Suicide in the Medical Profession: an upstream approach

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> *"I am standing by the shore of a swiftly flowing river and hear the cry of a drowning man. I jump into the cold waters. I fight against the strong current and force my way to the struggling man. I hold on hard and gradually pull him to shore. I lay him out on the bank and revive him with artificial respiration. Just when he begins to breathe, I hear another cry for help. I jump into the cold waters. I fight against the strong current, and swim forcefully to the struggling woman. I grab hold and gradually pull her to shore. I lift her out onto the bank beside the man and work to revive her with artificial respiration. Just when she begins to breathe, I hear another cry for help. I jump into the cold waters. Fighting again against the strong current, I force my way to the struggling man. I am getting tired, so with great effort I eventually pull him to shore. I lay him out on the bank and try to revive him with artificial respiration. Just when he begins to breathe, I hear another cry for help. Near exhaustion, it occurs to me that I'm so busy jumping in, pulling them to shore, applying artificial respiration that I have no time to see who is upstream pushing them all in…."* [1]

The above passage is an adaptation of the colloquially known *Public Health Parable* by sociologist Irving Zola.[1] It describes the impossible task of looking upstream at a problem when you are so busy dealing with the downstream consequences.[1] This message lends itself well to public health and medicine, and its real-world applications in preventative healthcare are not hard to find. For example, cervical cancer rates are dropping significantly with the introduction of regular cervical screening and the Gardasil vaccine, all because someone decided to look upstream to identify the early signs and address them before they became fatal.[2] However, the notion of looking upstream is still lacking in many areas of medicine, notably in the suicide of doctors and medical students.[3-4] It is no secret that suicide is a disease that plagues the medical profession, with its onset often hiding within the masses of medical school.[3] Despite this, there appears to be a lack of action being taken on preventing suicide in the medical profession.[4] Thus, this essay will investigate suicide within the medical profession, and more specifically, how we can move from a responsive approach, to a preventative one.

Australian endocrinologist Dr Ann McCormack published a perspective article on reducing the risk of suicide in the Australian medical profession.[5] She notes research that suggests the rate of male doctor suicide was 1.41 compared to the general population, and females even higher at 2.27.[5-6] Furthermore, 20% of Australian medical students reported suicidal ideation within a 12-month period, and 50% of Australian junior doctors reported moderate-high levels of distress.[5,7-8] Other research has demonstrated the increased risk of depression and suicide within the medical profession starts in the first year of medical school.[3] Whilst medical students commence university training with lower rates of depression and suicide than the general population, by the end of their first year, these rates are significantly higher than the general population.[3] Furthermore, these rates of depression and suicide constantly increase throughout medical school and hospital training, regardless of the speciality.[3] Consequently, rates of suicide in the medical profession are high.[5,9] In fact, in the United States, 300-400 doctors commit suicide yearly, the highest suicide rate of any profession.[5,9]

But why? Why does medicine have the highest rate of suicide amongst any other profession? And what is responsible for pushing these people into the river to begin with?

Dr McCormack has several well-evidenced theories regarding the upstream causes of increased suicide in doctors and medical students.[5] Firstly, she attributes part of the blame to the individual

characteristics typically found in medical students.[5] For example, perfectionism is common amongst medical students and doctors.[5,10] Given society expects the highest quality of its doctors, it is no wonder that medical students and doctors all strive to do their jobs perfectly, no matter what.[5,10] Furthermore, the perfectionism is potentiated by the praise and self-gratitude given for the positive results yielded from such perfectionism.[5,10] However, a high degree of perfectionism is not the answer.[5,10] Maladaptive perfectionism, i.e., where an individual experiences distress due to a feeling of failure after failing to achieve perfection, has been shown to be the strongest predictor for depression, anxiety and suicidal ideation within medical students, with maladaptive negative thoughts often surfacing if said perfection is not achieved.[5,10] Therefore, whilst perfectionist qualities are often desirable in a medical student because they typically equate to a higher-achieving doctor, it appears selecting for and potentiating said perfectionism is having the reverse effect in setting unattainable standards with consequent negative thoughts and suicidal ideations.[5,10]

