

Summer Opportunities in Health Care



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There are many activities you could participate in over the summer, including gaining more clinical hours by volunteering, working in a health profession, taking part in research, participating in a structured summer program, completing an internship, traveling abroad, and participating in general community service. Some students may combine opportunities, for example conducting clinical research, or they may participate in multiple opportunities in one summer. This handbook will help you to explore the different options available to you. If you have additional questions you can make an appointment with a prehealth advisor by calling 716-645-6013 or scheduling an appointment online.

For any summer opportunity it is best to start your research early. Some program deadlines are in February and March. Other programs that do not have deadlines, like volunteering at a hospital, could fill all their spots for the summer during the spring semester. As with all other activities, clinical and otherwise, make sure you carefully track what you do during the summer so that you have the information when it comes time to apply to a professional health program. To view how to document your experiences and some questions for reflection please see Appendix A.

Tips on Searching For a Summer Opportunity in Health Care

1. Start doing your research into programs early. Some deadlines are as early as November.
2. If you are planning to do an international medical missions trip, thoroughly research the program. Make sure it would be worth your time and money to go on the trip.
3. Smaller clinics and organizations provide unique experiences and great opportunities to get to know health care professionals, administrators, and patients.
4. Make sure you dress professionally during your program.
5. Try a variety of experiences!

Types of Experiences

Clinical Hours

Clinical hours are important to help you discover if a health profession is really the right career for you and to help you build a strong answer to **why** you want to go into the field and **how you know** you want to go into the field. When applying to the professional health schools, the admissions committee will review the depth and breadth of your clinical hours. While some professional health schools do not have minimum number of hours, a strong, consistent history of clinical experience can show that you are dedicated to the profession.

One way to gain clinical hours is to ask your personal physician, dentist, vet, etc. if they will allow you to shadow or refer you to a colleague that would allow you to shadow. You

can also ask your friends and relatives if they know a health professional that would be willing to have you shadow them for a day or more.

Some students spend the summer volunteering at a hospital or clinic. If you are planning on volunteering you will want to start researching locations early as some will fill up quickly or the paperwork could take a couple weeks to over a month to process.

Employment and Internships

Some students choose to gain experience in medical fields through employment as an EMT, phlebotomist, or nurse's aide. Many of these positions require that you are certified or have training before you can be employed in the field.

If you are not certified you could take courses over the summer to become certified in one of these areas. For example, Erie County Community College offers EMT and phlebotomist certification courses. Check your local colleges, universities and fire departments for course offerings.

Internships can be difficult to find in the medical field. You can find internships at the Career Services Internship page at <https://buffalo.edu/career/jobs/internships.html> or through other UB departments such as the Cora P. Maloney Collegiate Science and Technology Entry Program Summer Research Program:

<https://buffalo.edu/cpmc/cstep/signature-offerings/summer-research-program.html>.

Research

Students can gain experience in research during the summer. Two sites and programs for prehealth students are the National Research Experience for Undergraduate Students (REU) and the Association of American Medical Colleges (AAMC) website. The National REU allows students to spend the summer working on a research project at different institution than their home institution. These projects have a number of topics. For students who would like to focus on medical research, the AAMC has a website of summer research projects that are open to undergraduate students: <https://students-residents.aamc.org/choosing-medical-career/article/summer-undergraduate-research-programs/>.

Summer Programs

There are many summer programs across the country geared specifically towards prehealth students. Summer programs can include courses, clinical hours, shadowing, etc. as part of the program.

Some popular programs are:

Opto-Camp at Berkeley Optometry

This camp is open to all prehealth science/pre-optometry majors, especially those who are underrepresented in the profession and/or first-generation college students. The objective of the program is provide a five-day "in residence" experience providing opportunities to learn about the optometry profession and process of becoming an optometrist.

<https://optometry.berkeley.edu/admissions/opto-camp>.

Summer Health Professions Education Program

This six-week program is for freshmen and sophomore level students. There are 13 sites across the country and students will participate in academic enrichment, career development, clinical experience, a learning-skills seminar, and a financial planning workshop. Deadline: February 15. <http://www.shpep.org/>.

Tufts Adventures in Veterinary Medicine Program

This week-long program allows students to attend lectures, meet faculty, staff, and vet students, and shadow fourth year vet students in the clinics. Deadline: Late February/early March. An early application is encouraged.

<https://vetsites.tufts.edu/avm/programs/college-program/>

SUNY Optometry CSTEP Summer Academic Program

Students can enroll in a gateway course to the profession of optometry. The program takes place two times each year, once during the winter and once during the spring/early summer. Each session runs eight hours per day for two consecutive weeks. Students will discuss topics in ocular anatomy, physiology, neuroscience, and visual perception.

