

## Physicians and Surgeons

(All information, except UB degree program information, is from the US Department of Labor, Bureau of Labor Statistics 2004-2005 Occupational Outlook Handbook.)

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- **UB Graduate Programs:**
  - [MD](#)
  - [DDS](#)
- **UB Undergraduate Programs:**
  - [BS Biochemical Pharmacology](#)
  - [BS Biochemistry](#)
  - [BA, BS Biological Sciences](#)
  - [BS Biophysics](#)
  - [BS Biotechnology](#)
  - [BS, BS/MS Exercise Science](#)
  - [BS Medical Technology](#)
  - [BS, BS/MS Medicinal Chemistry](#)
  - [BS Nuclear Medicine Technology](#)
  - [BS, BS/MS Pharmaceuticals](#)
  - [BS Special Major in Biomedical Sciences](#)
  - [BA Speech and Hearing Science](#)

### Significant Points

- Many physicians and surgeons work long, irregular hours; almost one-third of physicians worked 60 or more hours a week in 2002.
- New physicians are much less likely to enter solo practice and more likely to work as salaried employees of group medical practices, clinics, hospitals, or health networks.
- Formal education and training requirements are among the most demanding of any occupation, but earnings are among the highest.

### Employment

Physicians and surgeons held about 583,000 jobs in 2002; approximately 1 out of 6 was self-employed. About half of salaried physicians and surgeons were in office-based practice, and almost a quarter were employed by hospitals. Others practiced in Federal, State, and local government; educational services; and outpatient care centers.

A growing number of physicians are partners or salaried employees of group practices. Organized as clinics or as associations of physicians, medical groups can afford expensive medical equipment and realize other business advantages.

The New England and Middle Atlantic States have the highest ratio of physicians to population; the South Central States have the lowest. D.O.s are more likely than M.D.s to practice in small cities and towns and in rural areas. M.D.s tend to locate in urban areas, close to hospital and education centers.

## **Job Outlook**

Employment of physicians and surgeons will [grow about as fast as the average](#) for all occupations through the year 2012 due to continued expansion of the health services industries. The growing and aging population will drive overall growth in the demand for physician services, as consumers continue to demand high levels of care using the latest technologies, diagnostic tests, and therapies.

Demand for physicians' services is highly sensitive to changes in consumer preferences, healthcare reimbursement policies, and legislation. For example, if changes to health coverage result in consumers facing higher out-of-pocket costs, they may demand fewer physician services. Demand for physician services may also be tempered by patients relying more on other healthcare providers—such as physician assistants, nurse practitioners, optometrists, and nurse anesthetists—for some healthcare services. In addition, new technologies will increase physician productivity. Telemedicine will allow physicians to treat patients or consult with other providers remotely. Increasing use of electronic medical records, test and prescription orders, billing, and scheduling will also improve physician productivity.

Opportunities for individuals interested in becoming physicians and surgeons are expected to be favorable. Reports of shortages in some specialties or geographic areas should attract new entrants, encouraging schools to expand programs and hospitals to expand available residency slots. However, because physician training is so lengthy, employment change happens gradually. In the short term, to meet increased demand, experienced physicians may work longer hours, delay retirement, or take measures to increase productivity, such as using more support staff to provide services. Opportunities should be particularly good in rural and low-income areas, because some physicians find these areas unattractive due to lower earnings potential, isolation from medical colleagues, or other reasons.

Unlike their predecessors, newly trained physicians face radically different choices of where and how to practice. New physicians are much less likely to enter solo practice and more likely to take salaried jobs in group medical practices, clinics, and health networks.

## **Earnings**

Physicians have among the highest earnings of any occupation. According to the Medical Group Management Association's Physician Compensation and Production Survey, median total compensation for physicians in 2002 varied by specialty, as shown in table 1. Total compensation for physicians reflects the amount reported as direct compensation for tax purposes, plus all voluntary salary reductions. Salary, bonus and/or incentive payments, research stipends, honoraria, and distribution of profits were included in total compensation.

