecology, psychiatry, preventative medicine, geriatric medicine, and osteopathic general practice.



Enclosure IV

procedural, and primary care positions in 2008, we divided the number of students from each type of medical school that had received a position in primary care, surgical, or procedural specialties by the number of 1st and 2nd year positions available in each specialty group. (See table 2 for the number of students that filled each specialty category.)

**Table 1: Categories of NRMP Specialties and Subspecialties and U.S. MD Student NRMP Preferences and Positions Available in 2008**

Category	NRMP specialties/ subspecialties	Number of U.S. MD student applicants who expressed the specialty category as a preferred choice (2008)	Number of positions available (2008)	Ratio, preferences to positions (2008)
Primary care	family medicine internal medicine pediatrics	5,992	10,643	0.56
Surgical	general surgery neurological surgery orthopedic surgery plastic surgery otolaryngology urology	2,217	2,093	1.06
Procedural	Anesthesiology dermatology emergency medicine neurology radiology radiation oncology pathology physical medicine and rehabilitation	4,605	5,831	0.79
<b>Total</b>		<b>12,814</b>	<b>18,567</b>	<b>N/A</b>

Source: GAO and GAO analysis of NRMP data.

Notes: NRMP included combined internal medicine and pediatrics programs in its preference data; however, NRMP does not consider preliminary or transitional year programs a preference for a specific specialty, and therefore they were excluded from its preference data. We grouped NRMP applicants into three specialty categories, and therefore did not include all NRMP applicants in our analysis. We also did not include specialties or subspecialties with fewer than 10 NRMP positions (with the exception of combined programs, which NRMP included under internal medicine and pediatrics accordingly). In addition, obstetrics/gynecology and psychiatry were not included because of debate within the industry about whether they are considered primary care specialties. However, including them in our preferences-to-positions ratio did not change the trend for primary care specialties from 1998 to 2008. In providing comments on our report, AAMC stated that neurology and pathology are not typically considered procedural specialties. When we conducted an additional analysis that removed them from the procedural specialties category in our preferences-to-positions ratio analysis, we found that their exclusion did not change the trend for procedural specialties from 1998 to 2008.

**Table 2: Number of U.S. MD, DO, and International Medical Students that Filled Each Specialty Category in 2008**

Category	U.S. MD students	DO students	International medical students
Primary care	5,926	784	3,207
Surgical	1,843	34	133
Procedural	4,287	449	596
<b>Total</b>	<b>12,056</b>	<b>1,267</b>	<b>3,936</b>

Source: GAO analysis of NRMP data.

Notes: For purposes of consistency, we excluded the same programs and specialties or subspecialties as we did in our preferences-to-positions ratio analysis; we also excluded combined programs with less than 10 NRMP positions and those in which the first specialty mentioned was not included in our original definitions of primary care, surgical, and procedural.

To examine factors that influence specialty choice, we reviewed data from AAMC's Graduation Questionnaire (GQ). The data are available on the AAMC Web site. The GQ is an annual survey of 4th year MD students at U.S. medical schools. The survey asks students to rate the importance of factors that influence their specialty choice; students do not rank the factors in order of importance. We examined data from 2005 to 2008 because the factors listed in the survey for these years were considered to be comparable by AAMC officials. The response rate for the survey for these years ranged from 33 percent in 2005 to 71 percent in 2008.<sup>24</sup> Despite the variation in the response rates from 2005 to 2008, our analysis generally revealed little change in the influence of the factors on specialty choice. We therefore only reported data for 2008.

To examine trends in student debt, we reviewed median summary data for 1998 to 2008 from the GQ published in the *AAMC Data Book: Medical Schools and Teaching Hospitals by the Numbers* (May 2008 edition), also available on the AAMC Web site.<sup>25</sup> The GQ asks 4th year medical students about their outstanding loans for both medical school and undergraduate education. The data are self-reported near the time of students' exit interviews with their financial aid office, when they are informed of their debt levels. The overall response rate for the survey has ranged from 33 percent to 92 percent since 1998, but this variation does not appear to have resulted in any year-to-year irregularity in the data. To validate the GQ debt data, AAMC officials compare the aggregate student-reported data with administrative records from medical school financial aid offices. The AAMC debt data are widely used because they are the most comprehensive available. Further, we also compared the AAMC data with data obtained from Education's National Postsecondary Student Aid Study (NPSAS) of 2000 and 2004. The comprehensive, nationwide NPSAS is designed to determine how students and their families pay for postsecondary education and includes data on outstanding student loan debt. We determined that average medical student debt levels from the NPSAS were comparable with the AAMC data. We adjusted the historical AAMC debt data for inflation using the gross domestic product price index. We also calculated estimated monthly loan payments for medical school graduates using the median level of student indebtedness reported by the AAMC. Our calculation was based on the assumption of a 10-year repayment schedule at the standard Stafford loan interest rate of 6.8 percent. Our

<sup>24</sup>The GQ survey response rate declined in 2005 when the survey became optional but has since increased.

