# Table of Contents

- Introduction .............................................................................................................. 3
- Hospital Contact Information .................................................................................. 4
- Career Resources ...................................................................................................... 5
- Administrative, Business and Financial ................................................................. 8
  - Bookkeeping, Accounting & Auditing Clerk ......................................................... 8
  - Accountant & Auditor ......................................................................................... 9
- Financial Manager .................................................................................................... 10
- Human Resources Specialist .................................................................................. 11
- Compensation and Benefits Manager ...................................................................... 12
- Human Resources Manager .................................................................................... 13
- Medical Records and Health Information Technician ............................................ 14
- Medical Transcriptionist ......................................................................................... 15
- Secretary & Administrative Assistant ...................................................................... 16
- Purchasing Manager, Buyer and Purchasing Agent ................................................. 17
- Computer and Information Technology ................................................................. 18
  - Computer Support Specialist ............................................................................. 18
  - Computer Programmer ....................................................................................... 19
  - Database Administrator ..................................................................................... 20
  - Information Security Analyst, Web Developer, and Computer Network Architect . 21
  - Computer Systems Analyst .............................................................................. 22
- Counseling and Social Service ................................................................................ 23
  - Mental Health Counselor & Marriage & Family Therapist .................................. 23
  - Social Worker .................................................................................................... 24
  - Health Educator .................................................................................................. 25
- Diagnostics and Imaging ........................................................................................ 26
  - Cardiovascular Technologist ............................................................................. 26
  - Radiation Technologist ...................................................................................... 27
  - Diagnostic Medical Sonographer ......................................................................... 28
  - Nuclear Medicine Technologist .......................................................................... 29
  - Radiation Therapist ............................................................................................ 30
- Maid and Housekeeping Cleaner ............................................................................. 31
- Maintenance and Repair ........................................................................................ 32
  - Janitors & Building Cleaners ............................................................................. 32
  - Grounds Maintenance Worker .......................................................................... 33
  - Security Guard .................................................................................................... 34
  - General Maintenance and Repair Worker .......................................................... 35
  - Biomedical Equipment Technician ...................................................................... 36
- Medical .................................................................................................................... 37
  - Medical Assistant ............................................................................................... 37
  - Emergency Medical Technician & Paramedic ..................................................... 38
  - Surgical Technologist ......................................................................................... 39
  - Physician Assistant ............................................................................................ 40
  - Physician and Surgeon ....................................................................................... 41
- Nursing ..................................................................................................................... 42
  - Nursing Aides, Orderlies, and Attendants ............................................................ 42
  - Licensed Practical and Licensed Vocational Nurses ............................................. 43
  - Registered Nurse ................................................................................................. 44
- Nutrition and Food Service ...................................................................................... 45
  - Food Preparation Worker .................................................................................... 45
  - Chefs and Head Cooks ....................................................................................... 46
  - Dietitian and Nutritionist .................................................................................... 47
Introduction

The Akron Regional Hospital Association works on behalf of its member hospitals through coordination of services that assist hospitals in meeting and improving the health care needs of the communities they serve. Communication and information, education and research and data are among our many services, thus the production of the career guide.

All aspects of healthcare (hospitals, long-term care facilities, rehabilitation facilities and home health agencies) are facing an immediate need as well as a continued long-range need for caregivers and support staff.

This guide is designed to give you an overview and some examples of the many types of jobs available. It describes careers available for those interested in touching and healing as well as for those interested in technologically advanced support services. Whether a healthcare employee touches a patient or not, all provide key services that keep the healthcare delivery systems operating efficiently.

We encourage you to explore the job openings, shadowing or volunteer opportunities at one of our member hospitals which are listed on the next page.

Citations

The information in the career guide has been derived from the United States Bureau of Labor Statistics Occupational Outlook Handbook—a career guidance publication for adults and upper-level high school students that describes the job duties, education and training requirements, median salary, and employment outlook. We credit the video links to the Department of Labor’s CareerOneStop website, http://www.careeronestop.org/.

Financial Aid

If you need money to help pay for college or career school, below are some options to consider:

- The U.S. federal government,
- The state where you live,
- The college you attend, or
- A nonprofit or private organization

Ohio Colleges and Universities

Explore http://education.careers.org/colleges/in/ohio for an extensive and comprehensive listing of colleges and universities in Ohio including trade, professional, vocational career schools, community colleges, and traditional colleges and universities.
Hospital Contact Information

Affinity Medical Center
Akron Children’s Hospital
Akron General Medical Center
Aultman Hospital
East Liverpool City Hospital
Humility of Mary Health Partners
  St. Elizabeth Health Center
  St. Elizabeth Boardman Health Center
  St. Joseph Health Center
Lodi Community Hospital
Medina Hospital
Mercy Medical Center
Regency Hospitals
  Akron
  Ravenna
Robinson Memorial Hospital
Samaritan Regional Health System
Select Specialty Hospitals
  Akron
  Canton
Summa Health System
  Akron City Hospital
  Barberton Hospital
  St. Thomas Hospital
  Wadsworth Rittman Hospital
  Western Reserve Hospital
Union Hospital
Valley Care Health System
  Northside Medical Center
  Trumbull Memorial Hospital
  Hillside Rehabilitation Institute
## Career Resources

<table>
<thead>
<tr>
<th>Career</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bookkeeping, Accounting, &amp; Auditing Clerk</td>
<td>• American Institute of Professional Bookkeepers</td>
</tr>
<tr>
<td><strong>Accountant &amp; Auditor</strong></td>
<td>• Institute of Management Accountants</td>
</tr>
<tr>
<td></td>
<td>• Institute of Internal Auditors</td>
</tr>
<tr>
<td></td>
<td>• American Institute of CPAs</td>
</tr>
<tr>
<td><strong>Financial Manager</strong></td>
<td>• Healthcare Financial Management Association</td>
</tr>
<tr>
<td>Human Resources Specialist</td>
<td>• Society for Human Resource Management</td>
</tr>
<tr>
<td>Compensation &amp; Benefits Manager</td>
<td>• International Foundation: Education-Benefits-Compensation</td>
</tr>
<tr>
<td><strong>Human Resources Manager</strong></td>
<td>• Society for Human Resource Management</td>
</tr>
<tr>
<td></td>
<td>• National Human Resources Association</td>
</tr>
<tr>
<td><strong>Medical Records and Health Information Technician</strong></td>
<td>• American Health Information Management Association</td>
</tr>
<tr>
<td><strong>Medical Transcriptionist</strong></td>
<td>• Association for Healthcare Document Integrity</td>
</tr>
<tr>
<td>Secretary &amp; Administrative Assistant</td>
<td>• Association of Executive and Administrative Professionals</td>
</tr>
<tr>
<td>Purchasing Manager, Buyer and Purchasing Agent</td>
<td>• American Purchasing Society</td>
</tr>
<tr>
<td></td>
<td>• Institute for Supply Management</td>
</tr>
<tr>
<td><strong>Computer Support Specialist</strong></td>
<td>• Technical Services Industry Association</td>
</tr>
<tr>
<td></td>
<td>• Help Desk Institute</td>
</tr>
<tr>
<td><strong>Computer Programmer</strong></td>
<td>• Association for Computing Machinery</td>
</tr>
<tr>
<td></td>
<td>• National Center for Women &amp; Information Technology</td>
</tr>
<tr>
<td><strong>Database Administrator</strong></td>
<td>• Association for Computing Machinery</td>
</tr>
<tr>
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<td>• Institute of Electrical and Electronics Engineers Computer Society</td>
</tr>
<tr>
<td>Information Security Analyst, Web Developer, and Computer Network Architect</td>
<td>• Association for Computing Machinery</td>
</tr>
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</tr>
<tr>
<td></td>
<td>• Computer Research Association</td>
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<tr>
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<td>• Association for Computing Machinery</td>
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<tr>
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<td>• Institute of Electrical and Electronics Engineers Computer Society</td>
</tr>
<tr>
<td></td>
<td>• Computer Research Association</td>
</tr>
<tr>
<td><strong>Mental Health Counselor &amp; Marriage &amp; Family Therapist</strong></td>
<td>• American Mental Health Counselors Association</td>
</tr>
<tr>
<td></td>
<td>• American Association for Marriage and Family Therapy</td>
</tr>
<tr>
<td>Social Worker</td>
<td>• National Association of Social Workers</td>
</tr>
<tr>
<td></td>
<td>• Center for Clinical Social Work</td>
</tr>
<tr>
<td>Health Educator</td>
<td>• American Association for Health Education</td>
</tr>
<tr>
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<td>• Society for Public Health Education</td>
</tr>
<tr>
<td>Career</td>
<td>Resources</td>
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<tr>
<td>Cardiovascular Technologist</td>
<td>Alliance of Cardiovascular Professionals</td>
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<tr>
<td>Radiation Technologist</td>
<td>American Society of Radiologic Technologists</td>
</tr>
<tr>
<td></td>
<td>Joint Review Committee on Education in Radiologic Technology</td>
</tr>
<tr>
<td></td>
<td>The American Registry of Radiologic Technologists</td>
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<tr>
<td>Diagnostic Medical Sonographer</td>
<td>Society of Diagnostic Medical Sonography</td>
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<tr>
<td>Nuclear Medicine Technologist</td>
<td>Society for Nuclear Medicine</td>
</tr>
<tr>
<td>Radiation Therapist</td>
<td>American Society of Radiologic Technologists</td>
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<td></td>
<td>American Society of Radiologic Technologists</td>
</tr>
<tr>
<td>Maid and Housekeeping Cleaner</td>
<td>Building Service Contractors Association International</td>
</tr>
<tr>
<td></td>
<td>International Executive Housekeepers Association</td>
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<tr>
<td>Janitors &amp; Building Cleaners</td>
<td>Building Service Contractors Association International</td>
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<td>Association of Residential Cleaning Services International</td>
</tr>
<tr>
<td></td>
<td>International Sanitary Supply Association</td>
</tr>
<tr>
<td>Grounds Maintenance Workers</td>
<td>Professional Grounds Management Society</td>
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<td></td>
<td>Professional Landcare Network</td>
</tr>
<tr>
<td>Security Guard</td>
<td>ASIS International</td>
</tr>
<tr>
<td>General Maintenance and Repair Worker</td>
<td>The Society for Maintenance and Reliability Professionals</td>
</tr>
<tr>
<td>Biomedical Equipment Technician</td>
<td>Association for the Advancement of Medical Instrumentation</td>
</tr>
<tr>
<td>Medical Assistant</td>
<td>American Association of Medical Assistants</td>
</tr>
<tr>
<td></td>
<td>American Medical Technologists</td>
</tr>
<tr>
<td>Emergency Medical Technician &amp; Paramedic</td>
<td>National Association of Emergency Medical Technicians</td>
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<tr>
<td>Surgical Technologist</td>
<td>Association of Surgical Technologists</td>
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<tr>
<td></td>
<td>Commission on Accreditation of Allied Health Education Programs</td>
</tr>
<tr>
<td>Physician Assistant</td>
<td>American Academy of Physician Assistants</td>
</tr>
<tr>
<td>Physician &amp; Surgeon</td>
<td>American Medical Association</td>
</tr>
<tr>
<td></td>
<td>American Osteopathic Association</td>
</tr>
<tr>
<td>Nursing Aide, Orderly &amp; Attendant</td>
<td>National Association of Health Care Assistants</td>
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<td>National Network of Career Nursing Assistants</td>
</tr>
<tr>
<td>Licensed Practical &amp; Licensed Vocational Nurse</td>
<td>National Association for Practical Nurse Education and Service</td>
</tr>
<tr>
<td></td>
<td>National Federation of Licensed Practical Nurses</td>
</tr>
<tr>
<td>Registered Nurse</td>
<td>American Nurses Association</td>
</tr>
<tr>
<td>Food Preparation Worker</td>
<td>National Restaurant Association</td>
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<tr>
<td>Career</td>
<td>Resources</td>
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<tr>
<td>Chef and Head Cook</td>
<td>• National Restaurant Association</td>
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<td>• American Culinary Federation</td>
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<tr>
<td>Dietitian and Nutritionist</td>
<td>• Academy of Nutrition and Dietetics</td>
</tr>
<tr>
<td>Pharmacy Technician</td>
<td>• National Pharmacy Technician Association</td>
</tr>
<tr>
<td>Pharmacist</td>
<td>• American Society of Health-System Pharmacists</td>
</tr>
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<td>• American Pharmacists Association</td>
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<tr>
<td>Biological Technician</td>
<td>• American Institute for Biological Sciences</td>
</tr>
<tr>
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<td>• American Society for Cell Biology</td>
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<td>• American Society for Microbiology</td>
</tr>
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<td>Medical and Clinical Laboratory Technologist and Technician</td>
<td>• American Society for Clinical Laboratory Science</td>
</tr>
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<td></td>
<td>• American Society of Cytopathology</td>
</tr>
<tr>
<td></td>
<td>• Clinical Laboratory Management Association</td>
</tr>
<tr>
<td>Medical Scientist</td>
<td>• American Society for Biochemistry and Molecular Biology</td>
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<tr>
<td>Biochemist and Biophysicist</td>
<td>• American Chemical Society</td>
</tr>
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<td></td>
<td>• American Society for Biochemistry and Molecular Biology</td>
</tr>
<tr>
<td>Physical Therapist Assistant and Aide</td>
<td>• American Physical Therapy Association</td>
</tr>
<tr>
<td></td>
<td>• Federation of State Boards of Physical Therapy</td>
</tr>
<tr>
<td>Recreation Therapist</td>
<td>• American Therapeutic Recreation Association</td>
</tr>
<tr>
<td>Athletic Trainer</td>
<td>• National Athletic Trainers' Association</td>
</tr>
<tr>
<td>Occupational Therapy Assistant and Aide</td>
<td>• American Occupational Therapy Association</td>
</tr>
<tr>
<td>Respiratory Therapy</td>
<td>• American Association for Respiratory Care</td>
</tr>
<tr>
<td>Audiologist</td>
<td>• American Speech-Language-Hearing Association</td>
</tr>
<tr>
<td></td>
<td>• American Board of Audiology</td>
</tr>
<tr>
<td>Speech and Language Pathologist</td>
<td>• American Speech-Language-Hearing Association</td>
</tr>
<tr>
<td>Occupational Therapist</td>
<td>• American Occupational Therapy Association</td>
</tr>
<tr>
<td>Physical Therapist</td>
<td>• American Physical Therapy Association</td>
</tr>
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</table>
Job Title: **Bookkeeping, Accounting & Auditing Clerk**

