“Pre-Med” Handbook

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The goal of this booklet is to help you prepare for medical school with understanding and good judgement. Some “specifics,” such as pre-med courses, quality of work, the Medical College Admission test (MCAT), and letters of evaluation are issues which you control through personal ability, decisions, and actions. Other factors you don’t have much control over are intelligence, age, sex, race, and perhaps money. The earlier you plan and test yourself in a health science program, the better it will be for you. Start by reading.
Resources

Be aware of two handbooks that are published annually. Each outlines specific requirements for schools throughout the land. For pre-meds the handbook is titled Medical School Admission Requirements: U.S.A. and Canada available from: Association of American Medical Colleges, Attn: Membership & Publication Orders, Suite 200, One Dupont Circle, N.W., Washington, D.C. 20036. (henceforth called MSAR); and for pre-dents it is the Admissions Requirements of U.S. and Canadian Dental Schools. Be sure to check the website at http://www.aamc.org.

From this point forward, few references will be made to pre-dental, pre-vet, and any other pre-studies. We will use pre-med with the intention of including the pre-dents and other health science students.

In planning your studies, it is helpful to read the introductory essays of the above admissions handbooks for the insight they may offer you in selecting courses and mapping your strategy. Specific requirements for admission to medical schools are limited in order to allow you some latitude in developing your own interests at the undergraduate level. Your interests should include alternatives to medicine, and early on you should ask yourself, “What will I be happy doing if I don’t make it to med school?”

There are specific requirements, of equal importance in your program of studies other than those we label “pre-med.” Medical schools want and need people with a diversity of backgrounds, talents, and interests; and all are interested in people with a broad, liberal arts education that includes a reasonable balance of courses in mathematics, sciences, arts and humanities, social studies, and communication skills, as well as a management course.

Ideally, you should begin to identify some schools that you are likely to be interested in as early as your freshman or sophomore year. As you look at the requirements of various schools, you can see that it takes little, if any, variation of the University of Missouri/Columbia School of Medicine requirements to cover the requirements of a great many schools. Courses listed on the next page meet the requirements of the MU/Columbia Medical School as well as many other medical or dental schools in the U.S.A. Course descriptions can be checked in the UCM General Catalog.
“Pre-med” Courses:

Specific Requirements

1. **College Mathematics:** The minimum is College Algebra, Math 1111, and Trigonometry, Math 1112. Also, it is recommended that Calculus and Analytic Geometry I, or Math 1151 be taken.

2. **General Chemistry:** All Med Schools require 1 year of General Chemistry and Chem 1131 and Chem 1132 will fulfill these requirements. Chem 1130 **will not** count.

3. **Organic Chemistry:** One year of Organic Chemistry is required and Chem 3341 and Chem 3342 will satisfy these requirements.

4. **General Biology:** Biology I and II (Biol 1111 and Biol 1112), Genetics (Biol 2511), and Cell Biology (Biol 2512), should be taken to fulfill the general Biology requirements for most schools.

5. **Other Biology:** Most schools require at least one year of advanced Biology courses such as; Anatomy & Physiology I (Biol 2401), Anatomy & Physiology II (Biol 2402), Comparative Anatomy (Biol 3211), Microbiology (Biol 3611), Animal Physiology (Biol 3431), Parasitology (Biol 4311), Invertebrate Zoology (Biol 3310), Embryology (Biol 3213) or Immunology (Biol 3413). Other courses like Endocrinology, Molecular or Hematology are also beneficial.

6. **General Physics:** One year of General Physics is required by almost all U.S. Med schools. At UCM Phys 1101, and 1102 will fulfill these requirements.

7. **English:** One year of English Composition. Rhetorical Writing (Eng 1020) and Composition (Eng 1030), will fulfill these requirements.
Quality of work

As an undergraduate student, you must aim for the highest quality of academic achievement and extracurricular activities of which you are capable. Men and women applying to medical school may have studied the same general quality of preparation that may be reflected in grades, the courses chosen, activities, and even the relative strength or standing of the university or college attended.

