

NEW ZEALAND Anaesthesia

THE MAGAZINE OF THE NEW ZEALAND SOCIETY OF ANAESTHETISTS • APRIL 2021

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Aotearoa
New Zealand
ASM

Planet health - a
public health issue

PLUS:

Departing NZSA CEO Renu Borst
A personal experience of COVID
Pacific Anaesthesia Collaborative Training



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President's column

APRIL 2021

The ANZCA NZNC Cultural Safety and Leadership Hui took place in February and the venue at Waitangi was a stunning location, which really brought it home as we listened to talks on Māori health inequity and Māori under representation in medicine, including anaesthesia. Congratulations to the organising committee for putting together such a thought-provoking and challenging program. Of course, the key will be to achieve meaningful, enduring change to achieve better health outcomes for those who are not well served by our current health system. There is a long way to go but it was heartening to see the commitment of those who attended the hui and to hear a range of perspectives and ideas on how to effect change.

Change is a hot topic at the NZSA this month, with two of our key staff leaving.

Renu Borst has been the CEO of NZSA for almost nine years. During that time, she helped to develop the NZSA's strategic vision and operational priorities, enabling organisational changes such as new policies and processes, which helped to make the office and Executive more efficient in managing its work. We now have a robust operational infrastructure and a team that works cohesively and productively to ensure the society is in a strong position and sustainable for the future. Along the way the NZSA also made some significant changes, as Renu led the NZSA rebrand and more recently the launch of the new NZSA website. She has built and maintained great relationships with our members, our stakeholders, and of course our Pacific neighbours. She has been a wonderful asset to the Society, and I have to say, it will take some getting used to: Renu has been the only CEO I have known in my time at NZSA! We have been busy recruiting and are pleased to announce that we have appointed Michele Thomas as the new NZSA CEO. Michele's previous role was as CEO at Lakes Hospice Trust. Michele begins in the role on 28 April and will have some time with Renu for handover. Renu, we wish you all the very best and thank you for all the time and hard work you have put in over the years supporting and growing the NZSA. Renu reflects on her time at NZSA and the many changes, as well as her personal growth, in an interview that appears on pp.8-9.

We also farewell our Communications Manager Daphne Atkinson, who will take up a new communications role in the health sector. She has been with the Society for five years and has contributed to developing our submissions, building our stakeholder relationships, marketing events, writing our E-Zine, and of course this magazine, plus much more. Thank you Daphne and we wish you all the very best in your next challenge. We are now recruiting for a new Communications Manager.

We welcome our new Executive and Network Support Administrator, Rebecca Nodwell, who began in the role on 8 April. This role was vacant for several months and has increased the workload of the current office staff who have covered the key duties of this position.

The Executive Committee met in March, our first face-to-face meeting this year. I am still extremely grateful that this is something we can do in New Zealand! We spent some time on this day thinking about where we want the Society to go, our goals and priorities, and what we can do to add value for our members. Below I cover some of the areas the NZSA is involved in and which cover some of the discussion we had at our meeting.

Advocacy

One of our key roles is advocacy, and we regularly draft submissions on legislative/policy consultations. Recent submissions include providing feedback on the Climate Change Commission report and PHARMAC's consultation on their subcommittees and their composition to achieve greater equity. Submissions are time consuming, but an essential aspect of our work. We anticipate changes ahead with the implementation of the Simpson Report, the End of Life Choice Act, the review of the PHARMAC model and PHARMAC's medical devices implementation.

One of our key goals for the coming year is to develop a plan to integrate the principles of Te Tiriti o Waitangi into the NZSA and its activities. We have been discussing how we might achieve this for some time, and the Executive recognises that we need to do this in a meaningful and honest way, not just a token effort. We wrote to the University of Otago last year, with a message aligned with NZNC, supporting their Mirror on Society admissions policy. But after medical school, how do we advocate for our specialty and make it more attractive to Māori (and other minority) doctors? The Hui in February challenged us to look at our training

programs, our exams, our set up. This is clearly bigger than the NZSA, and always a challenge with a binational college. But this is where we can use our voice. How do we represent the needs of our Māori anaesthetists? We need to hear their voice. The lack of diversity on our executive committee is painfully apparent, and that is something we are actively trying to change.

Community

Our Vision is 'To be a trusted, leading voice, which represents and supports our community of medically registered anaesthetists in NZ and promotes high quality perioperative care and patient safety.'

Seeing our membership numbers rise steadily is fantastic, as it means that we are truly representing our community of anaesthetists and that we are responsive to the needs of our members. A question we constantly ask ourselves however, is how can we add value for our members? How can we improve the lives of our members?

The wellbeing of our members is always on our mind, and more so in the current COVID environment. No doubt 2020 was a tough year, and this year continues to be so. Many are experiencing the cumulative fatigue but also questioning why, given we have been relatively spared, they may be feeling distress. Of course, despite low numbers of COVID cases, the impact has still been huge. Not being able to see family overseas, significant family events curtailed, the uncertainty around what will happen, the fear of widespread community infection, lost jobs, reduced incomes, and uncertain futures. We may have been 'spared' the cases, but we have not been spared from the impact of the pandemic.

The Networks have been a hugely positive addition to our activities, allowing collaboration and connection across the country. This was particularly valuable as COVID emerged – including for the wellbeing of network members. We have the following networks operating: PANNZ (joint with SPANZA), NOA (joint with NZNC), Airways, Environmental & Sustainability, Inpatient Pain Network and Private Practice. We began with two networks five years ago, so it is wonderful that we have expanded our networks and better still, to see them thriving.

Launch of new initiative

I believe it is important to acknowledge the hard work and efforts of those in our community who have an impact.

NZSA Life membership is awarded to members of the Society who have made outstanding contributions to Anaesthesia in New Zealand, and/or to the NZSA. They are nominated by the Executive Committee and elected as Life Members at a General Meeting of the Society.

The most recent recipients of lifetime membership were Drs Kaye Ottaway and Malcolm Futter.

This year we will launch the President's Award, to be conferred on an NZSA member who has provided a sustained or specific contribution to the Society and anaesthesia community.

Nominations can be made by anyone of you and selection will be completed by the current president, vice president and immediate past president, with presentation of the award at our AGM in Christchurch, held during the ASM. So get your nominations in – the nomination form can be found on our website.

Education

We are pleased that the Christchurch ASM successfully secured a new venue and has confirmed dates for 27-30 October. Please register and support this meeting. Read about the many outstanding attractions of this conference on p.14-15.

