

Bridging the gap

In the footsteps of giants: a tale of legacy and discovery in medicine

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ABSTRACT | BACKGROUND: In the heart of Brazil, a renowned MD, PhD scientist and his son, a newly accepted medical student, embark on a unique collaboration. This essay serves as a bridge between generations, capturing the essence of entering the medical profession from two distinct vantage points. Through it, they aim to share their fears, hopes, and advice, illuminating the path for others who dare to follow in their footsteps.

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1. Father's address to the son

My dear son,

As you stand on the threshold of medical school, I want you to know that the journey ahead is one of profound challenge and unmatched reward. Medical school is a crucible that will test your resolve, patience, and dedication. You will encounter long nights of study, the pressure of exams, and the responsibility of caring for patients. Yet, it is within this crucible that you will forge your character and skill as a physician.

In recent years, Brazil has seen a dramatic increase in medical education capacity. By 2022, the country had 389 medical schools offering 41,805 undergraduate places.¹ Notably, 23,287 of these places were created after the implementation of the Mais Médicos program in 2014.² While this growth addresses healthcare needs, it also raises concerns about the quality and equity of medical education. The responsibility for having quality, evidence-based training and developing the skills necessary to become a good professional lies not only with the university, but also with you.

The implications are profound. The distribution of physicians in Brazil is uneven, both geographically and in terms of specialties. In 2022, there were 321,581 specialists, representing 62.5% of the 514,215 active professionals.¹ The remaining 37.5% were generalists without specialty titles. This discrepancy is further complicated by the fact that there are 55 recognized medical specialties in Brazil, and 34% of specialists have more than one specialty.¹ Such a complex landscape demands not only clinical excellence but also a deep understanding of our healthcare system's dynamics. It is still early to decide whether or not you will specialize and which field to follow, but it is important to keep this outlook in mind throughout your career. Regardless of such challenges, Medicine will fill you with joy and excitement, and you will find your way through the challenges.

My journey through medical research has been marked by endless curiosity, hard-won discoveries, and an unwavering pursuit of knowledge. I have navigated through setbacks and celebrated numerous

breakthroughs, each experience underscoring the importance of perseverance and the exhilaration of revealing truths that benefit humanity. Throughout this journey, I have had the privilege of collaborating with outstanding scientists at my university. These collaborations have deepened my understanding of internal medicine, immunology, physiopathology, infectious diseases, as well as statistics and data visualization. My work was conducted within research groups focusing on various health conditions, including Leishmaniasis, Malaria, Asthma, Tuberculosis, and HIV.

To comprehend these diseases fully, it was crucial to examine the complex interaction between biology and social determinants, dedicating substantial time to understanding vulnerable populations. I recognized that combating or controlling these diseases requires focusing on the most susceptible groups. This realization led me to tailor my career, integrating advanced analytical and data visualization methods, high-throughput biological assays, immunopathogenesis, and disease models with field research and multicenter initiatives. This approach aims to identify disease determinants with the highest precision possible, establishing a foundation to inform decision-making strategies for governments, stakeholders, and policymakers. It is not an easy path to follow, but I truly believe I am in the right direction to help build a slightly better world for you.

There is still much to achieve, but my group consistently strives to contribute to the eradication of some of humanity's most dangerous infectious diseases. This commitment has come at a cost - time. How you utilize your time and interact with people and organizations is crucial for your success and the implementation of your ideas. Kindness, generosity, and support for others in achieving their goals are essential. These attributes not only aid in personal growth but also pave the way for providing humanity with alternatives to alleviate suffering and promote health.

The path is challenging, and you will frequently question your choices. It is imperative to be mature and confident in your decisions and interactions, whether it be with colleagues or patients.

It is also crucial to remember that mistakes are a natural part of the learning process. Embracing them, rather than allowing them to halt your progress, will enable you to reflect on your actions and ultimately propel you forward on your journey. As you follow in these footsteps, remember that the comparisons are inevitable, but not insurmountable. You are not me, and your journey should not be a mirror of mine. Seek your own passions, make your own discoveries, and let the joy of helping others be your guide. This is your path to carve, and I have every confidence in your ability to walk it with integrity and purpose.

2. Son's address to the father

Father,

As I stand on the brink of my medical school journey, I am awash with emotions - excitement, apprehension, and a profound sense of responsibility. The insights you've shared about Brazil's medical landscape are both enlightening and daunting. The competitive nature of the field, the uneven distribution of specialists, and the varying quality of healthcare across the nation present formidable challenges. Yet, understanding these realities only strengthens my resolve to strive for excellence and to make meaningful contributions.