**Summary:**

Bookkeeping, accounting, and auditing clerks produce financial records for organizations. They record financial transactions, update statements, and check financial records for accuracy.

**Typical duties:**

- Use bookkeeping software as well as online spreadsheets and databases
- Enter (post) financial transactions into the appropriate computer software
- Receive and record cash, checks, and vouchers
- Put costs (debits) as well as income (credits) into the software, assigning each to an appropriate account
- Produce reports, such as balance sheets (costs compared to income), income statements, and totals by account
- Check figures, postings, and reports for accuracy
- Reconcile or note and report any differences they find in the records

**Education:**

- Most bookkeeping, accounting, and auditing clerks need a high school diploma. However, some employers prefer candidates who have some postsecondary education, particularly coursework in accounting. In 2009, 25 percent of these workers had an associate’s or higher degree.

**Average median salary in 2010:**

$34,000

**Employment outlook:**

Employment of bookkeeping, accounting, and auditing clerks is expected to grow 14 percent from 2010 to 2020, as fast as the average for all occupations.

Job growth for these workers is largely driven by overall economic growth. As the number of organizations increase, more bookkeepers will be needed to keep these organizations’ books. In addition, in response to the recent financial crisis, investors will pay increased attention to the accuracy of corporate books. Stricter regulation in the financial sector will create demand for accounting services, creating opportunities for accounting clerks.

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Administrative, Business and Financial

Job Title:  
Accountant & Auditor

Summary:
Prepare and examine financial records. Ensure that financial records are accurate and that taxes are paid properly and on time. Accountants and auditors assess financial operations and work to help ensure organizations run efficiently.

Typical duties:
- Examine financial statements to be sure they are accurate and comply with laws and regulations
- Compute taxes owed, prepare tax returns, and ensure that taxes are paid properly and on time
- Inspect account books and accounting systems for efficiency and use of accepted accounting procedures
- Organize and maintain financial records
- Assess financial operations and make best-practices recommendations to management
- Suggest ways to reduce costs, enhance revenues, and improve profits

Education:
- Most accountants and auditors need at least a bachelor’s degree in accounting or a related field. Certification within a specific field of accounting improves job prospects. For example, many accountants become Certified Public Accountants (CPAs).
- Work experience is important for getting a job, and most states require experience before an accountant can apply for a CPA license. Many colleges help students gain practical experience through summer or part-time internships with public accounting or business firms.

Average median salary in 2010:
$61,700

Employment outlook:
Employment of accountants and auditors is expected to grow 16 percent from 2010 to 2020, about as fast as the average for all occupations. Demand for thorough financial documentation is expected to increase in response to recent financial crises and subsequent financial regulations.

**Administrative, Business and Financial**

**Job Title:** Financial Manager  

**Summary:**

Financial managers are responsible for the financial health of an organization. They produce financial reports, direct investment activities, and develop strategies and plans for the long-term financial goals of their organization.

**Typical duties:**

- Prepare financial statements, business activity reports, and forecasts
- Monitor financial details to ensure that legal requirements are met
- Supervise employees who do financial reporting and budgeting
- Review company financial reports and seek ways to reduce costs
- Analyze market trends to find opportunities for expansion or for acquiring other companies
- Help management make financial decisions

**Education:**

- A bachelor’s degree in finance, accounting, economics, or business administration is often the minimum education needed for financial managers. However, many employers now seek candidates with a master’s degree, preferably in business administration, finance, or economics. These academic programs help students develop analytical skills and learn financial analysis methods and software.
- Financial managers must usually have a bachelor’s degree and more than 5 years of experience in another business or financial occupation, such as loan officer, accountant, auditor, securities sales agent, or financial analyst.

**Average median salary in 2010:**  

$104,000

**Employment outlook:**

Employment among financial managers is expected to grow nine percent from 2010 to 2020, slower than the average for all occupations. However, growth will vary by industry.

Services provided by financial managers, such as planning, directing, and coordinating investments, will continue to be in demand as the economy grows. The United States remains an international financial center, meaning that the economic growth of countries around the world will likely contribute to employment growth in the U.S. financial industry.

Administrative, Business and Financial

Job Title: Human Resources Specialist

Summary:

Human resources specialists recruit, screen, interview, and place workers. They also may handle human resources work in a variety of other areas, such as employee relations, payroll and benefits, and training.

Typical duties:

- Consult with employers to identify employment needs and preferred qualifications
- Interview applicants about their experience, education, training, and skills
- Contact references and perform background checks on job applicants
- Inform applicants about job details, such as duties, benefits, and working conditions
- Hire or refer qualified candidates for employers
- Conduct or help with new employee orientation
- Keep employment records and process paperwork

Education:

- Most positions require a bachelor’s degree. When hiring a human resources generalist, for example, most employers prefer applicants who have a bachelor’s degree in human resources, business, or a related field.
- Although candidates with a high school diploma may qualify for some interviewing and recruiting positions, employers usually require several years of related work experience as a substitute for education.
- Some positions, particularly human resources generalists, may require work experience. Candidates often gain experience as human resources assistants, in customer service positions, or in other related jobs.

Average median salary in 2010:

$53,000

Employment outlook:

Employment of human resources specialists is expected to grow 21 percent from 2010 to 2020, faster than the average for all occupations. Specifically, employment will increase 55 percent in the employment services industry. About 17 percent of human resources specialists work in this industry, which includes employment placement agencies, temporary help services, and professional employer organizations. Organizations will continue to outsource human resources functions to professional employer organizations—companies that provide human resources services to client businesses.

Administrative, Business and Financial

Job Title: Compensation and Benefits Manager

Summary:

Compensation managers plan, direct, and coordinate how and how much an organization pays its employees. Benefits managers do the same for retirement plans, health insurance, and other benefits an organization offers its employees.

Typical duties:

- Set the organization’s pay structure and benefits offerings so the organization can compete for employees
- Participate in or buy salary surveys to see how their organization's pay compares with that in other organizations
- Determine competitive wage rates and develop or modify compensation plans
- Evaluate employee benefits policies to assess whether they are current, competitive, and legal
- Coordinate and supervise the work activities of specialists and support staff
- Oversee the distribution of pay and benefits information to the organization’s employees
- Ensure that pay and benefits plans comply with federal and state regulations
- Collaborate with outside partners such as benefits vendors and investment managers
- Prepare a program budget and keep operations within budget

Education:

- Compensation and benefits managers need at least a bachelor’s degree for most positions, although some jobs require a master’s degree. Because not all undergraduate programs offer a degree in human resources, managers often have a bachelor’s degree in business administration, business management, finance, or a related field.
- Many employers prefer to hire managers who have a master’s degree, particularly one with a concentration in human resources management, finance, or business administration (MBA).

Average median salary in 2010:

$89,000

Employment outlook:

Employment of compensation and benefits managers is expected to grow three percent from 2010 to 2020, slower than the average for all occupations. Many organizations contract out a portion of their compensation and benefits functions to human resources consulting firms to reduce costs and gain access to technical expertise.

Administrative, Business and Financial

Job Title: **Human Resources Manager**

**Summary:**

Human resources managers plan, direct, and coordinate the administrative functions of an organization. They oversee the recruiting, interviewing, and hiring of new staff; consult with top executives on strategic planning; and serve as a link between an organization’s management and its employees.

**Typical duties:**

- Plan and coordinate an organization’s workforce to best use employees’ talents
- Link an organization’s management with its employees by handling questions, administering employee services, and resolving work-related problems
- Advise managers on organizational policies, such as equal employment opportunity and sexual harassment
- Coordinate and supervise the work of specialists and support staff
- Oversee an organization’s recruitment, interview, selection, and hiring processes
- Handle staffing issues, such as mediating disputes, firing employees, and directing disciplinary procedures

**Education:**

- Human resources managers usually need a bachelor’s degree in human resources or business administration. Alternatively, as not all undergraduate programs offer a degree in human resources, candidates can get a bachelor’s degree in another field and take courses in human resources subjects, such as labor or industrial relations, organizational development, or industrial psychology. Some positions are also filled by experienced individuals with other backgrounds, including finance, business management, education, and information technology.
- Some higher-level jobs require a master’s degree in human resources, labor relations, or a Master of Business Administration (MBA) degree.

**Average median salary in 2010:**

$99,000

**Employment outlook:**

Employment of human resources managers is expected to grow 13 percent from 2010 to 2020, about as fast as the average for all occupations. Employment growth for human resources managers largely depends on the performance and growth of individual companies. As new companies form and organizations expand their operations, they will need more human resources staff to oversee and administer their programs.

Administrative, Business and Financial

Job Title: Medical Records and Health Information Technician

Summary:
Medical records and health information technicians organize and manage health information data by ensuring its quality, accuracy, accessibility, and security in both paper and electronic systems. They use various classification systems to code and categorize patient information for reimbursement purposes, for databases and registries, and to maintain patients’ medical and treatment histories.