The Part 3 course has been a regular feature of our calendar for almost a decade. This will run in Christchurch this year, and in Wellington in 2022 aligned to the Combined Scientific Congress.

I would also draw your attention to the Auckland City Symposium on 17 April, a hybrid conference. Visit the website <http://www.acs.ac.nz/>

In summary, the top priorities for NZSA this year are to:

- Ensure new office staff settle in, without them we cannot do anything!!
- Look at our Society with the principles of Te Tiriti o Waitangi in mind and through this lens grow our Society and its values in the right direction.
- Continue to be an active voice, alongside ANZCA, in important issues likely to affect our members.
- Connect with our members and engage. We have a full schedule of hospital visits planned for the year. This is an opportunity to hear from you about how you are and what you want from the NZSA.
- Award the inaugural President's award to a well deserving anaesthetist!

Thank you to our members for your support and engagement. On behalf of the Executive and staff, we look forward to a productive and successful year, representing you across advocacy, community, and education.



Sheila Hart, NZSA President



News in brief

Anaesthetic Technician degree update

The Auckland University of Technology (AUT) is developing a degree program to replace the current Diploma in Applied Science - Anaesthetic Technology. The Bachelor of Health Science (Perioperative Practice) is currently undertaking its initial proposal to the Committee of University Academic Programmes (CUAP), which details the justification for the proposed qualification, including the infrastructure required to successfully develop and deliver the qualification, alignment with the universities and wider health workforce vision, as well as the detail for the proposed courses. Following sign-off, AUT will present the application to the Council of Universities. Diploma numbers for 2021 are strong, despite this being the final year of offering this model of learning. In total, there are 101 students enrolled in the Anaesthetic Technology pathway.

The NZSA has engaged in stakeholder meetings over the last two years on the proposed degree content, and in December last year we provided formal feedback on the proposed final program. Our main concerns are to ensure that the degree complies with the ANZCA professional standard PS08, which includes 12 months of clinical placement (an essential component of PS08). The NZSA is also involved in the process to help ensure a sufficient supply of anaesthetic technicians, especially in the regions, as many DHBs are currently experiencing shortages.

The inaugural Perioperative Practice Programme Advisory Committee met on 16 March this year, with representation from NZSA, NZNC, NZATS, AUT and the wider health sector, including DHBs and private practice. Discussion included the broadened graduate profile with a focus on shared skills, competencies, and a flexible workforce. This was welcomed by all parties. There are also plans for approximately 10 pathways of transition to recognise prior learning, with the purpose of establishing a pathway for postgraduate education.

Dr Morgan Edwards, who is the NZSA's Assistant to the Anaesthetist Representative, says that ensuring a fit-for-purpose workforce, which is compliant with PS08, remains paramount for the NZSA.

World Congress 2021 goes virtual

In light of the ongoing impact of COVID on international travel, the WFSA and the CSARIM have decided to move to an entirely virtual World Congress of Anaesthesiologists (1-5 September 2021).

Moving online provides an exciting opportunity to ensure that WCA 2021 is the most accessible gathering of its kind. Without the expense of travel and accommodation WFSA will be able to welcome the largest global community of anaesthesia and perioperative care providers ever assembled for a congress.

For those who have never been able to travel to a WCA this online format opens up the possibility of attending.

Alongside a comprehensive scientific programme, the virtual platform provides opportunities to meet, collaborate and share experiences with a truly global network of anaesthesiologists and intensivists. More details www.WCA2021.org and www.wfsahq.org

New NZSA staff member

The NZSA extends a very warm welcome to Rebecca Nodwell, who has been appointed as NZSA's new Executive and Network Support Administrator. She will provide administrative support to the CEO, NZSA Executive, our obstetrics and paediatrics networks, as well as the Aotearoa New Zealand Education Committee. Rebecca's previous role was at Presbyterian Support Central, where she provided administrative support to the CEO and Board, as well as managing the office. She was responsible for the organisation's health and safety compliance and will also undertake the H & S role at NZSA. Rebecca describes herself as highly organised, detail focused and driven. She looks forward to meeting NZSA members and supporting the NZSA's diverse work program.



Wellbeing resources

Did you know that the Medical Protection Society (MPS) provides wellbeing resources? These resources enable you to assess your own wellbeing and get the support you need. MPS (In conjunction with the Medical Assurance Society), also offers counselling to members experiencing work-related stress, or stress that they feel could impact their practice. The counselling service is provided with the assistance of the New Zealand College of Clinical Psychologists and is accessible 24 hours a day, 7 days a week. Call MPS on 0800 2255 677 or email advice@mps.org.nz. The NZSA's wellbeing webpage <https://anaesthesia.nz/community/wellbeing/> has a range of resources. We are expanding our wellbeing page and welcome your suggestions on resources we can add that you think would benefit NZSA members. Please email comms@anaesthesia.nz

PHARMAC review

The Government announced its independent review of the PHARMAC model last month, which will evaluate how well PHARMAC performs against its current objectives and how its performance against these could be improved; whether these objectives maximise its potential to improve health outcomes for all New Zealanders; and whether objectives should be changed. A range of factors will be assessed including the timeliness and transparency of PHARMAC's decision making, especially in relation to new medicines. Another focus will be equity, including access to medicines for Māori and Pacific peoples.

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A conversation with departing NZSA CEO Renu Borst

Departing NZSA CEO Renu Borst talks about her cultural identity, her ascent up the career ladder, personal growth and the key changes and achievements at the NZSA in her almost nine-year tenure. Renu has been working as CEO remotely from Melbourne, while the Society recruited for a new CEO, and is settling well into her new life in Australia.

Childhood, Fiji, family, and cultural identity

I am third generation Fiji Indian, and was born and raised in a culturally traditional home. My parents were a huge influence on my early life. I inherited my mum's resilience and tenacity, and my dad's love of people, music, and spirituality. They were great role models for hard work and overcoming challenges.

As a child, I was introduced to Indian classical dancing, music, meditation, and yoga which have helped to keep me connected to my roots.

The Indians in Fiji worked very hard and had high aspirations for their children after the indenture period. They wanted their children to have a good education as we had very limited land ownership. The coup in Fiji was a major disrupter and took away our security and our lives as we knew it. Family and friends left Fiji in droves to make new lives for themselves. It influenced my father's decision to send me to New Zealand to study. Coming from a very close knit family, I experienced extreme homesickness when I came to New Zealand to study at Massey University. Eventually, I returned to Fiji to complete my studies.