Roughly, you have six semesters to establish and present your case to medical school admissions people. What kind of a pattern will you establish? One instance of consistency as a virtue may be noted here. Medical admissions officers look for steady progress, four or five courses each semester, 15 credits or so, a balance of studies between the sciences, humanities, and social studies, and a B or better grade average. Grades aren’t everything, but they cannot be dismissed lightly. Using the MSAR you can consider the profile of previous class admitted to the medical schools in which you are interested.

Sometimes students have a bummer of a semester for some unforeseen reason--poor health, adjusting to the campus, a broken romance, etc. Or perhaps you have difficulty with a particular subject outside your pre-med studies, let’s say French 3243. Although an A would be ideal, a C in the course will not be significant when it comes down to the admissions wire. A poor semester in itself will not “kill” you. It’s how you snap back or recover. Once again, trends and consistency of overall good work in your preparation are working for you.

On the other hand, if you have difficulty in establishing that you can do well in key pre-med courses, you should carefully reevaluate your situation and goals. Obviously, the sooner you can do this, the better. If you like science, take other diverse upper level courses to help you decide.
The MCAT

The Medical College Admission Test (MCAT); The Dental Admissions Test (DAT): An important part of applying to a medical school or to many other schools in the health professions is the taking of a general test of your academic achievement. Courses tested on MCAT: Biology I & II, Cell, Genetics, Molecular, Micro, Chemistry I & II, Organic I & II, Physics I & II.

Folders describing these tests, the dates of administration, and application cards are available from a Pre-med advisor. Plan to spend over $100 for the MCAT.

Medical and osteopathic schools require students to take the MCAT. The general format is not far removed from the SAT or the ACT, which you may have taken in high school. If you want a more detailed idea, The New MCAT Student Manual describes, outlines, and provides sample questions. Some companies offer crash courses on “How to Take the MCAT,” but they are designed to make money for the promoters, and may not help you one bit. Some companies offer a thorough review program of the pre-med sciences you have taken in college. There is nothing wrong with taking a review course from a reputable firm. The major drawback is $$$ We do not recommend you use your time or money in this manner. After all, you really can’t learn enough science in “a few easy lessons” that might replace or supplement six semesters of solid academic course work. However, it must be said that review of your course work before taking the MCAT is essential. If you are a good disciplinarian, you can do it on your own. On the other hand, if you have trouble making yourself review, an expensive program might be a real incentive. TIP: buy your intro textbooks so you have material to review.
There is nothing dark or mysterious about the MCAT; it is an all day test made up of questions that test you in the areas as noted in the chart below which appears in the New MCAT Student Manual:

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<th>Title of Material</th>
<th>No. of ?’s</th>
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<td>1. Science Knowledge</td>
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<td>Biology</td>
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<td>Chemistry</td>
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<td>Physics</td>
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<td>Rest Period</td>
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<td>2. Science Problems</td>
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<td>Problems</td>
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<tr>
<td>Biology</td>
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<td>Physics</td>
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<td>Lunch Break</td>
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<td>3. Essay</td>
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<td>Break</td>
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<td>4. Skills: Reading</td>
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<td>Rest Period</td>
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<td>5. Skills</td>
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**MCAT offered twice per year: April and August.**

Medical schools would like to have you take the MCAT in April of the year you apply to be admitted to a program the following year-not semester. Normally this is near the end of the sixth semester on you junior year. The test is also given in late August. In general, it is better to test on the spring date rather than the fall because there are no make-up dates. Further, pre-meds should not take the MCAT until they are properly prepared, that is, with most of the pre-med courses behind them. (Students who wish to apply to medical school a year early must move these dates up one year.)
Get the information pamphlet and application form for the MCAT from the Biology Office, WCM 306 in early February or early July for the April and August test respectively. MCAT registration materials post marked AFTER the published registration deadlines of one month will not be accepted for registration. The examination is on a Saturday and takes a full day. Test scores are sent automatically to AMCAS. On the form you can designate up to six medical schools not in AMCAS to receive your scores.

