

Career Connections

Medicine

OBJECTIVES OF THE PROGRAM

The Medicine Career Connections program is intended to encourage you to take advantage of some of the myriad opportunities available to discover about and experience the medical profession, and to learn about yourself relative to it. Through exploratory activities, course work, co-curricular involvement and work experience, you will gain both insight and skills that will serve you well as you embark on a career in medicine.

Medicine places considerable demands on its practitioners. Intellectual requirements include an aptitude for science and an ability to understand, accurately remember, analyze, interpret and evaluate information in order to determine a diagnosis, monitor progress, and plan a course of treatment. Medicine generally involves complex interactions with patients through active listening, explaining, answering questions, and providing emotional support; therefore, good “bedside manner” or strong interpersonal skills are valuable as well. Likewise, emotional stability and compassion are important in physicians’ effective work with sick or dying people. Further, physicians generally need manual dexterity in the use of a range of medical instruments, and physical stamina, as they often work under pressure for long and irregular hours providing physical care. Commitment to the medical profession, on-going study to keep knowledge current, dedication to patients’ welfare, and upholding professional ethics are also central to effectiveness in the field. As you consider a career in medicine, you should ask yourself about your motivation and ability to develop the wide-ranging skills and characteristics valuable to an effective physician.

RECOMMENDATIONS

Exploring Options

Pursuing medicine requires significant personal and financial commitment, and should be considered carefully and entered advisedly. At the exploratory stage, it is important to speak with members of the Health Careers Advisory Group about the intellectual, personal, and academic demands of medicine. They will be able to give you a realistic sense of the competitiveness of medical school and guidance in planning a complete, yet manageable, undergraduate schedule.

It is wise to gain a clear understanding of the realities of the profession as you begin to prepare yourself academically and experientially. In the Career Center, you can find helpful books such as *Careers in Focus: Physicians*, which outlines twenty-nine areas of general practice and specialties within medicine, and *The Medicine of ER*, which contrasts actual emergency medicine with that portrayed on the popular television show, “ER”. You can watch “MD: The Making of a Doctor” and “Survivor MD”, excellent videotapes produced by NOVA that trace the lives of six students through their four years at Harvard Medical School and beyond into the practice of medicine. If you would like to confirm the relatedness of your skills and interests to medicine, consider also taking the inventories the Career Center offers, including the Strong Interest Inventory, the Campbell Interest and Skill Survey and the Myers Briggs Type Indicator.

There are a number of valuable web sites you should check out to help you gain a sense of the realities of medicine and its alternatives. If you visit <http://www.hanover.edu/academics/career/careercenter/careergradschools> and look under Medical Schools, you'll be able to find links to such sites as the American Association of Medical Colleges, listing medical schools both geographically and alphabetically, and providing information about the MCAT and AMCAS (application service); the American Association of Colleges of Osteopathic Medicine; and American Association of Veterinary Medical Colleges. The Hanover College Pre-Med Manual can be found there as well.

Having gained an overview of the medical profession, if any questions arise about specific details or aspects of the field, a quick way to acquire first-hand information is to see a physician in action. Ask a physician if you might shadow him or her for the day to give you an idea of the aspects of the profession that aren't apparent at first glance. With permission, you might be able to sit in on a consultation, observe a physical, or listen as a medical history is taken. At the same time, you will have a valuable chance to gain insight about the impact of the profession on one's personal life. To get started, call your own personal physician, contact members of Hanover's Health Careers Advisory Group for leads, or ask the Career Center for names of alumni who have volunteered to give informational interviews or to provide job-shadowing sites.

Academics

Choosing Your Major

Since medical school is, of necessity, a time of specialization, your emphasis while at Hanover should be placed on receiving a broad liberal arts education and sound preparation for the field of study. It is important that you choose a major that you would enjoy even if you reconsidered your decision to pursue a career in medicine; while many pre-med students major in one of the sciences, such a major is not required for admission to medical school programs. In fact, any traditional liberal arts major is suitable, as long as you take the science courses required for admission, lay a foundation for successful performance in medical school, and prepare to take the Medical College Admission Tests (MCAT). Recent Hanover students who have been admitted to medical school have included psychology, philosophy and business majors and double majors who coupled a major in Spanish, philosophy, music or classical studies with one in science.

Courses Required for Admission to Most Medical Schools

Students applying to enter medical school immediately after graduating from college are strongly advised to take the MCAT in April of their junior year; therefore all required science courses should be completed by then. Typically, coursework required for entrance to medical schools includes the following courses offered at Hanover:

- General Biology: Heredity and Evolution (Bio 161)
- General Biology: Cells & Systems (Bio 185)
- Principles of Chemistry I (Che 161)
- Principles of Chemistry II (Che 185)
- Organic Chemistry I (Che 221)
- Organic Chemistry II (Che 222)
- General Physics I (Phy 161)
- General Physics II (Phy 185)
- English (one to two terms)

Because requirements vary, be sure to check the AAMC's *Medical School Admission Requirements* for the specific requirements of the schools you are interested in, or visit each school's web site.