<http://www.sunyopt.edu/education/admissions/cstep>.

You can also search through Google or professional associations such as the AAMC for additional summer programs.

Community Service

Professional health schools like to see that you are giving back to the community. Summer is a great time to volunteer in this manner. You want to pick a project you are passionate about. Some examples of community service include Habitat for Humanity, working with youth groups, and working in soup kitchens. You can find several Buffalo area community service projects at <https://buffalo.edu/studentlife/life-on-campus/clubs-and-activities/search.html>.

Travel

Studying abroad during the academic year can be difficult when pursuing some majors. Summer is a great time to take part in a study abroad opportunity. The Study Abroad website (<https://buffalo.edu/studyabroad.html>) lists many different programs that you can participate in.

In addition to study abroad programs, some students will work through a volunteer organization to travel to another country for medically relevant mission work. Many of the programs require you to pay to participate, so make sure that the trip will be worth it for you. The American Medical Student Association's (AMSA) also lists international health opportunities on their website: <https://www.amsa.org/advocacy/action-committees/global-health/international-health/>.

These programs are not sponsored by UB and you should research the program you are interested in carefully. Please read this article [*Some Health Programs Overseas Let Students Do Too Much, Too Soon*](#) from the Chronicle of Higher Education and the AAMC's [*Guidelines for Premedical and Medical Students Providing Patient Care During Clinical Experiences Abroad*](#) if you are planning to go on a medical mission trip.

Appendix A: How to Document Your Clinical Experiences

It is important that you keep track of your clinical experiences so that you can easily and accurately report these experiences when it is time to apply to the Prehealth Committee and professional health schools. We recommend keeping a journal for yourself that includes the following information for each experience:

- Experience type (e.g., volunteering, shadowing, internships, clinical research, etc.)
- Name of medical professional (if applicable)
- Contact information
- Name of facility
- Location
- Start and end dates
- Approximate number of hours per week
- Total number of hours
- Brief description

It is often helpful in your description to be detailed about what you observed, or about what your specific responsibilities were and briefly comment on what you learned or gained from the experience. Below are a few questions to help you reflect on your experiences.

1. What did you learn about the field as a result of this experience?
2. What did you learn about yourself (strengths/weaknesses, interests, skills, values)?
3. Did this experience change your views/understanding of health care in the US (or abroad) in any way? If so, how?
4. What did you find most rewarding about your experience? Most challenging?
5. Were there any interesting/memorable events or patients that you want to be sure to remember? Be sure to exclude names to maintain privacy.

Appendix B: Summer Opportunities

- AAMC MD/PhD Summer Research Programs: <https://www.aamc.org/members/great/169782/mdphdsummerprograms.html>
- AAMC Summer Enrichment Programs: <https://services.aamc.org/summerprograms/index.cfm>
- AAMC Summer Undergraduate Research Program: <https://www.aamc.org/professional-development/affinity-groups/great/summer-undergrad-research-programs>
- ACS Chemistry for Life: <https://chemistryjobs.acs.org/jobs/>
- ACS Chemistry for Life (Internships for Undergraduate Chemistry Students): <https://www.acs.org/content/acs/en/education/students/college/experienceopp.html>
- Amgen Scholars: <https://amgenscholars.com/>
- Amherst College Summer Opportunities: https://www.amherst.edu/academiclife/departments/chemistry/research_opportunities
- AMS Research Experience for Undergraduates Summer Programs: <http://www.ams.org/programs/students/emp-reu>
- APS Undergraduate Summer Research Projects/UGSRFs: <https://www.physiology.org/ugsrif?SSO=Y>
- CalTech Amgen Scholars: https://sfp.caltech.edu/programs/amgen_scholars
- CalTech Programs: <http://sfp.caltech.edu/programs>
- Case Western Reserve University Summer Research: <https://case.edu/medicine/research/>
- Clark University Prehealth Advising (links to over 500 summer research opportunities) <https://www.clarku.edu/departments/prehealth/undergraduate/research-opportunities/>
- ExploreHealthCareers.org (Search for prehealth enrichment programs): <https://explorehealthcareers.org/enrichment-programs/>
- Gerstner Sloan Kettering Summer Undergraduate Research Program: <https://www.sloankettering.edu/gerstner/summer-undergraduate-research>
- HHMI Janelia Undergraduate Scholars: <https://www.janelia.org/you-janelia/students-postdocs/undergraduate-scholars-program>
- Homeland Security OHS: <https://www.dhs.gov/homeland-security-careers/students>
- Internship Opportunities: https://www.funfaculty.org/student_resources
- Mayo Clinic Summer Fellowship: <https://college.mayo.edu/academics/biomedical-research-training/summer-undergraduate-research-fellowship-surf/>