I met my Dutch, now ex-husband, in New Zealand and we lived in Fiji for a few years. Married at 19, I went through a huge identity shift – the difficulty I faced was straddling two very different cultures and not feeling like I wholly belonged in either. As a mixed race couple, life in Fiji wasn't easy and the antagonism, sexual harassment and racism within my own culture threw me into an existential crisis.

I made the choice to move to New Zealand with my husband and six-month-old daughter, as I wanted her to grow up in a country where she had a voice and the stability of a homeland.

Both my husband and I were immigrants and with my parents in Fiji and in laws in the next town we had to build a whole new life with very little money and without a network of people to support us. As a young stay at home mum, I suffered loneliness, severe postnatal depression, and a lack of cultural familiarity. This really showed me the importance of community, support and helping those in need.

New Zealand is a much more multicultural society today, and this has led to more conversations about acceptance of cultural diversity.



Renu and partner Wayne

I was also adjusting to some less than friendly attitudes in my new homeland. A Plunket nurse once told me 'you people have to assimilate if you want to live in New Zealand.' These types of experiences motivated me to work harder at making New Zealand my home. New Zealand is a much more multicultural society today, and this has led to more conversations about acceptance of cultural diversity, and a recognition that assimilation shouldn't mean having to lose your cultural identity.

Career beginnings

When my parents migrated to New Zealand they helped with childcare and I had the opportunity to look for a job. I had a degree, but very little work experience. From my very first day of employment, I was like a sponge soaking up the experience, learning new skills and throwing myself into harder and harder roles, tackling whatever was thrown at me.

With two children at home and the support of my parents and husband, I worked long hours, including many weekends. I faced adversity and challenges but learnt many skills and quickly moved up the ladder – reception, office management, corporate services and then my first CEO role at NZSA. When I look back at my working life, my main motivation was to do the best job possible to make people's lives easier. I learnt IT, HR, operations, finance, and management. Every job has been a huge learning curve and has enabled me to progress to the next level. I had great mentors and learnt that leadership comes from within, and we all need to find our own style.

The NZSA experience

At NZSA, I had a platform to instigate change. As a decision maker, it was important to hear what others had to say. I wanted people to be included in the journey. Community and collaboration were key aspects of driving change. For an organisation to flourish, you need a common goal and an overarching vision that people can believe in. That is always the hardest to do as it involves a lot of strategic thinking and the first strategic planning session was met with a lot of silence, but ideas started coming in and we had engagement.

My work was cut out for me with NZSA needing a significant rebuild, but with limited resources. These big changes needed to happen simultaneously – the Society was struggling with operational data and system management. We needed to rebuild membership services, office systems, and internal resources for a well-functioning organisation. The manual systems required more skills and resources than we had. We didn't have the data or information required to make important decisions. There wasn't a cohesive platform or an infrastructure to fulfil our strategic vision. We needed to automate some of our services, keep good records, build new systems, and develop procedures and policies to create a professional body that members wanted to engage with.

My vision was to have a growing and engaged membership, and an organisational culture that supported the overarching vision. The NZSA had an impressive and long history, but it was hard to see a thriving future. NZSA did not yet have a connected, cohesive anaesthesia community and, we have worked hard to turn this

around. A big factor in building a strong community has been the growth in NZSA membership and engagement through our sub-specialty networks.

We had several strategic planning sessions in those early years, and we set operational goals and persevered during very busy and challenging times, to future proof the NZSA to make it adaptable and sustainable. We then needed to communicate the work we were doing so that members could exchange ideas and have a platform to bring burning issues to the forefront. As we built our key pillars of advocacy, education, and community, telling the NZSA story became essential. We have increased the touch points of membership engagement across a range of areas including hospital visits, newsletters, conferences, and our sub-specialty networks.

Our members are extraordinary and even with immensely busy schedules are stepping up to volunteer their time to support the Society's work. They are helping to organise events, to be part of the Executive Committee, are members of our networks, national and international groups, they help with submissions, have had input into our website, and of course contribute to our advocacy with the government, and other stakeholders.

NZSA has had steadily rising membership, especially in the last four or five years. It has been particularly pleasing to see the increase in trainee members, with most choosing to stay on as members after becoming consultants.

Continued on page 20



Starting a new life in Melbourne



Renu, second from left, with CEOs of the Common Issues Group attending the group's annual meeting in 2017



Renu pictured with delegates at the Pacific Society of Anaesthetist's conference in Fiji, 2019

Planet health – a public health issue



Dr Rose Cameron

Anaesthetists as a group are one of the largest carbon emission producers in our hospitals. Dr Rose Cameron, an Anaesthetic Registrar employed at North Shore Hospital and a member of the NZSA's Environmental and Sustainability Network, writes about innovative new initiatives to support environmental sustainability and says "small, sustainable changes can have a big impact." Dr Cameron also sits on the ANZCA

NZ Trainee Committee.

Planet health is a public health issue – a message that has been reinforced by our Government's recently announced goal of a carbon neutral public sector by 2025. This goal includes a requirement to report on emissions with carbon offsets if neutrality is not achieved. For District Health Boards (DHBs), the Government has suggested electric vehicles and renewable energy as targets. However, there are many other indirect emissions that occur, as every single item we use has a carbon footprint. This is the area that needs to be focused on in theatre, in addition to the above more specific targets laid out by the Government.

Anaesthetists as a group are one of the largest carbon emission producers in our hospitals. Environment and sustainability in Anaesthesia has always been an interest area of mine. It came sharply to my attention in the Primary Exam last year, with a short answer question on the environmental impacts of Anaesthesia. This motivated me to do additional research (post exam!) to help initiate ways of reducing our carbon emission footprint.

There are many products we use daily in theatre that have concerning and avoidable detrimental environmental costs. I joined TRA2SH (Trainee-Led Research and Audit in Anaesthesia for Sustainability in Healthcare) and the NZSA Environmental and Sustainability Network, with an aim to bring sustainability further to the forefront of our minds. Involvement with these groups was encouraged by my role in the NZ Trainee Committee for ANZCA, as sustainability is a primary focus for the committee this year. I have outlined some of the areas where we can make small, sustainable changes below.

Reducing (rather than reusing or recycling) one's use of any given item is the most effective way of making a positive impact on the environment. It not only reduces landfill waste, but reduces the environmental impact of manufacturing, sourcing, transporting, and processing raw materials. Life Cycle Analysis encompasses the cost of anaesthetic equipment we use. Reusing items in New Zealand (for example drug trays) may be favoured compared to in Australia. For example, where some states rely on fossil fuel burning for the ability to reuse these items.