Typical duties:
- Review patient records for timeliness, completeness, accuracy, and appropriateness of health data
- Organize and maintain data for clinical databases and registries
- Track patient outcomes for quality assessment
- Use classification software to assign clinical codes for reimbursement and data analysis
- Electronically record data for collection, storage, analysis, retrieval, and reporting
- Protect patients’ health information for confidentiality, authorized access for treatment, and data security

Education:
- Postsecondary certificate and associate’s degree programs in health information technology typically include courses in medical terminology, anatomy and physiology, health data requirements and standards, classification and coding systems, healthcare reimbursement methods, healthcare statistics, and computer systems. Applicants to health information technology programs increase their chances of admission by taking high school courses in health, computer science, math, and biology.
- Most employers prefer to hire medical records and health information technicians who have professional certification. Certifications include Registered Health Information Technician (RHIT) and Certified Tumor Registrar (CTR), among others.

Average median salary in 2010:
$32,400

Employment Outlook:
Employment of medical records and health information technicians is expected to increase by 21 percent from 2010 to 2020, faster than the average for all occupations. An aging population will need more medical tests, treatments, and procedures. This will also mean more claims for reimbursement from private and public insurance. Additional records, coupled with widespread use of electronic health records by all types of healthcare providers, should lead to an increased need for technicians to organize and manage the associated information in all areas of the healthcare industry.

Administrative, Business and Financial

Job Title: Medical Transcriptionist

Summary:

Medical transcriptionists listen to voice recordings that physicians and other health professionals make and convert them into written reports. They interpret medical terminology and abbreviations in preparing patients’ medical histories, discharge summaries, and other documents.

Typical duties:

- Listen to the recorded dictation of a doctor or other health professional
- Transcribe the dictation into diagnostic test results, operative reports, referral letters, and other documents
- Edit drafts prepared by speech recognition software, making sure that the transcription is correct and has a consistent style
- Translate medical abbreviations or jargon into the appropriate long form
- Recognize inconsistencies within a report and follow up with the healthcare provider to ensure accuracy
- Submit written reports for physicians to approve
- Follow patient confidentiality guidelines and legal documentation requirements

Education:

- Employers prefer to hire transcriptionists who have completed postsecondary training in medical transcription, which is offered by many vocational schools, community colleges, and distance-learning programs.
- A 1-year certificate program or 2-year associate’s degree normally includes coursework in anatomy, medical terminology, legal issues relating to healthcare documentation, and English grammar and punctuation.
- Although certification is not required, some medical transcriptionists choose to become certified. The Association for Healthcare Documentation Integrity offers two certifications: Registered Medical Transcriptionist (RMT) and Certified Medical Transcriptionist (CMT).

Average median salary in 2010:

$33,000

Employment outlook:

Employment of medical transcriptionists is expected to grow six percent from 2010 to 2020, slower than the average for all occupations.

Administrative, Business and Financial

Job Title: Secretary & Administrative Assistant

Summary:

Secretaries and administrative assistants perform routine clerical and organizational tasks. They organize files, draft messages, schedule appointments, and support other staff.

Typical duties:

- Maintain paper and electronic filing systems for records and messages
- Route and distribute incoming mail and email
- Answer routine letters and email
- Reply and attach files to incoming messages
- Correct spelling and grammar to ensure accuracy
- Operate fax machines, videoconferencing and phone systems, and other office equipment
- Use computers for spreadsheet, word processing, database management, and other applications
- Complete forms in accordance with company procedures

Education:

- High school graduates can get basic office, computer, and English grammar skills in various ways: through high school vocational education programs, vocational–technical schools, or community colleges. Many temporary placement agencies also provide formal training in computer and office skills.
- Employers of more specialized positions, including medical and legal secretaries, often require applicants to have some knowledge of industry-specific terminology and practices. Community colleges and vocational-technical schools usually offer instruction in these areas.

Average median salary in 2010:

$35,000

Employment outlook:

Employment of medical secretaries is projected to grow 41 percent from 2010 to 2020, much faster than the average for all occupations. Employment growth will be driven by rapid growth of the healthcare and social assistance industries. An anticipated increase in the use of medical services by an aging population will require many additional medical secretaries.

Administrative, Business and Financial

**Job Title:** Purchasing Manager, Buyer and Purchasing Agent

**Summary:**

Purchasing managers, buyers, and purchasing agents buy products for organizations to use or resell. They evaluate suppliers, negotiate contracts, and review product quality.

**Typical duties:**

- Evaluate suppliers based on price, quality, and delivery speed
- Interview vendors and visit suppliers’ plants and distribution centers to examine and learn about products, services, and prices
- Attend meetings, trade shows, and conferences to learn about new industry trends and make contacts with suppliers
- Analyze price proposals, financial reports, and other information to determine reasonable prices
- Negotiate contracts on behalf of their organization
- Work out policies with suppliers, such as when products will be delivered
- Meet with staff and vendors to discuss defective or unacceptable goods or services and determine corrective action
- Evaluate and monitor contracts to be sure that vendors and supplies comply with the terms and conditions of the contract and to determine need for changes
- Maintain and review records of items bought, costs, deliveries, product performance, and inventories

**Education:**

- Educational requirements usually vary with the size of the organization. A high school diploma is enough at many organizations for entry into the purchasing agent occupation, although large stores and distributors may prefer applicants who have completed a bachelor’s degree program and have taken some business or accounting classes.
- Purchasing managers usually have at least a bachelor’s degree and some work experience in the field. A master’s degree may be required for advancement to some top-level purchasing manager jobs.

**Average median salary in 2010:**

$58,000

**Employment outlook:**

Employment of purchasing managers, buyers, and purchasing agents is expected to increase seven percent from 2010 to 2020, slower than the average for all occupations.

Computer and Information Technology

Job Title: **Computer Support Specialist**

**Summary:**

Computer support specialists provide help and advice to people and organizations using computer software or equipment. Some, called technical support specialists, support information technology (IT) employees within their organization. Others, called help-desk technicians, assist non-IT users who are having computer problems.

**Typical duties:**

- Test and evaluate existing network systems
- Perform regular maintenance to ensure that networks operate correctly
- Troubleshoot local area networks (LANs), wide area networks (WANs), and Internet systems

**Education:**

- Because of the wide range of skills for different computer support jobs, there are many paths into the occupation. A bachelor’s degree is required for some computer support specialist positions, but an associate’s degree or postsecondary classes may be enough for others. After being hired, many workers enter a training program that lasts for several months.
- Training requirements for computer support specialists vary, but many employers prefer to hire applicants who have a bachelor’s degree. More technical positions are likely to require a degree in a field such as computer science, engineering, or information science, but for others the applicant’s field of study is less important. Some lower level help-desk jobs or call-center jobs require some computer knowledge, but not necessarily a postsecondary degree.

**Average median salary in 2010:**

$46,300

**Employment outlook:**

Employment of computer support specialists is expected to grow 18 percent from 2010 to 2020, about as fast as the average for all occupations. Job prospects should be favorable. Applicants with a bachelor’s degree and a strong technical background should have the best job opportunities.

Computer and Information Technology

Job Title: Computer Programmer

Summary:

Computer programmers write code to create software programs. They turn the program designs created by software developers and engineers into instructions that a computer can follow. Programmers must debug the programs—that is, test them to ensure that they produce the expected results. If a program does not work correctly, they check the code for mistakes and fix them.

Typical duties:

- Write programs in a variety of computer languages, such as C++ and Java
- Update and expand existing programs
- Debug programs by testing for and fixing errors
- Build and use computer-assisted software engineering (CASE) tools to automate the writing of some code
- Use code libraries, which are collections of independent lines of code, to simplify the writing

Education:

- Most computer programmers have a bachelor’s degree; however, some employers hire workers who have an associate’s degree. Most programmers get a degree in computer science or a related subject. Programmers who work in specific fields, such as healthcare or accounting, may take classes in that field in addition to their degree in computer programming. In addition, employers value experience, which many students get through internships.

Average median salary in 2010:

$71,500

Employment outlook:

Employment of computer programmers is expected to increase 12 percent from 2010 to 2020, about as fast as the average for all occupations. Since computer programming can be done from anywhere in the world, companies often hire programmers in countries that have lower wages.

Computer and Information Technology

Job Title: Database Administrator

Summary:
Database administrators use software to store and organize data, such as financial information and customer shipping records. They make sure data is available to users and is secure from unauthorized access.

Typical duties:
• Identify user needs to create and administer databases
• Ensure that the database operates efficiently and without error
• Make and test modifications to the database structure when needed
• Maintain the database and update permissions
• Merge old databases into new ones
• Backup and restore data to prevent data loss

Education:
• Most database administrators have a bachelor’s degree in management information systems (MIS) or a computer-related field. Firms with large databases may prefer applicants who have a Master of Business Administration (MBA) with a concentration in information systems. An MBA typically requires 2 years of schooling after the undergraduate level.

Average median salary in 2010:
$73,500

Employment outlook:
Employment of database administrators is projected to grow 31 percent from 2010 to 2020, much faster than the average for all occupations. Rapid growth in data collection by businesses, as well as increased need for database security measures, will contribute to the growth of this occupation.

Computer and Information Technology

Job Title: Information Security Analyst, Web Developer, and Computer Network Architect

Summary:
Information security analysts, web developers, and computer network architects all use information technology (IT) to advance their organization’s goals. Security analysts ensure a firm’s information stays safe from cyberattacks. Web developers create websites to help firms have a public face. Computer network architects create the internal networks all workers within organizations use.

Typical duties:
- Research the latest information technology security trends
- Monitor their organization’s networks for security breaches and investigate a violation when one occurs
- Help plan and carry out an organization’s way of handling security
- Develop security standards and best practices for their organization
- Install and use software, such as firewalls and data encryption programs, to protect sensitive information
- Recommend security enhancements to management or senior IT staff
- Help computer users when they need to install or learn about new security products and procedures

Education:
- Most information security analysts, web developers, and computer network security analysts and computer network architects usually need experience in a related occupation, and additional knowledge of web programming languages can help web developers.

Average median salary in 2010:
$75,700

Employment outlook:
Employment of information security analysts, web developers, and computer network architects is projected to grow 22 percent from 2010 to 2020, faster than the average for all occupations. Job prospects for all three occupations should be favorable.

Computer and Information Technology

Job Title: Computer Systems Analyst

Summary:

Computer systems analysts study an organization’s current computer systems and procedures and make recommendations to management to help the organization operate more efficiently and effectively. They bring business and information technology (IT) together by understanding the needs and limitations of both.

Typical duties:

- Consult with managers to determine the role of the IT system in an organization
- Research emerging technologies to decide if installing them can increase the organization’s efficiency and effectiveness
- Prepare an analysis of costs and benefits so that management can decide if computer upgrades are financially worthwhile
- Devise ways to make existing computer systems meet new needs
- Design and develop new systems by choosing and configuring hardware and software
- Oversee installing and configuring the new system to customize it for the organization
- Do tests to ensure that the systems work as expected
- Train the system’s end users and write instruction manuals, when required

Education:

- Most computer systems analysts have a bachelor’s degree in a computer-related field. Because computer systems analysts are also heavily involved in the business side of a company, it may be helpful to take business courses or major in management information systems (MIS).
- Some employers prefer applicants who have a Master of Business Administration (MBA) with a concentration in information systems.

Average median salary in 2010:

$77,700

Employment outlook:

Employment of computer systems analysts is expected to grow 22 percent from 2010 to 2020, faster than the average of all occupations. A greater reliance on computer systems in organizations throughout the economy will lead to an increased demand for this occupation.

Counseling and Social Service

Job Title: Mental Health Counselor & Marriage & Family Therapist

Summary:
Mental health counselors and marriage and family therapists help people manage or overcome mental and emotional disorders and problems with their family and relationships. They listen to clients and ask questions to help the clients understand their problems and develop strategies to improve their lives.

Typical duties:
- Diagnose and treat mental and emotional disorders, such as anxiety and depression
- Encourage clients to discuss their emotions and experiences
- Help clients process their reactions and adjust to changes in their life, such as divorce or layoffs
- Guide clients through the process of making decisions about their future
- Help clients develop strategies and skills to change their behavior or cope with difficult situations
- Coordinate treatment with other professionals, such as psychiatrists and social workers
- Refer clients to other resources or services in the community, such as support groups or inpatient treatment facilities

Education:
- A master's degree in counseling or marriage and family therapy is required. A bachelor's degree in most fields is acceptable to enter a master's-level program.