This also links in with resilience, a trait found to protect against suicide within doctors and medical students.[5,11] A UK study found consultant doctors typically showed more grit compared to trainees and junior doctors, which they suggest could be due to "weeding out" ill-suited junior doctors during training.[11] Putting the two qualities together, it is evident how medical students and junior doctors with perfectionist qualities, coupled with lower levels of grit, appear to be predisposed to fail within the current medical system, leading to increased suicidal ideations and suicides.[5,10-11] But why? Why is the medical profession one where people who have made it through medical school and shown they possess the essential skills and qualities to be a doctor, face a workforce focused on "weeding out" the ill-suited junior doctors, rather than supporting those doctors to become proficient and safe clinicians?

Rebekah Clarke, a final year medical student from the University of Adelaide, notes her own and her colleagues' personal experiences:

> *"As an intern, you may be told that extensive unrostered and unclaimed overtime is necessary because you simply need to learn to be faster. You may then be told that it's your fault you're overworked by a senior doctor who has a direct influence on your likelihood of you entering a training program. We cannot be surprised that in this work climate these issues remain unreported and unresolved."*[12]

These issues are also highlighted in the most recent Australian Medical Association Queensland Resident Hospital Health Check which found 24% of junior doctors were not paid overtime, and 25% had been explicitly advised not to claim overtime.[13] Furthermore, 25% felt claiming overtime would lead to a negative assessment.[13] These statistics, coupled with Rebekah's personal experiences reinforce the lack of support and necessity for resilience when starting a medical career.[5,11-13]

It is clear a cultural shift is overdue.[14] This is something the American Medical Association (AMA) have recently spoken on, stating:

> *"Taking proactive steps to identify and address physician distress can help to ensure the well-being of colleagues and reduce the risk of suicidal ideation. Additionally, it is imperative that physicians recognize the importance of self-care, model wellness behaviours and encourage others to do the same. Organizations should also note the importance of creating a supportive atmosphere in the workplace, which can be instrumental in addressing physician distress."*[14]

There is a clear discord between the UK study and the AMA's position; where the UK study focuses on weeding out ill-fitting junior doctors, the AMA focuses more on a supportive workplace that identifies significant distress in clinicians and supports them through it.[11,14] Therefore, perhaps part of the solution to prevention suicide within the medical profession is less about simply blaming the individual's existing personal characteristics, and more so on supporting clinicians and students

through distress and giving them the tools to build their personal resilience prospectively.[5,10-14] It is clear to see how the latter is more conducive to reducing suicide in the medical profession.

One potential method of reducing medical students' maladaptive perfectionist traits is cognitive behavioural therapy (CBT).[5,15] Preliminary results of using CBT to challenge unhealthy perfectionism and related distresses in medical students have demonstrated positive and durable effects on these maladaptive thought patterns.[15] Furthermore, existing CBT programs have been modified to be internet-based, increasing accessibility and uptake within medical students.[15] One study found medical students who practiced the skills acquired during CBT throughout their medical training demonstrated an overall benefit in their mental health.[16]

Similarly, resilience should be fostered within a supportive workplace.[17] One study found offering a resilience teaching session to doctors showed significant benefit in reducing distress compared with other stress management and mindfulness-based exercises.[11] Therefore, if resilience can be taught and modelled within a supportive workplace, suicide rates would likely drop accordingly.[5,11]

Moving beyond individual characteristics and more into the medical workplace, another issue Dr McCormack touched on was the stress of medical training, particularly around getting onto specialty training programs.[5] She notes her personal experience:

> *"As gruelling as I recall basic physician training, there was never a sense of anxiety among my peers about future job opportunities in our chosen specialties. That is no longer a reality. In 1999, the Australian Medical Association introduced a National Code of Practice on safe working hours, but in practice, this is a misnomer. Junior doctors now find themselves undertaking significant research projects, even higher degrees, to increase their chances to secure a training position. The pressure to perform keeps building, the fear of failure is a constant threat."*[5]