<sup>25</sup>These data are not verified by the Department of Education (Education); therefore, they may be under or overstated.

Enclosure IV

calculated loan payments corresponded with estimates produced with Education’s repayment plan calculator available on its Web site.<sup>26</sup>

To examine medical school tuition and fees, we examined data from the AAMC Tuition and Student Fees Survey of allopathic medical schools, published in the *AAMC Data Book: Medical Schools and Teaching Hospitals by the Numbers*. We adjusted the AAMC median historical data for inflation using the gross domestic product price index. To create an example of an annual medical student budget, we examined cost of attendance estimates from the five medical schools with the highest tuition and fees according to AAMC. These estimates are developed by each school’s financial aid office and reflect the average estimated cost of attending medical school.

To examine the expected income of medical school graduates, we reviewed 2007 data from the Medical Group Management Association’s (MGMA) *Physician Compensation and Production Survey: 2008 Report Based on 2007 Data*. The report contains the median compensation for physicians by specialty and also overall median compensation for the categories of primary care and specialists. The MGMA category of specialists includes specialties that we considered procedural or surgical specialties (for example, anesthesiology and orthopedic surgery). (See table 1.) It also includes specialties we excluded in our analysis of NRMP data (for example, obstetrics/gynecology) and additional specialties not included in the NRMP data (for example, gastroenterology). (See table 3.) However, because of the way MGMA data were reported, we were unable to recalculate median compensation amounts based solely on the specialties included in our NRMP categories . Therefore, we considered the MGMA category of specialists to correspond roughly to our combined categories of procedural and surgical.

**Table 3: GAO Categories and MGMA Categories and Specialties/Subspecialties**

GAO category	MGMA category	Specialties/subspecialties	
Primary care	Primary care	Family Practice Internal Medicine	Pediatrics/Adolescent Medicine
Procedural and surgical	Specialists	Anesthesiology Cardiology: Invasive Cardiology: Noninvasive Dermatology Emergency Medicine Gastroenterology Hematology/Oncology Neurology Obstetrics/Gynecology	Ophthalmology Orthopedic Surgery Otorhinolaryngology Psychiatry Pulmonary Medicine Radiology: Diagnostic Surgery: General Urology

Source: GAO, MGMA.

<sup>26</sup>Education’s repayment plan calculator is available at: <http://www.ed.gov/offices/OSFAP/DirectLoan/RepayCalc/dlentry1.html>.

## Enclosure IV

To collect these data, the MGMA mailed surveys to 9,975 of its member organizations, which include medical group practices and other organizations involved in physician practice management. The response rate was about 20 percent. The MGMA defines compensation to include the amounts reported on W-2, 1099, or K1 (for partnerships) tax forms plus all voluntary salary reductions. The MGMA instructs respondents to include the following sources of compensation: salary, bonus and/or incentive payments, research stipends, honoraria, and distribution of profits. According to MGMA officials, they ensure the reliability of the data by examining them for inconsistencies and comparing them with other industry studies. Although multiple compensation surveys are available, we used the MGMA data because they have been used in many health policy research articles and were recommended by experts we interviewed. In addition, the Centers for Medicare & Medicaid Services uses MGMA compensation data when setting Medicare physician payment rates.

To analyze median debt and income for other advanced degree holders, we reviewed debt data from the NPSAS of 2004 and income data from the Census Bureau's 2008 Current Population Survey (2007 data), the most recent years for which data are available. To account for the different years, we adjusted the 2004 NPSAS data for inflation to 2007 dollars using the gross domestic product price index. The Current Population Survey reports median earnings for full-time workers age 25 and over by educational attainment. These sources provide data on holders of three types of advanced degrees: masters degree (including M.S., M.Ed., and M.B.A.), doctoral degree (e.g., Ph.D.), and professional degree (including M.D. and J.D.), which is required for practicing in certain professions.