**Table 1. Total compensation of physicians by specialty, 2002**

<b>Anesthesiology</b>	\$306,964
<b>Surgery, general</b>	255,438
<b>Obstetrics/gynecology</b>	233,061
<b>Psychiatry</b>	163,144
<b>Internal medicine</b>	155,530
<b>Pediatrics/adolescent medicine</b>	152,690
<b>Family practice (without obstetrics)</b>	150,267

Footnotes:

(1) SOURCE: Medical Group Management Association, Physician Compensation and Production Report, 2003.

Self-employed physicians—those who own or are part owners of their medical practice—generally have higher median incomes than salaried physicians. Earnings vary according to number of years in practice, geographic region, hours worked, and skill, personality, and professional reputation. Self-employed physicians and surgeons must provide for their own health insurance and retirement.

### **Training, Other Qualifications, and Advancement**

It takes many years of education and training to become a physician: 4 years of undergraduate school, 4 years of medical school, and 3 to 8 years of internship and residency, depending on the specialty selected. A few medical schools offer a combined undergraduate and medical school programs that last 6 rather than the customary 8 years.

Premedical students must complete undergraduate work in physics, biology, mathematics, English, and inorganic and organic chemistry. Students also take courses in the humanities and the social sciences. Some students volunteer at local hospitals or clinics to gain practical experience in the health professions.

The minimum educational requirement for entry into a medical school is 3 years of college; most applicants, however, have at least a bachelor's degree, and many have advanced degrees. There are 146 medical schools in the United States—126 teach allopathic medicine and award a Doctor of Medicine (M.D.) degree; 20 teach osteopathic

medicine and award the Doctor of Osteopathic Medicine (D.O.) degree. Acceptance to medical school is highly competitive. Applicants must submit transcripts, scores from the Medical College Admission Test, and letters of recommendation. Schools also consider applicants' character, personality, leadership qualities, and participation in extracurricular activities. Most schools require an interview with members of the admissions committee.

Students spend most of the first 2 years of medical school in laboratories and classrooms, taking courses such as anatomy, biochemistry, physiology, pharmacology, psychology, microbiology, pathology, medical ethics, and laws governing medicine. They also learn to take medical histories, examine patients, and diagnose illnesses. During their last 2 years, students work with patients under the supervision of experienced physicians in hospitals and clinics, learning acute, chronic, preventive, and rehabilitative care. Through rotations in internal medicine, family practice, obstetrics and gynecology, pediatrics, psychiatry, and surgery, they gain experience in the diagnosis and treatment of illness.

Following medical school, almost all M.D.s enter a residency—graduate medical education in a specialty that takes the form of paid on-the-job training, usually in a hospital. Most D.O.s serve a 12-month rotating internship after graduation and before entering a residency, which may last 2 to 6 years.

All States, the District of Columbia, and U.S. territories license physicians. To be licensed, physicians must graduate from an accredited medical school, pass a licensing examination, and complete 1 to 7 years of graduate medical education. Although physicians licensed in one State usually can get a license to practice in another without further examination, some States limit reciprocity. Graduates of foreign medical schools generally can qualify for licensure after passing an examination and completing a U.S. residency.

M.D.s and D.O.s seeking board certification in a specialty may spend up to 7 years in residency training, depending on the specialty. A final examination immediately after residency or after 1 or 2 years of practice also is necessary for certification by the American Board of Medical Specialists or the American Osteopathic Association. There are 24 specialty boards, ranging from allergy and immunology to urology. For certification in a subspecialty, physicians usually need another 1 to 2 years of residency.

A physician's training is costly. More than 80 percent of medical students borrow money to cover their expenses.

People who wish to become physicians must have a desire to serve patients, be self-motivated, and be able to survive the pressures and long hours of medical education and practice. Physicians also must have a good bedside manner, emotional stability, and the ability to make decisions in emergencies. Prospective physicians must be willing to study throughout their career in order to keep up with medical advances.