Average median salary in 2010:
$39,700

Employment outlook:
Employment of mental health counselors is expected to grow by 36 percent from 2010 to 2020, much faster than the average for all occupations. Employment of marriage and family therapists is expected to grow by 41 percent from 2010 to 2020, much faster than the average for all occupations. Growth is expected as the overall population grows and as insurance companies increasingly provide for reimbursement of counselors and marriage and family therapists as a less costly alternative to psychiatrists and psychologists.

Counseling and Social Service

Job Title: Social Worker

Summary:

Direct-service social workers help people solve and cope with problems in their everyday lives.

Clinical social workers diagnose and treat mental, behavioral, and emotional issues.

Typical duties:

- Identify people who need help
- Assess clients’ needs, situations, strengths, and support networks to determine their goals
- Develop plans to improve their clients’ well-being
- Help clients adjust to changes and challenges in their lives, such as illness, divorce, or unemployment
- Research and refer clients to community resources, such as food stamps, childcare, and healthcare
- Help clients work with government agencies to apply for and receive benefits such as Medicare
- Respond to crisis situations, such as natural disasters or child abuse
- Advocate for and help clients get resources that would improve their well-being
- Follow up with clients to ensure that their situations have improved
- Evaluate services provided to ensure that they are effective

Education:

- A bachelor’s degree is required for most direct-service social work positions, but some positions and settings require a master’s degree. Clinical social workers must have a master’s degree. Licensure varies by state. Clinical social workers must be licensed. Although most states also have licenses for nonclinical social workers, these licenses are often optional. For more information about licensure by state, contact the Association of Social Work Boards.

Average median salary in 2010:

$42,500

Employment outlook:

Employment of social workers is expected to grow by 25 percent from 2010 to 2020, faster than the average for all occupations. Growth will be due to an increase in demand for health care and social services but will vary by specialty.

Job Title: Health Educator

Summary:
Teach people about behaviors that promote wellness. Develop programs and materials to encourage people to make healthy decisions.

Typical duties:
- Assess the needs of the people they serve
- Develop programs and events to teach people about health topics
- Create and distribute health-related posters, pamphlets, and other educational materials
- Evaluate the effectiveness of programs and materials
- Help people find health services or information
- Supervise staff who implement health education programs
- Collect and analyze data to learn about their audience and improve programs
- Advocate for improved health resources and policies

Education:
- A bachelor’s degree is required for entry-level positions. Some employers may require the Certified Health Education Specialist (CHES) credential. CHES is a certification offered by the National Commission for Health Education Credentialing.

Average median salary in 2010:
$45,800

Employment outlook:
Employment of health educators is expected to grow by 37 percent from 2010 to 2020, much faster than the average for all occupations. Growth will be driven by efforts to reduce healthcare costs by teaching people about healthy habits and behaviors.

Diagnostics and Imaging

Job Title: **Cardiovascular Technologist**

**Summary:**

Cardiovascular technologists and technicians and vascular technologists use imaging technology to help physicians diagnose cardiac (heart) and peripheral vascular (blood vessel) ailments in patients. They also help physicians treat problems with cardiac and vascular systems, such as blood clots.

Cardiac sonographers (Echocardiographers) use ultrasound to examine the heart’s chambers, valves, and vessels. They use ultrasound instruments to create images called echocardiograms. The echocardiogram may be done while the patient is either resting or physically active.

Cardiovascular technicians work closely with cardiovascular technologists. Technicians who specialize in electrocardiogram (EKG) testing are known as cardiographic or electrocardiogram (EKG) technicians.

**Typical duties:**

- Performs various cardiovascular and peripherovascular diagnosis and therapeutic procedures
- Reviews and records pertinent patient history and supporting clinical data
- Completes Doppler ultrasound tomography and plethysmography work
- May assist in cardiac catheterizations, completion of blood gases and balloon angioplasty

**Education:**

- There are several ways to become a cardiovascular technologist or technician or vascular technologist. Although some technologists and technicians are trained on the job, the most common path is formal education that leads to an associate’s degree. Many employers also require professional certification.

**Average median salary in 2010:**

$44,400

**Employment outlook:**

Employment is expected to grow by 29 percent from 2010 to 2020, much faster than average for all occupations. As imaging technology evolves, medical facilities will use it to replace more invasive, costly procedures.

Diagnostics and Imaging

Job Title: Radiation Technologist

Summary:
Radiologic technologists perform diagnostic imaging examinations, such as x-rays, on patients.

Typical duties:
- Adjust and maintain imaging equipment
- Precisely follow orders from physicians on what areas of the body to image
- Prepare patients for procedures, including taking a medical history and answering questions about the procedure
- Protect the patient by shielding exposed areas that do not need to be imaged
- Position the patient and the equipment in the location needed to get the correct image
- Operate the computerized equipment to take the images
- Work with radiologists reading the images to determine whether other images need to be taken
- Keep detailed patient records

Education:
- There are formal training programs in radiography that lead to a certificate, an associate’s degree, or a bachelor’s degree. Associate’s degree programs are the most common. Certificate programs typically last 6 to 12 months. Typical programs include both classroom training and clinical training. Coursework includes anatomy, pathology, patient care, radiation physics and protection, and image evaluation.
- The Joint Review Committee on Education in Radiologic Technology (JRCERT) accredits educational and training programs in radiography. Completing an accredited program is required for licensure in some states.
- High school students who are interested in radiologic technology should take courses that focus on science and math. Suggested courses include anatomy, biology, chemistry, physiology, mathematics, and physics.

Average median salary in 2010:
$54,000

Employment outlook:
Employment of radiologic technologists is expected to grow by 28 percent between 2010 and 2020, faster than the average for all occupations.

Diagnostics and Imaging

Job Title: Diagnostic Medical Sonographer

Summary:
Diagnostic medical sonographers use special imaging equipment that directs sound waves into a patient's body (in a procedure commonly known as an ultrasound, sonogram, or echocardiogram) to assess and diagnose various medical conditions.

Typical duties:
- Prepare patients for procedures by taking a patient's history and answering any questions about the procedure
- Prepare and maintain imaging equipment
- Apply a gel to aid the sound waves' ability to show the inside of the body
- Operate equipment to get diagnostic images of areas in the patient's body
- Analyze the images to check for quality and adequate coverage of the area needed for diagnosis
- Recognize the difference between normal and abnormal images
- Analyze images to provide preliminary findings for physicians
- Record findings and keep track of patients' records

Education:
- High school students who are interested in diagnostic medical sonography should take courses in anatomy, physiology, and mathematics.
- Diagnostic medical sonographers need formal education, such as an associate's degree or a postsecondary certificate. Many employers also require professional certification.
- Colleges and universities offer both associate's and bachelor's degree programs in sonography. One-year certificate programs also are available, although these are usually useful only to those who are already employed in related healthcare jobs, such as nursing. Employers prefer a degree or certificate from an accredited institute or hospital program.

Average median salary in 2010:

$64,400

Employment outlook:
Employment of diagnostic medical sonographers is expected to grow by 44 percent between 2010 and 2020, much faster than the average for all occupations. As ultrasound technology evolves, it will become a more common method used to assist in diagnosing medical conditions, favored over more invasive procedures.
Diagnostics and Imaging

Job Title: **Nuclear Medicine Technologist**

**Summary:**

Nuclear medicine technologists use a scanner to create images of various areas of a patient’s body. They prepare radioactive drugs and administer them to patients undergoing the scans. The radioactive drugs cause abnormal areas of the body to appear different from normal areas in the images.

**Typical duties:**

- Explain imaging procedures to the patient and answer questions
- Follow safety procedures to protect the patient and themselves from excessive radiation exposure
- Examine machines to make sure that they are safe and working properly
- Prepare radioactive drugs and administer them to the patient
- Monitor the patient to check for unusual reactions to drugs
- Operate equipment that creates images of areas in the body, such as images of organs
- Keep detailed records of procedures

**Education:**

- Nuclear medicine technologists typically need an associate’s degree in nuclear medicine technology; there are also bachelor’s degree programs. Some technologists become qualified by completing an associate’s or a bachelor’s degree program in a related health field, such as radiologic technology or nursing, and then completing a 12-month certificate program in nuclear medicine technology. Generally, certificate programs are offered in hospitals; associate’s degrees in community colleges, and bachelor’s degrees in 4-year colleges and universities.

**Average median salary in 2010:**

$68,600

**Employment outlook:**

Employment of nuclear medicine technologists is expected to grow by 19 percent from 2010 to 2020, about as fast as the average for all occupations.

Diagnostics and Imaging

Job Title: Radiation Therapist

Summary:
Radiation therapists treat cancer and other diseases in patients by giving radiation treatments.

Typical duties:
- Examine machines to make sure they are safe and work properly
- Explain treatment plans to the patient and answer questions about treatment
- Follow safety procedures to protect the patient and themselves from overexposure
- X-ray the patient to determine the exact location of the area requiring treatment
- Check the computer programs to make sure that they will give the correct dose of radiation to the correct area of the patient's body
- Operate the equipment to treat the patient with radiation
- Monitor the patient to check for unusual reactions to the treatment
- Keep detailed records of treatment

Education:
- Although candidates may qualify by completing a 12-month certificate program, employers usually prefer to hire applicants who have an associate’s or a bachelor’s degree in radiation therapy.
- Radiation therapy programs include courses in radiation therapy procedures and the scientific theories behind them. In addition, these programs often include courses in human anatomy and physiology, physics, algebra, computer science, and research methodology.
- In most states, radiation therapists must have a license. Requirements vary by state. To be licensed, radiation therapists must usually graduate from an accredited radiation therapy program and be certified by the American Registry of Radiologic Technologists (ARRT).

Average median salary in 2010:
$75,000

Employment outlook:
Employment of radiation therapists is expected to grow by 20 percent between 2010 and 2020, faster than the average for all occupations.

Diagnostics and Imaging

Job Title:  Maid and Housekeeping Cleaner

Summary:
Maids and housekeeping cleaners do general cleaning tasks, including making beds and vacuuming halls, in private homes and commercial establishments.

Typical duties:
- Clean rooms, hallways, and other living or work areas
- Change sheets and towels; make beds; wash, fold, and iron clothes
- Empty wastebaskets and take trash to disposal areas
- Replenish supplies, such as soap and toilet paper
- Dust and polish furniture and equipment
- Sweep, wax, or polish floors using brooms, mops, or other floor-cleaning equipment
- Vacuum rugs, carpets, and upholstered furniture
- Clean or polish windows, walls, and woodwork
- Lift and move lightweight objects and equipment

Education:
- There are no formal training or education requirements. Most maids and housekeeping cleaners are trained on the job. Entry-level maids and housekeeping cleaners typically work alongside a more experienced cleaner and gain more responsibilities and more difficult work as they become experienced.

Average median salary in 2010:
$19,000

Employment outlook:
Employment of maids and housekeeping cleaners is expected to grow eight percent from 2010 to 2020, slower than the average for all occupations. Some new jobs are expected in hotels as demand for accommodations increases. Companies that supply cleaning services on a contract basis will also experience some growth, as more of this work is being contracted out.

Maintenance and Repair

Job Title: **Janitors & Building Cleaners**

**Summary:**
Janitors and building cleaners keep many types of buildings clean, orderly, and in good condition.

**Typical duties:**
- Gather and empty trash and trash bins
- Clean building floors by sweeping, mopping, or vacuuming them
- Clean bathrooms and stock them with soap, toilet paper, and other supplies
- Keep buildings secure by locking doors
- Clean spills and other hazards using sponges and squeegees
- Wash windows, walls, and glass
- Order cleaning supplies
- Make minor repairs to the building, such as changing light bulbs
- Notify managers when the building needs major repairs

**Education:**
- Most janitors and building cleaners learn on the job. Beginners typically work with a more experienced janitor or cleaner, learning how to use and maintain machines, such as wet-and-dry vacuums and floor buffers and polishers. They may also learn on the job how to repair minor problems with the electricity or plumbing.
- Janitors and building cleaners should be able to do simple arithmetic and follow instructions. High school shop courses are generally helpful for jobs involving repair work.

