So, you want to be a physician?

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Physician: So, you want to become a physician?

Student: Well, I am thinking about it. However, I am not sure. I also like the concept of becoming a general practitioner and I enjoy some of the surgical subjects.

Physician: That is alright – enjoy that you have so many options.

Student: Would you choose to become a physician again, if you had the chance?

Physician: Definitely!

Student: Why?

Physician: I greatly enjoy being at the cutting edge of medical care. I want to work in a field where things are constantly evolving, and not in a mundane job that is the same year in and year out. There are more than 20 sub-specialties within internal medicine and most are changing rapidly. I am not an oncologist, however, let's take it as an example because it is a field that is changing beyond recognition. We are at the beginning of a revolution of cancer care. After chemotherapy and targeted tumour therapy, a third wave of therapies, the biological agents – antibodies against regulatory targets of the cancer cells – are entering the arena and will undoubtedly be transformative. I foresee that cancer care may even become the management of chronic illness, much like human immunodeficiency virus infection has changed from a death sentence to a chronic illness.

Student: Yes, I have followed the news in oncology. But is this the only sub-specialty that is making progress? Aren't physicians known for admiring the effect of illnesses and not really being able to do much to treat them?

Physician: Let me challenge this perception. Some medical specialties are clearly interventional. Cardiology and gastroenterology have even evolved to the point where physicians are undertaking practical procedures to treat illnesses that in the past have been the domain of surgeons – just think of cauterising bleeding gastric ulcers, coronary artery stenting, and the management of structural heart disease with procedures like transcatheter aortic valve implantation.

Similarly, in the less interventional specialties things are changing. Perhaps neurologists were said to admire their patients, a tongue-in-cheek comment on their excellent descriptive powers. However, there are now virtually no neurological illnesses left that do not have good and/or evolving treatment regimes; just think of stroke, migraines, multiple sclerosis, and myasthenia gravis. Rheumatology now has a variety of powerful and effective treatments for most illnesses.

The field of internal medicine as a whole has the advantage that there is a type of physician sub-specialty to suit all interests. Interventional procedures, imaging, laboratory work, pharmacology, physiology, counselling – you can find a medical sub-specialty that lets you do what you enjoy doing.

Student: Is there anything else which sets being a physician apart from other specialties?

Physician: Underpinning everything that all doctors do is a desire to help our patients. General practice has this in common, but more than in most other areas, many physician sub-specialties require the longitudinal management of patients. This is one of the joys of becoming an established consultant – you establish a bond with your patient that can persist over years, and even decades. Your unique opportunity to observe and modify the management of their illness and the way they cope with it, becomes one of the great pleasures of the job. Much of the recent improvement in medicine, and the future, will be the improved management of chronic illness.

Student: That is an interesting perspective. But what else is different about being a physician. Tell me – how can I tell whether becoming a physician is right for me?

Physician: There are two aspects which are central to the life of a physician. One is a love of the mental challenge of solving clinical puzzles. Patients may come to you with an indiscriminate problem and there is then a process of trying to piece together all the clues you can gain from history, examination, and investigations. I still enjoy the intellectual exercise of weighing up the potential relevance of all these factors and then moving towards a diagnosis, or differential diagnosis. Experience helps and this is sometimes where medicine can be both an art and a

science. The greatest problem solvers are probably our endocrinology, neurology, and infectious disease colleagues.

The second key aspect is a love of working in teams. Physicians almost always work in teams with some challenges and great revelations. A challenge is the, often humbling, experience that the sum of a team is much stronger than your own personal judgement. Working in a team gives you the power to develop opportunities for colleagues, to improve the overall quality of a health care system, and to move into leadership roles. With working in a team you develop a sense of camaraderie, which makes the job so much more enjoyable. On a more practical level, not working in isolation means there is always the option of seeking support and advice from colleagues for those difficult cases. You tend to get your curiosity and intellect piqued by having some sort of exposure to all the interesting cases and there is the continual opportunity to benchmark your management and performance against others, and to continue lifelong learning from this. So, solving problems and a love of working in teams are useful attributes to work out whether physician training is for you.

Student: You have spoken about the advances in internal medicine and the work in teams – does it mean that if I commit to internal medicine, I have to commit to living in a large town and bigger centre?

Physician: No. Once you are qualified as a physician, you have opportunities to work in a major centre or a district hospital. There are also many opportunities to work partially in the community or a rural centre, and opportunities to work part time.

You haven't asked about earning potential, which is polite of you. All doctors earn well compared to the New Zealand average salaries. Physicians have good earning potential, particularly if they consider private practice in an interventional specialty. You won't find many physicians complaining about their salary.

Spare a thought for a very non-interventional specialty that is at the forefront of changing the landscape of New Zealand health care: palliative care – while we are having this discussion, the New Zealand people are discussing passionately the role of euthanasia. Palliative care is in the middle of the discussion embodying much of what is great about physicians: care and empathy; constant improvement; and team work.

Student: If we are getting so good at treating diseases, is there a risk that if I train as a physician I will run out of work in the future?

Physican: An interesting thought, but that scenario is very unlikely to happen. Our population is getting older and many of the conditions that physicians manage are diseases of ageing. There will be no shortage of work available. In addition to all of the new investigations and therapies that are becoming available, we are going to need more doctors to oversee them.