There are several points noted that are worth focusing on. Firstly, the stress of getting onto medical training programs is increasing with time.[5] It is predicted that by 2030, there will be a shortfall of 1000 specialty training places.[12] Thus, as doctors and medical students, we do as Dr McCormack said, and find ourselves completing significant bouts of research and higher education just to be considered for a specialty training program.[4-5,12] I have personally been told by a medical colleague, that in order to even be considered for a place in nephrology training, an applicant must have a PhD, as well as at least three pages worth of publications under their belt; not because the training program requires any of that, but because the limited spots increase competition, hence why the higher education and research morph from being desirable to essential. Therefore, when there are only 24 hours in a day, finding time to complete this volume of research and higher education comes at a personal cost, usually taking the time normally allocated to self-care.

As a medical student myself, I have experienced this firsthand. For example, a standard week in Phase 2 of the MD typically involves a 40-hour practical week at the hospital. In addition, there is usually 10-20 hours of online content to cover each week, as well as completing any assignments or other assessment items. Furthermore, many of us are living independently, and have to work to support ourselves through medical school. However, we are on placement full time during the week, and have the online content to keep us busy after placement each day, which does not leave much time for work. Some of us are lucky enough to find casual employment on the weekends just to breakeven after weekly rent and other expenses. Then, with whatever limited time we have left in the week, there is our life outside of medicine which we should be dedicating to self-care and self-preservation. However, given clinicians recommend we take on research projects while still in medical school, these often take precedence, leaving the self-care behind. My experience is not a one-off either.[4,12]

Rebekah Clark also describes the difficulty of finding a "work-life balance" during medical school and junior medical training.[12] On a similar note to Dr McCormack, she also mentions the increasing difficulty of applying for training programs, with the associated inevitability of increased fatigue, stress, burnout and even suicide.[5,12] She mentions a *beyondblue* national survey, which found the most common source of work stress in doctors was a lack of work-life balance (27%), as well as an insurmountable workload when at work (25%).[12,17] The consequences from this increased workload are evident in the Australian Medical Association Queensland Resident Hospital Health Check which found 51% of junior doctors had been concerned about making a clinical error due to fatigue from working extremely long hours.[13]

Many of Rebekah's comments echo my own, especially concerning work-life balance.[12] She notes, whilst we all are encouraged to have interests outside of medicine and focus on self-care and obtaining that work-life balance, the balance is quickly being thrown off with increased time commitments taking precedence, all to do with boosting the resumé to make us a more desirable training applicant.[12] We both predict that as the bottleneck of training positions continues to tighten, if nothing changes, the work-life balance and the protective role it plays in suicide prevention, will cease to exist.[12]

This is also explicitly mentioned in a story about Tash Port, a junior doctor in Victoria who suffered such intense depression and anxiety in her career that she took her own life in June 2020.[4] It is reported that a large part of her anxiety was driven from both applying to specialist training, but also that throughout her short career, there was constantly competition after competition, hurdle after hurdle.[4] Psychiatrist Professor Patrick McGorry notes how depression and suicide are not uncommon amongst training doctors, yet people rarely speak out against the profession.[4,18] Professor McGorry also mentions the unattainable work-life balance, explaining:

> *"The early years of a young doctor's career are often traumatic as they struggle to balance long working hours and the need for intensive study. "[They] just don't live for, maybe, 20 years… That intergenerational cycle must be broken if young doctors' mental health was to be improved"*[4,18]

Professor McGorry's insight into the difficulty maintaining a work-life balance as a doctor being an intergenerational cycle within the system calls into question the safety of the system itself.[4,18] Psychiatry registrar Dr Tahnee Bridson also reinforces this, saying:

> *"When things [Tash Port's suicide] like this happen it really rocks everyone. You're always waiting for the next person who is going to end their life, there's just so many pressures and so many stresses… there's clearly something wrong in our profession, and so many of us are suffering in silence. There are at least a few suicides of young doctors each year, but the subject is often swept under the carpet and not given the attention it deserves. People are not listening to the problem…"*[4]

I would like to re-emphasise one sentence – *"you're always waiting for the next person who is going to end their life… there's clearly something wrong in our system."*[4] Dr Bridson positions the reader to question the safety and longevity of a system where not only are suicides essentially being expected, but those struggling with depression and anxiety as a consequence of their job suffer in silence, not to mention these suicides often being *"swept under the carpet."*[4] This emphasises the need to look upstream, recognise the root causes and address them before it results in a doctor committing suicide.