Furthermore, everyday items such as Blueys/Greenies ('incontinence sheets/pads') have huge environmental impacts. Blueys have an important function; reducing the risk of dermatitis and pressure sores caused by prolonged skin exposure to fluids. TRA2SH traced an 'Australian-made' Blueys cradle-to-grave journey and discovered that up to 12 countries are involved! Each step involves significant air, water and/or soil pollution. Also, Bluey breakdown in landfill exceeds 100 years. A TRA2SH survey showed that Inco pads are used for many purposes other than to reduce prolonged skin exposure to fluids therefore contributing to preventable waste. Incontinence pads are often discarded as 'biohazard' waste, which is more expensive than normal waste adding to the environmental and financial costs.



(Photo: Blue/greenie)

Blueys...
Take hundreds of years to decompose in landfill and can't be recycled
Do you really need to use a Bluey?
Can you...

-  **Refuse & Reduce**
Avoid using, or use something else!
-  **Use a re-usable item**
eg towel, for mopping up fluids or padding hard spots
-  **Re-use packaging destined for the bin**
for tasks with contamination
eg to catch the ETT or LMA, or to cover the bandage roll

The number of Blueys used in Australian hospitals surveyed last year ranged from 15,600 to 96,000 (4-16 theatres). This data was collected as part of 'Clean Up Theatre Day' and was an initiative run by the TRA2SH group. It was held across seven Australian hospitals last year and had a primary focus of reducing Bluey use.

TRA2SH was founded by Drs Jess Davies and Sophia Grobler, enthusiastic Australian Anaesthetic Trainees who co-chair our group. You can view this link of them presenting

a webinar on their environment and sustainability work <https://www.youtube.com/watch?v=gf68GinsCU4&feature=youtu.be>

This year TRA2SH's annual sustainability event is 'Operation Clean Up' Day (OCU) on 22 April 2021, coinciding with Earth Day. Blueys are just one of our four main focuses that include:

REFUSE Desflurane, REDUCE Greenies/Blueys, REUSE drug trays, and RECYCLE paper (or extend/improve on what your department already does).

How can you get involved?

'Operation Clean Up' can be run by anyone in your anaesthetic department. Trainees can get involved by taking on a scholar role, as well as giving the department an opportunity to reflect, identify issues and find solutions to achieve a more sustainable environmentally minded practice.

The aims of the TRA2SH group are to lead by example and inspire others around you, as well as to recruit more people to join in your challenge. Together, small changes can make a big difference. If each of us reduce ONE greenie per anaesthetic, we can save more than 5 million incopads from landfill PER YEAR in Australia and New Zealand (and from being manufactured in the first place)!

Have a look at the website www.tra2sh.org for further details, and sign up to OCU to take part in Operation Clean Up Day, where your small changes can make a big difference!

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JOIN TRA2SH IN
REFUSING
REDUCING
REUSING
RECYCLING



Earth Day April 22nd
to Clean Up Theatres

Writ in Water

Writ in Water is an art exhibition and social function which aims to bring senior doctors together from across Auckland.

The event has grown out of an SMO wellness initiative started in 2018, and was originally scheduled for April 2020 but due to COVID disruptions rescheduled to Saturday 18 September 2021. We are hoping to help senior doctors to refocus their lives outside of medicine, rediscover their creativity, and catch up with friends and colleagues. It's been organised entirely by senior doctors in their own time.

We're looking for doctors to exhibit their work and to provide musical performances for our event. See our website <https://endymionevent.com/> for more details - tickets go on sale on our website in June! Even if you don't wish to exhibit or perform, we would still love to see you!

Don't hesitate to contact us if you have any queries in the meantime.

The Organising Committee

Drs Stacey Byers, Alex Kazemi and Jo Sinclair

Introducing PACT (Pacific Anaesthetic Collaborative Training)

Give a man a fish feed him for a day. Teach a man to fish feed him for a lifetime.

The New Zealand Society of Anaesthetist's Global Health Committee (NZSA GHC) has launched a new project, PACT, to sponsor the training of Anaesthetists in the Pacific Islands. The idea is to crowd source funds for scholarships to train more Pacific Anaesthetists.

The current Pacific Anaesthesia workforce is nowhere near the Lancet Commission for Global Surgery and World Federation of Society of Anaesthesiologist's target of five anaesthetists per 100,000 population by 2030. Even though training facilities exist in the Pacific (in Suva, Fiji), funding is not available to train this required workforce. Through PACT we are trying to bridge this gap.

Since the launch of PACT in October 2020, this project has already raised funds to provide a scholarship for Dr Cecilia Vaai-Bartley from Samoa to continue her Anaesthesia training this year.

We hope you can join colleagues who have already signed to support more Pacific doctors to complete their specialist training. Your support will assist our Pacific neighbours to build a sustainable Anaesthesia workforce.

PACT will, we believe, also encourage other Medical Specialty groups to follow our lead and effect meaningful change for all medical groups in the Pacific leading to sustainable and resilient healthcare for our Pacific neighbours.

We invite you to make a small ongoing contribution – equivalent to one coffee per week (or more if you wish) – to help us make long lasting improvements in health outcomes in the Pacific.

Why donate? Read perspectives below from some PACT donors

"I have been lucky enough to work with two Pacific Island anaesthesia trainees so when I recently heard about PACT, it was a no-brainer. Pacific trainees work incredibly hard and sacrifice a

lot to help their local communities, often spending long periods of time away from their families. Their ongoing training is crucial to the continuing development of safe anaesthesia throughout the Pacific Islands - the small contribution every month is definitely money well spent!" Dr Jennifer Ross

"PACT resonates with us because of all it represents; collective activism for positive change, collaboration, advocacy, ease of donation and affordable, tangible outcomes, transparent governance and above all it represents who we are as a group." Dr Indu Kapoor

"It seems such a small effort on my part that helps have a huge impact for a trainee. Knowing that I'm contributing to the effort is very satisfying." Dr Sheila Hart, NZSA President

"I don't notice the lack of \$5 a week, but as part of something bigger it has real potential for change. Particularly at a time when our other options to help are more limited this seems like an easy way to keep contributing." Dr Elizabeth Dickie

"For the cost of a cup of coffee this is a great way of supporting growth and development of anaesthesia in the Pacific Islands." Dr Petra Linden-Ross

"I contribute to PACT because the continuous funding model matches the continuous shortfall of investment in homegrown anaesthetists, leaders and educators across the Pacific." Dr Dominic Johnpillai.