Medical schools know how to read patterns and subtexts in transcripts and make special note of the level of difficulty of the courses that you have taken. Thus, as you choose your courses, strive for increasing challenge and independence over time as well as for balance.

Elective Courses

The range of coursework that would be useful in medical school is broad and, as when selecting your major, your choices should be based on your interests. For example, if you enjoy life sciences, consider such options as genetics, cell biology, biochemistry, molecular biology, immunology, physiology, microbiology, and neuropsychology. Courses in economics, communication, ethics, business, and in other areas of psychology may be valuable in the practice of medicine as well. Whatever options you choose, your primary academic focus as a pre-med should be on the basic courses required by medical school and on a solid, challenging major program that you enjoy.

If you take a semester or year abroad, please note that the international university programs with which Hanover is affiliated often have extensive prerequisites for their laboratory courses. Therefore, explore carefully what your options may be as you plan your pre-med curriculum.

Co-Curricular Activities

It is wise for all undergraduates to become involved in activities that can help them to gain self-knowledge, to express and reach beyond themselves, and to find balance in their lives. Certainly that is true for those interested in medicine. Medical school admission committees generally inquire about your leisure activities during your admission interview, as they are interested in learning about your maturity level, altruism, time management skills, and preferred methods of stress relief. Still, please note that it is better to focus your energies and time on a well-chosen few to which you are naturally drawn and in which you can develop than to overextend yourself in a large number, as attention to your studies must be given priority.

On-Campus Activities

The types of activities that can assist you in developing skills useful in medicine can vary widely depending on your own personal interests. In general, those involving a sophisticated level of interaction with people, such as resident advising or peer advising; those honing your leadership skills, such as student senate or presidency of your living unit; those exploring your academic interests, such as American Chemical Society or Beta Beta Beta biological honor society; those that test your emotional and physical reserves, such as cross country; and extracurricular activities that help you to relieve stress, such as playing the piano or intramural sports, are all examples of paths that will help you to grow in self-understanding in areas related to this field. In addition to the qualities mentioned above, altruism is an important trait in those pursuing medicine. LINK (Love Is Needed by Kids), College Mentors For Kids, and Best Buddies are a few examples of activities through which you can test, express and develop this dimension of yourself.

Off-Campus Activities

Volunteering in the local community can help you to test your own motivation to reach out to others, as you work with or beside people who are from a wide range of socioeconomic groups, health conditions, and educational levels. Opportunities nearby can be found at such sites as the Clifty Falls Convalescent Center, King's Daughters' Hospital, American Red Cross, Prevent Child Abuse of Jefferson County, or Habitat for Humanity.

Work Experience

On-Campus Jobs

As with co-curricular activities, your choice of on-campus jobs can round out skills that will be useful to you in applying to medical school and that may give you a taste of your aptitude for and interest in health care itself. Student athletic trainers, for example, are able to work directly with injured athletes, handling first aid needs, taping or icing joints, and educating them about preventing injuries. Hanover College Health Services has occasional openings for student workers, who may gain experience taking vital signs, interviewing patients for chief complaints, and educating them about dosages and side effects of prescriptions. Students who have the interest can benefit from working as a collaborator in faculty research, which has the added benefit of helping them to discern whether they might be more drawn to the field of pure research than to medicine. Working as a resident assistant would allow you to develop strong interpersonal, leadership and organizational skills, and its requirement that you develop educational programming may provide you a forum to educate residents about health matters.

Related Summer Jobs

Because it is very important that you have a clear understanding of the realities of medical practice before you commit to medical school, admissions committees place a strong emphasis on your having had significant exposure to the clinical environment during your undergraduate years. Even if you are only able to volunteer at the local clinic on weekends or for brief blocks of time through the week while you hold down a job during your summers, it is important to work in a health care setting for at least one, and preferably two or more, summers. Often in the United States, you may find that your level of contact with patients is restricted, but that you may be able to attend rounds, observe surgeries, and talk with patients. To begin your search for summer jobs, contact the internship coordinator, your personal physician, hospitals or clinics in your area, or request a list of alumni contacts from the Career Center.

You might also want to consider participating in overseas humanitarian medical trips, often organized by medical missionaries, that will give you a great deal of supervised experience with primary care tasks such as taking vital signs and medical histories, checking vision, wound care, and providing public health information. International Service Learning is an organization that offers numerous summer trips to Latin America in which participants divide their time between orientation to basic health care delivery and medical Spanish with hours of direct patient interaction. Leads on a range of such programs are available through Hanover's science faculty or the Career Center.

Internships

Distinguished from typical summer jobs by the presence of activities that are specifically designed for your educational purposes, an internship can be another outstanding way to gain summer experience. The Internship Coordinator can assist you in developing your own internship and in taking steps to earn academic credit if you desire. Several students recently have had significant patient contact during full-semester internships at the Philadelphia Center. One, working under the supervision of a surgeon in a teaching hospital, was able to participate in surgery by guiding the fiber optic camera the surgeon used during the operation. Summer internships are available regionally, nationally, internationally, as well. For example, interns can gain hands-on clinical or research experience under a mentor, at such sites as Indianapolis's Methodist Research Institute and Riley Children's Hospital.

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