(You can of course have the results sent to more schools, for an additional fee.) You will receive a copy of the results too, including your percentile standing in each category. If you wish, you can take the exam a second time. We have no firm data on how much improvement most students show if they take the MCAT over, but we suspect that unless the circumstances were unusual the first time, the difference would not be significant, and in general the practice is a waste of time and money. It is also possible to take the MCAT, and at the end of the day request that the results not be scored.

The best preparation for the MCAT is simply doing a good job in a varied college program that includes most of the pre-med required courses. Your scores will reflect what you have retained from literally years of school—including high school. This is why it is futile to try to cram for the MCAT, although a thorough general review may be an excellent idea. You might consider brushing up on logarithms, exponents, sine, cos, etc.; a brief review of biology and anatomy; some review of your chemistry notes including organic; and have another look at physics. Certainly everyone should have a copy of the test manual (in the junior year).

Part of the anxiety pre-meds have about the test data is the uncertainty of the relative weight medical schools place on the results. You have to live with this, because the weight will vary from school to school (depending on the correlation they have learned to expect between MCAT scores and success in their particular program) and even, probably, from applicant to applicant. We do not have firm data on the specific differences in practice from one medical school to the next, and there is probably no reliable way to compile it.

Nevertheless, we can make several general points. Actual classroom achievement as reflected in your record carries more weight than test predictions, which are at best one step removed from performance. You simply hope both are equally favorable and confirm each other. If they are not equally favorable, good class work offsets mediocre MCAT results more than vice versa. It may not often be this simple, because individuals’ situations are too varied. If, for example, your record reflects some mediocre work mixed with the good, favorable test scores in a sense...
validate the good side and could tip the balance in your favor. If you have a fine record but the medical school knows little about your undergraduate school, good test scores help confirm that your record represents real achievement and not simply easy conditions.

Pre-meds often view the MCAT results as being more monolithic and absolute than do medical schools. Give admissions committees credit for being able to interpret the scores in light of the course work you have had when you take the exam. The math major is simply going to score higher in the quantitative category than is the person who stopped at trigonometry. All in all, and although we cannot offer statistical proof, we feel there are more ways the MCAT results can help you than ways it can hinder.

If you are planning to enter dental school, you can get an informative brochure about the Dental Admission Testing Program from Dr. John Gole, WCM 306. There are two testing dates; usually the last Saturday in April or the first Saturday in October; however; it is suggested that applicants take the DAT in April, one year prior to entering dental school.

### Evaluations and Credentials

Letters of evaluations help to round out a medical school’s view of you as a person in a way that your academic record alone, no matter how impressive, cannot do. You should plan carefully when you select people to write letters for you because there are limits to the number of letters to send to admissions committees. The MU/Columbia Medical School requires three academic letters, and will accept others from employers, advisors, etc., (6 max.). Some medical schools ask for as few as two.

Considering that you may have only three or four letters in your file, who should write them? Letters should be written by professors and teaching assistants who know your work well. Admissions committees are not going to be impressed by letters from full professors who write something like “She got an A in my course, therefore she must be a good student.” Make it a point to know three or four teachers well enough (hence, multiple courses from an instructor) for them to make reasonable statements about you and your work.

Obviously, it is difficult to get letters from people in several disciplines, but try for some variation with a slight preference for the pre-med sciences. To repeat, ask people who know your work best.
You should be aware that procedures for handling letters conform to the Family Rights and Privacy Act of 1974, which became effective January 1, 1975. Some writers of evaluation prefer you sign the waiver of the right to read your letter; check with the writer on this matter, not your adviser.

At UCM a committee of 3 or 4 professors evaluates each medical school applicant, compiles their evaluations on a specific form into a single letter and sends the committee evaluation letter to the medical schools of the students choice. The student chooses the professors that he/or she wants to evaluate him and should make it a point to ask the professors whether or not they will give a good evaluation. Evaluation forms should be picked up from the pre-med advisor and returned by the professors to him for compilation.

