

1 Title: A Comparison of Australian and American Medical School Admission Experiences

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**About the author:** Jack Ding has recently graduated in November 2021 from his 6-year medical program at the University of Adelaide, Australia and is due to commence an Australian internship in January 2022. Jack is also the recipient of the Global Health Travel Scholarship (for ongoing contributions to international health related studies) and Outstanding Academic Achievement, both of which were conferred by the University of Adelaide.

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#### **Authors Contribution Statement:**



Contributor Role	Role Definition	Aut	thors				
Continuator Role	Role Definition		2	3	4	5	6
Conceptualization	Ideas; formulation or evolution of overarching research goals and aims.						
Data Curation	Management activities to annotate (produce metadata), scrub data and maintain research data (including software code, where it is necessary for interpreting the data itself) for initial use and later reuse.						
Formal Analysis	Application of statistical, mathematical, computational, or other formal techniques to analyze or synthesize study data.						
Funding Acquisition	Acquisition of the financial support for the project leading to this publication.						
Investigation	Conducting a research and investigation process, specifically performing the experiments, or data/evidence collection.	Х	Χ	Χ	Χ	Х	Χ
Methodology	Development or design of methodology; creation of models						
Project Administration	Management and coordination responsibility for the research activity planning and execution.	Χ				_	
Resources	Provision of study materials, reagents, materials, patients, laboratory samples, animals, instrumentation, computing resources, or other analysis tools.						
Software	Programming, software development; designing computer programs; implementation of the computer code and supporting algorithms; testing of existing code components.						
Supervision	Oversight and leadership responsibility for the research activity planning and execution, including mentorship external to the core team.	Х	7				
Validation	Verification, whether as a part of the activity or separate, of the overall replication/reproducibility of results/experiments and other research outputs.						
Visualization	Preparation, creation and/or presentation of the published work, specifically visualization/data presentation.	X					
Writing – Original Draft Preparation	Creation and/or presentation of the published work, specifically writing the initial draft (including substantive translation).	X	Х	Χ	Χ	Χ	Χ
Writing - Review & Editing	Preparation, creation and/or presentation of the published work by those from the original research group, specifically critical review, commentary or revision – including pre- or post-publication stages.	X	Χ	Χ	Χ	Χ	Χ

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# **Discussion Points:**

1. What is the medical school admission process like in different countries?

2. What can we learn about medical school admission processes from other countries?



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#### ABSTRACT.

Attaining admission into medical school has been described as a very competitive process by successful matriculants. The processes that medical schools use to stratify applicants can greatly differ between institutions. These systemic differences flow over onto the applicant level, such that individuals from different geographic regions can have varied and diverse application experiences depending on local medical school admissions protocols. This piece compares the medical school admission processes of Australia and the United States of America, in the form of a narrative recount of a successful medical school matriculant in each country, with the individual experiences of matriculants from alternative pathways blended into the piece. The authors discovered significant differences in admissions protocols between the two countries, with the greatest differences revolving around admissions exams, applicant profile (high school students versus college students), degree types and alternative entrance pathways.

Key Words: Premedical Student, Medical Student, Medical School, Medical Education



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### 1 THE EXPERIENCE.

### INTRODUCTION.

Australia and the United States of America (USA) share significant similarities in language and culture, given that both have a mainly English-speaking population and are relatively new countries with colonial heritage. Gaining acceptance into medical school in either country is highly competitive. Over a 15-year period, there were around 580,000 applicants to US medical schools, of which 260,000 ultimately matriculated (45%).1 While there is a paucity of comparable Australian data, one study noted that only 38% of first-time applicants who were extended an interview to medical schools in the largest Australian state matriculated in the 2013 to 2014 cycle.<sup>2</sup> There are notable differences in medical school admission processes between the two countries. For example, about half of all Australian medical schools recruit applicants who are in their final year of high school for entry into 5 to 7-year medical school courses, while the rest recruit applicants holding undergraduate degrees into 4-year courses.3 Those that do the former are referred to as 'undergraduate medical schools', which are generally regarded as the 'traditional' path to medical school, while the latter is called 'postgraduate medical schools'. In contrast, all US schools require an undergraduate degree as a prerequisite to enter medical school. Two other major differences include US osteopathic medical education and US citizens attending foreign medical schools. Osteopaths in the US will have attained all requirements to practice as medical doctors, whereas osteopathy in Australia is a different degree with no medical training. Australian citizens very rarely pursue medical education abroad. In contrast, nearly 3000 US citizen IMGs entered US residency training in 2018.4

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These systemic differences in admission protocol ultimately flow over onto the individual level and define each student's admission experiences. Table 1 summarizes the similarities and differences in our experiences. Table 2 summarizes the UCAT, GAMSAT, and MCAT admission tests.