To begin making your contribution in just under five minutes visit: <https://anaesthesia.nz/community/global-health-committee/donation/>

On behalf of our Pacific colleagues, we would like to thank you for your support!

NZSA Global Health Committee



At the current level of funding,
the Pacific region will not meet
the target for Global Safe Surgery of
5 anaesthetists per 100,000 people

Data/target by World Federation of Societies of Anaesthesiologists



By donating the cost of
one coffee per week

help our neighbours build their own

sustainable anaesthesia workforce
across the Pacific

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<https://anaesthesia.nz/community/global-health-committee/donation/>

WFSA Uniting for Oxygen Appeal

The World Federation of Society of Anaesthesiologists (WFSA) recently launched the Uniting for Oxygen appeal. The WFSA is very grateful for a significant donation from the NZSA. This appeal aims to raise £100,000 to provide life-saving oxygen therapy equipment for hospitals in Nigeria and Zimbabwe.

In New Zealand, we take oxygen availability for granted but this is not the case in many hospitals in resource-poor countries. In one survey of healthcare facilities in 22 low- and middle-income countries, only 61% of the hospitals had continuous supply of oxygen in the operating theatres (1). Worldwide, the need for oxygen has become even more urgent during the COVID-19 pandemic.

The appeal aims to raise sufficient funds to cover the costs and delivery of:

- 300 oxygen concentrators; 150 Lifebox pulse oximeters; 15 emergency bags (containing resuscitation and airway equipment); 15 biomedical engineering training courses; and 30 generators.

The WFSA is working with Medical Aid International to provide equipment and training. Oxygen concentrators are particularly appropriate in resource-poor settings because they are highly cost-effective and reliable when other delivery systems are unavailable or broken. The project also includes training and on-going maintenance, both critically important in any equipment development project.

Many countries around the world are facing unprecedented challenges because of the COVID-19 pandemic and unmet surgical need. Uniting for Oxygen provides a tangible and constructive approach to help colleagues and patients in hospitals with the greatest need. Thanks again to the NZSA. Personal donations are also very welcome.

Find out more <https://wfsahq.org/get-involved/donate/uniting-for-oxygen-appeal/>

Dr Wayne Morriss, President-Elect, WFSA

1. Hadler RA, Chawla S, Stewart BT, McCunn MC, Kushner AL. Anesthesia Care Capacity at Health Facilities in 22 Low- and Middle-Income Countries. *World J Surg.* 2016;40(5):1025-1033.



AOTEAROA NZ ANAESTHESIA ASM 2021

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Society

Aotearoa New Zealand Anaesthesia Annual Scientific Meeting

A lot has happened, and much has changed since Ōtautahi Christchurch last hosted a significant scientific meeting. It is fair to say that we have had more than our share of trauma. We have now emerged from past events energised about re-engaging with the greater anaesthetic community and sharing our stories. Together, we have an opportunity to reflect, learn and to prepare ourselves for new challenges.

Our conference explores Whakaora; the Māori concept of healing. We will be examining Whakaora for our patients, ourselves, our city, and our planet.

Our logo is reminiscent of the Waimakariri and the Rakaia, braided rivers north and south of Christchurch. The logo symbolises the way the themes of the meeting flow and interconnect through the programme. The braids also represent the anaesthetic community, interconnected, yet diverging and converging. Despite this, we are always moving forward towards the common goal of safe, effective care of our patients.

We encourage you to come to Christchurch and to engage with our programme, developed to reflect the dynamic times we live in.

We are honoured and excited to have as invited speakers Professor Carol Peden and Professor Daniel Sessler from North

America and Professor Victoria Brazil and Professor Bernhard Riedel from Australia. We also have an amazing group of speakers from both the North and South Islands of Aotearoa. We will hear from experts on topics including Quality Improvement, Big Data, Brain Health, Human Factors, Equity, Climate Change, Welfare and Christchurch's experience of the earthquakes and terror attack.

While you're here, take some time and focus on your personal development. Touch up on your te reo, paddle down the Avon in a waka, take in the botanical gardens or experience the exhilaration on the longest and highest zipline in Aotearoa.

We would love for you to bring your whānau, including tamariki. Childcare will be available on site during the conference and you are welcome to bring your newborns into the sessions.

For those able to stay on, the University of Otago Māori/Indigenous Health Institute is offering a special anaesthetic and perioperative specific health professions course: Application of the Hui Process / Meihana Model to Clinical Practice on Monday 1 November 2021. Details will be available on our website very soon.



Professor Carol Peden



Professor Daniel Sessler



Professor Bernhard Riedel

A personal experience of COVID

NZSA member and ASMS Vice-President Dr Julian Fuller wrote about his experiences of COVID whilst in MIQ, after his return to New Zealand from South Africa. He describes some of his experiences as the most “deepest days of despair” he has ever felt.

The NZSA appreciates Julian sharing his very personal story and thanks the Association of Salaried Medical Specialists, which granted permission to republish his article, originally published in ASMS magazine The Specialist.

Whilst in South Africa, recently, I became sick with Covid, testing positive, before recovering, and flying back to NZ, where I have since recorded 2 negatives whilst in MIQ.

I’m an anaesthetist at North Shore Hospital, and undertook a compassionate trip to Durban, to visit my younger brother, 63 years old, who was dying from Amyloidosis of the heart and kidneys

When I booked the flight on Nov 9th, Covid in SA was relatively stable. There were roughly 1,500 new cases a day, with 55 deaths, 4,800 cases were in hospital, with 500 in ICU and 250 being ventilated.

As I touched down, in Durban, on Dec 19th, daily cases had risen to 8,500, with 8,500 in hospital, 1,100 in ICU, and 430 ventilated.

The day that I became symptomatic, on Jan 6th, the numbers were extremely grim, with 16,000 new daily cases, 13,400 hospital admissions, 1,845 in ICU and 658 ventilated.

By the time I flew out on Jan 21st, daily cases had just peaked at 20,000, with 17,000 admitted, 2,500 in ICU and 1,400 ventilated.

I guess it was almost inevitable that I’d get Covid, although I took all the usual precautions, including masking up, hand sanitizing, and distancing. I rarely “went out” apart from visiting my sick brother at his home every day.

Prior to becoming sick, I did end up having 10 wonderful, quality days with my brother, before he passed on Dec 29th.