Student: I have already been working pretty hard the last couple of years – what is the work-life balance like for a physician? Do they take their work home with them?

Physicians: A career as a physician means a commitment to lifelong learning – but this is a genuine highlight of the job, not a burden. Physicians all learn from each other, as you will have seen at grand rounds, and we are fortunate in New Zealand that senior doctors are currently well supported to attend conferences and educational activities.

Hospital-based physicians tend to be part of an after-hours (weekends and overnight), on-call roster in addition to scheduled weekly duties. Much of the time this primarily consists of providing advice to junior doctors over the telephone; with the increasing ability of technology to allow us to review results and imaging remotely, this is becoming easier. For some sub-specialties – an interventional cardiologist treating a ST-Elevation Myorcardial Infarction or a gastroenterologist treating a gastrointestinal bleed – this may involve a greater burden in having to come back to the hospital. For other sub-specialties, such as dermatology or clinical genetics, the after-hours roster tends to be less taxing.

Student: You have talked a lot about sub-specialties. Will I have to pick one?

Physician: No. There is, and always will be, a strong demand for general physicians. Many patients present to hospital with an undifferentiated problem where it is not clear which organ-based sub-specialty would suit them best. Increasingly we see patients with multiple comorbidities and having skilled physicians with a more generalist outlook, rather than sub-specialists who know a lot about a small field, is most productive for ensuring they have the best overall care. Most general physicians, even if they do not train formally to completion in a sub-specialty, develop an interest in something such as diabetes, stroke, or bone metabolism. In New Zealand's smaller hospitals, most physicians, even trained sub-specialists, are required to participate in a general medicine on-call rota. In the tertiary hospitals in the larger centres (Auckland, Waikato, Wellington, Christchurch, and Dunedin) there are separate general physicians and there are enough of the individual sub-specialists for them to group together to form their own out-of-hours rosters.

Student: I have become interested in research during my training. Is being a physician a good choice if I want to pursue an academic career?

Physician: Absolutely. If nothing else, a lot of research boils down to money and the two areas that attract the most funding attention are the physician sub-specialties of cardiology and oncology. I have already told you that in the decades since I trained, many of the sub-specialties such as cardiology with cardiac resynchronisation pacemakers, and rheumatology with targeted monoclonal antibodies have changed beyond all recognition and all of this has come about because of research. As a physician, you can apply a true bench-to-bedside approach to research, and have opportunities ranging from evaluating the biochemical properties of a new peptide under a microscope, to large multicentre randomised drug trials of thousands of patients.

Student: You are convincing me. What should I do over the next few years to become a physician?

Physician: You are about to embark on two years as a house officer. Look at doing general medicine or sub-specialty attachments in your second year, but I think it is also important to do at least three months of something completely different, to gain some perspective. In fact, I would argue that any time spent in anaesthesia, critical care, or the emergency department would give you invaluable skills for a future life as a physician in terms of being more confident looking after critically unwell medical patients and being able to interact well with other non-medical specialties. In your third or fourth year out of medical school, you want to begin basic training as a medical registrar working towards the Fellowship of the Royal Australasian College of Physicians' written and clinical exams after a further two or three years. Time spent in these early years in a district hospital doing general medicine, where you get a very good overview of managing conditions across the entire spectrum of internal medicine, can be very rewarding. From a training perspective, you often get much more of an opportunity to be actively involved than you would in a similar position in a bigger centre. However, as you come to sit your exams most people prefer to be in a tertiary centre. You should take advantage of the opportunity here to work alongside experts in a range of sub-specialties, as this will build up your overall general skills and knowledge base.

Throughout this whole time, you should be on the lookout for role models and mentors. No two physicians are identical and you will find people, or even simply certain aspects of the way they conduct themselves, that you wish to incorporate into your own practice. You

will hopefully also find yourself being attracted towards a particular sub-specialty; this can be because of the nature of the sub-specialty itself or often it's simply the positive working environment created by the individual personalities that you have worked with that draws you in. With the exams completed, now is when you begin advanced registrar training. This involves a further three to four years and to get the complexity of cases you need, the majority of it needs to be done in a bigger centre. You may also wish to take time out along the way to perform some research. For some sub-specialties, undertaking a further overseas fellowship for one to two years is recommended to round off your training and experience. Training paths are variable, but at the end of all this you will be a medical consultant.

Student: That does sound like quite a long road. What happens if I were to change my mind about being a physician along the way. Would I lose out?

Physician: Absolutely not. You don't have to make a decision now for the rest of your life. Even if you start physician training, the first few years of general training involve rotating through a number of the medical sub-specialties. If during this time you were to change your mind and would prefer to work as a general practitioner, surgeon, or psychiatrist, you have only gained in terms of experience. I have good friends who are radiologists, anaesthetists, and pathologists with a background of a few years' general physician training, and they would all agree that the greater understanding they have developed from their additional medical training has made them better doctors in the specialties they now pursue.

Yes – you are right that most medical sub-specialties will take a significant time to train in, but so do other specialties. Embrace this time – as you train in New Zealand, you are in a well-paid job with good working conditions and educational support.

Student: Thank you for your time.

Physician: Thanks for your trust, and don't forget to enjoy this period where you have a whole world of opportunities.

References

1. Royal Australasian College of Physicians [Internet]. Training pathways; 2016 [cited 28 April 2018]. Available from: https://www.racp.edu.au/become-a-physician/training-pathways