At the beginning of your senior year (or when you apply to medical schools), you will want your letters forwarded to schools of your choice.

A final point on this subject. Pre-meds are often too sensitive about choosing instructors to ask for evaluations, feeling that somehow if they did not earn an A, their instructors are eager to trumpet their inferiority to the world. Outright bad evaluations are rare, unless you have been dishonest or lazy in a course. Your instructor may note some chinks in your armor, but then few medical schools will believe you have no weaknesses no matter what he or she tells them. Most commonly the instructor will note your particular strengths: analytical ability, broad interests, care in technique, ability to grasp and order a mass of information, and the like. At any rate, it is only common courtesy to ask the person if you can have an evaluation sheet sent out, and then if your teacher plans to be hard on you he or she will probably tell you.

So far we have looked at things that are fairly fixed. Other things you must decide for yourself.

**Program strategy for freshmen**

This section is aimed more at the freshman or sophomore than the upperclassman because the more your programming involves your major and advanced electives, the harder it is to give good general advice. It is also aimed mainly at the student who will have the conventional four-year preparation. For those who are trying to enter medical school after three years, many of the
comments will apply, but with these modifications: (1) expect more doubling up in science courses; and (2) expect to have a required course or two to complete in your third year after you have applied.

There is more freedom to choose your own road toward medical school than you might expect when you first set out. A poorly programmed beginning will take you on unplanned detours, but if you plan well, you can take more excursions and desirable side trips in your academic career than you might think.

Consider the parts and overall scheme of your study in light of the previous section before you make specific course selections. At present, nearly all of our students entering the MU Med School have a four-year bachelor’s degree. The four-year degree program for a pre-med student in the College of Arts and Science involves the completion of three fundamental groups of requirements. These are (1) the general education requirements, (2) the requirements for a specific major, such as chemistry, English, history, etc., and (3) the courses (mainly sciences) that medical schools require for admission. You can easily complete all these in a four-year course of study providing you determine soon enough that medicine is for you. In one sense, the only difference between the pre-med student and other students in our college is that the pre-med student has to complete the third set of requirements while other students do not. Incidentally, it does not matter if you choose a BA or BS degree route. However, if you choose a program developed mostly without “science” courses, it stands to reason that medical schools will pay closer attention to the work that you have done in the sciences required for med school admission. This does depend upon the institution, thus you need to research the institutions you are interested in applying to.

In planning your basic strategy, look to your long range goals, and remember that all medical schools value a broad general education. To be sure, you need to be strong in basic sciences and math, but it is very important to study humanities, arts, social studies, and communication skills as well. As you plan each semester, try to develop study lists with a variety or diversity of courses. In all likelihood, your undergraduate years will be the last opportunity to pursue a broad liberal arts education.

It is advisable for ALL pre-meds to think of alternatives to a professional school from the very beginning. It is fact that not all pre-meds or pre-dents are accepted. It is possible and desirable to
develop alternate careers in the health sciences right along with everything else through the undergraduate years.

As a pre-med student you normally will take eight or ten science courses, plus math through at least trig to complete the admission requirements of most medical schools. You could distribute these courses over eight semesters of undergraduate work, but it is probably better to complete the majority of them by the end of your sixth semester or junior year because they are necessary preparation for the Medical College Admissions Test, or MCAT. Medical school admissions committees are understandably anxious to see how you have fared in science courses.

If you take the eight to ten science courses in six semesters, obviously you will have to double up on science courses somewhere. When you do this depends on several factors, for example, your aptitudes, interests, study habits, extracurricular activities, outside work, and general stability.