It was the undertakers who described Durban to me as being like a “war zone”, with death everywhere, so many dead, the

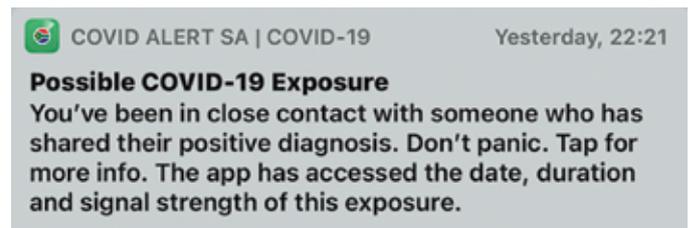
mortuaries were all full as were all the morgues, the hospitals, the undertaker firms, and all the crematoria.

Talking with a former colleague anaesthetist, there just were no hospital beds left in Durban. Private hospitals had all stopped elective work, and were treating Covid patients, in the wards and in ICUs. Patients were being ventilated with makeshift ventilators.

Durban was now so full of Covid, that were one to suffer a heart attack, or other medical emergency, you were on your own.

Whilst there, I was regaled by story after story of fit well young people succumbing to Covid, physiotherapists, doctors, nurses, just anyone. My friends were by now double masking, N95s routinely, plus another.

Durban was now so full of Covid, that were one to suffer a heart attack, or other medical emergency, you were on your own



Covid App notices that arrived on phone



On my daily exercise walks which ended up being around 6-8k



Extensive outside area with few people, open all day for exercise or just relaxing



Christmas Eve with my sick younger brother Adam, in Durban.



Monkeys in Durban, always present even at the Hotel pool

How did I know I had Covid? To begin with I developed fevers and rigors, that lasted 2-3 days, and then the worst myalgia I have ever had, muscle aches and pains all over my back, and shoulders, along with chronic persistent headaches. Add to that extreme lethargy, loss of appetite and upset stomach, and it was remarkably debilitating. Five of our bubble all had similar symptoms, and tested positive. None of us had marked respiratory symptoms. Just a mild productive cough. These chronic symptoms lasted around 10-12 days.

With my symptoms starting on Jan 6th, I began to self-isolate in my room in a beachfront hotel, until I flew out on the 21st. My PCR swab test came back positive on the 13th.

South Africa's President had announced strict lockdown conditions with immediate effect, on Dec 28th, with all beaches closed indefinitely, a daily curfew of 9pm, and absolutely no alcohol sales anywhere, restaurants, shops, or hotels. I lived in trepidation he could also close the borders again.

I flew to South Africa with Singapore Airlines, arriving in Johannesburg only to find they had cancelled my return flight! I then re-booked with Emirates, before, likewise, they cancelled all flights out of SA, 6 days before my return. The last major airline flying out of SA, towards the east, was Qatar.

After catching Covid, I had to delay my return in order that I could have a full 14 days of self-isolation in Durban before flying. I then had to make an application for an "Emergency Allocation" of an MIQ slot, but, even with DHB support, this was turned down.

I applied again, with further support from my DHB, just 2 days before my intended departure. You cannot imagine my relief when at around 6:30am, after being up all-night checking, emailing, phoning and worrying, at last an emailed voucher arrived! This was just 3 hours before I had to be at Durban airport.

The last couple of weeks in Durban, I had only survived by being an eternal optimist, always positive, but also always a realist. I had had so many ups and downs; emotionally with my brother; becoming infected with Covid; cancelled flights, and chasing MIQ vouchers, that I knew that I could only relax once onboard the Qatar flight home.

By this time, I was also quite an expert in all the rules for PCR testing, who required it, which airlines, the average course of Covid, etc.

We arrived at Auckland Airport at 6:00am, and I have never been more relieved, nor happy, in my life to be back in NZ

I made a wise decision to obtain a medical certificate by the hotel doctor in Durban, simply stating that I had tested positive on the 13th, been symptomatic since the 6th, and was now asymptomatic and not contagious. Most information at this stage suggested one was infectious for 10 days after symptoms began, but that the PCR test would remain positive for at least 2 weeks or more.

So, utter frustration, when I checked in at Durban airport, and was asked for a negative PCR test! Qatar phoned NZ, but they still insisted on a negative test despite my informing the Qatar staff that it was not yet a legal requirement. I then produced my medical certificate, which was sent to NZ. I was kept waiting 90 minutes, before eventually, a rather apologetic Qatar staff member walked over and gave me my boarding pass!

We arrived at Auckland Airport at 6:00am, and I have never been more relieved, nor happy, in my life to be back in NZ. As soon as I owned up to a positive test in SA, I was sent to the Jet Park Hotel, along with one other passenger out of 90.

Last Thought:

I do not regret doing what I did, of course. However, if I knew what I know today, there is some doubt in my mind as to whether I would have gone. I cannot for the life of me see any reason to leave NZ at present, excepting for compassionate reasons, and even then, one needs to seriously think about it, "eyes wide open."

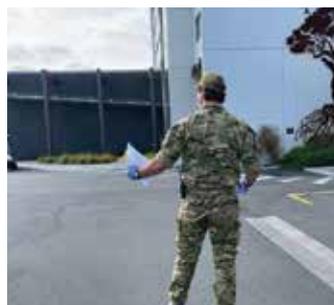
When I got Covid, I lived day by day, hoping that it was just a "mild" version, but never knowing; my age was against me. I had already likened getting Covid to playing "Russian Roulette;" you really have no idea if you are going to draw the short straw. Managing my Covid, as well as the fluid lockdown levels in SA, multiple cancelled flights, and the need to change MIQ dates, was incredibly hard, and probably the deepest days of despair that I have ever felt. If my voucher had not come through when it did, I was facing at the minimum, at least 3-4 months being marooned in South Africa.



SA went into a hard lockdown whilst I was there illustrated by these diagrams



Jet Park



Well looked after at Jet Park, by Military types, here, with my discharge papers ready to go home



In Quarantine Hotel, Jet Park in Auckland

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A hospital's experience of RNAA training and placement

Guest column



Steve Soufflot, Kensington Hospital Manager and NZPSHA Executive Lead - Workforce

A nationwide shortage of anaesthetic technicians (ATs) was impacting Kensington Hospital with deferred procedures and the AT team working long hours under pressure. Steve Soufflot, Kensington Hospital Manager and Executive Lead – Workforce for the New Zealand Private Surgical Hospitals Association writes about the hospital's experience to address these impacts with Registered Nurse Anaesthetic Assistant (RNAA) training and placement.