**Average median salary in 2010:**
$22,000

**Employment outlook:**
Employment of janitors and building cleaners is expected to grow 11 percent from 2010 to 2020, about as fast as the average for all occupations. Many new jobs are expected in facilities related to health care, as this industry is expected to grow rapidly. In addition, as more companies outsource their cleaning services, janitorial contractors are likely to benefit and experience demand. However, employment growth is expected to be tempered as fewer new buildings are built over the projections decade.

Maintenance and Repair

Job Title: Grounds Maintenance Worker

Summary:

Grounds maintenance workers provide a pleasant outdoor environment by ensuring that the grounds of houses, businesses, and parks are attractive, orderly, and healthy.

Typical duties:

- Mow, edge, and fertilize lawns
- Weed and mulch landscapes
- Trim hedges, shrubs, and small trees
- Remove dead, damaged, or unwanted trees
- Plant flowers, trees, and shrubs
- Water lawns, landscapes, and gardens

Education:

- Although most grounds maintenance jobs have no education requirements, some employers may require formal education in areas such as landscape design, horticulture, or arboriculture.

Average median salary in 2010:

$24,000

Employment outlook:

Employment of grounds maintenance workers is projected to grow 20 percent from 2010 to 2020, faster than the average for all occupations.

More workers will be needed to keep up with increasing demand for lawn care and landscaping services from large institutions, including universities and corporate headquarters. Many aging or busy homeowners also will require lawn care services to help maintain their yards.

Employment of tree trimmers and pruners is expected to grow 18 percent, about as fast as the average for all occupations. Many municipalities are planting more trees in urban areas, likely increasing the demand for these workers.

Maintenance and Repair

**Job Title:** Security Guard

**Summary:**
Security guards and gaming surveillance officers patrol and inspect property against fire, theft, vandalism, terrorism, and illegal activity. They monitor people and buildings in an effort to prevent crime.

**Typical duties:**
- Protect and enforce laws on an employer’s property
- Monitor alarms and closed-circuit TV cameras
- Control access for employees, visitors, and outside contractors
- Conduct security checks over a specified area
- Write comprehensive reports outlining what they observed while on patrol
- Interview witnesses for later court testimony
- Detain criminal violators

**Education:**
- Unarmed guards generally need to have a high school diploma or GED, although some jobs may not have any specific educational requirement. For armed guards, employers usually prefer people who are high school graduates or who have some coursework in criminal justice.
- Some employers prefer to hire security guards with some higher education, such as a police science or criminal justice degree. Programs and courses that focus specifically on security guards also are available at some postsecondary schools.
- Many employers give newly hired guards instruction before they start the job and provide on-the-job training. The amount of training guards receive varies. Training covers numerous topics, such as emergency procedures, detention of suspected criminals, and communication skills.

**Average median salary in 2010:**

$24,000

**Employment outlook:**
Employment of security guards is expected to grow by 19 percent from 2010 to 2020, about as fast as the average for all occupations. Security guards will be needed to protect both people and property. This occupation is expected to add 195,000, a large number of jobs, over the 2010–2020 decade. Concern about crime, vandalism, and terrorism continue to increase the need for security.
Maintenance and Repair

Job Title: General Maintenance and Repair Worker

Summary:
General maintenance and repair workers maintain and repair machines, mechanical equipment, and buildings. They work on plumbing, electrical, and air-conditioning and heating systems.

Typical duties:
- Maintain and repair machines, mechanical equipment, and buildings
- Troubleshoot and fix faulty electrical switches
- Inspect and diagnose problems and figure out the best way to correct them, frequently checking blueprints, repair manuals, and parts catalogs
- Do routine preventive maintenance to ensure that machines continue to run smoothly
- Assemble and set up machinery or equipment
- Plan repair work using blueprints or diagrams
- Do general cleaning and upkeep of buildings and properties
- Order supplies from catalogs and storerooms
- Meet with clients to estimate repairs and costs
- Keep detailed records of their work

Education:
- Many maintenance and repair workers may learn some basic skills in high school shop or technical education classes, postsecondary trade or vocational schools, or community colleges.
- Courses in mechanical drawing, electricity, woodworking, blueprint reading, science, mathematics, and computers are useful. Maintenance and repair workers often do work that involves electrical, plumbing, heating, and air-conditioning systems or painting and roofing tasks. Workers need a good working knowledge of many repair and maintenance tasks.

Average median salary in 2010:
$35,000

Employment outlook:
Employment of general maintenance and repair workers is expected to grow 11 percent from 2010 to 2020, about as fast as the average for all occupations. There should be many job openings for general maintenance and repair workers, due to growth and the need to replace workers who leave the occupation. Many job openings are expected as experienced workers retire.

Maintenance and Repair

**Job Title:**  
Biomedical Equipment Technician

**Summary:**
Maintain instruments and biomedical equipment used in hospitals, laboratories and other clinical settings. Ensure the safe and efficient operation of all biomedical equipment by conducting regular inspections, performing maintenance tests and executing repairs. Biomedical equipment technicians are specialists in electronic and mechanical equipment used to diagnose and treat diseases. A technician installs new equipment, such as electrocardiographs (EKGs) and artificial kidney machines.

**Typical duties:**
- Repairs medical electronic patient monitoring equipment
- Maintains diagnostic x-ray and imaging equipment
- Provides specialized maintenance of clinical pathology instruments and systems
- Tests hospital equipment for safety and performance
- Trains and educates clinical and medical personnel in the proper use of medical equipment
- Evaluates and tests new high-tech equipment for use
- Supports medical personnel who work in the operating room with diagnostic equipment
- Repairs microcomputers
- Maintains wireless telemetry systems
- Instructs other health care personnel in the correct use of the equipment
- Assists in the evaluation of new devices

**Education:**
- Typically trains for two years and receives a certificate or associate degree from a university or other accredited technical school
- Special emphasis required in biomedical instrumentation and physiology
- Training is available through all branches of the military
- Certification is available by additional study and nationally standardized tests

**Average median salary in 2010:**
$44,500

**Employment outlook:**
Employment of medical equipment repairers is projected to grow 31 percent from 2010 to 2020, much faster than the average for all occupations. Greater demand for healthcare services and the use of increasingly complex medical equipment will drive employment growth. Those who have an associate’s degree in biomedical equipment technology or engineering should have the best job opportunities.

Medical

Job Title: Medical Assistant

Summary: Medical assistants complete administrative and clinical tasks in the offices of physicians, podiatrists, chiropractors, and other health practitioners. Their duties vary with the location, specialty, and size of the practice.

Typical duties:
- Take patient history and measure vital signs
- Help the physician with patient examinations
- Give patient injections as directed by the physician
- Schedule patient appointments
- Prepare blood for laboratory tests

Education:
- High school students interested in a career as a medical assistant should take courses in biology, chemistry, and anatomy.
- Medical assistants typically have a high school diploma or equivalent. There are no formal educational requirements for becoming a medical assistant in most states. However, some medical assistants graduate from formal education programs, and employers may prefer such training. Programs are available from community colleges, vocational schools, technical schools, or universities and take about one year to complete. These programs usually lead to a certificate or diploma. Some community and junior colleges offer two-year programs that lead to an associate’s degree. All programs have classroom and laboratory portions that include lessons in anatomy and medical terminology.

Average median salary in 2010:
$28,900

Employment outlook:
Employment is expected to grow by 31 percent from 2010 to 2020, much faster than the average for all occupations. Demand will stem from physicians hiring more medical assistants to do routine administrative and clinical duties so that physicians can see more patients.

Medical

Job Title: **Emergency Medical Technician & Paramedic**

Summary:

Emergency medical technicians (EMTs) and paramedics care for the sick or injured in emergency medical settings. People’s lives often depend on their quick reaction and competent care. EMTs and paramedics respond to emergency calls, performing medical services and transporting patients to medical facilities.

**Typical duties:**

- Respond to 911 calls for emergency medical assistance, such as cardiopulmonary resuscitation (CPR) or bandaging a wound
- Assess a patient’s condition and determine a course of treatment
- Follow guidelines that they learned in training and that they receive from physicians who oversee their work
- Use backboards and restraints to keep patients still and safe in an ambulance for transport
- Help transfer patients to the emergency department of a healthcare facility and report their observations and treatment to the staff
- Create a patient care report; documenting the medical care they gave the patient
- Replace used supplies and check or clean equipment after use

Education:

- All emergency medical technicians (EMTs) and paramedics must complete a formal training program. All states require EMTs and paramedics to be licensed; requirements vary by state.
- Either a high school diploma or equivalent and cardiopulmonary resuscitation (CPR) certification are prerequisites for most formal education and training programs. High school students interested in entering these occupations should take courses in anatomy and physiology. Formal training is offered by technical institutes, community colleges, and facilities that specialize in emergency care training.
- The [National Registry of Emergency Medical Technicians](http://www.nremt.org) (NREMT) certifies EMTs and paramedics.

**Average median salary in 2010:**

$30,400

**Employment outlook:**

Employment of EMTs and paramedics is expected to grow by 33 percent from 2010 to 2020, much faster than the average for all occupations.

Job Title: Surgical Technologist

Summary:
Surgical technologists, also called operating room technicians, assist in surgical operations. They prepare operating rooms, arrange equipment, and help doctors and nurses during surgeries.

Typical duties:
- Prepare operating rooms for surgery
- Sterilize equipment and make sure that there are adequate supplies for surgery
- Prepare patients for surgery, such as washing and disinfecting incision sites
- Help surgeons and nurses during surgery by passing them instruments and other sterile supplies

Education:
- People interested in surgical technology should take high school courses in health, biology, chemistry, and mathematics.
- Surgical technologists typically need some type of postsecondary education. Accredited programs in surgical technology are in many community colleges and vocational schools. Programs range in length from several months to two years, and they grant a certificate or associate’s degree. Admission typically requires a high school diploma or equivalent.
- Surgical technology education includes courses in anatomy, biology, medical terminology, and other topics. Students also work in supervised clinical settings to gain hands-on skills as technologists. In addition, technologists are trained in the care and safety of patients, sterilization techniques, and preventing and controlling infections.
- In 2010, accredited training programs were recognized by the Commission on Accreditation of Allied Health Education Programs (CAAHEP).

Average median salary in 2010:
$40,000

Employment outlook:
Employment of surgical technologists is expected to increase 19 percent from 2010 to 2020, about as fast as the average for all occupations. Hospitals will continue to be the primary employer of surgical technologists, reducing costs by employing technologists, instead of higher paid registered nurses, in operating rooms.

Medical

Job Title: **Physician Assistant**

**Summary:**
Physician assistants, also known as PAs, practice medicine under the direction of physicians and surgeons. They are formally trained to examine patients, diagnose injuries and illnesses, and provide treatment.

**Typical duties:**
- Work under the supervision of a physician or surgeon
- Review patients’ medical histories
- Do physical exams to check patients’ health
- Order and interpret diagnostic tests, such as x rays or blood tests
- Make preliminary diagnoses concerning a patient’s injury or illness
- Provide treatment, such as setting broken bones and giving immunizations
- Counsel patients and their families; for example, answering questions about how to care for a child with asthma
- Prescribe medicine, when needed
- Record a patient’s progress
- Complete insurance paperwork

**Education:**
- Physician assistants typically need a master’s degree. Most applicants to master’s programs already have a bachelor’s degree and some work experience. Then, they must complete an accredited educational program for physician assistants. That usually takes at least two years of full-time study and typically leads to a master’s degree. All states require physician assistants to be licensed.
- Many assistants already have experience as registered nurses, emergency medical technicians (EMTs), or paramedics before they apply to a physician assistant program. For more information, see the profiles on [registered nurses](http://www.bls.gov/ooh/medical-assisting/registered-nurses.htm) and [EMTs and paramedics](http://www.bls.gov/ooh/medical-assisting/emt-and-paramedics.htm).