Beginning pre-med students should consider first their situation in mathematics. In high school, you should have completed AT LEAST three years of math, and preferably four. If you are a non-science major, completion of college algebra and trigonometry will satisfy the basic math requirements for many medical schools. If you intend to major in a science, you should take the Calculus & Analytic Geometry I-II series. (Calculus is not required for the BA or BS at UCM.) Students who know they will need more math should take it before or concurrently with other subjects that may require it. The wise pre-med will take math in the FIRST semester enrolled.

Once you have assessed your mathematics situation, consider chemistry. Since at least four, and very often five semesters of chemistry are required, and since the first two semesters are prerequisites to both organic and quantitative analysis, it is generally desirable to start chemistry in your first semester. Your second year may start with either quantitative analysis or organic chemistry. Neither is dependent on the other so the order in which you take them is not very important. Many students enter UCM without adequate math background to begin the chemistry sequence during their freshman year. In this case, students will often delay chemistry to the second year in order to have adequate math background. During this time, they often begin the biology sequence. You may or may not want to take Biology I your first semester here, but we think it fits much better in the sophomore year if your math background permits beginning chemistry as a freshman.

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A certain continuity in the subject matter between freshman chemistry and quantitative analysis may tip the scales in favor of taking “quant” the third semester, but many students choose the reverse order. Another possibility for the beginning pre-med is to take a course in physics, but obviously don’t try it until you have the math competence for the level you choose. That is to say, your physics may well be courses for your junior year, and in fact more than half of our pre-meds have been taking their physics then. In your overall planning, you should include at least one semester of physics before taking the MCAT although 2 is preferable. For most health science students, your first semester study list should be four courses with 14 to 16 credits. In general, no more than two science courses should be taken in given semester unless you have specific reasons for it, and the idea makes as much sense to an adviser as to you.

As indicated, there are several possibilities, but something like the following first year schedule will provide maximum options in the second year.*

First Semester. 14-16 credits
Biology I and Biology 1000; a math course (selected by placement exam); General Chemistry; A humanities course, for example, literature; Foreign language or a social studies course or History; English

Second Semester. 14-16 credits:
Biology II; a continuation of mathematics; General Chemistry; A second literature course or some other humanities; or a social studies course

Third Semester. 14-16 credits:
Organic Chemistry; Cell Biology; Genetics; Elective; Elective

Fourth Semester. 14-16 credits:
Organic Chemistry; General Ecology; Elective; Elective

In general, take course work at the highest level for which you are qualified. Medical schools will know something of the level of difficulty of our courses. It isn’t one or two courses taken at a more difficult level that matters very much. It is the overall pattern over a period of several semesters that begins to add weight to your undergraduate achievement. This is generally true
whether you apply to medical, dental, or graduate schools. Maybe a good way to put it is: “stretch yourself, but don’t overextend yourself.” Freshmen should begin with some caution until they understand what “stretch” and “overextended” mean in their own equation. In any event, take your work a semester at a time and evaluate as you go along.

**Pass fail?**

An additional word of caution: at present you may take some courses on a pass-fail basis. Courses required for your general degree requirements or prerequisites definitely should not be taken under pass-fail, and not all medical schools are ever happy to see much elective work taken pass-fail. For example: pre-vet do NOT ACCEPT courses without a letter grade assigned.

We trust the preceding discussion has helped you develop a personal program strategy as a beginning health science student. You should also be aware of some factors in the pre-med or pre-dent timetable.

**Timetable**

1. Make an appointment with your premed advisor at your leisure, but preferably during your first semester on campus—the third or fourth week is fine. There is nothing special to do other than to learn where advising services and information are available and located. Check out the ParaMedico Library.

2. In April of your junior year (sophomore year if intend to enter medical school after three years of undergraduate study), you will be taking MCAT or the DAT. Application forms are available at the pre-med advisor’s office.

3. Collect faculty evaluations in your sophomore and junior years, (obtain no more than six of these.)

4. Apply to and have credentials sent to medical schools between the junior and senior year (or early fall of the senior year.)

Familiarize yourself with the AMCAS central application service. Students going to osteopathic medicine use AAMCOMAS. Information is available at the Faculty Advising Service.