The aforementioned issues surrounding specialist training applications is also explicitly mentioned by Dr Jessica Green, Director of Prevocational Education and Training at St Vincent's Hospital Sydney.[4] In her professional experience, Dr Green confirmed that stress and anxiety were significantly elevated when specialist training applications were due, and that this was compounded by excessive overtime

demands and a lack of workplace support.[4] Research by *beyondblue* has clearly identified an increase prevalence of mental health issues in junior doctors compared to the general population.[4,17] However, these rates are also significantly higher when compared to other professionals in equally demanding positions.[4,17] Dr Green follows on by signifying that therefore there must be something within the medical environment and system itself that is creating this situation of increased mental health issues and suicide.[4]

The final doctor I would like to mention is Dr Hashim Abdeen, chair of the Australian Medical Association's Council of Doctors in Training, who agrees that more upstream work is required to prevent suicides like Tash Port.[4] He says:

> *"There is a lot of talk about wellbeing ... but we still haven't seen tangible changes [to facilitate] people not getting affected by burnout and junior doctors contemplating suicide"*[4]

Dr Abdeen explicitly notes that whilst there is a recognised issue of suicide within the medical profession, there has been little actual action taken in preventing it.[4] He also mentions the notion of wellbeing, which comes back to the aforementioned issues regarding work-life balance, i.e., where can a medical student or junior doctor find the time to focus on their wellbeing in the current system?[4-5,12]

It is clear how the increased stress of trying to get onto a training program, coupled with reduced self-care would then increase significant distress in clinicians and ultimately increase suicidal ideations. However, I would take this one step further by agreeing with Professor McGorry, Dr Bridson, Dr Green and Dr Abdeen, that it is more than just a training-based issue, but a system-based issue.[4] Specifically, why is there a system in place that requires someone to undertake a PhD and have three pages of research publications to get onto a specialty program, especially considering the forecasted shortages in medical specialists? Why does a system that is responsible for many junior doctor suicides still exist without any tangible effort being made to prevent such atrocities?

As Dr McCormack pointed out, the Australian Medical Association's *National Code of Practice* outlines safe work hours and rostering within the Australian healthcare system.[5,19] However, the Code's real-life implementation is scarce.[5,19] The Australian Medical Association note despite this National Code, many doctors still work extremely long hours, placing them at higher risk of distress, burnout and ultimately suicide.[5,19] The National Code also highlights the need for more trainee positions within the healthcare system to ease the burden on consultants as well as reduce the stress on presumptive trainees.[19] Interestingly, despite this National Code detailing how the medical profession requires more training positions and safer working hours being released over 20 years ago in 1999, those same issues are still prevalent today.[19] Thus, it is no surprise then that distress, depression and suicide remain high within the medical workforce.[5] Therefore again, perhaps it is the system that is not following its own recommended guidelines regarding safe working hours and training availability that is underpinning the sustained increase in suicide seen within the medical profession compared to the general population.

Another part to this puzzle is mandatory reporting and the current difficulty for doctors seeking mental health treatment.[3,5,20]

The Queensland mandatory reporting laws stipulate:

> *"The law requires the health practitioner to mandatory report all forms of 'notifiable conduct' undertaken by another health practitioner. Notifiable conduct means a health practitioner has:*
>
> - *Practised their health profession while intoxicated by alcohol or drugs*
> - *Engaged in sexual misconduct in connection with the practice of their profession*
> - *Placed the public at risk of substantial harm in the practice of their profession because of an impairment*
> - *Placed the public at risk of harm by practising their profession in a way that constitutes a significant departure from accepted professional standards"*[20]