**Average median salary in 2010:**
$86,400

**Employment outlook:**
Employment of physician assistants is expected to increase 30 percent from 2010 to 2020, much faster than the average for all occupations.

As more physicians enter specialty areas of medicine, there will be a greater need for primary healthcare providers, such as physician assistants. Because physician assistants are more cost-effective than physicians, they are expected to have an increasing role in giving routine care.

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Medical

Job Title: **Physician and Surgeon**

**Summary:**
Physicians and surgeons diagnose and treat injuries or illnesses. Physicians examine patients, take medical histories, prescribe medications, and order, perform, and interpret diagnostic tests. They often counsel patients on diet, hygiene, and preventive health care. Surgeons operate on patients to treat injuries, such as broken bones; diseases, such as cancerous tumors; and deformities, such as cleft palates.

There are two types of physicians: M.D. (Medical Doctor) and D.O. (Doctor of Osteopathic Medicine). Both types of physicians use the same methods of treatment, including drugs and surgery, but D.O.s place additional emphasis on the body’s musculoskeletal system, preventive medicine, and holistic (whole person) patient care.

**Typical duties:**
- Take a patient’s medical history
- Update charts and patient information to show current findings
- Order tests for nurses or other healthcare staff to do
- Review test results to identify any abnormal findings
- Recommend and design a plan of treatment
- Answer concerns or questions that patients have about their health and well-being
- Help patients take care of their health by discussing topics such as proper nutrition and hygiene

**Education:**
- Physicians and surgeons have demanding education and training requirements. Almost all physicians complete at least 4 years of undergraduate school, four years of medical school, and three to eight years in internship and residency programs, depending on their specialty.
- Medical schools are highly competitive. Most applicants must submit transcripts, scores from the Medical College Admission Test (MCAT), and letters of recommendation. Schools also consider an applicant’s personality, leadership qualities, and participation in extracurricular activities.

**Average median salary in 2010:**
In 2010, physicians practicing primary care received total median annual compensation of $202,392, and physicians practicing in medical specialties received total median annual compensation of $356,885.

**Employment outlook:**
Employment of physicians and surgeons is expected to grow by 24 percent from 2010 to 2020, faster than the average for all occupations. Job growth will occur because of the continued expansion of healthcare-related industries.

Nursing

Job Title: Nursing Aides, Orderlies, and Attendants

Summary: Nursing aides, orderlies, and attendants help provide basic care for patients in hospitals and residents of long term care facilities, such as nursing homes.

Typical duties:

• Clean and bathe patients or residents
• Help patients use the toilet and dress
• Turn, reposition, and transfer patients between beds and wheelchairs
• Listen to and record patients’ health concerns and report that information to nurses
• Measure patients’ vital signs, such as blood pressure and temperature
• Serve meals and help patients eat

Education:

• Nursing aides and attendants must earn a postsecondary certificate or award, in which they learn the basic principles of nursing and complete supervised clinical work. These programs are found in community colleges, vocational and technical schools, and in hospitals and nursing homes. Some high schools offer nursing aide programs.
• Orderlies typically have at least a high school diploma. Orderlies who are not involved in patient care may be trained on the job.

Average median salary in 2010:

$24,000

Employment outlook:

Employment of nursing aides, orderlies, and attendants is expected to grow by 20 percent from 2010 to 2020, faster than the average for all occupations.

Because of the growing elderly population, many nursing aides, orderlies, and attendants will be needed in long-term care facilities, such as nursing homes.

Nursing

Job Title: Licensed Practical and Licensed Vocational Nurses

Summary:
Licensed practical and licensed vocational nurses (known as LPNs or LVNs, depending on the state in which they work) provide basic nursing care. They work under the direction of registered nurses and doctors.

Typical duties:
- Monitor patients’ health—for example, by checking their blood pressure
- Administer basic nursing care, including changing bandages and inserting catheters
- Provide for the basic comfort of patients, such as helping them bathe or dress
- Discuss health care with patients and listen to their concerns
- Report patients’ status to registered nurses and doctors
- Keep records on patients’ health

Education:
- LPNs and LVNs must complete an accredited program, which takes about 1 year. These programs are commonly in technical schools and community colleges. They may occasionally be in high schools and hospitals as well. Practical nursing programs combine classroom learning in subjects such as nursing, biology, and pharmacology, with supervised clinical experience. These programs give certificates in practical nursing. Contact your state’s board of nursing for a list of approved programs.
- After getting a certificate, prospective LPNs or LVNs can take the National Council Licensure Examination, or NCLEX-PN. They must pass the exam to get a license and work as an LPN or LVN in all states.

Average median salary in 2010:
$40,000

Employment outlook:
Employment of licensed practical and licensed vocational nurses is expected to grow 22 percent from 2010 to 2020, faster than the average for all occupations. As the U.S. population ages, the overall need for healthcare is expected to increase. This trend will lead to increased employment of LPNs and LVNs in hospitals, physicians’ offices, and other healthcare settings. LPNs and LVNs also will be needed in residential care facilities such as nursing homes and assisted-living centers. Many procedures that once could be done only in hospitals are now being done outside of hospitals, creating demand in other settings, such as outpatient care centers.

Nursing

Job Title: Registered Nurse

Summary:
Registered nurses (RNs) provide and coordinate patient care, educate patients and the public about various health conditions, and provide advice and emotional support to patients and their family members.

Typical duties:
- Record patients’ medical histories and symptoms
- Give patients medicines and treatments
- Set up plans for patients’ care or contribute to existing plans
- Observe patients and record the observations
- Consult with doctors and other healthcare professionals
- Operate and monitor medical equipment
- Help perform diagnostic tests and analyze results
- Teach patients and their families how to manage their illnesses or injuries
- Explain what to do at home after treatment

Education:
- Registered nurses usually take one of three education paths: a bachelor's of science degree in nursing (BSN), an associate's degree in nursing (ADN), or a diploma from an approved nursing program. Registered nurses must also be licensed.
- In all nursing education programs, students take courses in nursing, anatomy, physiology, microbiology, chemistry, nutrition, psychology and other social and behavioral sciences, as well as in liberal arts. BSN programs typically take four years to complete; ADN and diploma programs usually take two to three years to complete.

Average median salary in 2010:
$65,000

Employment outlook:
Employment of registered nurses is expected to grow 26 percent from 2010 to 2020, faster than the average for all occupations. Growth will occur primarily because of technological advancements, permitting a greater number of health problems to be treated; an increased emphasis on preventive care; and the large, aging baby boomer population who will demand more healthcare services as they live longer and more active lives than previous generations.

Nutrition and Food Service

Job Title: **Food Preparation Worker**

Summary:
Food preparation workers perform many routine tasks under the guidance of cooks or food supervisors. They prepare cold foods, slice meat, peel and cut vegetables, brew coffee or tea, and do many other tasks.

Typical duties:
- Clean and sanitize work areas, equipment, utensils, and dishes
- Weigh or measure ingredients, such as meat and cheeses
- Prepare fresh condiments, including lettuce, tomatoes, and onions
- Cut and grind meats, poultry, and seafood to prepare for cooking
- Mix ingredients for salads
- Store food in designated containers and storage areas to prevent spoilage
- Take and record temperatures of food and food storage areas
- Place food trays over food warmers for immediate service

Education:
- Most food preparation workers obtain their skills through short-term on-the-job training, which often lasts several weeks. Many start as kitchen helpers and progress into food preparation positions as they learn basic knife skills. Training generally starts with basic sanitation and workplace safety regulations and continues with instructions on how to handle, prepare, and cook food.
- Advancement opportunities for food preparation workers depend on their training, work experience, and ability to do more refined tasks. Many food preparation workers move into assistant or line cook positions as they learn basic cooking techniques.

Average median salary in 2010:
$19,000

Employment outlook:
Employment of food preparation workers is expected to grow 10 percent from 2010 to 2020, about as fast as the average for all occupations.

However, a growing number of fast-food restaurants and school and hospital cafeterias are customizing their food orders from wholesalers and distributors in an effort to lower costs. As more food service establishments use these cost-saving strategies, the need for food preparation workers to wash, portion, and season ingredients should be diminished.

Nutrition and Food Service

Job Title: Chefs and Head Cooks

Summary:
Chefs and head cooks oversee the daily food preparation at restaurants or other places where food is served. They direct kitchen staff and handle any food-related concerns.

Typical duties:
- Check freshness of food and ingredients
- Supervise and coordinate activities of cooks and other food preparation workers
- Develop recipes and determine how to present the food
- Plan menus and ensure uniform serving sizes and quality of meals
- Inspect supplies, equipment, and work areas for cleanliness and functionality
- Hire, train, and supervise cooks and other food preparation workers
- Order and maintain inventory of food and supplies needed to ensure efficient operations
- Monitor sanitation practices and ensure that kitchen safety standards are followed

Education:
- Most chefs and head cooks start working in kitchens in other positions, such as line cooks or dishwashers, learning cooking skills from the chefs they work for. Many spend years working in kitchens before learning enough to get promoted to chef or head cook positions.
- A growing number of chefs and head cooks receive formal training at community colleges, technical schools, culinary arts schools, and two-year or four-year institutions. Students in culinary programs spend most of their time in kitchens practicing their cooking skills. These programs cover all aspects of kitchen work, including menu planning, food sanitation procedures, and purchasing and inventory methods. Most formal training programs also require students to get experience in a commercial kitchen through an internship, apprenticeship, or out-placement program.

Average median salary in 2010:

$41,000

Employment outlook:

Employment of chefs and head cooks is projected to experience little or no change from 2010 to 2020. Population and income growth is expected to result in greater demand for more high-quality dishes at a variety of dining venues, including many up-scale establishments. However, employment growth will be tempered as many restaurants, in an effort to lower costs, use lower-level cooks to perform the work normally done by chefs and head cooks.

Nutrition and Food Service

Job Title: Dietitian and Nutritionist

Summary:

Dieticians and Nutritionists are experts in food and nutrition. They advise people on what to eat in order to lead a healthy lifestyle or achieve a specific health-related goal.

Typical duties:

- Explain nutrition issues
- Assess patients’ and clients’ health needs and diet
- Develop meal plans, taking both cost and clients’ preferences into account
- Evaluate the effects of meal plans and change the plans as needed
- Promote better nutrition by giving talks to groups about diet, nutrition, and the relationship between good eating habits and preventing or managing specific diseases
- Keep up with the latest nutritional science research

Education:

- Most dietitians and nutritionists have earned a bachelor’s degree in dietetics, foods and nutrition, food service systems management, or a related area. Programs include courses in nutrition, physiology, chemistry, and biology.
- Many employers prefer or require the RD, which is administered by the Commission on Dietetic Registration, the credentialing agency for the Academy of Nutrition and Dietetics.

Average median salary in 2010:

$53,250

Employment outlook:

Employment of dietitians and nutritionists is expected to increase 20 percent from 2010 to 2020, faster than average for all occupations. In recent years, there has been increased interest in the role of food in promoting health and wellness, particularly as a part of preventative healthcare in medical settings. The importance of diet in preventing and treating illnesses such as diabetes and heart disease is now well known. More dietitians and nutritionists will be needed to provide care for people with these conditions. An aging population also will increase the need for dietitians and nutritionists in nursing homes.

Pharmacy

Job Title: Pharmacy Technician

Summary:
Pharmacy technicians help licensed pharmacists dispense prescription medication.