Decisions are like death and taxes--human ingenuity comes up with ways to put them off, but you can’t make them go away. It is probably less painful to come to terms with all three early in the game. As a pre-med you will have at least four important decisions to make, more or less in this order: Should I aim for medical school after three or four years as an undergraduate? Which major
should I elect? Which medical schools should I apply to? Finally, what are my alternatives to medical school?

The Three-Year Versus Four-Year Preparation

This question involves, to start with, the simple fact that very few students are accepted after three years. Nearly all schools listed in a recent MSAR show 100 percent of the entering students had baccalaureate degrees. Even though some dental schools may admit a relatively high number of three-year students, it may be unwise to pass by your undergraduate degree when it is so close at hand.

The more important question in our view is whether you ought to aim for the three-year preparation even if you could be accepted. It may come as a surprise that many of us do not assume that maximum speed and minimum time are automatically good. In the eyes of some pre-meds, a hot undergraduate pace and early acceptance represents top achievement, “and achievement is what we’re here for, isn’t it?”

That may depend on what it is you have achieved, and whether you have achieved what you want. The three-year undergraduate preparation is after all a limitation on your undergraduate experience. It may be well to sit down first of all and decide what you want your undergraduate years to do for you. The answers tend to distribute themselves between two poles: at one pole is the view that the undergraduate years are mainly an interim period between high school and medical or dental school, and are useful mainly in providing a situation in which you can do the necessary pre-med courses. At the other pole is the view that the undergraduate years comprise an educational whole with its own validity, and are useful mainly in providing an opportunity in which you can work at becoming an educated person, making your pre-med/pre-dent courses a smaller part of the process. The first pole allies itself with the minimum-time preparation, and the second with the full four-year degree program.

The fact that most medical schools are not eager to admit students after three years probably reflects their tendency to align with the second pole. Indeed, this is our own bias. Traditionally the physician and dentist have been expected to be educated persons as well as technical experts. The day you enter a professional school is a fairly irreversible point in that your chances to continue a formal, general education have essentially ended. Once in med school, you will
probably find all the concentrated, professionally aimed work you care for without seeking to give your undergraduate years the same cast.

We believe too that medical and dental schools find that the extra year of experience (and, hopefully, of maturity) leaves many students better set to handle the rigors of professional school.

**Your Undergraduate Major**

There are very real values in planning and following up a major in a discipline that interests you, even if you know that you are not trying to become a professional within that field. Doing so is intellectually worthwhile for its own sake. A medical school admissions committee may like to see evidence that you can set up an academic goal, a major program that hangs together and means something in its own terms, and then accomplish it. Furthermore, it is not bad strategy to get a major going simply as an alternative, for it is an ancient observation that not every student who is full of pre-med fire as a sophomore will be applying to medical school as a senior. Finally, having such an alternative is prudent in the event that you might not be accepted for medical school.

What, then, about majors? How do you end up satisfying both yourself and medical schools? The traditional reply from a lot of pre-meds has been something like, “Biology or chemistry is pretty much my choice.” Indeed more pre-meds at UCM major in these areas than any other.

The thing we would emphasize, however, is not what major you end up with, but whether you have started with a wide enough choice. The above triumvirate is not wide enough. Zoology, chemistry, or biochemistry will attract pre-meds simply because pre-meds are (or had better be) interested in science and in humanity. If one of these majors is what you most genuinely like, fine. But if you end up scratching along and marking time in, say, a zoology major instead of political science, which you very much prefer, then you have defaulted on an important freedom of choice, and you will probably find no one (including admissions committees) applauding your move. Granted that your total record must satisfy the medical schools you apply to, you may find them easier to please, as regards to majors, than you suspect. Here you should read the Association of American Medical Colleges pronouncements in MSAR. We would underscore this: you are asked to choose a major that interests you, and to demonstrate your ability in the sciences regardless of your major. There is one rider: the fewer your courses in science, the more uniformly well you need to do in them to demonstrate you science ability. Professional or
vocational majors, such as engineering and business, would certainly not disqualify you, but it could raise the questions: what direction do you really want to take, and where will you get your “breadth” courses, i.e., humanities, social studies, art, or whatever. Students in various professional colleges might find it helpful to discuss their particular goals and intentions with the pre-med adviser. Such talks should be held early in your college program. It should be noted here that non-traditional students returning to college are looked upon favorably by medical schools, so a different major other than biology is fine as long as you have taken the required science courses.