To examine trends in postgraduate dental training, we reviewed publicly available data for 1995 to 2006 from the American Dental Education Association's (ADEA) Survey of Dental School Seniors. The survey asks about students' choice to pursue dentistry, educational debt, and postgraduation plans. The response rate was 84 percent in 2006 and about 79 percent from 1995 through 2006. Using the survey data, we created three categories for students' postgraduation plans: private practice, advanced education, and other. For private practice, we included students who planned to pursue solo private practice, enter a partner or group practice, or begin as an associate or employee of a private practice. For advanced education, we included students who planned to enter general practice residency or advanced education in general or specialty dental programs. For other, we included students who planned to pursue teaching, research or administrative positions, or government service, and those who are undecided. To examine trends in debt for graduating dental students, we reviewed data from the same survey. We adjusted the ADEA historical data for inflation using the gross domestic product price index. The number of U.S. dental school graduates ranged from 3,930 in 1997 to 4,515 in 2006.

To examine dental school tuition and fees, we reviewed data from the American Dental Association's (ADA) 2006-2007 Survey of Dental Education, which contains information on 1st year tuition and fees. All U.S. dental schools are required to complete the survey to maintain their accreditation status. We adjusted the ADA historical data for inflation using the gross domestic product price index.

To examine trends in thoracic surgery fellowships, we reviewed publicly available NRMP fellowship data on surgical subspecialties for 2004 and 2008. We included only surgical subspecialties for which 2004 and 2008 data were available.

## Enclosure IV

We determined that data from the NRMP, AAMC, MGMA, ADA, and ADEA were sufficiently reliable for our purposes. We assessed the reliability of the NRMP data by interviewing NRMP officials about the residency matching process, data entry procedures, and data accuracy assurance. We assessed the reliability of the AAMC GQ data by interviewing AAMC officials about the survey methodology, response rate, and changes in the data over time. We also corroborated the GQ debt data against similar NPSAS data for selected years. We assessed the reliability of the MGMA data by interviewing MGMA officials about the survey methodology, data entry procedures, and the data accuracy assurance. We assessed the reliability of the ADA and ADEA data by reviewing documentation about the survey methodology and the response rates for the ADA Survey of Dental Education and the ADEA Survey of Dental School Seniors.

### **Literature and Document Review**

We also reviewed literature published from 1998 to 2008 that included research articles identified through 16 databases such as MEDLINE, PsycINFO, Social SciSearch, and Gale Group Health and Wellness. To examine trends in postgraduate medical training (including thoracic surgery fellowships), we searched “trends, medical residencies,” “applications, medical residencies,” “trends, physician supply,” and other such terms. To examine the factors that influence medical students’ specialty choice, we searched terms such as “lifestyle,” “salary,” “Medicare payments,” “job market,” and “debt.” We also reviewed relevant articles from the annual medical education issue of the *Journal of the American Medical Association*. We also included in our review articles that were identified by government officials and representatives of professional associations we interviewed. We identified the factors influencing specialty choice by determining those frequently mentioned in the articles we reviewed. We then corroborated that these factors had been mentioned by experts as being influential or were identified as having influenced the specialty choice of most student respondents to the AAMC GQ survey. In all, we reviewed 162 articles.

To examine trends in postgraduate medical training and the factors affecting specialty choice, we reviewed information or documents provided to us by the Centers for Medicare & Medicaid Services, Health Resources and Services Administration (HRSA), and the Council on Graduate Medical Education. We also examined documents provided to us by the professional organizations we interviewed. (See below for the full list of government agencies and professional organizations we interviewed.)

To identify the types of federal loans and repayment plans available to medical students, we reviewed relevant regulations and guidance from Education and HRSA of the Department of Health and Human Services. We used these documents to evaluate eligibility requirements and the general terms of the loan programs.

To provide information on postgraduate dental education and the factors that influence dental specialization, we reviewed research articles that were published from 1998 to 2008. We identified research articles through 18 databases and searched using such terms as “dental residencies,” “dental specialists,” “salary,” “lifestyle,” and “training”. We reviewed a total of 28 articles. The articles were used to inform our findings on postgraduate dental education and to supplement the information we obtained from experts and publicly available data from the ADA and the ADEA.

