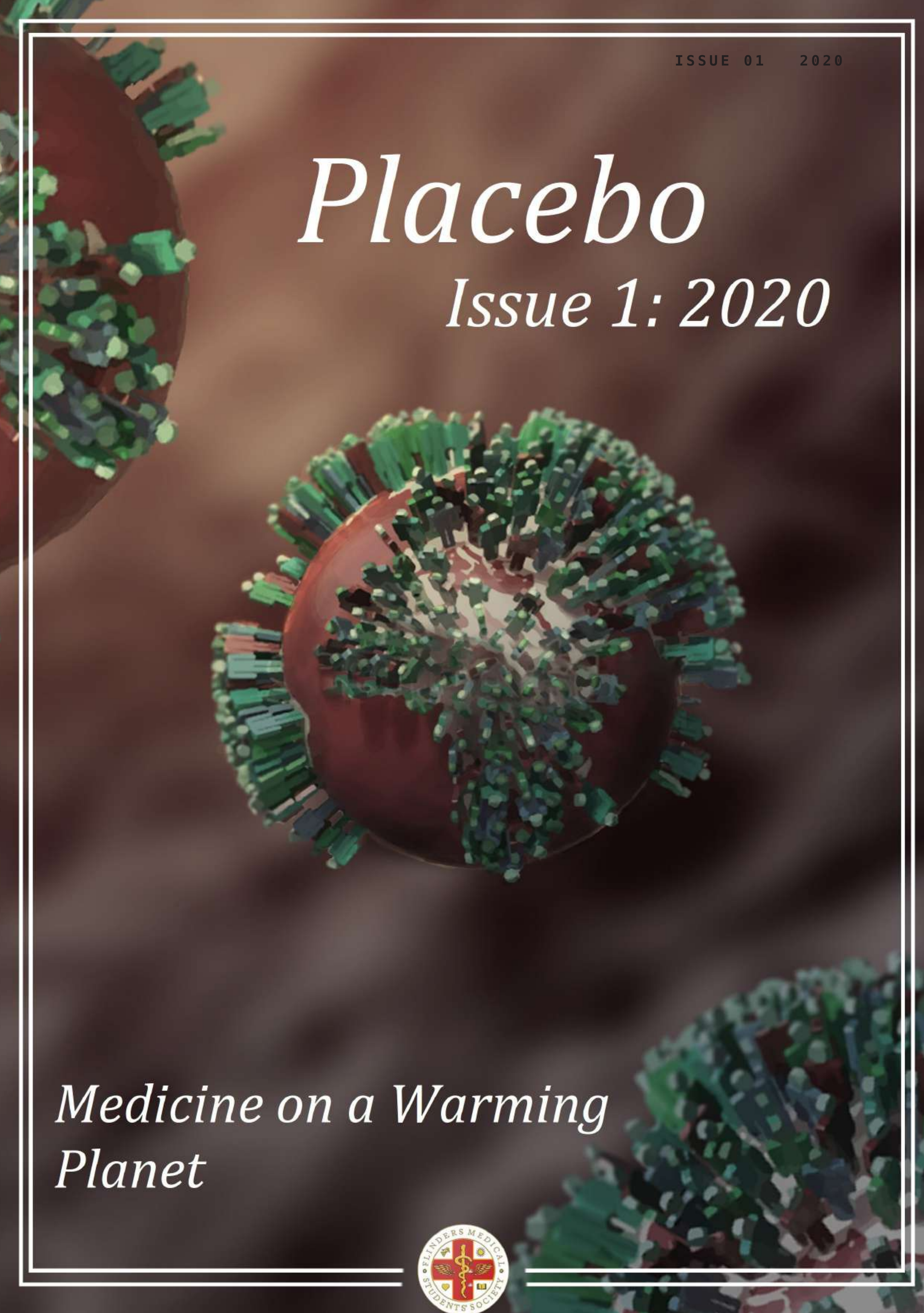
ISSUE 01 2020
Placebo
Issue 1: 2020
Medicine on a Warming Planet

2020-ISSUE 01

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FROM THE PUBLICATIONS TEAM

Ramy and Minjoo

Welcome to the first issue of Placebo for 2020

What a time to be alive. We hope you all find yourselves doing alright during this peculiar time as we slowly start returning to our "normal" lives. It has been such a rough time for many of us – being isolated from our friends, stuck at home, wondering why do I have no motivation to do anything and some people have friends or families who were directly impacted by the pandemic. We just want to let you all know that you did well and are going to make it through.

2020 so far has reminded us how close our lives – especially within healthcare – are related to environmental health. Let us please recognise that whilst COVID-19 is a global talking point for environmentalism, we had one of the worst Australian bushfire seasons on record. There has been global outcry on the topic of climate change long before this Pandemic.

As we have witnessed with our own eyes, the consequences of climate change and effects to public health are the realities that we, as doctors, will face one day. We hope our first issue of the year could help us to remember this time and its significance in medicine as well as remind you that you are not alone during the ups and downs of MD.

We would like to show appreciation for everyone who has contributed to this issue, even during such a hectic time. All the contributions are deeply appreciated and valued by our team, thank you all for your hard work!

Aside from all the contributors we would also like to extend a thanks to Harry Gaffney and Josh Hassan from Marketing for all their hard work in putting this issue together.

Let me finish with an acknowledgement of the Kaurna people, who are the traditional custodians of the land Flinders University is built upon. We recognise their continuing connection with country and pay respects to Elders both present and past

Your 2020 FMSS Publications team, Ramy and Minjoo.

Ramy Robin: Publishing Director

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STATEMENT FROM THE COVER DESIGNER

With the theme of this Placebo magazine being about the Environment and Medicine, I wanted to design a cover that reflected this relationship in its current landscape of COVID-19 and social distancing, along with provoking some thought into globalisation and our individual and collective effect on the world and environment. The design attempts to explore contrasting isolation and interconnectedness in parallel with the health of an individual and the health of the public – and its ever increasingly interdependent nature.
- Midhin John

Harry Gaffney: Marketing Director
(Placebo Co-Designer)

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RESPONSIBILITY

The climate is warming up. Why does this matter to healthcare? More heatstroke cases? A few more respiratory conditions flaring up? Is there more to it, and will it even be noticeable? We should notice it, and the only reason we may not is that its effects will be unequally felt across different demographics. Those in prone areas and with fewer resources will feel a greater burden. Climate change might not threaten large Australian cities yet, but our rural communities are already feeling the strain, from climate change-related natural disasters and the resultant economic anxiety.

This year, we saw fires, people from Mallacoota fleeing to the shoreline to escape the flames. For years we've had Torres Strait communities plead for federal funding to construct sea walls to stop erosion claiming their shoreline. There is a documented elevated prevalence of suicide in rural communities that has been linked to the economic woes. Climate change has made droughts longer and more severe, and this will only hurt rural economies.

Both climate change's general trend and the volatile weather it induces threaten air quality, food security and livelihoods. These are some of the factors that will exacerbate the causes behind mental illnesses, deaths from respiratory conditions and vector-borne diseases such as the novel coronavirus known as COVID-19. People want these challenges addressed, but rapid change is costly.

Each small step forward has been staggered to slow a move from last. The Carbon Pollution Reduction Scheme was repealed at the last change of government. Credits awarded to Australia for overachieving reductions in emission in 1991 are now being used in recent years to mask our inaction in achieving recent greenhouse gas cutbacks. The current pandemic has shed a light on how willing we are to confront a health crisis in front of us, yet how inattentive our policymakers are to less visible challenges. Any move to solve climate change will reward future governments and not the sitting government that wears the cost. But does that make inaction excusable? Our current heatwave season has accounted for 1100 deaths a year, while the political ructions over climate change policy (the issue has seen off four prime ministers in ten years) have led to us being dubbed the coup capital of the democratic world.

What can medical workers do in terms of practising in a climate-conscious way? Moving towards primary level care. The proactive measures we lable as preventive care should be increased because hospitals are hugely resource-intensive institutions. Managing almost every condition at the lifestyle/GP level is preferable.
For those that do need to go into hospitals, wastage should be reduced, even given the high use in medicine of single-use materials. Medical personnel will use and dispose of entire kits because they need one instrument, to ensure sterility. I am not suggesting we cut safety standards, but there is a notable lack of effort. Even accounting for biohazardous material, it's still estimated 85% of recyclable hospital waste nationally goes into landfill. If we are pushing other industries to operate more environmentally, why should the medical field be an exception.

Construction is experimenting with things like "green concrete", a much lower emission substitute. They are changing the surfaces 183-tonne planes lands on – a high-risk situation no less technically exacting than many procedures in modern medicine. Why don't we seek alternatives both in the materials we use and the protocols of how we use them? Anaesthetic nurse Darren Bradbrook has had an enormous effect at changing how waste is managed at Flinders Medical College. Over two thirds of our operating room waste is now being recycled. Just because safety is paramount does not mean we can't make an effort to be resource conscientious. Many of us will leave Flinders to work elsewhere. I think that it's important that if placed in an unyielding environment, where others believe their purpose is above making an effort, we correct them.

Above: "There is no planet B" by Markus Spiske

Stepping back, I do not for a moment contend that the healthcare industry is a big player in causing climate change. It is however important to lead by example and turn away from being a high waste profession. What we do will largely be symbolic, but as climate change impacts our patients, we could hope our small actions could spur real action from legislators. The Australian Medical Association and a dozen or so other speciality colleges have made environmental declarations that need to be followed with greater lobbying efforts. Pressure needs to be applied on how we generate power, what innovations we sponsor, and how we discourage or criminalise pollution.

It's important to consider this impact beyond Australia. Take something as simple as food security. We might suffer weather events that raise the price of bananas to that of avocados. In Australia, these are not for most people matters of life and death. But currently, millions already go without clean water and are malnourished. Rising prevalence of inhospitable weather patterns will only increase those figures. That rise in climate caused death ought to concern those of us residing in developed nations. Again, the effects of climate change will be unequally borne by those who did little to cause it, and have less ability to reverse it.

Inaction will become less of a viable option as we see more poor health outcomes. But it is my hope change comes sooner, for less of a cost to our future. Climate change will impact how well people can stay healthy. I again want to thank the many contributors to this issue of Placebo. It is my hope they will stimulate your thinking on how we consider how relevant we should believe a warming climate is to wanting people to stay healthy.

Written by Ramy Robin

WELCOME TO PLACEBO

Liam Ramsey – FMSS President 2020

Welcome to Placebo! A reflection of the creative and analytical talent of our FlindersMD cohort and the best student led publication at Flinders (in my humble opinion).

The central theme of this issue of Placebo is change. It's a theme that Flinders students have become very accustomed to. We are a progressive University; the curriculum reflects that and that be really challenging for students.

Change challenges us in how we view set points. How we make cognitive allowances for ourselves and forces us to think dynamically rather than in absolutes.
This year, again, has been full of change. Corona has enjoyed around the world trip, unlike me who has had mine cancelled. I'm not quite over it yet if you can tell. However I have been happily distracted by our fantastic new MD1s, Clin Scis and old faces.

In stellar fashion we welcome our enthusiastic and fresh faced first years into the Flinders MD family. Thankfully we got to meet them all over many a free lunch, a few
nights out and a Medcamp to (not) remember. We are so proud of the MD2 team in FMSS that organised O' Week and MedCamp. It is certainly, for me reflecting on my four years in the MD, an absolute highpoint.

Changing leaves - Chris Lawton

Mentorship cracked on and we had an oversupply of older students eager to nurture the new students' minds. I was in second year when Mentoring was introduced by my Presidents pass, Stephen McMannis and Mekha John. They were so proud of the initiative. At the time the course was enduring even bigger Scandinavian- flavoured changes and staff restructuring. Mentoring was created to fill a cultural hole the students were feeling. Now two years on, it's becoming evident that change is inevitable, and we should be proactive rather than re-active. Environments heavily impact how we behave, so ensuring that we create a caring, empathetic and tight knit culture amongst the MD makes us stronger and more resilient.

Each year level faces their unique challenges. FMSS has tried to enhance the student experience and respond to this as they arise. Undoubtedly the MD1 cohort hasn't had the experience they expected, with crucial time together lost. But this can be made up, and FMSS, with the other special interest groups will have a cracking social calendar once Miss Rona moves on. MD2 are seasoned veterans now, PAL, Mahara and learning cycles form a unique vernacular they share with themselves and some European Universities. While some practical components of their course have ceased, I have no doubt they will catch up once University returns. MD3 and MD4 stayed on placement and witnessed fantastic leadership by senior doctors, and also the effect of uncertainty and anxiety on even the most experienced doctors. It's been a massive learning curve for the entire cohort, but we not only survived this change, but began to thrive, evidenced by the multiple initiatives we have seen our students, SIGS and FMSS implement, I am so proud.

As university begins to return, I hope we can use our little time left in isolation for reflection and make the most of it. The experience has been cathartic for some, and
terrifying for others. We need to be kind to each other and ourselves as we transition
back to normal lives, including University. This kindness should extend to university
staff members who themselves, in this rapidly

Life is a succession of choices - Javier Allegue Barros

changing environment have provided stability for uncertain students.

I would like to ask you, the reader, a question about change. You will likely undergo significant reinvention over the following four years of the MD. How do you define yourself in the face of change? What is dynamic and what is static, what is you and what is a reaction to your environment? Self-reflection can be invaluable in the face
of uncertainty, something as a student and doctor you will learn to live with. I hope you enjoy reading this issue as much as I will. It's a celebration of the diversity in our cohort and I'm so proud of this issue and all the students that have contributed
to it.

As always,
Stay connected.

Different reading styles - Mark Williams

PHYSICALLY SEPARATED BUT UNITED TOGETHER

"I would like to acknowledge that this is a tough time for all of us and that it is okay to not come out of this awwwn artist or equipped with a new language."

Matilda Smale – FMSS Senior Vice President 2020

Hi everyone, welcome to 2020 – what a funky start to the year we have had!
My name is Matilda and I am the Senior Vice President for 2020 which marks my fourth and final year as a committee member of FMSS. My time on FMSS has brought me so many wonderfu opportunities which have helped me develop as an individual and whilst I didn't think that any of us envisioned our year beginning with a pandemic, I have been trying my hardest to focus on the good
things that we can take from this unpredictable experience.