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### **EXPERIENCE REPORT.**

our journeys into medical school.

A total of 6 medical students from Australia and the US were virtually introduced to one another by a mutual connection in September 2021. We shared our admissions experiences with Australian and US allopathic, US osteopathic, and international medical schools through WhatsApp, Zoom, and Google Docs. The two Australian and US 'traditional' applicants penned a classic vignette of their experiences. The remaining members blended their experiences into these two vignettes to provide a succinct, multi-faceted overview of

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## A STUDENT WITH A TRADITIONAL AUSTRALIAN MEDICAL SCHOOL ADMISSIONS EXPERIENCE

I am a traditional medical student at an undergraduate Australian medical school. I wanted to become a physician for as long as I could remember, and it made perfect sense to pursue this career as early as possible. I consolidated on this goal in my junior year (11th grade) of high school first enrolling in senior year (12th grade) subjects that count toward my ATAR (SAT equivalent), as part of an accelerated curriculum. I also purchased numerous third-party resources for the UCAT (MCAT equivalent). I started UCAT preparation over a year in advance of my anticipated test date, as applicants can only take it once a year, meaning I only effectively had one attempt per intake cycle to take it. All of this was the standard strategy for traditional AU undergraduate applicants, who are typically aged 17 or 18 with strong prior academic performance. As I entered my senior year (12th grade), I noticed diminished academic collaboration between medical school aspirants in my classes. In hindsight, I attribute this to the competitive nature of the undergraduate medicine admissions processes, and the high weighting assigned to ATAR performance. I dedicated about 4 hours of after-hours study on school days, and about 8 hours a day over the weekend. Due to the academic rigor, I had limited time for non-academic experiences during the school week. Across the four mid-term breaks in the year, I engaged in shadowing and volunteer experiences. By the year-end, I scored a 99.5 ATAR percentile and 95 percentile in the UCAT. I realized these scores were very average for matriculating undergraduate medical students, and therefore applied to every undergraduate medical school in the country. Eventually, six schools responded with Multiple Mini Interview (MMI) interview offers. An MMI interview consists of several short interviews that are evaluated independently of one another and were the norm for Australian medical schools. After completing the interview process, I nervously investigated the two main backup options applicants had if they failed to receive an admission offer in their senior year (12th grade). The first option was to redo Year 12, and ideally score a higher ATAR and UCAT. Alternatively, I could enroll in an undergraduate course with the intention of being admitted to a postgraduate medical school upon the completion of the degree. Notably, there are no dedicated 'pre-medical' tracks in Australia, though certain courses are saturated with students who are competing for a medical seat. This is not to say postgraduate medical schools are primarily occupied by applicants who failed to receive an undergraduate seat. I was told that the premise of postgraduate medical education was to select more holistic and mature candidates, who hailed from all walks of life.5 After an agonizing 2-month wait, I thankfully received a medical school offer in my home state.



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### A STUDENT WITH A TRADITIONAL US MEDICAL SCHOOL ADMISSIONS EXPERIENCE

I am a traditional medical student at a US medical school. I was passionate about medicine for as long as I could remember. During my college years, I revolved my life around gaining a medical seat and was enrolled in a Bachelor of Science degree, though many of my pre-medical peers were enrolled in humanities degrees. I took the MCAT (GAMSAT equivalent) in the summer before my senior year (4th year undergraduate) and scored a 510 (84th percentile). Because most of my time was dedicated to studies and extracurricular activities, such as shadowing and volunteering experiences, I did not forge strong friendships with other premedical students. I finished my degree with a 3.71 GPA and applied to 16 medical schools through the portal. I was required to include a personal statement, a list of personal experiences, my MCAT score, and my college transcripts. Every school sent secondary applications to me, with detailed questions that I filled out. Finally, three medical schools extended MMI interview invitations to me. Following this process, I experienced an agonizing wait of several months, knowing that my scores were very modest for most MD schools. During this time, I thought about the option to study medicine abroad. I had heard that some Caribbean medical schools may use a more holistic review process. They typically also have a lower barrier for entry, more streamlined selection processes, and may also be more liberal with scholarship offers. I may have even begun my studies a semester earlier due to how swift some schools process applications. The primary drawback is that many schools may be of uncertain quality, and I could face additional hardships returning to the US for licensure. The other option I could have contemplated was DO schools, which would have involved applying through a separate application portal. Indeed, I was interested in a holistic approach to patients, and was charmed by the tenets of osteopathic manipulative medicine. Both options tended to attract more nontraditional applicants and those with more diverse life experiences. Finally, after several months, I received an offer in March of my senior college year (4th year undergraduate).