## Enclosure IV

### **Interviews with Government Officials and Professional Groups**

To gather information on medical and dental education and training, we interviewed officials from government agencies and the following professional organizations, including groups that represent medical schools, medical students, and physicians:

Accreditation Council of Graduate Medical Education  
American Association of Colleges of Osteopathic Medicine  
Association of American Medical Colleges  
American Academy of Family Physicians  
American Board of Medical Specialties  
American College of Surgeons  
American Dental Association  
American Dental Education Association  
American Medical Association  
American Medical Student Association  
American Osteopathic Association  
Centers for Medicare & Medicaid Services  
Council on Graduate Medical Education<sup>27</sup>  
Department of Education  
Educational Commission of Foreign Medical Graduates  
Health Resources and Services Administration  
Medical Group Management Association  
Medicare Payment Advisory Commission  
National Resident Matching Program  
The Society of Thoracic Surgeons

We conducted our work from September 2008 to April 2009 in accordance with all sections of GAO's Quality Assurance Framework that are relevant to our objectives. The framework requires that we plan and perform the engagement to obtain sufficient and appropriate evidence to meet our stated objectives and discuss any limitations in our work. We believe that the information and data obtained, and the analysis conducted, provide a reasonable basis for any findings and conclusions.

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<sup>27</sup>We attended its fall 2008 meeting, reviewed presentation materials, and discussed the nature of the council with HRSA, the federal agency that provides support to the council.

**Comments from the Department of Health and Human Services**

Note: Page numbers in the draft report may differ from those in this report.



DEPARTMENT OF HEALTH & HUMAN SERVICES

OFFICE OF THE SECRETARY

Assistant Secretary for Legislation  
Washington, DC 20201

**APR 23 2009**

Kathleen M. King  
Director, Health Care  
U.S. Government Accountability Office  
441 G Street N.W.  
Washington, DC 20548

Dear Ms. King:

Enclosed are comments on the U.S. Government Accountability Office's (GAO) report entitled: "Graduate Medical Education: Trends in Training and Student Debt" (GAO-09-438R).

The Department appreciates the opportunity to review this report before its publication.

Sincerely,

Handwritten signature of Barbara Pisaro Clark in cursive.

Barbara Pisaro Clark  
Acting Assistant Secretary for Legislation

Attachment

**GENERAL COMMENTS OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES (HHS) ON THE U.S. GOVERNMENT ACCOUNTABILITY OFFICE'S DRAFT REPORT: "GRADUATE MEDICAL EDUCATION: TRENDS IN TRAINING AND STUDENT DEBT" (GAO-09-438R)**

The U.S. Department of Health and Human Services, including the Health Resources and Services Administration (HRSA) and the Centers for Medicare and Medicaid Services (CMS), has reviewed the GAO's draft report entitled, "Graduate Medical Education: Trends in Training and Student Debt" (GAO-09-438R).

GAO has made reference on Page 4 (second paragraph, 5<sup>th</sup> sentence) and on page 17 (first bullet on slide and in the accompanying chart) that there has been an increase in the choice of Family Medicine by United States Medical School Graduates (USMGs). While it is true that the percentage of Family Medicine residency slots filled by USMGs has increased from 2005 to 2009, this is the result of two factors. The first is the number of residency slots offered has decreased by 8 percent, and the second is the number of USMGs filling those slots has decreased by only 4 percent. Moreover, USMGs entering Family Medicine residencies have decreased as a percentage of all USMGs between 2005 and 2009 from 8.1 percent to 7.4 percent. Therefore, HRSA believes stating an increase in the choice of USMGs is misleading and that all references to an increase in Family Practice residencies should be removed from the draft correspondence.

HRSA also suggests that the GAO should include "service obligation" as an additional factor that influences not only the choice of specialty, but where the clinician chooses to practice and for how long. For example, in the article, "Factors Influencing Primary Care Physician's Choice to Practice in Medically Underserved Areas," (Academic Medicine, Vol. 72, No. 10/October Supplement 1, 1997, pages S109 – S111) it was found that these factors strongly influenced the decision to practice in an underserved area. HRSA's National Health Service Corps Scholarship Program requires a scholarship recipient to complete a primary care residency, and the program actively seeks out scholarship recipients with the characteristics which experience has shown are more likely to result in the recipients wanting to practice in underserved areas and remain after fulfillment of the service obligation.

Finally, CMS notes that the draft report does not specifically mention residents training in podiatric programs. Under Medicare, podiatric residents are treated the same way as dental residents.



**GAO Contacts and Staff Acknowledgments**

**GAO Contacts**

Kathleen M. King, (202) 512-7114 or [kingk@gao.gov](mailto:kingk@gao.gov) and George A. Scott, (202) 512-7215 or [scottg@gao.gov](mailto:scottg@gao.gov)

**Staff Acknowledgments**

In addition to the contacts named above, Karen Doran and Bill J. Keller, Assistant Directors; Stella Chiang; William W. Colvin; Elayne Heisler; Carla Jackson Willis; Timothy Walker; and Jennifer Whitworth made key contributions to this report.

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