For me personally, I have been able to observe exceptional leadership skills from individuals in South Australia like Dr Chris Moy, Professor Jonathan Craig and Associate Professor Rosalie Grivell (to only name a few). It has also helped me to fully acknowledge that sometimes things are well and truly out
of our control, which has been really hard for me! Like many of you, I too have experienced the grief of my year not looking like what I had planned but I think this experience brings so much opportunity for personal growth.

I would like to acknowledge that this is a tough time for all of us and that it is okay to not come out of this an artist or equipped with a new language. I would particularly like to extend support to our 2020 MD1 cohort who have experienced disruptions to their studies very early on – I am incredibly confident you will come out of this a strong and cohesive cohort! To our international and interstate students, I cannot even imagine how this time has been for you, being away from your family and friends. I want to reiterate that your Medicine family is here for you.

Some of the positives which I will take away from this:

Connecting and checking in with our loved ones regularly – how good is Zoom?

Exercise and getting outdoors

Being grateful for what we have! How good are all the hugs, brunches and get togethers going to be when this blows over? I personally will be putting down my phone, reminding myself to be present and probably never saying no to dessert or another glass of wine when offered ever again.

Technology – never have I been so grateful for phones and computers which have been used
to deliver us our university education, connections with family and friends, gym classes etc

Research and innovation– how amazing are humans when we put our minds to work towards a common goal?

Community and connecting with those around you whether it's a simple hello on your local walk, supporting a local business or our wonderful #reachouttofmss campaign.

Leadership – on a local, state and federal level – the leadership demonstrated in Australia is admirable.

Finally, a massive thank you to our wonderful FMSS 2020 committee who have persevered and found creative ways to engage with each other and our members.
I look forward to the day we are all back in the medical library occupying your usual desk (we all had one in MD1/MD2) and the common room is bustling again.

Matilda.

CHANGING THE STUDENT DYNAMIC

Kritika Mishra – FMSS Vice President Internal 2020

The Roaring Twenties were a period of dramatic and energetic social, economic, and political change. One-hundred years later, whilst anticipating a similar roaring start to the new decade, unexpectedly we find ourselves in perhaps the most challenging years for humankind. After all, 1.5 metres is a long way away. However, despite the struggles we have encountered, 2020 has made us increasingly aware about the power of human connectivity in our dynamic world.

It is amazing to see how communities have evolved to support each other. We have seen people forming orchestras by playing music on their balcony every evening, neighbours filling the streets to applaud cancer patients returning home after treatment, grandparents meeting their newly born grandchildren through windows, and we have seen an unseen appreciation for our unsung heroes, Retail workers, cleaners, teachers, emergency services and of course, healthcare workers.

These events demonstrate the ability of humans to adapt to difficult circumstances to demonstrate healing, not through medicine, but through community. This unity and togetherness extends to our own medical school. Initiatives such as #ReachOutOfFMSS have brought Flinders Medical Students together on social media, where each day we engage our members in activities to support their mental health, hobbies and talents, fitness and wellbeing and education.

In the face of a global pandemic, inevitably, healthcare has evolved to deliver the best quality of support to patients and their families, but this has not been without sacrifices. Whilst many of us have found creative avenues to ensure togetherness, this time has perhaps been the most challenging for our frontline healthcare workers, many of who have isolated themselves for their profession and their oath to help others.

Observing their exceptional work and professional commitment has certainly inspired me to ask myself what kind of medical practitioner I seek to be in the future and who I will emulate. Likewise, this issue of Placebo encourages you to consider how you will evolve and adapt as a medical student and practitioner in our changing environment. Ask yourself, what is your vision, what will be your footprint and what do you aspire to do? And sometimes, inspiration is closer to home than we expect. For example, I have been inspired by superstars in my own cohort who, whilst being full-time university students, have been working as paramedics, pharmacists and physiotherapists to ensure health services are not understaffed, all whilst maintaining a positive attitude. If this is not selflessness, then I don't know what is.

As we strive to become the best possible health practitioners, we bury ourselves in textbooks, Osmosis videos, AMBOSS and peer teaching notes. It is in the hope that one day we can be the type of hero that better;s someone's life and mirror the actions of those who we now look up to.

It is important however to remember to take off the cape, be kind to oneself and reflect on achievements; no matter how big or

small. Maybe today you correctly identified all the anatomy of the upper limb, or maybe you still haven't been able to remember the contraindications of that medication, but know that you are working towards it. If it weren't for the efforts you put in today then you would be a less competent and capable version of your future self.

When I imagine the qualities that each medical student embodies, they are those of perseverance and tenacity. However, looking more closely at the attributes of my friends, I would say that kindness, generosity, selflessness, and support are values we consistently foster in our medical school.

At Flinders, in our unique cohort, there is always someone to reach out to. Maybe a block test didn't go to plan, perhaps you couldn't answer a consultant's question correctly or forget to tell the patient to breathe through their mouth when auscultating their lungs. This atmosphere of understanding that working together and supporting one another rather than competing, is a quality seen in and respected by all Flinders medical students. Thus, yet another teaching COVID will leave behind is our need for each other to get through this tremendous journey – something no lecture or practical could teach us.

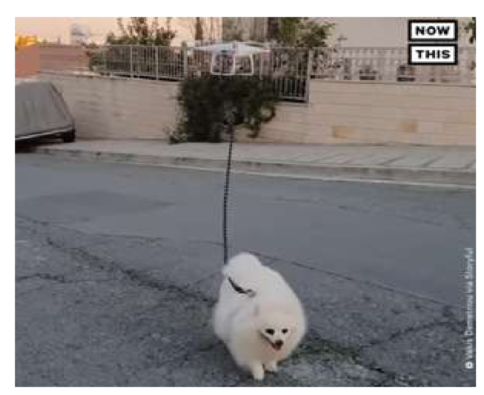
So, as I think about all the things I have learnt about myself, my friends and our community this year, I think it would be unfair to say that 2020 hasn't been a 'roaring' year. Perhaps, it has, just in an entirely different way than what I had expected. Hence, regardless of the changes we are subject to, we can make this decade whatever we want it to be. So, let us get off our feet, because there is more to do and learn than ever before. What better incentive could we ask for?

- Kritika Mishra FMSS Vice President Internal

Green field - Andre IV

Photo by - David Levêque

CHANGING TECH, CHANGING MED?



Yuze Zhai – FMSS Vice President External 2020

In Japan, a dozen robots dressed in graduation caps and gowns make their way onto the podium for a university graduation ceremony with students dialling in from the safety of their homes. In Italy, hospital robots are helping doctors, nurses and family members to interact with sick patients from a safe distance. In Cyprus, a man walks his dog with his drone amidst the stay-at-home restrictions. These are just a few of the many ways in which robots have been used during the COVID-19 pandemic.

When I learnt that this issue's theme was Medicine and our environment my mind immediately 'zoomed' to the topic of how technology and artificial intelligence have thrived in assisting in every aspect of life during this global pandemic. And why wouldn't this be the case? After all, our biggest enemy at hand - these inanimate, intracellular parasites (viruses) have not yet found a way to penetrate the aluminium and stainless-steel outer shells of our best robots. Specialised robots are disinfecting rooms, delivering hospital meals and prescriptions, and assisting in handling the surge in patient numbers in countless hospitals across the United States. In fact, this fancy schmancy new technology that I speak of aren't such a foreign concept – think Automated Guided Vehicle meal trolleys at the new Royal Adelaide Hospital! Importantly, these robots have helped to balance the extra workload and helped limit the amount of direct contact that healthcare workers have with patients, thus reducing the risk of infection.

When exploring this topic, it is easy to get caught up in the cynicism of robots taking over and imagine a 'Wall-E'-esque dystopian world where mankind will eventually grow into a bunch of lazy, fat lotus-eaters. Or even, the more rational fear that one day all our hard- crammed knowledge will be rendered useless as robots eventually take our jobs. But in reality, how likely is this all going to happen?

I recall a scene from 'Hidden Figures' when an astronaut says in reference to a computer: "You can't trust something you can't look in the eyes". He's right. How do you trust something that can't interpret actions, tone or feelings? Machines are here to assist humans in performing tasks that humans can't do or can't do safely, like the use of robots to enable teleoperation in hospitals during this pandemic. There is something uniquely human about the need for connection with one another that machines simply cannot replace. Imagine talking to a machine about how your day went – would that make you feel heard?

In the face of this global pandemic, it is incredible to see the compassion and generosity that people possess. The ability to adapt to difficult circumstances and show support for one another is something innately human that robots will never acquire. From frontline workers to our very own lecturers, I have been inspired to see people putting in countless hours of work behind the scenes for the benefit of others.

At last, I leave you a quote from one of my favourite lectures in the MD course, to shed some perspective on how we all should strive to adapt in face of adversity:

"Life throws curveballs at all of us on a continual basis, and in many ways it's how we react that defines us going forward."– Dr Dusan Matusica

BURNT OUT

I spent my summer in my hometown, Moruya, on the Far South Coast of NSW. What I thought was going to be weeks of going to the beach, working at the local pool, spending time with my family and relaxing, ended up being weeks spent under siege from the NSW bushfires. I am not writing to you to get political, rather, I am here to get personal. On 31 December, around 3am, I woke up from a sudden wave of heat that blew through my open windows. My stomach dropped when I peered outside. The horizon was glowing orange. While this
fire was still at least twenty kilometres away, it was so huge and so fierce, I could see its flames bursting into the sky. Unsure of what to do, I went to wake up my parents like I was having a bad dream – something I have not done since I was ten years old. But they were awake too, they were watching another fire (this one was south-west of us) through their window. I said, “Don’t [our friends] the Coppin’s live out that way?” and Mum just nodded, trying not to think of the worst. I stood by the window for at least 20 minutes, unable to comprehend what I was watching. This night is burnt into my mind because it was the first time in my life that I had truly felt unsafe. With strong north-westerly winds and temperatures above 40 degrees, the bushfire was burning down the coast at an emergency level. By 9am, all roads leading in and out of town had closed, electricity was out, the riot squad had been called to the local supermarket, the local ABC Radio Emergency Broadcast had been lost (the tower burnt down) and the only mobile phone provider working was Telstra. In other words, it was too late to leave. The panic was insurmountable as thick smoke flooded our sky.

The view of the Clyde Mountain Fire from the Moruya River on the morning of 31 December.

Evacuees stranded on the beach at Batemans Bay on 31 December.

By now, residential areas were burning. Firefighters were explicitly instructed to “defend lives, not homes”. Thousands of people were stranded on beaches, with nowhere left safe to be evacuated to. While my home was not in direct danger, we had to remain vigilant. Burning embers can ignite new spot-fires many kilometres ahead of the fire front. With telecommunications down, we did not know what was happening or where the fire was. We just had to wait

The NSW Government declared a third State of Emergency on 2 January, ahead of worsening fire conditions predicted for the weekend. All tourists were ordered to immediately leave the area and were escorted out in convoys. Those who did not live in the immediate townships were strongly encouraged to evacuate their homes and take refuge. Our original plan was to ‘stay and defend’ but after hearing the horrific stories of New Year’s Eve, there was really only one choice and that was to leave.

So, we spent the next 3 days reducing the fuel load around our house, essentially chopping down 20 years of gardening and landscaping. All the while, you could literally see the fire creeping its way over the northern ridge lines. Art was removed from the walls, photo albums were boxed up and we each packed a bag of clothes. My parents also loaded the trailer with all our camping gear. If we lost our house, we would need somewhere to sleep. And that was it, that was all we were taking. When it comes down to it, a house is just a house and things are just things. We put up a sign on the front gate, “STARMER, NO ONE HERE, 4000 litres beside shed”, then, we drove away. That weekend was honestly one of the worst experiences of my life. I am not exaggerating when I say that life felt like a warzone and my hometown was turned into a refugee camp. While over 9000 people had checked into the three evacuation centres, the scenes there were too depressing for a lot of people to cope with.

That weekend was honestly one of the worst experiences of my life. I am not exaggerating when I say that life felt like a warzone and my hometown was turned into a refugee camp. While over 9000 people had checked into the three evacuation centres, the scenes there were too depressing for a lot of people to cope with.

The Showground was used as the Evacuation Centre in

Instead, many camped jam-packed, in the park beside the river. I was one of forty people living in my Dad's medical practice, along with ten dogs, a cat, and a bird. Along with the fire trucks and police cars, there were also army personnel roaming the streets. January 4 was a forty-degree day but there was no power for air conditioning or fans. We spent most of the day, along with the rest of the town, cheering on the three waterbombing planes as they refilled from the river. By 5pm, the fire was so close that the sky had completely blackened, and you could taste ash in the air. Although, we were lucky, the southerly wind change came early and pushed the fire away from us.

We were safe, at least. I have described to you just one week of my summer. It took 74 days to officially extinguish the bushfires. This experience challenged me in a way that I am still yet to come to terms with. For weeks, we lived in survival mode. Every night, we parked our cars on the front lawn and left the gates open for a quick getaway. We lived out of suitcases. The walls of our house remained empty. As more and more of our friends' homes and businesses fell to the inferno, we were always wondering if we were going to be next. The wait was torturous, I actually wished for the fire to come. We were never going to be truly safe until our property burnt. The statutory Bush Fire Danger Period (BFDP) usually begins on 1 October, but for many Local Government Areas (including my own), the 2019 - 2020 BFDP commenced on 1 August 2019 and continued until the last fire was officially extinguished on 4 March 2020. While Australia's "Black Summer" was unprecedented, it is important to realise that it was in no way unexpected.

The smoke of the bushfire left us in complete darkness at 7PM on a midsummer's night.

Back in 2008, PM Kevin Rudd commissioned a review to examine the scientific evidence around the impacts of climate change on Australia and its economy. The Garnaut Climate Change Review predicted that without sufficient action, "fire seasons will start earlier, end slightly later, and generally be more intense" and that "[this effect] should be directly observable by 2020". For months, before and after the Federal Election, twenty-three former fire and emergency leaders tried to schedule a meeting with the Prime Minister to warn of, and prepare for, the impending bushfire disaster. But their urgency was ignored and trivialised. What were the consequences for not heeding years of expert advice? For my local area, the Eurobodalla Shire, approximately 80% of the landmass was incinerated. For reference, the comparative area of the Eurobodalla Shire and Greater Adelaide is 3428 km² and 3258 km², respectively. Almost 500 homes were destroyed, a further 280 were left damaged and more than 1230 additional facilities and outbuildings were lost or ravaged. And that is just the physical damage. As we come out of survival mode, we are forced to come to terms with the devastating reality of the situation. Unless there are global reductions in greenhouse gas emissions, temperatures will continue to rise, increasing the risk that catastrophic bushfire conditions become Australia's "new normal". While a bout of torrential rain extinguished the last of the NSW Bushfires, my area is still in drought and the threat remains.
That thought haunts me, does it haunt you?