One caution: discussing majors tends to make people too label-conscious, as if “he’s a psychology major” somehow describes and disposes of a person in a phrase. By all means try instead to think in terms of your total program, all your courses inside and outside the major, and the total record that will reflect this. Most majors in Arts and Science here allow for freedom of choice. For example, the student majoring in philosophy is free to elect a handful of courses in zoology if he or she likes, as well as a wide range of work in other departments. All this is clear on your total transcript, which is what people will read, not your diploma. Check in MSAR a similar table of majors which identifies as many as 32 different majors of students accepted to med schools across the country. Just for the record, dental schools, too, like and approve off this diversity of majors.

**Which School?**

One of the big decisions will probably be choosing schools to apply to. This often produces uncertainty and thus frustration on your part, and unfortunately we do not have the resources to make your decision simple. Everyone wants a “good” medical school, and this is laudable enough, but not much help; how many “bad” medical schools are there? You might find it helpful to check your academic profile against the profiles in the MSAR. We frankly feel that here many pre-meds are talking about status, about a medical school’s fame more than its objective characteristics, and the two may not always be the same thing. Others are more concerned with finding those schools where they are likely to be accepted with a given kind of record; and of course pre-med advisers are not much help here.
because they aren’t privy to any special information that might have any bearing on problems of this sort. We cannot give you final answers.

Nevertheless, there are points and procedures that can reduce the job of choice to human proportions. First, we think you should assume, until you learn otherwise, that a medical school that is accredited has the people and facilities to do the job. This is not to say that there are not striking differences in financial support given medical schools, in the size of the faculty, in the amount of faculty assistance given to students, and in the physical facilities.

Second, if you are concerned with reputation, apply to those schools you have heard most about-- remembering, of course, that a lot of other well-qualified students have heard about them too.

Third, recall the rule of thumb that the general reputation of a med school will be similar to the reputation of the parent university.

Fourth, the home state, tax--supported medical school will give you THE BEST ODDS for admission because of residency preference. This is true in Missouri and in most other states. Applying to medical schools in the state where you claim residency cannot be over-stressed. Of course, the reverse is true--avoid applying to tax-supported schools outside your home state. It will save you considerable money as well as building up false hopes. Non-residents of Missouri are almost certain not to be accepted at UMC even though undergraduate preparation was done here.

Fifth, consider geography. There is something about regions that seems to operate in the admissions process. In the main, Missouri graduates seem to go to schools in the Midwest. Very few students who are not residents in a western state are admitted to California schools (see MSAR state and regional policies of admission).

If you are thinking of applying to a foreign medical school, see MSAR for leads. Language difficulties can be a tremendous handicap, and there are considerable problems in transferring back to the U.S.A.

Sixth, use the information in MSAR on Choosing a Medical School. That section of the MSAR includes discussions of race, sex, marital status, age, and includes several tables and charts of statistics vis-a-vis admission into medical school. We recommend going from Chapter 3 to the sections on individual medical schools. Note the specific entrance requirements. Note costs. When funds are absolutely limiting, you will find a state-supported medical school in your home state automatically the most desirable. Some schools discuss recommended electives and
programs under “Requirements for Entrance”; these can give you some idea of the kind of total preparation the school is looking for, and you can compare this with the kind of undergraduate program you feel is best for you. The “Selection Factors” sections can be very informative and ought to reflect any variations medical schools have on the sort of person best suited to their particular program. Occasionally they expand enough to let you compare your own preparation; Harvard, for example, emphasizes that it wants the person who is building a liberal education as an undergraduate. Do not overlook the possibility of a separate graduate degree other than an M.D., or a combination of the Ph.D. and M.D. With premedical and medical students increasingly interested in medical research careers, these graduate study combinations could be important to you.