- National Association of Advisors for the Health Professions (NAAHP): <https://www.naahp.org/student-resources/summer-opportunities>
- National Science Foundation: <https://www.nsf.gov/crssprgm/reu/>
- Naval Research Enterprise: <https://nreip.asee.org/>
- New England Clean Energy Careers Training <https://www.cleanenergyeducation.org>
- NHI Summer Internship in Biomedical Research: <https://www.training.nih.gov/programs/sip>
- NNIN Research Experience: <https://www.nnin.org/research-experience-undergraduates>
- Opto-Camp at Berkeley: <https://optometry.berkeley.edu/admissions/opto-camp>
- Penn State Hershey Summer Research Programs: <https://med.psu.edu/undergraduate>
- PennVet Summer VETS: <https://www.vet.upenn.edu/education/vmd-admissions/summer-vets>
- Podiatry:
 - Des Moines University Preview Events: <https://www.dmu.edu/admission/events/>
 - NYCPM: https://www.nycpm.edu/prehealth_internship.asp
 - Temple University: <https://podiatry.temple.edu/admissions/internship-programs>
- Purdue University Summer: <https://www.vet.purdue.edu/veterinary-scholars/>
- RIT Co-op/Internships and Summer Research Sciences: <https://people.rit.edu/gtfsbi/Symp/summer.htm>
- Summer Health Professions Education Program: <https://www.shpep.org/>
- SUNY Optometry CSTEP: <https://www.sunyopt.edu/education/admissions/cstep>
- Syracuse University: <https://thecollege.syr.edu/student-success/pre-health-advising-overview/>
- Tufts Adventures in Veterinary Medicine: <https://vetsites.tufts.edu/avm/programs/college-program/>
- University of Illinois Summer Research Training Program <https://vetmed.illinois.edu/education/doctor-veterinary-medicine-degree/research-opportunities-dvm-students/summer-research-training-program/>
- University of Iowa Summer Undergraduate MSTP Research (SUMR) Program: <https://medicine.uiowa.edu/mstp/sumr>
- University of Tennessee Veterinary Summer Experience: https://vetmed.tennessee.edu/outreach/Pages/Veterinary_Summer_Experience.aspx
- Upstate Medical University Summer Undergraduate Program:

<https://www.upstate.edu/grad/programs/summer.php>

- US Dept. of Energy: <https://www.energy.gov/jobs/new-intern-and-recent-graduate-opportunities>
- US Dept. of Health: <https://www.usphs.gov/student/>
- Wake Forest University Research Opportunities:
<https://school.wakehealth.edu/Research/Institutes-and-Centers/Wake-Forest-Institute-for-Regenerative-Medicine/Education-and-Training/Summer-Scholars-Program>

UB does not directly endorse any programs. Interested students should thoroughly research any programs before deciding to participate.

Appendix C: My Action Plan

Ideas I want to consider pursuing	Whom I need to contact to start	Date I will make contact	Notes

My preferred activities (in order with details):

1) _____

2) _____

3) _____

4) _____

5) _____

What I need to do to succeed in my first-choice activity?

1) _____

2) _____

3) _____

4) _____

5) _____

What I need to do to succeed in my second-choice activity (back-up)?

1) _____

2) _____

3) _____

4) _____

5) _____

Other activities to enjoy during my summer break:

1) _____

2) _____

3) _____

4) _____

5) _____

Remember:

- Be professional.
- Go do it and have fun!
- Update your resume and track your hours.

Appendix D: Articles

Some Health Programs Overseas Let Students Do Too Much, Too Soon

By Karin Fischer | November 4, 2013

Students often get the chance to pick up a new language or learn to navigate a strange city while studying abroad. Mary, a pre-med student at the University of Minnesota, helped deliver a baby.

She was so proud of the experience, which occurred during a visit to a health clinic in South America as part of a trip sponsored by a student organization on the Twin Cities campus, that she later wrote about it in her medical-school application.

Minnesota officials, however, were far from pleased. In fact, they included Mary's story (it's not her real name) in an online course they developed to highlight ethical and legal issues in health-related programs overseas.

Over the past decade, the number of American students in health fields going abroad has nearly tripled, with many opting for programs that take them out of the classroom and into clinics and hospitals. But as participation has increased, so, too, have educators' concerns.