Written by Isabelle Starmer

GLOBAL HEALTH IN A WARMING CLIMATE

Dr Katya Glogovska, MBBS

(University of Adelaide Graduate),

FRACGP. GP at Hindmarsh Bowden Health Clinic

Recent global events have demonstrated that our health is inextricably linked to the natural envi-ronment. Since the industrial era, the burning of fossil fuels and clearing of native vegetation has driven the world's carbon cycle towards an excess of greenhouse gases which trap heat in our at-mosphere. This has multiple flow-on effects including increased intensity and frequency of heat-waves, bushfires, droughts, hurricanes and floods. A rise in average global temperatures will also increase the spread of vector-borne diseases and threaten global food and water supplies. (1, 2)

It should come as no surprise therefore that climate change is regarded as the biggest health threat of the 21st century. (2, 3, 4) Furthermore, air pollution due to greenhouse gas emissions kills an es-timated 4.2 million people worldwide each year by contributing to respiratory, cardiovascular, and malignant diseases. (5, 6)
As we have seen with the COVID 19 pandemic, global health systems are not prepared to respond to an increased burden of new diseases. Measures to reduce the spread of the current pandemic will have unprecedented negative outcomes for the global economy. Sadly, we expect more pan-demics and natural disasters in coming decades, as a result of climate change. If the next generation is to survive the impending climate crisis, we must act now to limit global warming to 1.5 degrees. The 2019 IPCC report has shown that the next 10 years will be the critical decade when we must stop burning fossil fuels and transition to renewable energy. (7) The eco-nomic impact of transitioning to renewable energy today is a drop in the ocean compared to the economic threat that climate change will pose over the next 50 years. We must also safeguard our health systems and primary emergency response services against the impending flood of natural disasters and infectious diseases that are expected in coming decades. (7)
Unfortunately, our current leaders are not preparing us for what is to come. Each time we \face an unprecedented new level of natural disasters, the response we get is "We have always survived bushfires, heatwaves and floods. Keep calm and carry on".
We have to ask ourselves, why do our politicians advocate to continue fossil fuel burning when they know, without any reasonable scientificdoubt, that it will lead to human suffering and economic col-lapse?
The only explanation is that politicians, along with mainstream media companies, have strong vested interests in the fossil fuel industry. (8)
The global fossil fuel industry will only end if shareholders, organisations, banks and individuals stop investing in it, and choose to invest in renewable energy instead. The choices we make as con-sumers, investors and voters in the next decade, will make a huge difference to global tempera-tures. (9)
As medical students and doctors, our time is precious.

(13)

> *...the response we get is "We have always survived bushfires, heatwaves and floods. Keep calm and carry on."*

A lot of us feel that we don't have the time or energy to advocate for action on climate change, or to change our daily practices. In reality though, it is easy to make a difference. Here are some steps you can take:

- Switch your bank: If you're with one of the major banks, open an account with a bank that does not invest in fossil fuels (11, 12)
- Switch your electricity provider: to one that offers a 100% renewable energy option

- Switch to Ethical Super: Most of you will be working for SA Health and will therefore use Super SA, but you can switch within Super SA to their Socially Responsible option. If you move into private practice, switch to an ethical super fund instead (14)
- Vote For our Future: At the next election, vote for politicians who will take meaningful action on climate change. Don't be fooled by political spin, make an informed vote (15)
- Commute by bike, bus or EV: Private transport contributes to 18.8% of Australia's greenhouse emissions. Consider riding your bicycle when you can, catching public transport, or if you have the money, invest in an electric vehicle. (16, 17)
- Reduce your meat and dairy intake: Agriculture makes up 13% of Australia's greenhouse emissions, and the majority of this is from methane, a byproduct of the meat and dairy industry. Eating less meat and dairy is healthier for you and for the environment (10)
- Plastic: Reduce your plastic use and make sure that you recycle correctly (18)
- Advocate: Talk to your family and friends about the positive changes you are making - it might catch on!
- Join DEA: Join your DEA university group, follow our Facebook and Twitter page, and take part in local actions and events when you can.

It may seem like the problem of climate change is too large and difficult, and that your contribution is minuscule, but without everyone's small contribution, nothing will improve. As doctors, it is our duty to advocate for health, and this means advocating for a sustainable healthy planet. If you want to be part of the solution, now is the time to act.

www.dea.org.au

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CORONAVIRUS IS A WAKE-UP CALL: OUR WAR WITH THE ENVIRONMENT IS LEADING TO PANDEMICS

Written by Fiona Armstrong (Executive director at climate and Health Alliance), Anthony Capon (Monash Sustainable Development Institute), Ro McFarlane (University of Canberra)

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The COVID-19 pandemic sweeping across the world is a crisis of our own making. That's the message from infectious disease and environmental health experts, and from those in planetary health – an emerging field connecting human health, civilisation and the natural systems on which they depend.They might sound unrelated, but the COVID-19 crisis and the climate and biodiversity crises are deeply connected. Each arises from our seeming unwillingness to respect the interdependence between ourselves, other animal species and the natural world more generally.To put this into perspective, the vast majority (three out of every four) of new infectious diseases in people come from animals – from wildlife and from the livestock we keep in ever-larger numbers. To understand and effectively respond to COVID-19, and other novel infectious diseases we'll likely encounter in the future, policymakers need to acknowledge and respond with "planetary consciousness". This means taking a holistic view of public health that includes the health of the natural environment.

RISKING ANIMAL- BORNE DISEASES

Biodiversity (all biological diversity from genes, to species, to ecosystems) is declining faster than at any time in human history. We clear forests and remove habitat, bringing wild animals closer to human settlements. And we hunt and sell wildlife, often endangered, increasing the risk of disease transmission from animals to humans. The list of diseases that have jumped from animals to humans ("zoonotic diseases") includes HIV, Ebola, Zika, Hendra, SARS, MERS and bird flu. Like its precursor SARS, COVID-19 is thought to have originated in bats and subsequently transmitted to humans via another animal host, possibly at a wet market trading live animals. Ebola virus emerged in central Africa when land use changes and altered climatic conditions forced bats and chimpanzees together around concentrated areas of food resources. And Hendra virus is associated with urbanisation of fruit bats following habitat loss. Such changes are occurring worldwide. What's more, human-caused climate change is making this worse. Along with habitat loss, shifting climate zones are causing wildlife to migrate to new places, where they interact with other species they haven't previously encountered. This increases the risk of new diseases emerging. COVID-19 is just the latest new infectious disease arising from our collision with nature. Due to its ability to spread at an alarming pace, as well as its relatively high mortality rate, it's the sort of pandemic experts have been warning will arise from environmental degradation. We saw this in 2018, for instance, when disease ecologist Dr Peter Daszak, a contributor to the World Health Organisation Register of Priority Diseases, coined the term "Disease X". This described a then-unknown pathogen predicted to originate in animals and cause a "serious international epidemic". COVID-19, says Daszak, is Disease X.

CLIMATE CHANGE MAKES US VULNERABLE

But climate change is undermining human health globally in other profound ways. It's a risk multiplier, exacerbating our vulnerability to a range of health threats. Earlier this year, all eyes were on the extensive, life-threatening bushfires and the resulting blanket of smoke pollution. This exposed more than half of the Australian population to health harm for many weeks, and led to the deaths of more than 400 people. For infectious diseases such as COVID-19, air pollution creates another risk. This new virus causes a respiratory illness and, as with SARS, exposure to air pollution worsens our vulnerability. Particles of air pollution also act as transport for pathogens, contributing to the spread of viruses and infectious disease across large distances.

A WAKE-UP CALL

It might be clear to readers here that human health depends on healthy ecosystems. But this is rarely considered in policy decisions on projects that affect natural ecosystems – such as land clearing, major energy or transport infrastructure projects and industrial-scale farming. The current COVID-19 pandemic is yet another warning shot of the consequences of ignoring these connections. If we are to constrain the emergence of new infections and future pandemics, we simply must cease our exploitation and degradation of the natural world, and urgently cut our carbon emissions. Controlling the pandemic appropriately focuses on mobilising human and financial resources to provide health care for patients and prevent human to human transmission. But it's important we also invest in tackling the underlying causes of the problem through biodiversity conservation and stabilising the climate. This will help avoid the transmission of diseases from animals to humans in the first place. The health, social and economic consequences of COVID-19 should act as a wake-up call for all governments to take stock, carefully consider the evidence, and ensure post COVID-19 responses reverse our war on nature.

THE PIVOTAL ROLE OF THE MICROBIOLOGY LABORATORY IN THE COVID-19 RESPONSE

Written 23rd April 2020

It started as chatter on the Twittersphere, whilst the global community was celebrating the close of 2019 (1). However, in the ensuing short months the reverberations of Coronavirus Disease 2019 (COVID-19) are being felt across all sectors of our society and to the far reaches of the globe.

Novel respiratory viruses, particularly those related to virological spill-over from animals, pose a significant public health threat and high levels of vigilance for emerging pathogens are embedded within our national surveillance systems (2). On 26th December 2019, a 41-year-old male worker of an indoor seafood market was admitted to hospital in Wuhan, China with a severe acute respiratory syndrome of an unknown aetiology (3). The sophisticated advancements in molecular microbiology and whole genome sequencing (WGS), alongside the high level of clinical suspicion, played a pivotal role in the identification and testing of this novel virus. A pan-Betacoronavirus real-time polymerase chain reaction (rtPCR) assay was positive on the patient's bronchoalveolar lavage (BAL) samples, following which deep meta-transcriptomic sequencing using the Illumina MiniSeq with de novo assembly resulted in a 29, 903 nucleotide whole genome sequence (3, 4). The viral genome was rapidly made publicly available on 10th January 2020 (GenBank accession MN908947) (5). Phylogenetic analyses identified the virus as a Betacoronavirus, most closely related to SARS-like coronaviruses described in bats and resulted in the name 'Severe acute respiratory syndrome-related

Nam Phan preparing samples for pre-extraction on the Hamilton Microlab Starlet.

coronavirus-2', abbreviated to 'SARS-CoV-2' (3, 6). Following the publication of the SARS -CoV-2 viral genome in the public domain, there has been rapid international collaboration to develop highly sensitive and specific laboratory detection assays. Indeed, a preliminary rtPCR protocol with suggested first line and confirmatory targets was made available a mere three days later on 13th January 2020 by the World Health Organisation (WHO) (7, 8). Nucleic acid testing by rtPCR on respiratory samples is the preferred method of diagnosis, as through logarithmic amplification of DNA, the direct detection of SARS-CoV-2 in a patient sample is possible.

As the South Australian Public Health Reference Laboratory and with significant expertise in virological testing, SA Pathology has been able to respond with great agility and speed to the public health threat of SARS-CoV-2. Indeed, as many South Australians were enjoying the dwindling days of summer, the scientists and microbiologists of the Microbiology and Infectious Directorate were working hard to develop and optimise an in-house assay for SARS-CoV-2, as well as securing the required reagents and testing equipment. This saw SA Pathology test their first sample on 31st January 2020, within weeks of this novel pathogen being described on the international stage. Since then, the in-house assay has been further refined and respective SARS-CoV-2 targets introduced into the multiplexed respiratory assay to maximise throughput. In addition, further testing platforms including the Roche cobas® 6800 are being utilised to enable a surge response to testing.

Rapid laboratory detection has been and will remain a cornerstone for control and containment of SARS-CoV-2. It permits swift case isolation and screening of contacts, with containment of disease clusters. Within South Australia, the effective collaboration between SA Pathology, public health authorities, Infectious Diseases Physicians and the general medical community has facilitated the rapid response to the COVID-19 imperative.

Michelle MacArthur performing sample preparation and loading of the Cepheid GeneXpert SARS-CoV-2 cartridge onto the GeneXpert platform.

“SA Pathology has been able to respond with great agility and speed to the public health threat of SARS- CoV- 2.”

THE PIVOTAL ROLE OF MICROBIOLOGY LABORATORY IN THE COVID-19 RESPONSE CONT.

To achieve the minimum possible sample turn-around-time, SA Pathology has worked innovatively to implement significant changes in workflows to ensure the testing pipeline is as streamlined as possible. It has involved a whole-of-workforce team approach within SA Pathology, from sample collection to test resulting. Dedicated collection centres, including 'drive-through testing' stations and an SA Pathology home specimen collection service (9, 10), have facilitated optimally collected samples with efficient use of personal protective equipment (PPE) and expeditious courier transport. Within the laboratory, the virology scientists and technical staff systematically and diligently ensure each test run is accurately performed and reported, with testing only pausing in the early hours of the morning. An excellent in-laboratory turn-around-time for SARS-CoV-2 testing of approximately 17 hours has been achieved. In coming weeks, the Cepheid GeneXpert® will be deployed around the state. The GeneXpert will provide a rapid testing solution for regional laboratories, with an automated rtPCR in a single cartridge and results available within one hour.

SA Pathology has been a leader with regards to broad community testing, with testing for SARS-CoV-2 being performed alongside standard respiratory viruses on all samples from symptomatic patients since 4th February 2020. This has provided a valuable breadth of information on the epidemiology of COVID-19 in South Australia. Indeed, South Australia has the highest testing rates per capita in Australia (3.08% of the population tested to date), with Australia having one of the highest testing rates internationally (11). Such widespread testing has contributed to the estimated case detection rate in South Australia of above 90% (12), which in turn has assisted in limiting community transmission in South Australia (11, 12). The COVID-19 experience highlights the importance of the public health laboratory in the provision of state-wide testing of emerging pathogens of public health concern.

A global pandemic of this scale also demands innovative research into novel laboratory detection methods and with research a cornerstone of SA Pathology's mission, the organisation is well placed to respond to such a challenge. We look forward to the work of Professor David Gordon into serological assays, and Drs Chuan Lim, Teddy Teo and Morgyn Warner on the diagnostic utility of saliva specimens. As this piece is being written, Australia is entering the next phase of its response to COVID-19. Without a vaccine imminently available, a broadly susceptible population and only a preliminary scientific understanding of acquired SARs-CoV-2 immunity, the SA Pathology Microbiology Laboratory will remain a central component of the South Australian public health response through ongoing disease surveillance and diagnosis.