Pre-dental students will find similar information in the Admissions Requirements of U.S. and Canadian Dental Schools handbook which is published annually. Knowledge of details and facts from this source can be very helpful in making choices and reaching decisions.

All these things are just preliminaries, which at best can help you rough out a list of promising schools. Stage two means writing for catalogs, and asking many of these same questions again as you read them carefully. At this stage, too, you should begin consulting people if you have not already. Here is where fellow students a year or two ahead of you become helpful: if one or two have gone to a school that interest you, write them for their impressions. You should expect in reply a mixture of loyalty and frustration, since medical education is nowhere designed as a picnic. In comparing such comments, you may get a feeling for some real differences in climate and nature among medical schools.

Family doctors or other physicians and dentists you know would seem to be another good source for general evaluations. They may be, if you talk to enough of them. But while the average practicing physician may know some useful things about a small number of schools, the person is an expert mainly on what his or her school was like when he or she was there. Any physician, of course, may be a very good source of comment on what the human problems within medical education and medical practice are like. This is something, we feel, that pre-meds need to think about more. Entering a medical or dental school tends to be a most permanent step in terms of setting certain basic directions for the rest of your life.

Another resource is often thought of last but perhaps should be thought of first: the staffs of the medical schools themselves. There is not much point in beating the bushes far afield for
information if a letter to the source will bring it. Do yourself and the recipient of your letter a favor by using some real care on it. Ask answerable questions. “What is your school like?” is a good challenging question, but it is probably what the Dean has been asking himself for some time. Show that you know what the catalog says, and that you have designed your question to begin where it ends. You might ask about the policies and procedures that will be used to select new students. You might ask for specifics about the amount of faculty attention and aid available in the freshman classes, or whether the school considers itself to have certain special emphasis. You might describe your program and scholarship to date and ask whether there would seem to be some odds that you might be seriously considered.

Finally, in this matter of choosing schools, it is good to remember one thing: having a particular diploma on the wall never cured a patient. You will determine the quality of your medical education much more than will your school--which can only give a framework.

**Making Application: AMCAS and AADSAS**

In the summer before you commence your senior year and extending until sometime in November, you will make application to medical, dental, and other professional schools of your choice. In 1984-85, 100 medical schools participated in a centralized application service called AMCAS. Students applying to any participating schools must submit applications through a list
of AMCAS schools and application information for making application is available in the Faculty Advising Service. Also, a detailed discussion on the admission process may be found in Chapter 4 and 5 of MSAR. If you apply to only one medical school, you should be aware of the Early Decision Plan (EDP). For details, see Chapter 5 of MSAR.

Completion of application forms requires detailed information and will take a considerable amount of your time. You can’t whip out an application form overnight. After you have completed your forms, return them to AMCAS. Also at this time, you should request the Registrar to forward an official transcript of your work to AMCAS (or AADSAS for pre-dents). If you have taken work at more than one campus, you should submit a transcript from each campus. Transcripts should be requested promptly.

AMCAS processes your application and forwards the information to the schools to which you are applying. The medical schools then will inform you of further steps necessary to complete your application. It is probably best to submit letters of recommendation after you hear from specific medical schools. A fee is charged according to the number of schools to which an applicant applies. Additional application fees are usually assessed by each medical school, normally $25 to $100 each school AMCAS does not render any admissions decisions. Official transcripts add to cost, choose schools carefully as applying becomes expensive.

Dental schools, schools of osteopathic medicine, and some others have a central application service. All of these application services serve a similar function purpose. Proper forms, information, etc., about them are available in the ParaMedico Library (WCM 312).