Far too often, experts say, students are providing patient care—conducting examinations, suturing wounds, even delivering babies—for which they have little or no training. Indeed, as competition intensifies for medical-school slots, some students may actually be going overseas for hands-on experience they could not get in the United States, in hopes of giving their applications a competitive edge.

Instead, they could be putting their own health and that of foreign patients at risk, and putting colleges and study-abroad providers at risk of legal liability.

And they may end up hurting, not helping, their graduate applications, because many medical, dental, and nursing schools view such behavior as unethical and irresponsible.

"If you're not qualified to do something here," says Tricia Todd, a public-health instructor who helped create Minnesota's "Global Ambassadors for Patient Safety" course, "why would it be OK for you to do it abroad?"

Good Intentions

Ms. Todd, who is also assistant director of Minnesota's Health Careers Center, became aware of the issue several years ago, as students like Mary noted their international work in personal statements in their medical-school applications. One student wrote he had assisted in surgery while abroad; another had pulled teeth. Others had stitched wounds or given vaccinations.

Alarmed, Ms. Todd approached Martha J. Johnson, assistant dean for learning abroad at the university. Because many students were traveling on service trips arranged by student groups, Ms. Johnson's office didn't oversee them, but she, too, was concerned.

Untrained students could jeopardize their own health and the health of the very patients

they're trying to help, the officials say. An errant stick with a dirty needle could expose a student to blood-borne disease. Improperly closed wounds can scar or become infected. Surgeries run the risk of complications.

Even taking on seemingly benign tasks can be dangerous. Inexperience could cause a student to overlook a worrisome sign on an otherwise routine health screening. Students have misdiagnosed patients' blood pressure as alarmingly high, only to realize later that the errant readings had been caused by using a pediatric blood-pressure cuff rather than an adult one.

As interest in global health grows, many students who apply to Child Family Health International, a nonprofit organization that runs health-education programs in six countries, are seeking to provide patient care. "I've had a student say to me upfront that she wants to deliver babies in South Africa," says Jessica Evert, the group's executive director. "I try to use it as a conversation starter."

Students are often well intentioned, Dr. Evert says, and believe that no one else can meet the needs they see, especially in impoverished places.

There can also be misunderstandings about what students are prepared to do.

In almost every country except the United States and Canada, a medical degree is an undergraduate degree, notes Jose B. Alvarez, associate vice president for program management and development at CEA Global Education, another independent study-abroad provider. Thus, local practitioners may not realize that an American college junior has not had any medical training. (Some people believe that even medical students should not give hands-on care, because they have not completed their coursework, but others find it less problematic.)

When students dress in lab coats or hospital scrubs, they further blur those lines. "A white lab coat," Mr. Alvarez says, "signifies authority."

Also troubling, Dr. Evert says, is that students frequently do such work in developing countries without the rules or licensure requirements of wealthy or middle-income countries. South Africa, for instance, requires students to register with a professional board just to observe in medical settings, but other sub-Saharan countries don't have the same regulations.

"There are uncomfortable power dynamics here," Dr. Evert says, calling it an issue of "social responsibility."

Raising Awareness

If a patient is harmed, both the individual student and the university could be held liable. In addition, the license of an American health-care professional supervising untrained students could be in jeopardy if something goes wrong, says Ms. Todd, of Minnesota.

The University of Minnesota now requires the roughly 250 students it sends abroad on health-related programs each year to complete its online workshop. At the conclusion of the course, they are given a certificate to print out, stating they are unlicensed preprofessionals who should not be giving direct patient care.

The university also recently made the workshop available free of charge to students from other campuses.

It's not just students who need to become more aware of these problems. Because study-abroad advisers don't have medical or other health-care training, they don't always understand the risks, Ms. Johnson says. And when she and Ms. Todd give presentations to health educators, she is often approached by people who don't even know whom to contact in the international office on their own campuses.

This year the Forum on Education Abroad, an association of American and overseas colleges and independent education-abroad providers, released a set of best-practice guidelines for undergraduate global-health programs. Drafted over two years, the nonbinding standards state that students should "not engage in activities beyond their education level."

Several health-education groups, including the Association of American Medical Colleges and the American Dental Education Association, have issued similar sets of guidelines.

But while many medical, dental, and nursing programs frown on unprepared students' engaging in patient care abroad, the professional schools need to become better aware of the problem and even say that such activities will count against applicants, Dr. Evert says. "They have to make clear, " she says, "that it's not acceptable."