Kensington Hospital is a four-theatre private Hospital in Whangarei performing a wide range of surgery in the specialties of orthopaedics, general surgery, urology, ophthalmology, plastic surgery, gynaecology, ENT, and endoscopy. For many years, we have relied on Anaesthetic Technicians (ATs) to assist our Anaesthetists during surgery and immediately post-operatively and this has generally worked very well for us. However, we have not been exempt from nationwide shortages of this key workforce which has been exacerbated by the difficulty of attracting appropriately qualified and experienced ATs to a regional centre. Like many other facilities, we became reliant on overseas recruitment and a locum workforce based several hours drive away. The situation was becoming untenable with our AT team reluctant to take annual or sick leave and working long hours under pressure. Our Anaesthetists and Surgeons were becoming frustrated, and this was starting to impact our patients with increasing numbers of procedures being deferred. With no solution in sight, we needed to look at a different direction.

We considered an RNAA placement to provide the flexible resource needed to relieve the pressures on our team. We commenced discussions with our Anaesthetists and Anaesthetic Technicians. Given that formal RNAA training was relatively new to New Zealand these were by no means straight forward with a divergence of viewpoints and numerous concerns relating to how these nurses would measure up to their AT colleagues in terms of skill, competence, and crisis management. The perceived threat to existing staff roles also caused some anxiety. Conversations were at times very emotional.

As a management team we emphasised that the role of the RNAA was to support our existing AT workforce, enabling them to take leave and to practice more safely. We were only supplementing

our Assistant to the Anaesthetist workforce and had no intention of replacing ATs with RNAAs. ATs will always be an essential component of the workforce at Kensington Hospital.

Fortunately, we had a small core group of Anaesthetists and ATs who supported the approach and we decided to progress. After assessing the options available we decided to enrol in the Southern Cross Hospitals' RNAA programme. One of our theatre nurses "Sue" had shown strong interest and in August 2018 commenced her training on a part-time basis.

I cannot speak highly enough of the Southern Cross RNAA programme. The support provided by their team was exceptional. Numerous phone calls and regular site visits by the Programme Leader ensured that both Sue and the management team were fully informed and that any issues could be quickly resolved. Our Anaesthetists and ATs quickly recognised that the course met all of their expectations.

Once the training was underway, any initial scepticism quickly evaporated as the other Anaesthetists and ATs came to understand the depth of training required, the level of support provided, and the benefits became evident. Sue attended an emergency management workshop and a PALS course to develop her crisis management skills. We are also indebted to and would like to acknowledge the support of Waikato DHB for providing exposure to acute and complex patients as part of Sue's training.

In July 2020 Sue completed the programme – the first in New Zealand to do so. She is now one of the team and is supported by all of our ATs and welcomed into theatre by all Anaesthetists. She divides her time between theatre nursing and RNAA roles and this flexibility has greatly changed the dynamics within our theatre suite. ATs no longer need to feel guilty about taking holidays or sick leave, and lists are no longer deferred due to a staff shortage. The broader Assistant to the Anaesthetist team works extremely well together and morale is in a great place.

Would we repeat this exercise? Absolutely without a doubt!



Kensington Hospital, Whangarei

continued from p.8

Best NZSA memory

It is difficult to choose my best NZSA memory as there have been so many, but one I would highlight is the tremendous pride I felt last year when the NZSA hosted its standalone conference in the difficult COVID environment. Members of our Executive had the confidence and drive to organise a conference in just four months and they pulled it off brilliantly. The NZSA was also able to support this event to give members an outstanding face-to-face educational event. It showcased the professionalism of the NZSA and our ability to deliver in a short timeframe. At the conference you could feel the immense goodwill and enthusiasm of members for the NZSA. We had an impressive stand where we exhibited photos of our past, current, and future Presidents. These individuals have all shown amazing leadership and this along with our succession planning, makes for a bright future. It felt like all the hard work had paid off!

Life lessons

Success comes with having a vision, strategic thinking, learning new things, being committed to finding solutions in a collaborative way, being receptive to mentoring, and keeping the passion alive. I always try to understand other points of view and what motivates people, but sometimes you have to make decisions for the greater good and it may not make everyone happy.

When you find purpose and gain the skills and experience you need, you feel more comfortable making decisions that positively impact lives. I am learning to accept people for who they are and concentrate on building deep relationships based on shared experiences rather than be divided by differences. The path is often not linear and it's the journey that is most important. It starts with self, so invest the time to look after and love yourself.

Coming 'full circle'

I am standing on the shoulders of my ancestors who made Fiji their home after their difficult indentured lives. My original plans did not involve becoming a CEO – I just imagined a life and career that would be about helping people. Sometimes, especially when we are young, we aren't sure what we want to do with our lives, but the underlying aspect of what makes each of us happy is often apparent – and that can guide your life's decisions. I have always listened to that voice and that has influenced my choices. Working from home I was thinking about the questions for this article. I closed my eyes and took in my present surroundings. I was in Melbourne. There was Hindi religious music blasting on a google assistant speaker through my partner's spotify playlist, while he was working in the next room, and my mother was humming while making rotis in the kitchen. I was managing the NZSA as CEO remotely and I thought how far I have come. Despite the innovation and technology, my culture is still intact and now more visible with a partner who shares it. Life has taken me full circle. I have come back to my roots, richer and wiser with experience. I also hope that with my background I have been able to bring a unique perspective that can inspire others.

Gratitude and the future

I have been very fortunate to work with so many talented, committed, hard-working members, staff and stakeholders both nationally and internationally. A major highlight was being able to contribute to helping our Pacific colleagues and working closely with our Global Health Committee as I had an opportunity to give back to my country of birth.

The NZSA is ready for the next level, continuing to grow in visibility, impact, and influence. The planning session we held last month demonstrated that our Executive have many great ideas and that they are committed to achieving the best outcomes for the benefit of members and their patients.

We have developed a strong platform, and NZSA can continue to thrive and build on the momentum it has.

I wish the new CEO all the best in supporting the NZSA's vision and goals as I hand over the baton.

I am looking forward to the future. Melbourne is such a melting pot and the diversity of cultures here is quite extraordinary. I am not sure where my next role will be, but I am ready to create room in my life for new opportunities to help!

A major highlight was being able to contribute to helping our Pacific colleagues

Some farewell comments about Renu

"Renu brought a liveliness to the office – bold, colourful, warm and welcoming. Charismatic, able to spark conversation with anyone, Renu created genuine relationships with so many relevant connections, from ANZCA to the Pacific Society, everyone was welcome at Renu's table!"