Mandatory reporting was introduced in 2020 and has attracted a fear amongst many doctors for its ability to potentially end a medical career.[3,5,21] For example, concerns about being reported is one of the most common barriers for doctors when contemplating mental health treatment.[3,5,21] On a similar note, studies show doctors who commit suicide were less likely to seek mental healthcare prior to their suicide than non-doctors, notably because of issues with access and stigma within the medical community.[3,21] Furthermore, because of mandatory reporting, maintaining confidentiality, objectivity and rapport with a doctor patient is difficult – the patient likely will minimise their symptoms to decrease the chance of reporting, and the treating clinician may battle with the internal tug-of-war between reporting or not reporting.[3,21] There is also a high chance the treating doctor is a friend or a colleague, adding complexity.[3,21] Regarding reporting, treatment for mental health can hinder a doctor's ability to obtain various insurances and there have even been instances where medical licences have been withheld due to mental health concerns.[3,21-22] When you consider all of the potential social and professional consequences for doctors seeking mental health treatment, it is not illogical to understand why many doctors choose not to engage with the treatment. Unfortunately, that plays a significant role in explaining why suicide rates are higher in doctors than in any other profession.[3,5,21]

One potential solution for this barrier are doctor wellbeing programs currently being run by the Mayo Clinic in the USA.[5,22] These programs focus on evaluating the factors influencing a clinician's wellbeing, and then researching optimum organisational approaches to reducing clinician stress and create a supportive and positive workplace.[22] For example, one of their studies identified 40% of their respondents were reluctant to seek treatment for mental health problems for fear of licencing restrictions.[22] They then developed a solution of advocating for changed licencing regulations that would consequently reduce the barriers to physicians seeking help, ultimately reducing the chance of suicide amongst clinicians.[22] Therefore, these programs should be considered within the Australian healthcare system in an environment of confidentiality to reduce the barriers doctors currently face when contemplating mental health treatment and hopefully decrease any potential suicides in the process.[5]

In conclusion, it is clear that more groundwork is required on working upstream when it comes to suicide in the medical profession. There is not one quick fix, but rather a complex network of interventions and changes to current practices that require implementation and regular monitoring. As discussed, the medical workforce currently seems focussed on weeding out ill-fitting junior doctors rather than offering a supportive workplace for them to grow, thrive and build resilience.[5,11,14-17] Furthermore, despite the Australian Medical Association stipulating specific work hours and trainee position availability in their *National Code of Practice*, the significant distress still experienced regarding extreme work hours and training program applications calls into question the safety and longevity of the entire medical system.[4-5,12-13,17-19] Finally, mandatory reporting has increased fear

amongst doctors when considering mental health treatment, resultantly leading to many doctors either minimising their symptoms or not seeking help at all.[3,5,20-22]

There are well-researched solutions to each of these problems available, but those in the system appear to be too busy working downstream to look for these root problems. Unfortunately, there are also feasibility issues associated with each of the solutions, given many of these issues are also complicated with their own upstream factors – one only has to ask why to recognise this. For example, on the issue of reduced training positions – why are there not more trainee positions available? Likely, it is because there is not enough money to fund more positions – why is that?[4] Likely because there is limited money in the state health budget, which needs to be distributed equitably across the entire system.[4] Therefore, whilst solutions exist, the upstream factors hindering their implementation also need to be addressed alongside their consideration.

As a medical student, I have experienced suicide firsthand. At least one UQ medical student has lost their life each year I have been in the program, one of whom was a very close friend. From my personal experience, I have not heard of any other UQ cohorts who have experienced such great loss within their communities. Furthermore, the evidence shows this is virtually unanimous across medical schools, as well as the medical profession as a whole. As a cohort of people, we in the medical community have dedicated our lives to helping other people. What must be considered however, is how we need to first help ourselves, in order to efficiently and safely help others. We need to move beyond the system where suicide is expected. We need to address what is going on upstream and fundamentally fix a broken system. We need to head up the river.

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