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### CONCLUSION.

- 2 To conclude, there are key differences in medical school admission processes between Australia and the US.
- 3 This has a flow-over effect on the individual experiences of applicants. While both students in this paper were
- 4 from a traditional background, their experiences are by no means wholly representative of their cohorts. Rather,
- 5 their narrative accounts serve best as adding dimension, perspective, and depth to the discussion and debate
- 6 on medical school admission processes. Future qualitative interview studies on medical school applicants and
- 7 their admission experiences would help set a formal research analysis of this topic and help identify common
  - themes in applicant experience across a wider sample pool.



#### 1 REFERENCES.

- 2 1. Zhang D, Li G, Mu L, Thapa J, Li Y, Chen Z, et al. Trends in Medical School Application and
- 3 Matriculation Rates Across the United States From 2001 to 2015: Implications for Health
- 4 Disparities. Acad Med. 2021;96(6):885-93.
- 5 2. Griffin B, Auton J, Duvivier R, Shulruf B, Hu W. Applicants to medical school: if at first they
- 6 don't succeed, who tries again and are they successful? Adv Health Sci Educ Theory Pract.
- 7 2019;24(1):33-43.
- 8 3. Medical Deans Australia and New Zealand. Membership. Available from
- 9 https://medicaldeans.org.au/about/membership/; updated 2022 March; cited 2022 March 6.
- 10 4. Ahmed AA, Hwang W-T, Thomas CR, Jr., Deville C, Jr. International Medical Graduates in the
- 11 US Physician Workforce and Graduate Medical Education: Current and Historical Trends. J Grad
- 12 Med Educ. 2018;10(2):214-8.
- 13 5. Geffen LB. The case for graduate schools of medicine in Australia. Med J Aust. 1991;155(11-
- 14 12):737-40.



## 1 FIGURES AND TABLES.

# 2 Table 1. Comparison of Medical School Landscape in Australia and the United States of America

	Australia	United States of America
Local applicant landscape	Allopathic medical schools	Allopathic medical schools,
		osteopathic medical schools,
		international medical schools
Applicant recruitment	High school students and	Primarily undergraduate
	undergraduate graduates	students/graduates
Medical entrance exam	UCAT (undergraduate	MCAT
	schools), GAMSAT	
	(postgraduate schools)	
Selection factors	Primarily academic (ATAR or	Primarily academic (GPA) and
	GPA) and interview	interview. Extracurricular
		experiences such as
		volunteering, research, letters
		of recommendation, personal
	• 🔺	statement, work record also
	A	play a role

4 Legend: ATAR: Australian Tertiary Admission Rank; GAMSAT: Graduate Medical School Admissions Test;

5 GPA: Grade point average; MCAT: Medical College Admission Test; UCAT: University Clinical Aptitude Test



1 Table 2. Overview of content on the UCAT, GAMSAT, and MCAT medical school selection tests

University Clinical Aptitude Test (UCAT) Overview – Australia							
Subtest	Task	Time limit					
Verbal reasoning	44 MCQs	26 minutes, 15 seconds					
Decision making	29 MCQs	38 minutes, 45 seconds					
Quantitative reasoning	36 MCQs	30 minutes					
Abstract reasoning	55 MCQs	16 minutes, 15 seconds					
Situational judgment	69 MCQs	32 minutes, 30 seconds					
Graduate Medical School Admissions Test (GAMSAT) – Australia							
Section	Task	Time limit					
Reasoning in humanities and	47 MCQs	70 minutes					
social sciences							
Written communication	2 written essays	65 minutes					
Reasoning in biological and	75 MCQs	150 minutes					
physical sciences		<b>Y</b>					
Medical College Admissions Test (MCAT) Overview – US							
Section	Task	Time limit					
Biological and biochemical	59 MCQs	95 minutes					
foundations of living systems							
Chemical and physical	59 MCQs	95 minutes					
foundations of biological							
systems							
Psychological, social, and	59 MCQs	95 minutes					
biological foundations of							
behavior							
Critical analysis & reasoning	53 MCQs	90 minutes					
skills							

3 Legend: MCQs: Multiple choice questions.