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Nam Phan loading samples for nucleic acid extraction on Roche MagNA Pure 96

Written by Dr Susan Harch, Infectious Diseases and Microbiology Advanced Trainee on behalf of the Microbiology and Infectious Diseases Directorate, SA Pathology, South Australia

Correspondence: Susan Harch, susan.harch@sa.gov.au

TEMPORY MORGUES- AN UNCOMFORTABLE PHRASE

I'm not a journalist nor am I an experienced writer, but the evolving effect of COVID-19 (Covid) drew me to express my thoughts; I hope they likewise stimulate yours.

~ Dichotomy ~
The journey of the virus has been evolving quickly and similarly, so has our response. On a global scale, we think on a weekly (in some cases daily) basis. Prior to this, I had plans; we all had plans. Covid didn't care though. It didn't care about the lost wedding days, nor the thousands of miles separating people – Covid came and everything about it has sucked.

Despite the hardships brought with the virus, it has provided us with an opportunity to demonstrate the human spirit.
As an MD2 student, studying from home has introduced challenges for all parties, with a shared desire for normality felt practically everywhere. In general, pre-clinical students lost valuable resources, whilst gaining safety; whereas the clinical years initially felt caged by the wards that were being romanticised by others. Time has passed and, although divided, we all collectively feel the academic cost of the virus. But we're just a stream of a larger river; if anything, our positions provides us the unique opportunity to truly see
where the greatest sources of hardship are. People are dying, but those living have suffered and continue to do so. I can't remember a time when the streets were this quiet. Distanced from the chaos, a sense of peace can almost be felt as skies clear and front yards are cleaned. This tranquillity can't deter from our understanding that it was achieved on the foundations of unemployment, sorrow and fear. Inside these clean houses sat 1000s of people who had lost their jobs, some embracing the time off whilst others worried looking forward. Those in work, while maintaining threads of normality, were put in harm's way for the betterment of others. In the beginning, those working were envied when, ironically, they'd rather be home.
Time passed and anxiety evolved into restlessness. We're becoming sick of being isolated, with the media complimenting this change in mindset. This incontrast to the messages of fear plaguing us 5 weeks earlier.

~Pain~

With remnants of normality returning in Australia, the threat of the virus seems more distant; but the pain of the virus remains loud globally.

The news has provided a source of connection whilst introducing us to horrors previously unimaginable. Millions have been diagnosed and thousands are dying, many alone and separated from their loved ones. From the comfort of my home, I sit and read in anguish about the pain and desperation abroad. “Temporary Morgues” is a term I’ve both learnt and heard more than I ever thought I would. As a student I feel powerless to help, but as a future doctor my heart breaks for the pain being experienced by patients, families and staff.

Hospitals have been working in the face of danger, tirelessly saving, while unfairly losing many as well. The virus hasn’t discriminated; rich or poor, young or old, us or them... Covid hasn’t cared.

People may have lost weddings, but many have lost a lot more.

The voice of Covid has been deafening.

It has silenced the voices of those still suffering from fires.

It has silenced the prayers of families in grievance.

It has silenced the calls other calls for help.

The virus has (necessarily?) grabbed focus and disregarded all those dying in between – In the space of 5 weeks, a fever and cough became more alarming than chest pain on exertion.

While those suffering in city hospitals has been the focus, it’s important to remember that Covid has compounded pain for some. Rural communities decimated by horrific fires not even months ago have not spontaneously recovered, rather additional pressures placed on them.

We’ve been given so many stats, which is paramount on a large scale; but I think it’s equally important to recognise the pain/suffering on an individual level (something stats can’t capture).

~Hope~

Last year, spending a week learning rurally, our GP (Dr Pradeep Vijayanand) told one of the patients“ pain should be respected and learnt from.” Covid has taught us similar lessons, some more immediate than others.

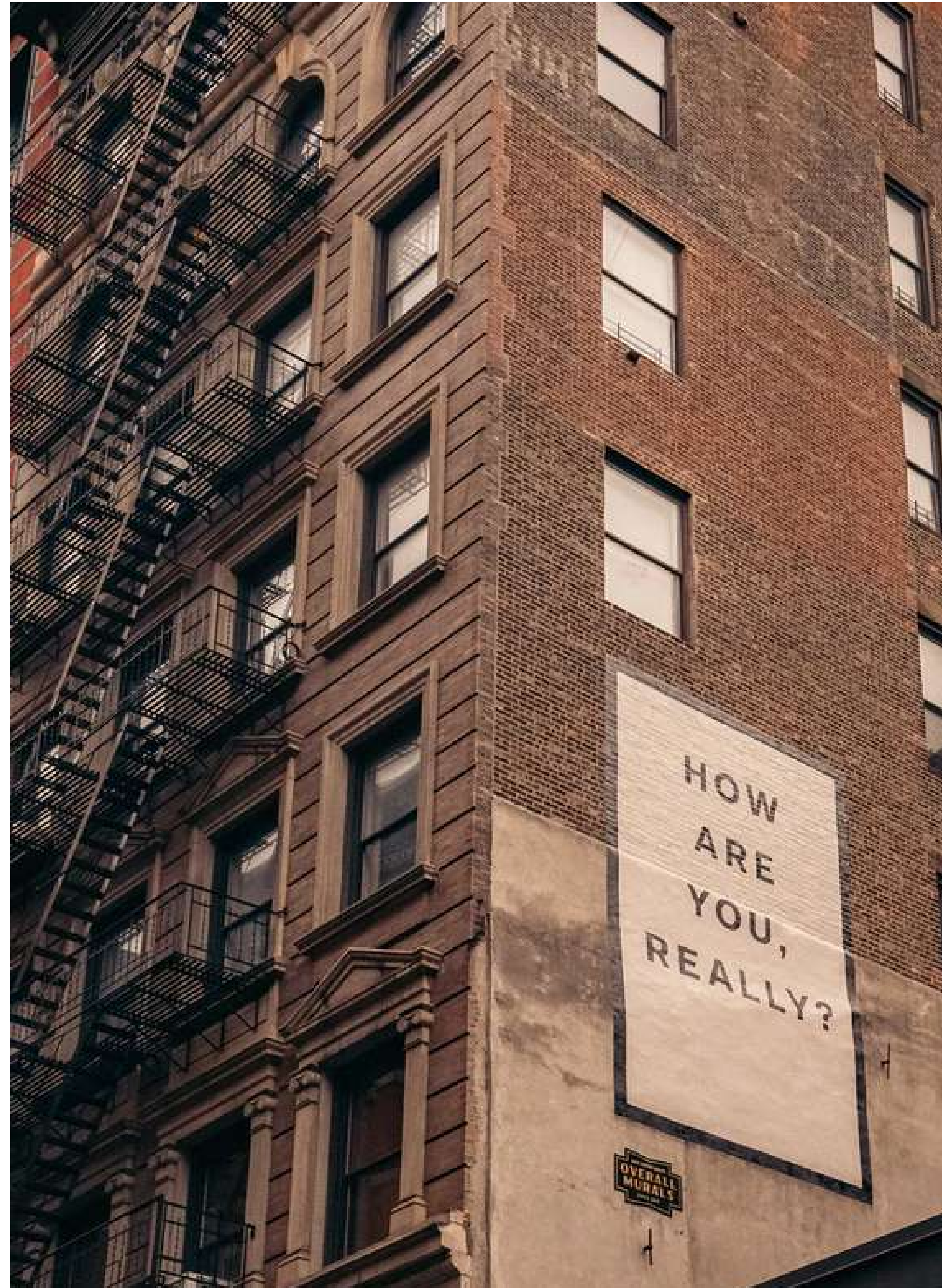
Above all else, I think it’s important to acknowledge the strength of our collaboration – as separated as we’ve become, our demonstration of care hasn’t been so prominent in years.

The progress in some countries (fortunately, one being here) shouldn’t be used as a point-of-contrast for places in hardships, but rather should represent the roots of recovery which are being watered with hope/care.

What we all need to do moving forward is to learn from this experience. For each of us, the lessons will be different, some more complex than others. We’re used to treating global impacts as viral ‘trends’ that come-and-go – Covid is not one of these.

The environment has rightfully gained a lot of attention over the years due to the devastating impacts we’ve had on it. Perhaps Covid’s impact will similarly carry the necessary changes in Healthcare and Public Health systems? We’ll see.

Written by Alen Pasalic


HOW
ARE
YOU,
REALLY?

MENTAL HEALTH DURING ISOLATION

2020 will long be remembered for the impacts of COVID-19. A new and highly contagious virus with no known treatments and a globalised world make for an environment where the virus could wipeout millions of people if left unchecked. To slow the spread of the virus in Australia, a measure called "social distancing" was introduced by the government. The term "social distancing" is somewhat of a misnomer, as it encourages not social but physical distancing to reduce contact between people and allow fewer chances for the virus to spread. Other terms in use are quarantine - when you may or may not be incubating the disease, and self-isolation
- where you have tested positive for the disease but are well enough to be cared for at home. Being socially distant from others can have serious negative impacts on mental health, particularly in uncertain times such as these. Some people may be quite delighted with the idea of not having to put on clothes or leave the house, but humans are social creatures and even the introverts among us need occasional human interaction. While 'social distancing' is now easing up in South Australia and the Northern Territory, the psychological impacts are still being felt. It's normal to feel stress and worry when there is a health event happening in the community that is affecting people's wellbeing, like COVID-19. We are in a collective storm, and some of us are cruising in catamarans while others frantically bail water out o their dinghies. If you feel you're more bailing than cruising,
some strategies you can try to help your

"Some resources that may help you
www.headtohealth.gov.au/
www.beyondblue.org.au/
www.lifeline.org.au/
Flinders Health, Counselling and Disability Service
Health and Wellbeing reps
Anyone you feel comfortable talking to!"

wellbeing during 'social distancing' include:
If you feel you're more bailing than cruising, some strategies you can try to help your wellbeing during 'social distancing' include:

Perspective – yes it sucks that we can't go about our day-to-day lives, but it's better to be stuck at home than admitted to hospital. Remember who we are protecting by keeping apart. A young, fit uni student may just get the sniffles, but their elderly grandparents may not be so lucky.

Connection – studies from the SARS pandemic in Hong Kong in 2008 have shown that maintaining social connection can offset the negative mental health impacts of the pandemic. People are using technology to connect with family and friends when they didn't before the virus.

Routine – even if t's getting out of your night pyjamas into your day pyjamas, having simple rituals allows you to regain some control over your day.

Limit your exposure to media – Choose a specific time of the day to check, and only check reputable sources. What you consume each day is not just what you eat and drink, but what you take in emotionally as well.

Mindfulness – Allow yourself to feel your emotions. Being human is not a weakness! Invalidating emotions prevents you from appropriately processing them, and can lead to mental illness, addiction and even physical problems.

Self-compassion – The world as we know it has changed for good. Some people find themselves with more time on their hands to explore their interests, while others are just making it through the day. It is totally okay to not be writing amazing poetry or getting super fit. We're all wired differently and cope with trauma in different ways. For people who have never experienced mental illness first-hand, the distress felt during social isolation is not unlike what people with mental illnesses experience every day. It's harder to empathize with people when we have no experience with their suffering. Recognising how you feel in this situation can help you better recognise these feelings in others and become a better doctor.

Written by Shannon Waters

ANTIMICROBIAL ABUSE IN LIVESTOCK

HISTORY OF ANTIMICROBIAL USE IN LIVESTOCK

Globally, livestock consumes 73% of antibiotics (1). In 1928, Alexander Fleming returned home from a holiday, to discover mould growing in a petri dish he had previously inoculated with staphylococcus. Of particular interest was the circumferential zone surrounding the mould, as it was void of staphylococcus spores unlike the remainder of the petri dish. This led to the discovery of penicillin and the emergence of antibiotics in medicine. In the late 1940's, just following WWII, farmers began using penicillin to treat mastitis in cows, as mastitis was decreasing milk production efficiency (2). This dawned the era of antimicrobial use in livestock. Soon after in 1949, non-therapeutic antimicrobial use in livestock began, with the discovery that aureomycin increased the growth rate of poultry and decreased disease-related losses (3). Today, antibiotics are still routinely used for growth advantage and as a supplement for good hygiene (4).

ANTIMICROBIAL RESISTANCE

When antimicrobials are prescribed, patients are advised not to cease treatment upon symptom resolution, instead to take the entire prescription. But why? It may not seem obvious at first, as we know antimicrobials are somewhat harmful, yet a seemingly prolonged use is encouraged. Indeed, this is due to the symptomatic threshold of bacterial infections, such that bacteria must proliferate beyond a certain point to induce an immune response strong enough to disrupt normal physiological function. Thus, absence of symptoms does not strictly infer absence of pathogenic bacteria. The most ominous consideration here is that antimicrobials at sublethal doses encourage the selection and proliferation of antimicrobial resistant traits.

Where do cows and pigs and chickens come into all of this? Well, livestock are not treated therapeutically. Instead, we observe sublethal antimicrobial exposure in turn encouraging the proliferation of bacterial traits resistant to our current repertoire of
antibiotics.

We must consider the fact that not all infections are zoonotic in nature, so could it be that antimicrobial resistance in cattle, for example, is irrelevant regarding human disease? Simply, no. While zoonotic transfer is not always possible, the proliferation of bacteria with antibiotic resistance genes (ARGs) pollutes the environment via animal waste products, leaving the likes of soil and water tainted (5). Although firm evidence is yet to be produced displaying the acquisition of these specific ARGs by human gut microbiome or pathogenic bacteria, research in this field is scant and thus the likelihood of human microbiome appropriating these genetic alterations is indeterminate. We can, however, be sure that ARG abundance results from animal waste products with data showing manured soil contains up to 28,000 times more ARGs than non-manured soil (5). Thus, there is certainly potential for horizontal gene transfer which may generate untreatable human

I suspect that almost everyone reading this isn't feeding livestock antibiotics so it may seem as if I am preaching to the choir. However, we must accept that farmers don't feed their livestock antibiotics out of choice, rather they are meeting the demands of which we all place on them. In reality, 'getting enough protein' is a strikingly inadequate rationale for daily meat consumption, as plant-based foods represent 57% of the global protein intake (6). Furthermore, although vegans and vegetarians tend to consume less protein than omnivores, the total daily protein consumption generally remains above the RDI (7). Thus, we may not be giving livestock antibiotics, but we reinforce the practice with our consumer behaviour.