Typical duties:
- Take from customers or health professionals the information needed to fill a prescription
- Count tablets and measure amounts of other medication for prescriptions
- Compound or mix medications, such as preparing ointments
- Package and label prescriptions
- Accept payment for prescriptions and process insurance claims
- Do routine pharmacy tasks, such as answering phone calls from customers

Education:
- Many pharmacy technicians learn how to perform their duties through on-the-job training. Others attend postsecondary education programs in pharmacy technology at vocational schools or community colleges, which award certificates. These programs typically last one year or less and cover a variety of subjects, such as arithmetic used in pharmacies, recordkeeping, methods of dispensing medications, and pharmacy law and ethics. Technicians also learn the names, actions, uses, and doses of medications. Many training programs include internships, in which students get hands-on experience in a pharmacy.

Average median salary in 2010:
$28,000

Employment outlook:
Employment of pharmacy technicians is expected to grow by 32 percent from 2010 to 2020, much faster than the average for all occupations. As a result of advances in pharmaceutical research, more prescription medications are being used to fight diseases. Also, the number of older people is growing, and older people use more prescription drugs than younger people.

Job Title: Pharmacist

Summary:
Pharmacists dispense prescription medications to patients and offer advice on their safe use.

Typical duties:
- Fill prescriptions, verifying instructions from physicians on the proper amounts of medication to give to patients
- Check whether the prescription will interact negatively with other drugs that a patient is taking or conditions the patient has
- Instruct patients on how and when to take a prescribed medicine
- Advise patients on potential side effects they may experience from taking the medicine
- Advise patients about general health topics, such as diet, exercise, and managing stress, and on other issues, such as what equipment or supplies would be best for a health problem
- Complete insurance forms and work with insurance companies to be sure that patients get the medicines they need
- Oversee the work of pharmacy technicians and pharmacists in training (interns)
- Keep records and do other administrative tasks
- Teach other healthcare practitioners about proper medication therapies for patients

Education:
- All Doctor of Pharmacy programs require applicants to have taken postsecondary courses such as chemistry, biology, and anatomy. Applicants need at least two to three years of undergraduate study; for some programs, applicants must have a bachelor’s degree.
- Pharm.D. programs usually take four years to finish, although some programs offer a three-year option.

Average median salary in 2010:
$112,000

Employment outlook:
Employment of pharmacists is expected to increase by 25 percent from 2010 to 2020, faster than the average for all occupations.

Science and Laboratory

Job Title:  Biological Technician

Summary:
Biological technicians help biological and medical scientists conduct laboratory tests and experiments.

Typical duties:

- Set up, maintain, and clean laboratory instruments and equipment, such as microscopes, scales, and test tubes
- Gather and prepare samples of substances, such as blood, food, or bacteria cultures, for laboratory analysis
- Conduct biological tests and experiments
- Document their work, including procedures, observations, and results
- Analyze experimental data and interpret results
- Write reports that summarize their findings

Education:

- Biological technicians typically need a bachelor’s degree in biology or a closely related field. Most colleges and universities offer bachelor’s degree programs in biological science.
- Biological science programs usually include courses in general biology, as well as in specific subfields such as ecology, microbiology, and molecular biology. In addition to taking courses in biology, students must study chemistry, mathematics, and physics. Computer science courses are helpful for modeling and simulating biological processes and for operating some laboratory equipment.
- It is important for students to gain laboratory experience before entering the workforce. Students should take biology courses that emphasize laboratory work. They often can also gain laboratory experience through summer internships with prospective employers, such as pharmaceutical and medicine manufacturers.

Average median salary in 2010:

$39,000

Employment Outlook:

Employment of biological technicians is projected to increase 14 percent from 2010 to 2020, as fast as the average for all occupations. Greater demand for biotechnology research is expected to increase the need for these workers. Biological technicians will be needed to help scientists develop new medicines and treatments for diseases such as cancer and Alzheimer’s.

Science and Laboratory

Job Title: Medical and Clinical Laboratory Technologists and Technicians

Summary:

**Medical laboratory technologists** (also known as medical laboratory scientists) and medical laboratory technicians collect samples and perform tests to analyze body fluids, tissue, and other substances.

**Cytotechnologists** prepare slides of body cells and examine these cells with a microscope for abnormalities that may signal the beginning of a cancerous growth.

**Histotechnicians** cut and stain tissue specimens for pathologists, doctors who study cause and development of diseases at a microscopic level.

Typical duties:

- Analyze body fluids such as blood, urine, and tissue samples to determine normal or abnormal findings
- Collect and study blood samples for use in transfusions by identifying the number of cells, the cell morphology or the blood group, blood type, and compatibility with other blood types
- Operate sophisticated laboratory equipment such as microscopes and cell counters
- Use automated equipment and computerized instruments capable of performing a number of tests at the same time
- Log data from medical tests and enter results into a patient’s medical record
- Discuss results and findings of laboratory tests and procedures with physicians
- Supervise or train medical laboratory technicians

Education:

- High school students who are interested in pursuing a career in the medical laboratory sciences should take courses in chemistry, biology, and mathematics.
- Medical laboratory technologists typically need a bachelor’s degree. Technicians usually need an associate’s degree or a postsecondary certificate. Some states require technologists and technicians to be licensed.

Average median salary in 2010:

$46,700

Employment Outlook:

Employment of medical laboratory technologists is expected to grow by 11 percent between 2010 and 2020, about as fast as the average for all occupations. Employment of medical laboratory technicians is expected to grow by 15 percent between 2010 and 2020, about as fast as the average for all occupations.

Science and Laboratory

Job Title: **Medical Scientist**

**Summary:**
Medical scientists conduct research aimed at improving overall human health. They often use clinical trials and other investigative methods to reach their findings.

**Typical duties:**
- Plan and direct studies to investigate human diseases, preventive methods, and the treatment of disease
- Develop methods, instruments, and procedures for medical applications and data analysis
- Prepare and analyze medical samples to identify toxicity, bacteria, or microorganisms or to study cell structure
- Standardize drug doses and immunization methods for manufacturing drugs and other medicinal compounds
- Work with health departments, industry personnel, and physicians to develop programs that improve health safety standards
- Prepare research grant proposals to get funding from government agencies
- Follow safety procedures to avoid contamination

**Education:**
- Students planning careers as medical scientists should pursue a bachelor’s degree in a biological science. Undergraduate programs typically include courses in life sciences, as well as chemistry, physics, and mathematics. Humanities courses also are beneficial for developing writing and Communication skills, which are necessary for drafting grant proposals and publishing research results.
- After students have completed undergraduate studies, there are two main degree paths for prospective medical scientists: either a Ph.D. or a joint M.D.-Ph.D. Students can enroll in a university Ph.D. program in the biological sciences, which typically take about six years of study.

**Average median salary in 2010:**
$77,000

**Employment Outlook:**
Employment of medical scientists is expected to increase by 36 percent between 2010 and 2020, much faster than the average for all occupations. Ongoing medical research, as well as an increased reliance on pharmaceuticals, will likely maintain current levels of demand for medical scientists.

Science and Laboratory

Job Title: Biochemists and Biophysicists

Summary:
Biochemists and biophysicists study the chemical and physical principles of living things and of biological processes such as cell development, growth, and heredity.

Typical duties:
- Plan and conduct complex projects in basic and applied research
- Manage laboratory teams and monitor the quality of their work
- Isolate, analyze, and synthesize proteins, enzymes, DNA, and other molecules
- Research the effects of substances such as drugs, hormones, and food on tissues and biological processes
- Prepare technical reports, research papers, and recommendations based on their research
- Present research findings to scientists, engineers, and other colleagues

Education:
- Most Ph.D. holders in biochemistry and biophysics have bachelor’s degrees in biochemistry or a related field, such as biology, chemistry, physics, or engineering. Many schools have bachelor’s degree programs in biochemistry, but few schools have bachelor’s degree programs in biophysics. In addition to completing required courses in biology and chemistry, students must typically take courses in mathematics, physics, and computer science. Courses in mathematics and computer science are important for biochemists and biophysicists, who must be able to do complex data analysis.
- Ph.D. programs typically include two years of advanced coursework in topics such as toxicology, genetics, and proteomics (the study of proteins). Graduate students also spend a lot of time conducting laboratory research. It typically takes four to six years to earn a doctoral degree in biochemistry or biophysics.

Average median salary in 2010:
$79,000

Employment Outlook:
Employment of biochemists and biophysicists is projected to increase by 31 percent from 2010 to 2020, much faster than the average for all occupations. However, because it is a small occupation, the fast growth will result in only about 7,700 new jobs over the 10-year period. More biochemists and biophysicists are expected to be needed to do basic research that increases scientific knowledge and to research and develop biological products and processes that improve our lives.

Therapy

Job Title: Physical Therapist Assistant and Aides

Summary:
Physical therapist assistants and physical therapist aides work under the direction of physical therapists. They help patients who are recovering from injuries, illnesses, and surgeries regain movement and manage pain.

Typical duties:
- Observe patients before and during therapy, noting their status and reporting to a physical therapist
- Help patients do specific exercises
- Use a variety of techniques, such as massage and stretching, to treat patients
- Use devices and equipment, such as walkers, to help patients
- Educate a patient and family members about what to do after treatment

Education:
- Most states require physical therapist assistants to have an associate’s degree from an accredited physical therapist program. In 2011, there were 280 associate’s degree programs for physical therapist assistants accredited by the Commission on Accreditation in Physical Therapy Education.

- Programs are divided into academic coursework and clinical experience. Academic courses include algebra, English, anatomy and physiology, and psychology. Clinical work includes certifications in cardiopulmonary resuscitation (CPR) and other first aid and hands-on experience in treatment centers. Many physical therapist assistants and aides continue their formal education to qualify for jobs in administration, management, and education.

Average median salary in 2010:
$38,000

Employment outlook:
Employment of physical therapist assistants is expected to increase 46 percent from 2010 to 2020, much faster than the average for all occupations.

Employment of physical therapist aides is expected to increase 43 percent from 2010 to 2020, much faster than the average for all occupations.

Employment of physical therapist assistants is projected to grow faster than that of aides, as assistants deliver therapy services directly.

Therapy

Job Title: Recreation Therapist

Summary:
Recreational therapists plan, direct, and coordinate recreation programs for people with disabilities or illnesses. They use a variety of techniques, including arts and crafts, drama, music, dance, sports, games, and field trips. These programs help maintain or improve a client’s physical and emotional well-being.

Typical duties:
- Assess clients’ needs through observations, medical records, standardized tests, and talking with medical staff, clients’ families, and the clients
- Work with other healthcare professionals to form treatment plans
- Create programs that meet clients’ needs and interests
- Plan and carry out interventions to prevent harm to a client
- Engage clients in activities, such as games, drama, and field trips
- Help clients learn social skills needed to become or remain independent
- Explain to clients ways to cope with anxiety or depression
- Record and analyze a client’s progress

Education:
- Most recreational therapists need a bachelor’s degree in therapeutic recreation or a related field. Though less common, associate’s, master’s, or doctoral degrees are also available.
- Therapeutic recreation programs include courses in assessment, human anatomy, medical and psychiatric terminology, characteristics of illnesses and disabilities, and the use of assistive devices and technology. Bachelor’s degree programs usually include an internship.
- Most employers prefer to hire certified recreational therapists. Hospitals and other clinical settings often require certification by the NCTRC. The council offers the Certified Therapeutic Recreation Specialist (CTRS) credential to candidates who pass a written certification exam and complete a supervised internship of at least 480 hours.

Average median salary in 2010: $39,000

Employment outlook:
Employment of recreational therapists is expected to grow by 17 percent from 2010 to 2020, about as fast as the average for all occupations.

As the large baby-boom generation ages, they will need recreational therapists to help treat age-related injuries and illnesses, such as strokes. As people age, their declines in general physical ability, and sometimes mental ability, may also be treated with recreational therapy.

Therapy

Job Title: Athletic Trainer

Summary:
Athletic trainers specialize in preventing, diagnosing, and treating muscle and bone injuries and illnesses. They work with people of all ages and all skill levels, from young children to soldiers and professional athletes.