*From the **Chronicle of Higher Education**: <https://www.chronicle.com/article/overseas-health-programs-let/142777>*

Guidelines for Premedical and Medical Students Providing Patient Care During Clinical Experiences Abroad

From the Association of American Medical Colleges:

Acquiring exposure to a variety of health-related clinical settings is a vital part of premedical and medical student preparation. Many students are now taking advantage of opportunities to gain clinical experiences abroad, where regulations governing the procedures that students can perform on patients are often less stringent and well defined than in the United States and Canada. Additionally, existing local regulations may not be uniformly or fully enforced. While many students have had beneficial experiences through involvement in patient care activities abroad, and services have been provided to people in need, the potential for harm and abuse in these situations cannot be ignored. Participation of inadequately educated and untrained students in these situations can have negative consequences including:

Harm done to the patient. Everyone's goal is to always help those in need; the first step in that direction must be to avoid doing any harm. As a student, it may be difficult to know what might cause harm, so you must carefully avoid situations where there is any possibility that you might injure someone or cause other harm.

Physical harm to yourself. Engaging in any clinical practice without sufficient training and protection can result in direct harm to you, as well as to the patient. Further, sponsoring organizations may not have in place plans to assist you if you contract an illness and/or are injured.

Legal issues with local authorities. Even if a local health care provider is supervising your interactions with patients or says that it is acceptable for you to perform a procedure, violation of local laws may still be a punishable offense.

Putting acceptance to medical school and residency training programs at risk. Many pre-medical students believe that the more in-depth clinical experience they have, the stronger their applications will be. However, taking on tasks that are beyond your training could make you look unethical, unknowledgeable about the health professions, irresponsible to admission committees, and may diminish or eliminate your chance for acceptance into medical school.

Similarly, medical students who perform procedures beyond their training may negatively impact their chances of matching in residency programs.

The potential for being involved with a fraudulent company. There are companies that will, for a fee, help place you in a foreign clinic. Be aware that some of these companies are in the business of making money first, and they may not be ethically sound. Check out these companies very carefully before signing any contracts. If any agency is over-promising and suggests that you will actually practice medicine while abroad, rather than simply observe or shadow, you should have serious reservations about working with this agency.

Premedical and Medical students considering participating in an international medical service experience should review the following:

The primary purpose of a student clinical experience is observation, not hands-on treatment.

You are there to learn, not to treat.

Always keep the welfare of the patient foremost in your mind, not the perceived opportunity for proving yourself. Ask yourself how you would feel if you were in the place of a patient and a person with limited skills and preparation was about to perform a procedure on you. If this thought makes you feel uncomfortable, it is probably not an appropriate task for you to be doing. Recognizing patient autonomy is one of the core values of medical ethics; it is particularly important to honor in communities with limited resources, where all patients must be given the choice whether or not to have trainees involved in their care.

Every act of service involves the building of a cultural bridge. Students should bring knowledge of the history and culture of the community they will serve, respect for cultural differences, a listening and learning attitude, and behaviors that will enable ethical and effective service. Health care professionals in the country being served will likely have a deep understanding of local health care issues, resources and challenges. Be sensitive to the concerns of the local health care team and seek to understand the perspective of the patients you are serving.

It is appropriate for students to provide preventive health education and to support the health care team by assisting in the provision of health treatment after receiving adequate instruction. However, students should never engage in any unsupervised activity that is considered the practice of medicine including, but not limited to: diagnosing diseases, administering narcotics, performing surgical procedures, suturing or other tasks generally reserved for the trained health professional.

There will always be disparities in what individual students are prepared and trained to do. Some students (e.g., those with previous EMT training) will be better prepared to take on more advanced patient care than others. However, just because a peer has been able to successfully perform a particular task does not mean that you are also ready to undertake the same task. Understand and perform within your limitations.

Students should be aware that it is not necessary to travel abroad to serve those in need. There are many opportunities to help the disadvantaged and other underserved groups in the U.S. There are likely worthwhile volunteer opportunities in your own community, with many more around the country. Also, be mindful that while appropriate experience in other countries can be valuable and may be viewed as complementary, if you plan to practice in the U.S, it is particularly important to understand U.S. healthcare.

Approved by the AAMC GSA Steering Committee on February 25, 2011

Adapted with permission from policies developed at: Hendrix College, Conway, AR by Mark Sutherland, Ph.D., Professor of Biology; Stanford University's Haas Center for Public Service (<http://studentaffairs.stanford.edu/haas/principles/document>), and the American Dental Education Association.

*Taken from the **AAMC** (the following link is to a PDF file):*

<https://www.aamc.org/download/181690/data/guidelinesforstudentsprovidingpatientcare.pdf>