ANTIMICROBIAL ABUSE IN LIVESTOCK CONT.

A BETTER OPTION

This is a supply and demand issue. The drive for livestock antimicrobial use is our current consumption of meat products, as increased growth rates and decreased losses can be achieved via non-therapeutic antimicrobial use. Let's make our mark by reducing demand. But where could we get our protein? Grains. 1 kilogram of meat-derived protein requires 100 times more water than 1 kilogrm of grain-derived protein (8). Despite animals not directly consuming large quantities of water, their food does. In the individual context, plant-based diets have been shown to significantly reduce both total cholesterol and LDL (9), albeit to a lesser degree than statins. Furthermore, Key and colleagues (10) found that occasional meat eaters, who ate meat an average of less than one time per week, had a 20% reduction in ischaemic heart disease mortality when compared to regular meat eaters, who ate meat 1 or more times per week. Of course, many valid arguments exist supporting meat consumption and the world of nutritional science is plagued with confounding variables making it extremely difficult to understand what the ideal diet really looks like. Ultimately, I can't argue that veganism is harmless, nor can I say regular meat consumption does not come at a price, but if we consider the environment, reducing meat intake shows clear benefit. I'm not suggesting to radically expel meat from your diet, instead I suggest gradually transitioning to a plant-based diet. Perhaps aim to become an occasional meat eater. In addition to its potential benefits to your health, it will reduce the demand on the farming industry in turn reducing the degree of non-therapeutic antimicrobial abuse. In fact, Van Boeckal and colleagues suggest that limiting global meat intake to 40 g/day per person would reduce the antimicrobial use in livestock by 66% (4). Even a more conservative restriction of 165 g/day would result in a 22% reduction, indicating that small changes at the individual level can make a significant impact. This may not seem like a problem today, but our best weapon against antimicrobial resistance is proactivity and as we have learned from COVID-19, reactivity is subordinate.

Written By Brandon Wadforth

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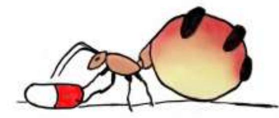
COOEE



Cooee is a widely used indigenous word used to gain one's attention across distances. These calls could be heard close to a mile away if the intonation was right.

The Remote Health Experience was run over the March long weekend in Katherine, Northern Territory by the NTMP Flinders University, designed by a collaborative team from Flinders and Charles Darwin Universities and representatives from Sunrise Aboriginal Health Services and Katherine Regional Hospital. As the Senior Aboriginal and Torres Strait Islander Engagement Officer with FURHS, I was lucky enough to be invited to attend this event with three members of the FURHS executive committee, who all came from different health degrees.

The weekend was designed to not only give us an experience of practising health in a remote environment, but also to expose us to working together and communicating with people across all health disciplines and being a part of the interdisciplinary team. There were students from almost every health degree and from across the country from nursing, pharmacy, physiotherapy, speech pathology, podiatry and psychology, amongst many others. I felt especially privileged to be learning with the Aboriginal health practitioner students. Despite coming from working in the hospital environment in Adelaide prior to starting the MD, I had never had any experience working with Aboriginal health practitioners, and I was really lucky to spend the weekend collaborating with, and learning about the role of the Aboriginal Health Practitioners.

After flying up to Darwin on a Friday following an iRAT, we met at the Charles Darwin campus before a four-hour bus ride to Katherine. We arrived at our accommodation, and the first thing everyone noticed was there was no reception, and no WiFi available (which was just perfect considering I had planned to finish my law assignment in the evenings – I swear I don't usually procrastinate so much!). We had just arrived and were already facing parts of remote practice that I had never thought to consider, the idea of practising medicine without access to the internet or phone services. Our weekend started with a traditional smoking ceremony run by the Elders to welcome us to Jawoyn country.

On the Sunday, we were split into groups, which were allocated to allow us to work with people from across the different health disciplines, and we then spent the day moving through various skill stations. These stations included cannulation, trachoma screening, snake bite, diabetic foot examination, opioid overdose, assessment and treatment of burns, and telehealth communication. I was especially excited to experience a simulation of telehealth; the perfect example of how difficult the treatment of a patient can be in the remote setting, and how important good communication is between health professionals. Communication skills are something we talk about (and Mahara about) all the time, but trying to liaise with nurses via walkie talkie, to gather all of the information was incredibly difficult, and is a skill that I genuinely think would take years to master. The idea of trying to manage a patient in a real situation entirely via radio is truly confronting, and just another aspect of remote health I had not considered in the past.

COOEE CONT.

The Banatjarl Strongbala Wimuns Grup and family ran a session where we made bush medicine, and we were able to have a frank discussion about Western medicine and bush medicine in the treatment plans for Aboriginal patients, and how we can treat Aboriginal patients through the integration of these two very different modes of care. We also spoke about the effect of climate change. One of the Elders explained to us the “seasons” that the Jawoyn people use to dictate their year, which is based on the local flora, and how this affects bush medicine, but also food that is available at any time. They said in response to climate change, there is a noticeable change in these seasons, which will continue to affect remote communities to increasing degrees as the situation worsens.

Whilst I came into the weekend expecting to have my eyes opened up to some of the challenges of practising remote medicine, I found myself constantly surprised at the complexities faced by medical practitioners and health workers in remote areas. We have tutorials on communication, Aboriginal health and the challenges of practising medicine in the remote setting, but I had never taken the time to consider the multiple layers of complexity that are involved in this kind of health care. The unique difficulties begin from the simple and obvious as far as distance, to those that do not even seem fathomable to those of us practising in a major city, such as lack of access to internet or phone services. In addition to the logistical obstacles that those doctors practising in remote health face, are the social intricacies and the depth of adversity that a new doctor practising in a remote town must face.

I would like to acknowledge the Jawoyn, Wardaman and Dagoman Elders past, present and future, and the traditional owners of the land and waters the RHE was held on. And to thank the people for welcoming us to their land and the Banatjarl Strongbala Wimuns Grup and family, for their teaching and wisdom that they provided throughout the weekend.

Written by Jess Thompson

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EVOLVING MEDICINE BUT A LACK OF PUBLIC AWARENESS

As I sat in my rocking chair thinking about my existential crisis, my face shone with the yellow light of the study lamp. Suddenly, I looked out of the room window and my eyes caught the sight of three ladies walking on the road in an equilateral triangle formation with side length being 1m. This reminded me of Covid19 – the real crisis facing humanity. I have mixed feelings about the current situation – there is a feeling of pride for being part of the medical family saving the lives and health of the infected people in the world right now. Also, there is immense sadness with a dash of anger thinking that healthcare systems are in great distress. All over the world, governments made disastrous and unplanned decisions, and society in general behaved selfishly. There are allegations that the Chinese government acted out of political motives to hide the fact that Coronavirus is atransmittable disease. The virus had begun circulating in Wuhan by December 2019. But China concealed its existence, extent and severity in the early stages. Once it became clear that the virus
spreads through contact, several other governments went into denial mode, for example the US. Other countries such as India acted out of haste without any planning for its underprivileged people. India announced complete draconian lockdown, giving just three hours' notice, to its 1.3 billion people. Not only the governments acted unwisely in the face of pandemic, some selfish people demonstrated how low they can stoop to make money out of misery! All over the world toilet paper memes circulated on social media mocking the solipsistic attitude of people.

Social Distancing and Hand Hygiene have been touted as the most effective Public Health preventive measures. Despite such advancements in medicine at all fronts, human society failed at the most basic level.. I cannot believe we had to educate 7.1 billion people 'how to wash their hands properly' whereas all the surgeons and doctors had been practicing the same technique every time before they stepped into the surgery wards or met patients. This reminds me of Atul Gawande's 'safe surgery checklist' inspired by his multiple visits to the people who build
skyscrapers. Just as experts needed checklists that walk them through the key steps of any complex procedure; we need the same written guidelines on seemingly easy yet vital health procedures such as how to brush teeth properly, wash our hands, cook raw meat, etc.
Sadly, public awareness early on about basic hygiene would have prevented thousands from dying in the hospitals, alone away from their loved ones and saved the lives of hundreds of heroic doctors and nurses. Transparency on the part of governments could have saved millions of migrant labourers in India who walked hundreds of kilometres in scorching heat. They desired to reach their homes amidst lockdown and many died on the way due to exhaustion and starvation.
Medicine and research are undoubtedly evolving as the times change. In a matter of five months, medical research has unravelled some of the mysteries of the novel Coronavirus and massive vaccination projects have sprung up. Amidst these variables, there is one thing that we need to keep constant – awareness amongst the public regarding basic health and hygiene. Afterall, it might be the simplest thing that could be employed safely. Lastly, it would be cool if countries, instead of fighting over resources, fought over who have the highest levels of Public Awareness!

Written by Sargam Bhardwaj

WOMEN HELPING WOMEN

When renowned OBGYN Dr Catherine Hamlin AC first landed in Ethiopia to fulfil a 3 year medical contract, little did she know it would be the beginning of a 6 decade long stay which culminated in an organisation that has transformed the lives of tens of thousands of African women.

Catherine Hamlin with midwives in Addis

Dr Hamlin, who passed away earlier this year, was born in Sydney in 1924 and graduated from the University of Sydney Medical School in 1946. In 1958, she and her husband, Dr Reginald Hamlin, responded to an advertisement placed by the Ethiopian government seeking an OBGYN to assist in the establishment of a midwifery school at the Princess Tsehay Hospital in Ethiopia's capital, Addis Ababa. They relocated soon after with their six year old son, Richard – a stark departure from their affluent life in Sydney. "We felt we would like to do something to help people in the world because we had had so many advantages," Dr Hamlin explained.

The goal was to aid in treatment of obstetric fistulas – an academic rarity that Dr Hamlin had never witnessed firsthand since it had been virtually eradicated in the developed word through advancements in medicine. In Ethiopia however, the incidence of fistula still remains disproportionally high. An obstetric fistula is an abnormal communication between the female genital tract and the urinary or gastrointestinal tract, usually due to a long, obstructed labour which carries a high rate of stillbirth. Without adequate medical interventions, many women either die or are left with injuries that leave them incontinent, in pain and at increased risk of infection. Those who do survive are often abandoned by their partners, banished to the outskirts of their communities and live with an unbearable sense of shame that drives many to ultimately end their lives. This heartbreaking and all too common sequence of events has earned these women the devastating title of modern day lepers.

After an overwhelming number of cases arrived at the hospital following the arrival of the Hamlin's, they founded the Hamlin Fistula Ethiopia (now the Catherine Hamlin Fistula)
Foundation and opened the Addis Ababa Fistula hospital which has treated over 60,000
women to date. This eventually grew into a network of 80 midwifery clinics, 6 hospitals, a rehabilitation centre and the Hamlin College of Midwives. In addition to perfecting surgical techniques for fistula repair that are still used today, Dr Hamlin also developed her renowned Hamlin Model of Care: "We don't just treat the hole in the bladder," she said, "we treat the whole patient with love and tender care, literacy and numeracy classes, a brand new dress and money to travel home."

Over the course of her career, Dr Hamlin treated thousands of women with obstetric fistulas, including a girl who had lived on the floor and had been nursed by her mother for 9 years, and another who was sold to a man and fell pregnant at age 13. However, she states that her most memorable patient was one of her first; an illiterate Ethiopian girl by the name of Mamitu Gashe. In 1962 at the age of 16, Mamitu suffered a severe obstetric fistula during the birth of her first child, which following a 3-day labour arrived stillborn. She came to the hospital several weeks later in ragged, urine-soaked clothes and sat alone in the waiting room having been shunned by other patients. After receiving surgery, Mamitu took a job in the hospital making beds. She expressed that she wanted to emulate the compassion she received from the Hamlin's and help the women around her, noting that her

Takin in 2009 after having worked 50 years in

own experience enabled her to guide these women through the process.

She later
began assisting the Hamlin's during surgery and was soon routinely performing the procedures herself. She has since gone on to become an internationally renowned fistula surgeon – all without any formal education. Over the decades, numerous distinguished professors of obstetrics have travelled to Addis Ababa to receive training in obstetric fistulas and are often taught by Mamitu herself.

Mamitu Gashe was recognised in the BBC's 2018 100 most influential women

Dr Hamlin's story is an equally beautiful and important reminder of the extent to which we as futur e doctors can use our skills to impart change and impact patient lives on a small or even large scale. It is an opportunity to reflect on our own reasons for entering this profession and how we might contribute to the medical field in the future. Importantly, Dr Hamlin and her incredible career are a lesson in hard work, humility, compassion and ambition, and how these qualities can foster results that are nothing short of miraculous. In recognition of her work, Dr Hamlin was nominated twice for a Nobel Peace Prize, as well as being awarded a Member of the Order of Australia in 1983 and a Companion of the Order of Australia in 1995, along with numerous other accolades..

Dr Hamlin urged the world to open its eyes to the suffering of these invisible women who are alone, vulnerable and in desperate need of our support. "My dream is to eradicate obstetric Fistula. Forever," she said. "I won't do it in my lifetime, but you can in yours."
To read more about Dr. Hamlin and the Catherine Hamlin Fistula Foundation, visit

Written by Georgie Burke and Vanshika Sinh

FROM CAGED BIRDS TO SITTING DUCKS

As I sit in my backyard typing this, I cannot help but think back to New Year's Eve, which seems like a lifetime ago now. It was the turn of the decade and like every New Year's Eve, there was a sense of possibility in the air, a hope for the future that was offered to us annually with promises of resolutions and a clean slate of 12 new months.

Fast forward a few months to the Adelaide Fringe Festival. I had some close friends visiting from interstate and I happily played tour guide, perhaps somewhat fraudulently as I had only been in Adelaide for a year myself. We visited McLaren Vale, dined out countless times, saw several shows at the Fringe and even hired scooters to zip around the city for fun. Those scooter handles were probably touched by hundreds of others and using hand sanitiser did not cross any of our minds. We sat cosily close in several cafes and restaurants and went out dancing where the dancefloor probably had at least 10 people for every 4 square metres. Crazy to think of today, right?

