

# Chapter 14

## The Premedical Years

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### ABSTRACT

*The premedical baccalaureate period is critical to shaping a high-achieving, diverse, and service-oriented medical school applicant pool. The focus on achieving superior academic performance in premedical coursework captures the attention of most premedical students, but equal attention must be paid to developing the personal qualities and experiences that will form the foundation of their future capacity to understand and communicate with patients. Premedical students are best served to major in a field for authentic intellectual reasons regardless of the field's immediate connection to the health care field. There is a growing trend for applicants to have a gap year or more between the undergraduate period and medical school. The authors discuss the role of letters of evaluation and the premedical committee in the application process. The authors have more than 40 years of combined experience in premedical academic and career advising at a large, research-focused public institution.*

### INTRODUCTION

The demands, competition, and anxiety of the premedical college experience shape the formative years in the lives of thousands of students. Some remember these years as stressful, consuming, and disappointing. Others remember an awakening of fascination with science, ambition to help individuals in need, and determination to make a societal impact. The difference in the premedical experience may prove critical, not only for individual happiness and fulfillment, but for the future wellbeing of countless patients who benefit the most when their physicians feel professionally satisfied, helpful, and capable rather than burned out.

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This chapter will consider the landscape of the premedical period encompassing the entirety of the college experience in the setting of a large research-focused public institution. The authors will address premedical students' choice of major, prerequisite coursework, MCAT preparation, how students engage in meaningful exploratory healthcare experiences, letters of evaluation, and the application stage. It is the authors' intent that medical school educators will find this perspective valuable for the enhancement of their ability to interpret applications to their programs. Insight they will gain from this review could improve their understanding of the particular challenges and unique opportunities that exist in the contemporary undergraduate premedical experience.

## **BACKGROUND**

The roots of the modern American medical education model can be traced to the late nineteenth century when medical educators first called for a premedical education period leading to a baccalaureate degree or its equivalent in preparation for medical training. These recommendations were established to ensure that medical trainees were properly prepared in the sciences and classics such that they would possess the academic fitness to complete a medical doctor degree that was becoming increasingly based on scientific practice (Fishbein, 2001). Decades later in 1910, in his comprehensive review of the American and Canadian medical education system, Abraham Flexner of the Carnegie Foundation concluded that "a two-year college training, in which the sciences are featured is the minimum basis upon which modern medicine can be successfully taught" and advocated further for medical departments to adopt a stricter standard of a prerequisite baccalaureate degree (Flexner, 1910). The 1920s saw the development of the the Moss Test, a forerunner of the Medical College Admission Test (MCAT), a tool designed to objectively assess an applicant's intellectual qualities with the aim of reducing the medical school attrition rate which had climbed to as high as 50% in that period (McGaghie, 2002). In the postwar period, under the direction of the Association of American Medical Colleges (AAMC), the exam evolved into a multiple-choice test of verbal, quantitative, and science ability and knowledge of "modern society." The MCAT has undergone numerous revisions and updates with the latest in 2015. The MCAT and the undergraduate record continue to be the key indicators of academic readiness in the medical school application process (Schwartzstein, Rosenfeld, Hilborn, Oyewole, & Mitchell, 2013).

This uniquely American rite of passage has played out for generations in elite liberal arts colleges and universities, the most prized recruiting grounds for medical schools. The decades that followed have witnessed considerable debate about the objectives of this premedical education period, and while such debates are still ongoing, a baccalaureate degree for the modern American premedical student is *de rigueur*. In an undergraduate experience characterized by competition, sacrifice and persistence (Richardson, Mulvihill, & Latz, 2014), the premedical student not only must demonstrate excellence in coursework, research, and service and achieve a high MCAT score, but also demonstrate mature personal development and obtain formal letters of support from several faculty. The numbers are not in the premedical student's favor with fewer than 50% of applicants each year gaining admission to U.S. MD-granting schools (*Applying to Medical School: 2018 AMCAS Medical School Applications by the Numbers*, 2019).

Like any large system, the U.S. medical school preparation and application process is susceptible to inequities. Institutionalized discrimination, endemic poverty, and poor educational opportunities focused in urban and rural environments are key drivers each year behind the underrepresentation of the poor in

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