The necessity for solutions in the face of these challenges is clear. There's a need for policy changes, improved standards in medical education, and strategic approaches for professional development. These efforts must aim to balance the distribution of medical professionals across regions and specialties, ensuring equitable and high-quality healthcare for all Brazilians. I recognize that to make a good impact, although I'm still at the beginning of the journey, I must also focus on the most vulnerable populations, as you have.

Your guidance in navigating this complex terrain will be indispensable. I am eager to learn from you, not only the clinical skills but also how to adapt and thrive within our healthcare system. Your approach to integrating advanced analytical methods, high-throughput biological assays, and field research

with policy-making strategies is a model I aspire to emulate. I am motivated to rise to these challenges, to learn how to use my time effectively, and to understand the importance of kindness, generosity, and collaboration in our profession.

Throughout my life, my exposure to the medical field through our many talks at dinner with you and mother has always been eye-opening, playing a crucial part in teaching me how a doctor should act and how one should rightly treat their patients. From mom, I learned that patience is a unexchangeable virtue, a necessity when dealing with people of all ages and origins. Her experience with special needs children taught me how compassion and kindness is one of the most important factors in treating patients. In spite of all this, the experience of dealing with a patient is something that I have never had the opportunity to personally partake in. The challenges associated with patient care are something that invoke a sense of dread and anxiety in me, especially the knowledge that losses are inevitable. The need to steel my nerves against death and deal with the pain of failure is something that I am not looking forward to, as I feel it may strip me of my humanity.

As emotional beings, humans often struggle to deal with the complex web of feelings and emotions. In the case of young medical students like myself, when these emotional challenges are coupled with hormonal imbalances and other unknown causes, many times this has an unfortunate side effect. In this day and age, I have seen a great many number of people suffer from symptoms of anxiety and depression, many of which are my own friends and colleagues. The number of cases of anxiety and depression in young people, be they teenagers or young adults, has dramatically risen in the past few years, being aggravated by the COVID-19 pandemic lockdown. From what I learned, there is no health without mental health, and depression and anxiety can be as destructive as other diseases, such as those you have studied so much, father. With 300 million cases and rising, depression affects all manner of people, but one such group is commonly victim to its grip: Medical students. They have one of the highest suicide rates across the globe due to pressure and troubles with mental health. This fact highlights the importance of empathy and human

emotion in the medical field, to not only humanely help the patients, but also to help the very doctors and students of medicine. Human compassion in medicine is a certain necessity.

The path ahead is indeed challenging, and I anticipate questioning my choices frequently. However, your journey assures me that with maturity, confidence in my decisions, and effective interactions with colleagues and patients, I can make a significant difference. I am not just embarking on a career; I am committing to a lifetime of learning, discovery, and contribution to the betterment of humanity and ultimately, myself.

In this endeavor, I am not only your son, but also your student, collaborator, and partner in one of the most noble causes. Together, we can forge a path that not only continues your legacy, but also allows me to create my own, guided by a shared vision of alleviating suffering and promoting health for all.

Armed with the knowledge, wisdom, and bravery that you have given me, I embark in this long road, finding myself eager to partake in the many challenges that will ultimately define my career. I seek not to be only a mere cog in the living, complex machine that is the ever-evolving world of medicine, but to define myself as a great doctor, a great scientist and perhaps, one day, a great father like you before me. Thanks to you, I have the confidence to continue your legacy, as well as build my own, hopefully living up to our family's names.

3. Conclusion

As we stand at the confluence of two generations, we are reminded of the enduring power of medicine to change lives. This essay is but a snapshot of our journey together, a journey that holds the promise of discovery, innovation, and healing. We move forward with a shared commitment to the well-being of

humanity, supported by the bond of family and the unyielding quest for knowledge. In this endeavor, we are not just father and son; we are collaborators in the noblest of causes.

Authors contributions

The authors declared that they have made substantial contributions to the work in terms of the conception or design of the research; the acquisition, analysis or interpretation of data for the work; and the writing or critical review for relevant intellectual content. All authors approved the final version to be published and agreed to take public responsibility for all aspects of the study.

Conflicts of interest

No financial, legal, or political conflicts involving third parties (government, private companies, and foundations, etc.) were declared for any aspect of the submitted work (including but not limited to grants and funding, advisory board participation, study design, manuscript preparation, statistical analysis, etc.).

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References

1. Scheffer M (Coord.). Demografia Médica no Brasil 2023. São Paulo: FMUSP, AMB; 2023. Available from: https://amb.org.br/wp-content/uploads/2023/02/DemografiaMedica2023_8fev-1.pdf
2. Ministério da Educação. Programa Mais Médicos [Internet]. Brasília: Ministério da Educação; 2024. Available from: <http://portal.mec.gov.br/secretaria-de-regulacao-e-supervisao-da-educacao-superior-seres/30000-uncategorised/59441-programa-mais-medicos>