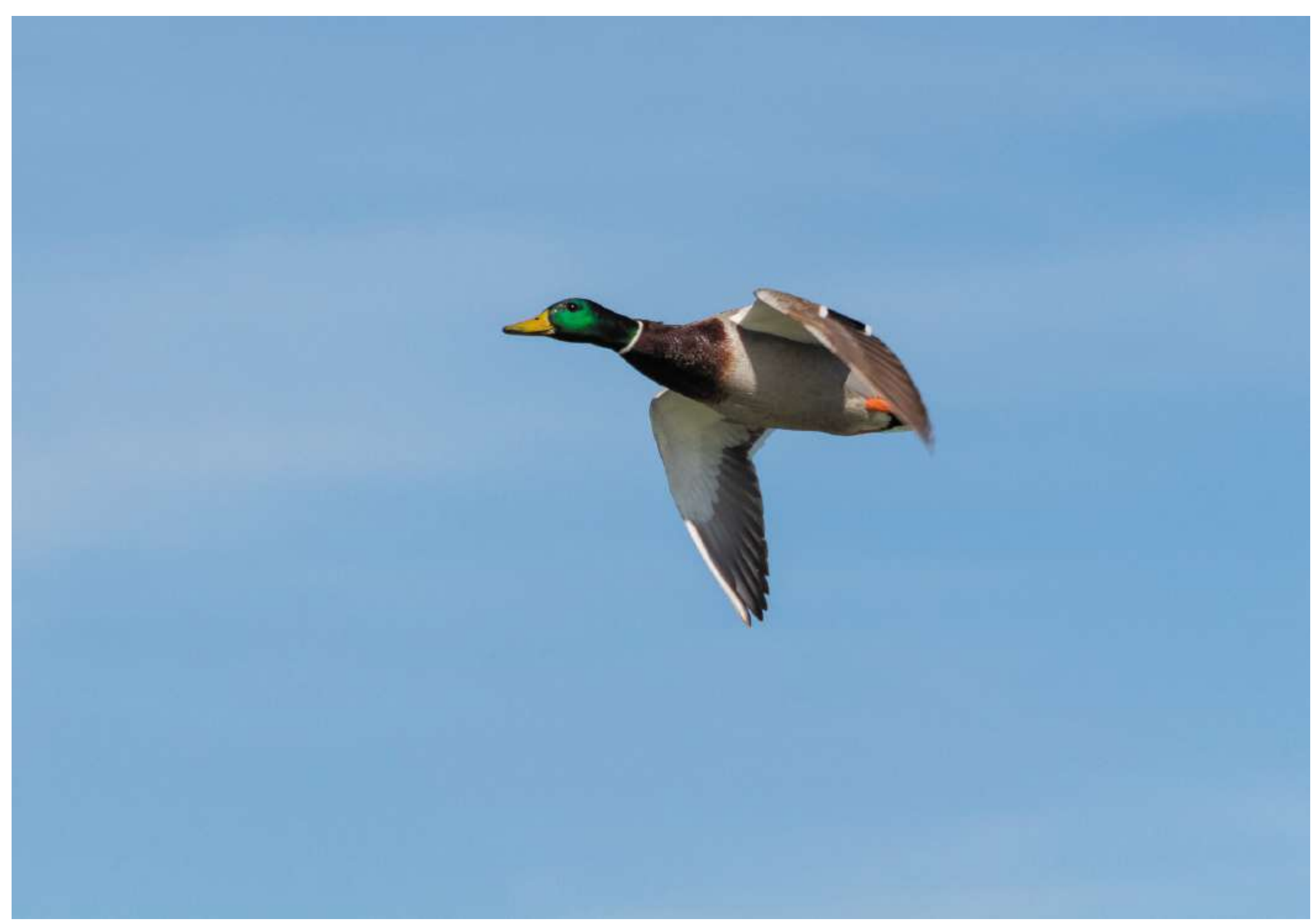
Despite the drastic changes to everyday life and the new normal we find ourselves living in, I consider myself lucky by all accounts. I am a free citizen. I have rights that are protected by law. I can also socially distance; I have access to hand wash, hand sanitisers, cleaning products. These may all sound like things that are obvious for people in Australia, but millions do not have these fundamental rights that we often take for granted?

Refugees and Asylum Seekers are the forgotten vulnerable community. COVID-19 has stopped the world in its tracks. Countries around the globe are in the grips of a health and economic crisis which is threatening lives and livelihoods. When the risk is to human health, prosperity, and life itself, the world springs to action. We do everything in our power to protect ourselves, our loved ones as well as members of the community. Our survival instinct is strong.

This same instinct is what forces refugees to flee their countries – they are also at risk of death, fleeing from persecution and surrounded by a war that has been raging for much longer than the current health crisis. So why are they so demonised and not afforded the same levels of consideration and protection?

The evidence for the poor health status of this vulnerable group is well-established – detention harms health. Now it is compounded by COVID-19. Detained in overcrowded detention centres with nebulous processing timelines, they cannot socially distance.
Moria is a refugee camp on the island of Lesbos, Greece that has seven times the population it was designed for. In early March there was a confirmed case of COVID-19. The infrastructure is dismal, hygiene hardly exists, over 21, 000 rely on twelve drink taps and as many bathrooms. The one living space is occupied by 4-6 families. Containing a spread in this kind of setting is difficult.

Perhaps it's too depressing to consider the management of the predicament of these places in Europe. Centres might be less crowded here because of our geography, but it also might have something to do with Australia's shameful history in regards to refugees. In the past, they've been political punching bags in incidents like the Children Overboard Affair and Operation Sovereign Borders. Abused by



Mallard duck at high speed - László Glatz

appropriate that the rest of Australia is asked to distance and we are putting six or so into a hotel room. They peacefully protest, on their balconies, imploring the government to release them into community detention - an opinion that has been echoed by peak medical bodies, health practitioners and the Australian Human Rights Commissioner.

They fear the conditions they are kept in and worry that a single infection could prove catastrophic. You'd think those being flown here for medical attention might be the kind of individual that have health concerns. They worry about returning to their offshore location where they also don't have the space to prevent transmission. It could be a death sentence for those who came to our shores to try and save their lives. Those who endured and left home in search of safety and a chance at a future. Asylum seekers are owed the same level of care and protection as all others. We aren't piling returning from abroad Australians into dormitories.

Let us add to the list of positive realisations and silver linings that this pandemic can bring out our humanity. As future medical professionals let us advocate for healthcare equity and ask our government to do the same. Let us embody what it means to be an Australian that we might mean the words of our national anthem: "For those who've come across the seas, we've boundless plains to share; With courage let us all combine, to Advance Australia Fair."

Written by By Hamza Ali
AMSA Global Health Representative
for Flinders University

FGAP- HEALTH IN THE HIMALAYAS

First year finished and BOOM we were off! Last year Tiani and I had the amazing opportunity to spend the month of December in Nepal, with the first two weeks spent on a placement at a hospital in Kathmandu. We spent these two weeks with a great group of other students from Flinders and had a WHALE of a time. I spent the two weeks in the paediatric department and Tiani spent her time on the general surgery team. This whole experience was organised by the FGAP program run by the Health and Human Rights Group (HHRG) here at Flinders. What is FGAP you ask? EXCELLENT question stick around and ALL your questions will be answered.

So what exactly did we do in our two weeks on placement? WELL, in the words of my fine-feathered friend Tiani:

"In the mornings I would get to the hospital early and read up on the case notes for the patients we would be seeing that day. Everything is written in English in hospitals in Nepal and all the doctors can speak English. The doctors speak to each other and the patients in Nepalese. Having read the notes, I would then attend the general surgery meeting every morning. Here the residents and attendings would discuss complex patients. Next, we went on ward rounds. These always moved very quickly but I was lucky enough to have residents who took their time to explain patient's cases to me when I was confused. After ward rounds, I could choose to go

to the operating theatre or head to the emergency department. My two-week experience consisted of observing many exciting surgeries from cholecystectomies to circumcisions, performing physical exams on patients and changing wound dressings on my own."

Hospitals in Nepal operate on a spectrum from fully privatised hospitals to fully government funded, and our hospital sat somewhere in between. Funds, or lack thereof, were at the root of many problems faced by the doctors at our hospital. Often, the cost of keeping a patient in the hospital would affect which treatment they received and sometimes meant they received no treatment at all. My

supervisor and I talked at length about what it means to be a doctor in Nepal. Often the care she can provide is severely limited by the resources she has access to. Taxi drivers are paid more than doctors in Nepal, she tells me, but she couldn't imagine doing anything else.

We also talked about the fantastic progress the Nepalese health care system is making. My supervisor told me that Nepal has some of the best preterm birth outcomes in Asia and has made major improvements on this front in the last few decades. I was lucky enough to be allowed to visit the NICU in our hospital and saw some fantastic examples of neonatal care. The hospital also runs an out-patient clinic. It was here I learnt that the Nepalese government has implemented a thorough childhood vaccination program in order to get a handle on diseases like tuberculosis and typhoid.

I'm sure you're still wondering, what is FGAP? WELL, the Flinders Global Action Project is organised by HHRG and involves partnerships with hospitals in India, Nepal and South Africa, with other destinations in the pipeline. Each of these incredible places offers something different, especially in your down time away from the hospital! Groups of students apply to attend two-week placements, choosing from a list of specialties. Speaking from experience, these placements are a once in a lifetime opportunity to get an inside look at health care systems (and countries) which are not nearly as developed as Australia's. The quiz night organised by HHRG raises money to send to these hospitals, which truly, truly makes an indescribable difference to these often severely underfunded hospitals.

Going on FGAP is not just about the hospital! What we did in our down time could fill an article of its own. In brief, delicious food, beautiful architecture and religious sites, fun nights out and THE HIMALAYAS. The Annapurna Base Camp Trek was an experience like no other, EVEN in the middle of winter.

To conclude, go on FGAP, visit some amazing countries and see some amazing things. Whilst visiting such amazingly generous site abroad might be on hold for now, soon we hope, we will be able to have such incredible experiences again.

Peace and love

Written by Nick and Tiani while on a HHRG organised elective at Kathmandu Model Hospital

Photos taken by Nick Harpas and Jessica Hanna

NITIN MEDICOS

FGAP - THREE WHEEL COMMUTE

For my FGAP experience I chose to go to India. I was there with four others from my cohort and we became affectionately known to each other as the "garam pani's" - the Punjabi term for "hot water"- an ode to the difficulty of finding a black coffee in India. I met one of the group in Singapore
and we landed in Delhi together. We spent that night in a dingy and poorly researched hotel in an alley in Delhi, but it did the job. We spent one night and half a day in Delhi and that was enough for the culture shock to set in. At that point I'll admit, I had judged India too soon and had no idea that I would grow to love my time there!

The next day we met a couple of others from our group and headed off on a road trip to Dayanand Medical College, Ludhiana, our home for the next two weeks. We were staying with the DMC medical students which added to our experience of medicine in India because we saw how our peers lived and studied. On our first day of placement, we had some trouble getting to the hospital. The hospital was really close to the dorms so we eventually got an auto and this became our preferred choice of transport for the rest of our time there. Arriving on our first day to a bustling hospital with people and cars everywhere was as exciting as I had imagined it would be since I first dreamt of studying medicine. After sorting out some admin, we were all shown to our wards. I had selected general surgery and I was lucky that on my first day the registrar showing me around was on duty in the outpatient clinic. Within 10 minutes of meeting him I was touching an infected leg, within an hour I was in the male change room surrounded by people and watching him change wound dressings, and within 2 hours I was in a tiny room watching him drain an anal abscess. It was overwhelming and fantastic!

Over the next 2 weeks I saw a lot of surgeries and went on ward rounds most days. After a few days most of the staff in the team and surgery suite knew I was an exchange tudent and they were exceedingly generous with their time and knowledge. For me though the best part was going on rounds, learning about new conditions, and meeting the patients.

It was clear that although DMC is a semi-private hospital there is still a shortage of resources. The healthcare system in general is different to ours and is based in the setting of an amazing culture that was completely new to me. The staff were resourceful, but it was crowded and all products, including analgesics, had to be bought by patients, meaning that some procedures were visibly
excruciating, albeit essential. When I spoke to some of the doctors, they said that public hospitals in India are much busier and less well-resourced than DMC. As someone who is interested in working in potentially similar settings in the future, it was a good first exposure to what this may be like.
On a personal level, within a few days, most of the hospital seemed aware of our existence and we were made to feel incredibly welcome. They took us to the pub, which became our local, for dinners and fruit-cream (yes it was as tasty as it sounds), and even invited us to one of their birthdays. My time in Ludhiana was all the more incredible because of the amazing people who made the effort to welcome us with their famous Punjabi hospitality, despite being some of the busiest people I have ever met.

Written by Nae Ali Pour

FGAP- JOURNEY THE THROUGH WESTERN CAPE

I applied to HHRG's 'Flinders Global Action Project' (FGAP) with the hope of undertaking a hands-on medical elective in an acute care setting. I expected the elective to equip me with invaluable tools to deepen my clinical understanding while simultaneously navigating an international health care system and increasing my cultural awareness. Following the FGAP information night, I left feeling eager to apply, yet not without reservations. Now that the 2-week medical elective at George Hospital, South Africa is complete, it is evident my travel reservations, although reasonable, were incomparable to the wealth of information and opportunity made possible by this experience. I can confidently say that it exceeded all my
expectations. I completed the elective

in the Emergency Centre (EC) of George Hospital with my friend and fellow medical student Suzie Mashtoub. After signing some paperwork and being introduced to our supervisor, Dr Van Zyl Smit, Head of EC, we were on the wards the following day. While each shift was unique, we were typically required to navigate the triage system; selecting and calling patients from the waiting room while in the EC 'minors' area. We would take a history and/or perform a physical examination, occasionally learning some
Afrikaans in the process. Assisting the doctors with more complex procedures took place in the 'majors' area. We frequently alternated between both areas.

We were given the freedom to perform medical procedures where we felt comfortable. While I could list these out, the most memorable moments were the

pep talks we gave each other before and during suturing or taking bloods for the first time. I remember running ECG's on patients and refraining from the temptation of requesting to perform one on myself next. We saw a variety of cases from trauma to severely necrotising limbs, however

assisting with a patient post MVA was particularly interesting. We assisted in this patient's care, reducing his bi-knee dislocation, making plaster casts and taking him to imaging. We then observed his left popliteal artery anastomosis and knee stabilisation surgery in theatre. The fast pace made days feel incredibly short. Whether faced with needlestick injury scares or emotionally challenging patient presentations, we were fortunate to work in a supportive team.