Typical duties:
- Apply protective or injury-preventive devices such as tape, bandages, and braces
- Recognize and evaluate injuries
- Provide first aid or emergency care
- Develop and carry out rehabilitation programs for injured athletes
- Plan and implement comprehensive programs to prevent injury and illness from athletics
- Do administrative tasks, such as keeping records and writing reports on injuries and treatment programs

Education:
- For most jobs, athletic trainers need a bachelor’s degree in athletic training from an accredited college or university; however, master’s degrees are also common. The Commission on Accreditation of Athletic Training Education (CAATE) accredits most programs. All programs have both classroom and clinical components. Courses include science and health-related courses, such as anatomy, physiology, nutrition, and biomechanics.
- Athletic trainers may need a higher degree to be eligible for some positions, especially trainers in colleges and universities, or to increase their advancement opportunities.
- High school students interested in athletic trainer programs should take courses in anatomy, physiology, and physics.

Average median salary in 2010:
$42,000

Employment outlook:
Employment of athletic trainers is expected to grow by 30 percent from 2010 to 2020, much faster than the average for all occupations. However, because it is a small occupation, the fast growth will result in only about 5,500 new jobs over the 10-year period. As people become more aware of sports-related injuries at a young age, demand for athletic trainers is expected to increase, most significantly in schools and youth leagues.

Therapy

Job Title: Occupational Therapy Assistant and Aide

Summary:
Occupational therapy assistants and aides work under the direction of occupational therapists in treating patients with injuries, illnesses, or disabilities through the therapeutic use of everyday activities. They help these patients develop, recover, and improve the skills needed for daily living and working.

Typical duties:
- Help patients do therapeutic activities, such as specific stretches and other exercises
- Work with children who have development disabilities, leading them in play activities that promote coordination
- Teach patients how to use special equipment; for example, showing a patient with Parkinson's disease how to use devices that make eating easier
- Record patients' progress, report to occupational therapists, and do other administrative tasks

Education:
- People interested in becoming an occupational therapy assistant should take high school courses in biology and health. They can also increase their chances of getting into a community college or technical school program by doing volunteer work in a healthcare setting, such as a nursing care facility, an occupational therapist's office, or a physical therapist's office.
- Occupational therapy assistants generally have an associate's degree. Programs generally require two years of full-time study. They include classroom instruction in subjects such as psychology, biology, and pediatric health. Occupational therapy assistants also complete clinical fieldwork as part of their education to gain hands-on work experience.
- To be licensed, occupational therapy assistants must graduate from an accredited program. In 2010, there were about 300 programs for occupational therapy assistants that the Accreditation Council for Occupational Therapy Education (ACOTE) had accredited.

Average median salary in 2010: $47,000

Employment outlook:
Employment of occupational therapy assistants is expected to increase 43 percent from 2010 to 2020, much faster than the average for all occupations. Employment of occupational therapy aides is expected to increase 33 percent from 2010 to 2020, much faster than the average for all occupations.

Job Title: **Respiratory Therapist**

**Summary:**
Respiratory therapists care for patients who have trouble breathing; for example, from a chronic respiratory disease, such as asthma or emphysema. They also provide emergency care to patients suffering from heart attacks, stroke, drowning, or shock.

**Typical duties:**
- Interview and examine patients with breathing or cardiopulmonary disorders
- Consult with physicians to develop patient treatment plans
- Perform diagnostic tests such as measuring lung capacity
- Treat patients, using a variety of methods, including chest physiotherapy and aerosol medications
- Monitor and record the progress of treatment
- Supervise respiratory therapy technicians during tests and evaluate the findings of the tests
- Teach patients how to use treatments

**Education:**
- Respiratory therapists need at least an associate’s degree, but employers look favorably on applicants who have more education. Many colleges and technical institutes, and the Armed Forces offer training. Most programs award an associate’s or bachelor’s degree.
- All programs have clinical components that allow therapists to earn course credit and gain supervised, practical experience treating patients.
- Respiratory therapy programs include courses in human anatomy and physiology, chemistry, physics, microbiology, pharmacology, and mathematics. Other courses deal with therapeutic and diagnostic procedures and tests, equipment, patient assessment, and cardiopulmonary resuscitation (CPR).
- High school students interested in applying to respiratory therapy programs should take courses in health, biology, mathematics, chemistry, and physics.

**Average median salary in 2010:**

$54,000

**Employment outlook:**
Employment of respiratory therapists is expected to grow by 28 percent from 2010 to 2020, faster than the average for all occupations. Growth in the middle-aged and elderly population will lead to an increased incidence of respiratory conditions such as emphysema, chronic bronchitis, and pneumonia, respiratory disorders that permanently damage the lungs or restrict lung function.
Therapy

Job Title: Audiologist

Summary:
Audiologists diagnose and treat a patient’s hearing and balance problems using advanced technology and procedures.

Typical duties:
- Examine patients who have hearing, balance, or related ear problems
- Assess the results of the examination and diagnose problems
- Determine and administer treatment
- Fit and dispense hearing aids
- Counsel patients and their families on ways to listen and communicate, such as by lip reading or through sign language
- See patients regularly to check on hearing and balance and to continue or change the treatment plan
- Keep records on the progress of patients
- Conduct research related to the causes and treatment of hearing and balance disorders

Education:
- The doctoral degree in audiology (Au.D.) is a graduate program typically lasting four years. A bachelor’s degree in any field is needed to enter one of these doctoral programs.
- Graduate coursework in audiology includes anatomy, physiology, physics, genetics, normal and abnormal communication development, diagnosis and treatment, pharmacology, and ethics. Graduate programs also include supervised clinical practice. Graduation from a program accredited by the Council on Academic Accreditation is required to get a license in some states.
- Audiologists can earn the Certificate of Clinical Competence in Audiology (CCC-A), offered by the American Speech-Language-Hearing Association. They also may be credentialed through the American Board of Audiology. Although it is not required, certification may satisfy some or all of the requirements for licensure and may be required by some employers.

Average median salary in 2010:
$67,000

Employment outlook:
Employment of audiologists is expected to grow by 37 percent from 2010 to 2020, much faster than the average for all occupations. However, because it is a small occupation, the fast growth will result in only about 4,800 new jobs over the 10-year period.

Therapy

Job Title: Speech and Language Pathologist

Summary:
Speech-language pathologists diagnose and treat communication and swallowing disorders in patients.

Typical duties:

- Communicate with patients to evaluate their levels of speech or language difficulty
- Determine the extent of communication problems by having a patient complete basic reading and vocalizing tasks or by giving standardized tests
- Identify treatment options
- Create and carry out an individualized treatment plan

Education:

- The standard level of education for speech-language pathologists is a master’s degree. Although master’s programs do not specify a particular undergraduate degree for admission, certain courses must be taken before entering the program. Required courses vary by institution. Graduate programs often include courses in age-specific speech disorders, alternative communication methods, and swallowing disorders. These programs also include supervised clinical practice in addition to coursework.
- The Council on Academic Accreditation (CAA), part of the American Speech-Language-Hearing Association, accredits education programs in speech-language pathology.
- Speech-language pathologists must be licensed in almost all states. Speech-language pathologists can earn the Certificate of Clinical Competence in Speech-Language Pathology (CCC-SLP) offered by the American Speech-Language-Hearing Association. Certification satisfies some or all of the requirements for licensure and may be required by some employers.

Average median salary in 2010:

$67,000

Employment outlook:

Employment of speech-language pathologists is expected to grow by 23 percent from 2010 to 2020, faster than the average for all occupations. As the large baby-boom population grows older, there will be more instances of health conditions that cause speech or language impairments, such as strokes and hearing loss. These increases are expected to add to the number of speech and language disorders in the population and require more speech-language pathologists to treat these patients.

Therapy

Job Title: **Occupational Therapist**

Summary:
Occupational therapists treat patients with injuries, illnesses, or disabilities through the therapeutic use of everyday activities. They help these patients develop, recover, and improve the skills needed for daily living and working.

Typical duties:
- Observe patients doing tasks, ask the patient questions, and review the patient’s medical history
- Use the observations, answers, and medical history to evaluate the patient’s condition and needs
- Establish a treatment plan for patients, laying out the types of activities and specific goals to be accomplished
- Help people with various disabilities with different tasks, such as helping an older person with poor memory use a computer, or leading an autistic child in play activities
- Demonstrate exercises that can help relieve pain for people with chronic conditions, such as joint stretches for arthritis sufferers
- Evaluate a patient’s home or workplace and identify how it can be better suited to the patient’s health needs
- Educate a patient’s family and employer about how to accommodate and care for the patient
- Recommend special equipment, such as wheelchairs and eating aids, and instruct patients how to use that equipment
- Assess and record patients’ activities and progress for evaluating clients, for billing, and for reporting to physicians and other healthcare providers

Education:
- Admission to occupational therapy programs generally requires a bachelor’s degree and specific coursework, including biology and physiology. Many programs also require applicants to have volunteered or worked in an occupational therapy setting.
- Master’s programs generally take two years to complete; doctoral programs take longer.

Average median salary in 2010: **$72,000**

Employment outlook:
Employment of occupational therapists is expected to increase 33 percent from 2010 to 2020, much faster than the average for all occupations. Occupational therapy will continue to be an important part of treatment for people with various illnesses and disabilities, such as Alzheimer’s disease, cerebral palsy, autism, or the loss of a limb.

Therapy

Job Title: **Physical Therapist**

**Summary:**

Physical therapists help people who have injuries or illnesses improve their movement and manage their pain. They are often an important part of rehabilitation and treatment of patients with chronic conditions or injuries.

**Typical duties:**

- Diagnose patients’ dysfunctional movements by watching them stand or walk and by listening to their concerns, among other methods
- Set up a plan for their patients, outlining the patient’s goals and the planned treatments
- Use exercises, stretching maneuvers, hands-on therapy, and equipment to ease patients’ pain and to help them increase their ability to move
- Evaluate a patient’s progress, modifying a treatment plan and trying new treatments as needed
- Educate patients and their families about what to expect during recovery from injury and illness and how best to cope with what happens

**Education:**

- Physical therapists are required to have a postgraduate professional degree. Physical therapy programs usually award a Doctor of Physical Therapy (DPT) degree, although a small number award a Master of Physical Therapy (MPT) degree. Doctoral programs typically last three years; MPT programs require two to three years of study. Most programs, either DPT or MPT, require a bachelor’s degree for admission, and many require specific prerequisites, such as anatomy, physiology, biology, and chemistry.
- Physical therapy programs often include courses in biomechanics, anatomy, physiology, neuroscience, and pharmacology.
- Physical therapists may apply to and complete residency programs after graduation. Residencies last nine months to three years and provide additional training and experience in advanced or specialty areas of care.

**Average median salary in 2010:**

$76,000

**Employment outlook:**

Employment of physical therapists is expected to increase 39 percent from 2010 to 2020, much faster than the average for all occupations. Demand for physical therapy services will come, in large part, from the aging baby boomers, which are staying active later in life than previous generations did. Older persons are more likely to suffer heart attacks, strokes, and mobility-related injuries that require physical therapy for rehabilitation.

Links We Like

College Surfing
“Find the school that’s right for you”
http://www.collegesurfing.com

Explore Health Careers
“Everything you want to know about a wide variety of health careers”

Career Overview
“Career and job source resources”
http://www.careeroverview.com/health-medical-careers.html

American Medical Association
“Careers in health care”
www.ama-assn.org/ama/pub/education-careers/careers-health-care

Education-Portal
“Making education accessible”
http://education-portal.com

City Town Info
“Information and Analysis on US Places, Careers, Colleges, and more”
http://www.citytowninfo.com/

Bureau of Labor Statistics - Teacher’s Guide
“Provides introductory career information for students in Grades 4-8”
http://www.bls.gov/k12/teachers_guide.htm