The doctor's willingness to teach and include us was heart-warming. Despite being based in
the EC, we were invited to observe surgical procures in theatre and join ward rounds in internal medicine. As part of George Hospital's outreach program, we were also driven to

remote hospitals, accounting for hours of conversation; a recurring theme of which related to the effects of climate change on the Western Cape. As we drove to Beaufort West Hospital, we witnessed the effects of the drought. The excitement of the locals at the rare sight of rain during our stay

was humbling. The following week we were driven to Knysna
Provincial Hospital to see the new paediatrics unit following the Knysna fires in 2017. It was reported to be the worst wildfire disaster in South African history. We were also told of the ire in George that raged the 'Garden Route' in 2018 as we were driven past this scenic stretch of road. When I was asked to comment on climate change in light of this trip, I therefore understood the necessity.

The unfortunate reality is that climate change is already having a terrible impact on the Western Cape. The areas with the least infrastructure to deal with climate change effects are suffering the most. Considering the global impact of our climate crisis. I would encourage anyone considering an international placement to do so for more reasons than one. The nature of the placement almost guarantees the establishment of personal growth and development and to assist at hospitals with fewer resources at times like this is highly appreciated by these communities. The synergistic relationship HHRG has forged with these hospitals is truly valuable. I am grateful for HHRG, the Flinders staff working behind the scenes, and the international hospitals for making this possible and accessible to our cohort.

Written by at Shalom Ndukwe

Photos taken by Shalom and Benjamin Forsyth

HEALTH AND HUMAN RIGHTS GROUP

The sun is shining, birds are chirping and coffee is brewing– given all that is going on around us at the moment, there is no time more prudent than now to assert the 'glass is half full rather than half empty' proverb!

The Health and Human Rights Group (HHRG), whom are fortunate enough to have just welcomed a new group of legends to the junior committee, have been hard at work brainstorming ways to adapt to this new, temporary, way of life. Essentially, that means we have had to put our beloved Heat Night on hold for the interim (it will be back!) and conjure up ideas of how we can continue to advocate, instil and educate our fellow students about our areas of interest; from mental and sexual health, disability, Indigenous health, global and refugee health and the health of our environment.

It would be remiss of us not address the two significant incursions on public health this year; firstly, the bushfires that saw the early summer months of November and December 2019 manifest as the most tragic and disastrous in Australian history, and now, being in the midst of a life changing, global COVID-19 pandemic. We at HHRG are as resolute as ever to ensure the safety, happiness and assuredness of our members and the student body as a whole. Many of our own friends,

Photo by Luis Quintero

family and colleagues were directly affected by the bushfires and it is an absolute testament to their strength of character to pull through to the other side, stronger and more 'together' as a result of the incredible individual and community voluntary response. HHRG stands to learn from and continue to model ourselves on the character shown by such grassroots, comprehensive and philanthropic responses. Whilst we reflect on these difficult times, surrounded by a new, perhaps more treacherous affront to daily life, and fondly remark on courage shown by all, we must remember that many were harshly treated and were faced with life-threatening circumstances. We as a community must continue to rally and support as best we can through initiatives such as 'Buy From A Bush Business' (Facebook), Turia Pitt's #spendwiththem and the SA Government's 'Book Them Out' appeal (which is seemingly impossible at the moment), to continue to support the people and businesses that have been affected.

HHRG are fortunate to have an organisation such as Doctors For the Environment (DEA) to look up to in times such as these; they embody and proactively demonstrate sustainable and considered approaches to many of our existential threats, none the least being their coordinated and tactful advocacy for climate change, particularly during those dire months over the recent summer. We strongly recommend familiarising yourself with the DEA organisation, particularly given the current circumstances.

Now, fast forward a couple months; the livelihoods, mental and physical health, understanding of our surroundings and community sovereignty on a global scale have been met with the most challenging crisis since perhaps World War II. Welcome to COVID-19. To the credit of all, we have truncated the progression of the pandemic and are now discussing the prospects of easing aspects of lockdown restrictions. International communities, institutions, governments and individuals have been exemplary in their ability to adapt and ensure life continues to move forward in the safest possible manner. In both instances, we as a collective people have embraced the challenge and are demonstrating the traits that define us and surmount what was seemingly the impossible only a month or so ago. Specifically, in the context of our own lives as medical students and future medical professionals, this has surely been one of the most egregious threat to public health; frankly, we must use this time as a valuable learning experience, not only in the context of our resolve and ability to adapt, but to engender us with the skills and aptitude to contribute professionally and personally to the betterment of all humans.

HHRG have continued to support various health and human rights platforms during the "iso" state of the nation. Recently, we participated in a nationwide rally, #DetentionHarmsHealth, to call for an end to offshore detention of refugees and asylum seekers; a virtual event hosted by the Australian Medical Students' Association. More locally, HHRG is helping to raise funds for Headspace through our team efforts to achieve the 3,046 push-ups required for 'The Push Up Challenge'. Additionally, we have taken the initiative to use our connections and resources to help the Welcome Centre in Bowden with their food drive, to ensure the supply of non-perishables to minority groups with less access to resources. Watch this space as we continue to fulfill our overarching mission; advocacy for the right of every human being to the enjoyment of the highest attainable standard of mental and physical health and wellbeing.

In closing, we wish to acknowledge one of the silent heroes during these trying times; the Flinders Medical Student Society. Their advocacy and stanch defence of the interests of the student body has no doubt placated much of the potential effect on our studies.

Photo by Luclain Alexe

A LITTLE EMERGENCY KNOWLEDGE CAN GO A LONG WAY

Picture this; you and some friends are on the bus heading home after a great Medcamp weekend at Normanville, listening to some Tame Impala and reminiscing about the time Sally slipped in the dorm and stacked it. The bus travels around one of the impervious corners in the hills and suddenly Edward, sitting down the front, yells out "guys, I think there's been a car crash!"

A black car has veered off the road, struck a passing pedestrian and continued into a large tree at speed. The car looks mangled with its front end crumpled, the airbags deployed, and smoke coming from the engine. The whole scene is chaos, broken glass all over the ground, fuel leaking from the car and some disconcerting power lines that had been damaged. The patients aren't too much better; the pedestrian has a large 12cm deep laceration on the right lateral lower limb, one of the backseat passengers is 38 weeks pregnant primigravid in labour with active contractions and screaming "I can feel the baby coming!", the second backseat passenger is dazed and confused, complaining of unrelenting cervical spinal pain, whilst the driver has seemed to luckily escape any immediate serious injury. How do you manage the situation? What is the first step? Who requires immediate attention?

The objectives of this scenario were to demonstrate the appropriate identification and application of basic emergency response skills, to recognize an arterial bleed early may prevent a patient going into hypovolaemic arrest, how can the traumatic arrest be reversed to save the patient's life? Understanding how to deal with an imminent labour, recognising the signs of a distressed foetus, pregnancy complications, or postpartum haemorrhage and treating accordingly. Working alongside SAAS or MFS/CFS, to manage a patient with a suspected cervical spinal fracture and get them to hospital preventing any lifelong disability.

This was the scenario presented to the MD1's by FCCS and PVOGS (Pre-Vocational Obstetrics and Gynaecology Society of Australia and New Zealand) at Medcamp, albeit dramatic, not unrealistic. Tragically, the other day we heard of two separate major car crashes that took the lives of six innocent Australians on our roads, five of whom were our front line Police Officers. This is not an uncommon site in the current climate, with lives lost on South Australian roads currently at 35, running almost equally with the figure from last year of 36 (30th April 2020).

Whether your passion is in General Practice, surgery or emergency, as a future Doctor you may find yourself thrust into an emergency medical situation beyond your control. The goal of this scenario was exactly that, to mentally and physically prepare the students to respond appropriately to a dramatic emergency situation. As a committee we applaud the MD1 cohort for their perseverance and enthusiasm in participating in the scenario, and hope, whether they're new or experienced, that we cultivated their interest about this intense but rewarding aspect of medicine.

We would also like to say thank you to SA Ambulance Service Yankalilla for their support in running the scenario.

Written by James Evenden, Vice-President of FCCS

FLINDERS UNIVERSITY RURAL HEALTH SOCIETY FURHS – IS UNUSUAL

We are not exclusive to the medical student body, rather, we encapsulate the entire health student network at Flinders University. This includes medicine, nursing, midwifery, occupational therapy, physiotherapy, paramedicine, dietetics, psychology, and speech pathology – just to name a few. In a field that increasingly relies on a multidisciplinary approach to acute treatment and long-term management, we foster a culture of respect and collaboration in the name of patient wellbeing. We host a diverse range of social and educational events, both aimed to provide a platform for professional integration and to help you build enriching friendships.

Looking at the bigger picture, FURHS is a part of National Rural Health Student Network, along with 27 other university Rural Health Clubs across Australia. We represent the future of rural health in Australia: with over 9000 members combined. We also work tightly with Flinders University Rural Health SA and the Rural Doctors Workforce Australia (RDWA), to provide our students with enticing and exciting educational opportunities to encourage students to experience what rural health has to offer. This includes our well-renowned Royal Flying Doctor Service (RFDS) Ride-Along Program, where 30 medical and nursing students are given the opportunity to spend the day in the skies, to see how emergency medical treatment is provided to those in rural and remote communities. South Australia is the only state in Australia to participate in such a program, we feel very privileged

here at FURHS to be a part of this once-in-a-lifetime experience.

We also had the opportunity to send four of our members to Katherine, in March, to take part in the three day 'Remote Health Experience'. Here, they were immersed in the rural and remote clinical experience, learning about snake bite and diabetic foot treatment, how to cannulate, trachoma screening practices and remote phone consultations. They also gained an invaluable insight into Aboriginal health practices. Opportunity and experience are the heart of rural practice – the opportunity to challenge yourself and push yourself out of your comfort zone, and the opportunity to open your mind and heart to people and places you might not have experienced otherwise. You do not have to be a rural student or aspire to be a General Practitioner to join our club. We sign up anyone with motivation, an open mind, and a sense of adventure. To get involved, please 'like' us on Facebook – Flinders University Rural Health Society, and feel free to come along to our monthly committee meetings!

Written by Soufia and Isabelle

WHEN SOCIAL CLUBS BECOME SOCIALLY DISTANT

What happens when a social club can no longer be social? When I was first approached and asked about being the 2020 GPSN chair, I was thrilled with the idea of making the club bigger and more social than ever. That is, until Covid-19. Although our face-to-face events can no longer occur, the Flinders GPSN team is working hard behind the scenes to start planning a vibrant and enthusiastic semester 2 for our members. On a national level, GPSN chairs from different universities across Australia have been brainstorming how to engage our members online, and for that we thank all our members for their support during this time. Locally, we are recruiting new students for our junior committee, and planning how we can make the best of tough times once lockdown is lifted.

If there is anything Covid has shown us, it is that Flinders students are much more resilient and understanding during tough times than anyone ever thought possible. We have watched as members of our club have looked after each other, supported each other, and leaned on each other when times are tough. As the GP society at Flinders, we could not be prouder of our members checking in with each other, and making sure their own mental and physical health is maintained- something we all will need to be aware of in our final years of university and as we progress in whichever medical field we chose.

The GPSN Flinders committee are looking forward to celebrating coming out of this time stronger and with a more optimistic outlook than ever before. We have come to realise that the fundamental principles behind being a GP- looking after the mental and physical health of others, the greater community, and yourselves- have become more evident during this time. Until we are able to fully provide details of events on a university and state level, we encourage everyone to look out for each other, and together, we can come out of this stronger. Stay healthy, stay safe,

Brittany Collie
GPSN Flinders Chair 2020

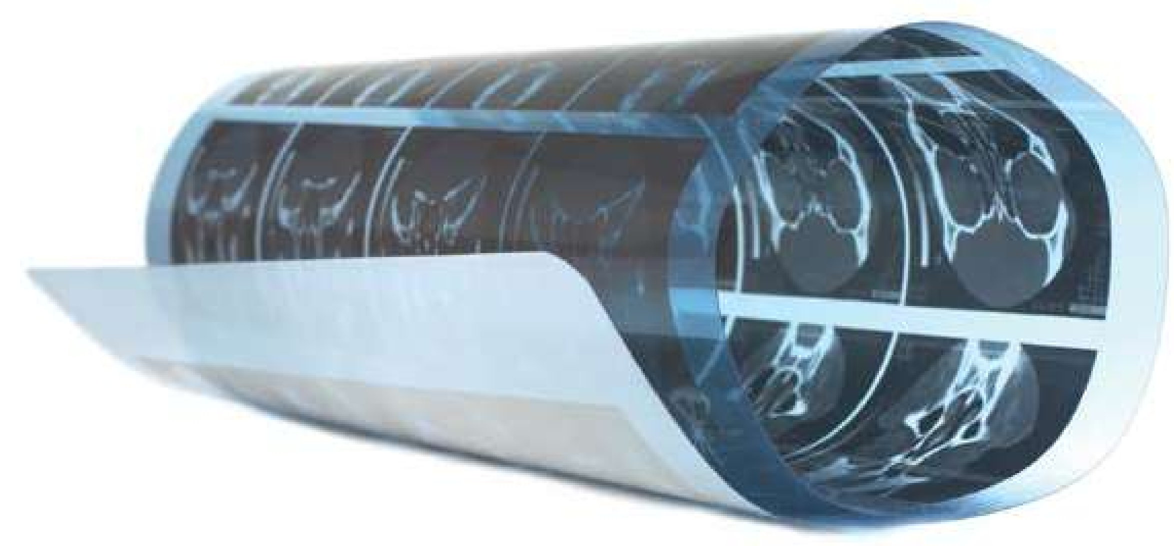
FLINDERS PEDIATRIC STUDENT SOCIETY

We are a new society this year and wanted to say hi to everyone from the Flinders Paediatric Student Society! we are excited to announce our inaugural committee members

President: Imogen Lee
Treasurer: Minjoo Kwon
Secretary: Mikayla Hussey
Events officer: Tereasa Pham

FPSS is a society that hopes to bring more awareness to paediatric and adolescent medicine and provide useful training and information nights in the future. As a society we recognised the lack of interactive paediatric information delivery and see FPSS as a place for students to meet and hear from clinical and academic professionals in the specialty. Additionally, as there is not a specific dedicated paediatric block in MD1 & 2 we know it can be quite difficult to tackle the paediatric section of the PT. We aim to target this directly by developing a paediatric PT resource to help you with your studies! This year we've definitely faced some struggles getting our feet off of the ground amidst the COVID-19 crisis, but whether you're considering a career in paediatric and adolescent medicine or just curious and want to develop your knowledge about child health FPSS is looking to forward hosting events when it is safe and possible to do so.

We know you're working towards more than just a piece of paper



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MEDICALLY BLONDE 2020

Bored of rewatching Tiger King? Tired of baking bread? Craving human interaction? Get involved in Med Revue 2020!

Med Revue is an annual student run satirical production widely enjoyed by medical students, faculty and greater community. If you enjoyed 2019's Fantastic Deans and Where to Find Them, get ready for the next sensational hit – Medically Blonde!

In 2020, a shock break up drives Elle Woods, a former nutrition student, to get into Flinders MD, where she finds Warner with his new girlfriend; mean girl Vivian Kenningston. How will Elle navigate the trials of medicine and win back Warner's heart?

So far, Med Revue 2020 has resisted the storm of Covid-19 and will likely go ahead on the first weekend of October. Final jokes are currently being added to the script and auditions are underway! Do you resonate with Elle Woods? Are you an aspiring "Orthobro" like Warner? Are you game enough to play Rainer Haberberger? More interested in arts and craft than acting? Join the props team. Love fashion and design? Costumes and make-up is for you. Interested in the inner works of the show? Join the stage team. Just want to get involved on stage? THAT'S WHAT THE CHORUS IS FOR! Keep an eye out on the FMSS facebook page for all Med Revue related updates opportunities to participate.

We can personally vouch for the multitude of benefits the much-anticipated Med Revue brings to the lives of medical students. Med Revue showcases some of the amazing talent we have here in medicine, and serves as a creative outlet for the stressed-out med student. Moreover, Med Revue is the perfect opportunity to get involved in the medical community. The time spent writing, rehearsing and performing as a team creates long lasting friendships across the medical cohort, from Clin sci 1s to MD 4s. In fact, many medical graduates recall their experience in Med Revue as some of their most fond memories of their time at Flinders.

Satisfy your crave for human interaction.

Get involved in Med Revue 2020.

2019 - Fantastic Deans and Where to Find Them

2019 - Fantastic Deans and Where to Find Them

2018 - Charlie and the Doctor Factory

MED CAMP 2020

It seems odd to think back to a time when we were able to take 120 medical students to a "non-essential gathering", but on Friday the 13 th of March that's exactly what we did. Generally, you never really know what a Friday the 13 th will bring your way. This was not the case for our MD1s in March, however, as they knew they were going to complete their TBL and then jump straight on a bus to Normanville's Camp Dzintari for a weekend full of education, sports and possibly a drink or two.

Med Camp is the first opportunity for our MD1's to get to know each other outside of the classroom. Their peers will essentially be their extended family for the next 4 years, so building strong relationships from the start is essential.

Night one involved getting everyone into their teams for some bonding time and to meet their MD2 team leaders. Following a delicious serving of burritos prepared by Joe and Bea (our resident chefs), it was time for the Friday night theme party: Op Shop. Everybody was looking fabulous in their thrift shop outfits, with some finding incredible outfits that we're sure have become part of their regular fashion rotation. With everyone looking the part, it was time for everyone to let their hair down and enjoy the evening, with rage cage, beer pong and a plethora of other games being played amongst the teams. Festivities carried on well into the evening and the stamina of some of the more seasoned veterans really showed, with some not clambering into bed until unthinkable hours. They certainly needed a power nap before the events of Saturday.

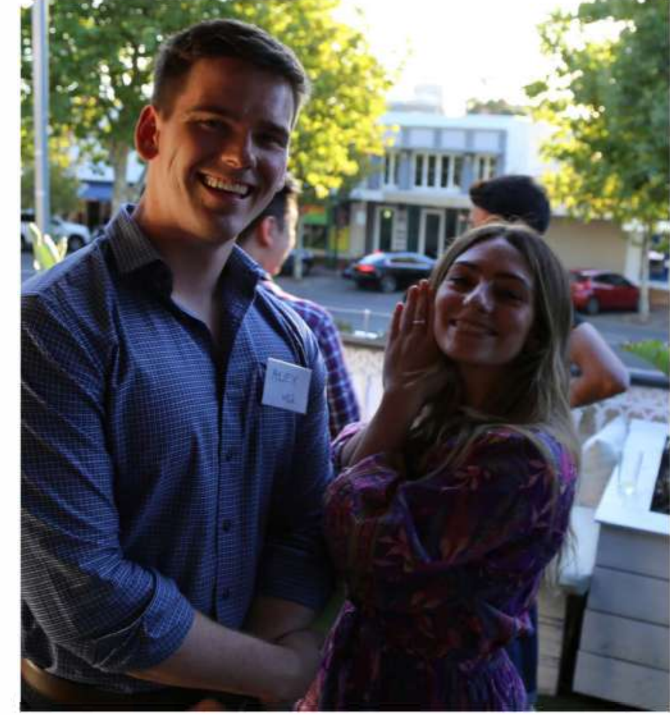
Wharton
FILA

MED CAMP 2020

After breakfast on Saturday morning, it was time for the medical students to participate in some academic activities. We had 4 fantastic stations run by FMSS and special interest groups, including suturing, auscultation, blood pressure monitoring, medical Pictionary and a comprehensive critical care scenario, complete with a real life ambulance, car crash, fake blood and a “pregnant” patient. We must give a huge thank you to FMSS, FUSS, GPSN, FCCS, and the Obs & Gynae society for putting together such amazing stations for the MD1s.
With the academics completed for the day, it was time for the students to put on their team colours and channel their competitive spirit, as the rest of the day was all about winning points for their team. We put the first year students through a marathon of sports (including tic-tac-toe relays, Tug’O’Wark and dodgeball), a scavenger hunt and iron stomach challenge.
The afternoon was capped off by the chilli eating challenge, which included some of the spiciest hot sauces known to taste. Most contestants were able to successfully navigate their way through all of the hot sauces, with just one reaching for the glass of milk to save them (and then approximately 3L more over the next 30 minutes…). Thankfully, all students made it out alive.
Saturday night was the ‘Anything But Clothes’ party and the students did not disappoint. We saw the creative side of the MD1s, who were dressed in everything from beach towels to sleeping bags. Saturday night was, as always, the boat racing competition between the teams and this year’s was one for the ages. With Pink and Red facing off in the final, both teams were so evenly matched that we needed to use goal-line technology to determine a winner. After an inconclusive result from the VAR, a third re-row was required and eventually the endurance of the Pink team shone through and they were crowned the champions.
Sunday morning’s hangover was challenged by the big camp clean up, but everyone banded together and was rewarded with a feast of leftover food for breakfast. The weekend’s end was particularly sweet for the Orange team, who claimed victory – in the form of both bragging rights, FMSS merch and Tav vouchers! Med Camp is a great tradition of FMSS and we were elated to see it come together in such a successful way! Thank you to everyone who contributed. We could not have done it without the support of the FMSS committee, our awesome team leaders who acted as great role models for their teams, and all the MD2, MD3 and MD4 helpers. Finally, thank you MD1s for all your enthusiasm in everything the weekend threw your way and respect for the space and each other – all great traits to carry throughout the medical degree and beyond. The social calendar isn’t quite over yet and we would like to draw your attention to Medball.
Despite the disruption of this current climate we are still optimistic this event will go ahead so stay tuned. Expect big things, the editor here tried to push us for a theme hint, but we want to keep you all guessing.

Love Social (Simon and Elise) x

FLINDERS MEDICAL
STUDENTS' SOCIETY



O' WEEK

We all know that feeling of uncertainty as we walk into a new environment, not to mention one that some have taken years to get into. Emotions are all over the joint. All you want to do is settle in, find your crew, and get on with it! As February rolled around this year we all geared up to welcome another cohort of MD students to the fold. Naturally, there was a running theme for our new students of free lunches and sign ups; what a evolutionary aspect of their O'Week 2020, groundbreaking! This year FMSS and a number of special interest groups provided our MD1s with delicious plant based meals as we transition to a more sustainable and environmentally friendly approach to student support. This included 'meaty' burgers and vietnamese salads with Banh Mi's. With full bellies the students signed up to our wonderful sponsors, AVANT and MIGA. Students also got their first chance to meet all the societies and be even more overwhelmed by information about the opportunities and options in front of them!

We unleashed the MD1s on a number of venues across Adelaide during the two ran for. The Havelock Hotel hosted our meet and greet night and Prateek took out the prize for our bingo. An obligatory pub crawl found the classy aspect of all our new students. Dressed as icons, they dragged themselves through the finest establishments Hindley Street could provide. Memories were made, memories were lost, bulls were ridden. Quiz Night returned to the Tonsley Hotel for another night of entertainment. Our talented MC, Benno, guided and entertained us through the

evening with his choice words and professional conduct that Stephen Gregory would have been proud of. Congrats to the winning team who won one of many awesome prize packages we had for the taking!

This year we also brought back our O'Week Movie Night with a viewing of Matilda on the outdoor superscreen at the student hub (that's right, there is more to campus than FMC). There were all the trimmings of fairy floss, popcorn, choc tops and slushies and the opportunity to meet the kids and partners of those going through the MD program. This was an amazing night and importantly recognises that our family is made up of all kinds of people, and believe it or not Hindley street is not for everyone!? O'Week 2020 was a success and we both had an amazing time welcoming the new students to our MD family. We all know the transition to med-life can be tough and daunting but we are all in this together and truly become each other's support. Little did we all know at this time that our social lives were to be so disrupted for the year ahead so hopefully the MD1s got to know each other well enough to survive months of conference calls! We hope that O'Week was as enjoyable for our new students as it was for us. We can't wait to see you all back at FMC in the future!

Rod and Eleanor,
O'Week Convenors

MORNING TEA GOES 'VIRTUAL' FOR 2020 WITH FLINDERS MEDICAL SOCIETY

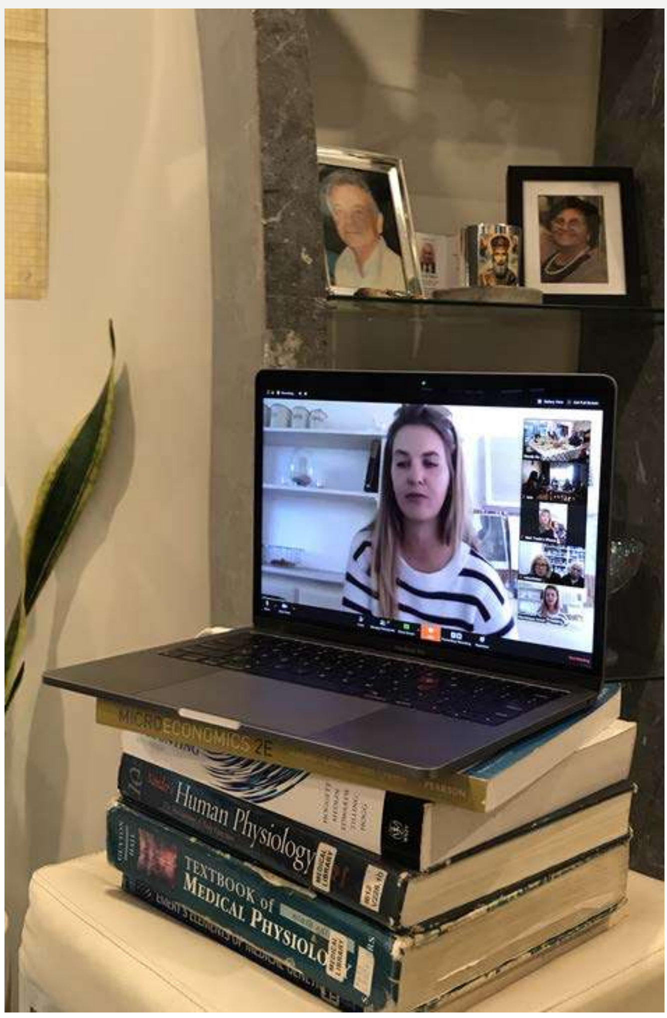
This May, we put the kettle on and connected online by hosting a virtual Australia's Biggest Morning Tea. Every year in May, thousands of Australians gather family, friends, and loved ones to host a Biggest Morning Tea and raise vital funds for Cancer Council SA; however, this year, due to COVID-19 restrictions, hosts had to move their morning teas online. We joined thousands of Australians across the country who were hosting a virtual Biggest Morning Tea, using it as a way to socialise and connect with each other during times of social distancing. "It is so important to look after our well-being during medical school, especially now, with many of us spending so much time isolated from one another. Australia's Biggest Morning Tea seemed like the perfect event for us to support not only our own health and well-being, but also that of those directly affected by cancer," said Tiani Pakos, FMSS Director for Health and Well-being. FMSS Committee Member Jesse Walsh agrees.

"We're a really social group, with many of our events throughout the year aimed at supporting students and encouraging them to give back. Like everyone, COVID-19 has changed the way we communicate and connect, including learning from home instead of in the hospital." Jesse says that for the students, supporting Cancer Council SA was the obvious choice, with many of them experiencing the impacts of cancer firsthand. "A lot of us have had close family or friends impacted by cancer and know how important organisations like Cancer Council are in providing information and support. For me personally, I've had five family members diagnosed with cancer." "Recently, we also found out that two members of the college were also battling a cancer diagnosis, which makes us even more determined to make a difference," she said.

The FMSS Virtual Morning Tea was held on Sunday 31 May will via Zoom, with prizes and competitions, along with guest speakers organised by FMSS Engagement Director, Eleanor Horsburgh. Our event was featured on the Cancer Council website and Facebook page, with highlights in the CMPH, P!ng, FUSA and Flinders' University newsletters across the month of May.

The virtual tea went beyond catching up with friends and we were privileged to have our very own MD2, Dominque Schell, who is an osteosarcoma survivor give a talk. She chatted about her experience going through cancer, life after and how now studying to be a doctor has given her a whole new outlook on her cancer experience. You can watch the talk by heading to the FMSS Virtual Biggest Morning Tea event page.

Dominque Schell has spoken at Tedx and Medx events around the world and is the founder of her own charity Crutch4Sarcoma which raises awareness of youths diagnosed with sarcoma. With COVID restrictions easing, we hope to get her back to talk to all of us about the medical side of her journey later in the year.



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