Dr Kathryn Hagen, Immediate Past President

"Renu took the Executive Committee and the Society to a different level. Much more professional. I very much appreciated her enthusiasm, energy, and support."

Dr David Kibblewhite, Past President

"I worked closely with Renu and it was a shared passion of Renu and I to improve the standing of Anaesthesia not only in NZ but across the Pacific region. Renu was pivotal in building the relationship between NZ anaesthetists and Pacific anaesthetists. Her Fijian heritage has been instrumental in closer relationships between the PSA and NZSA. Her work on establishing the PACT initiative may well be her greatest legacy to increasing the quality and standing of Anaesthesia in our region."

Dr Alan Goodey, member of the Global Health Committee and previous GHC Chair

"Renu's focus on collaboration and inclusiveness has been a huge contribution to the NZSA. She worked tirelessly to help establish and run the paediatric and obstetric networks of NZSA.

Her collaborative approach has helped the Global Health Committee to build enduring productive relationships with our Pacific colleagues.

I will miss her wise counsel and her friendly presence."

Indu Kapoor, GHC Chair and former Chair of PANNZ

Environmental news

The NZSA's Environmental & Sustainability Network, chaired by Dr Rob Burrell from Middlemore Hospital, has hit the ground running in 2021 with a range of advocacy activities on environmental sustainability. The network also regularly writes an environmental column for our magazine (see p.10 in this issue for the latest one). You can read previous E & S Network articles, as well as more about the Network, on the NZSA website <https://anaesthesia.nz/community/environmental-and-sustainability/>

Government's zero carbon goal for public sector by 2025

The NZSA Environmental & Sustainability Network wrote a letter to a number of Ministers, including Climate Change Minister James Shaw, recommending changes in health sector practices to help the Government achieve its goal of zero carbon emissions in the public sector by 2025. In its letter the Network outlined that the health sector is a major source of carbon release, and anaesthetic gases alone are a significant portion of that source, contributing around 4% from a typical public hospital. Other anaesthetic pharmacological waste is also highly polluting and persistent in the environment. "Our workplaces create vast amounts of waste, relying upon single use equipment and devices. This waste is discharged to our land, air, and water. The NZSA is eager to engage in processes where our carbon (and entire environmental) footprint can be safely and successfully reduced whilst maintaining the highest standards of patient care. Indeed, the NZSA believes that the health sector is ready to do this, and that a great deal of the required expertise and enthusiasm are ready and waiting."

A key NZSA recommendation included in this letter is to improve central coordination and sharing of experience to accelerate reducing the health sector's carbon footprint by establishing a central body, modelled on the UK's Sustainable Development Unit (SDU). The SDU has been the primary driver for measuring carbon footprint and implementing carbon reduction strategies in the NHS. A New Zealand SDU would work with DHBs, relevant Ministries, and PHARMAC. Dr Burrell says that the role of a central multidisciplinary body to reduce duplication and disseminate successful strategies is pivotal. He adds: "We believe adequate funding now is vastly superior to offsetting in the future, and that an SDU-like body is needed as soon as possible."

The Network says that the NZSA, and wider healthcare sector, are committed to playing their part, and ambition and determination are essential.

Global guidelines group

E & S Network Chair Dr Rob Burrell was approached to be part of a global group to develop International Consensus Guidelines on the 'Principles of Green Anaesthesia' (led by the UK's Association of Anaesthetists). The aim of these principles is to provide a set of

recommendations (with supporting literature) which anaesthetists anywhere in the world can follow to minimise the environmental impact of their practice. The NZSA has endorsed Dr Burrell's membership of this group, given his expertise and long-standing commitment to environmental sustainability.

The Group is aiming to have the recommendations completed in time for the UN Climate Change Conference (COP26) meeting in Glasgow, UK (1-12 November 2021).

Climate Change Commission Report

The Climate Change Commission's draft advice report to the Government lays out its vision and proposed activities for New Zealand to reduce its greenhouse gas emissions. It is sweeping and broad, covering areas such as energy and power, transport, and agriculture. The Commission prefaces its report by saying that New Zealand has a climate action problem which contravenes our 100 Percent Pure image, with net emissions having increased by 57 percent between 1990 and 2018. It concludes that the country is not on track to meet its Paris Agreement obligations.

NZSA's E & S Network has drafted a submission in response to the Commission's report. While it commends many of the proposed targets, measures, and the auditing of 'carbon budgets' to ensure accountability, the Network is focused on advocating for a greater emphasis on the health sector, wellness and equity – aspects which it does not believe are adequately covered in the report.

Failure to deal with climate disruption will fall most heavily on the most vulnerable New Zealanders

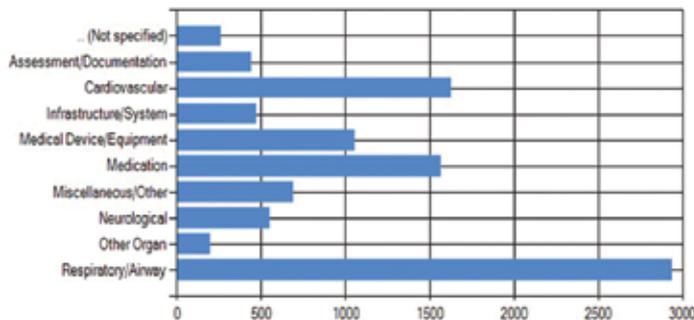
Failure to deal with climate disruption will fall most heavily on the most vulnerable New Zealanders: our indigenous population, the elderly, the young, the poor, and the sick. Carbon reduction inherently has opportunities for quadruple value outcomes, improving health and wellbeing, the environment, employment, and equity.

NZSA signatory to Ora Taiao letter

The NZSA joined 11 other organisations to co-sign a letter written by Ora Taiao (NZ Climate and Health Council) to Climate Change Minister James Shaw. One of the key messages in the letter was that a better understanding of the risk and effects of climate change on health in Aotearoa is needed. "Aotearoa currently has no climate and health action plan. Developing and implementing such a plan that adopts an integrated cross sectoral approach is a critical step towards ensuring the co-benefits of climate and health action are realised and towards ensuring health and health equity issues are considered in Aotearoa's climate change mitigation and adaptation strategy."

First impressions of Anaphylaxis cases reported to webAIRS

WebAIRS Dashboard January 2021



WebAIRS has collected over 8600 reports at the time of writing this report. The most common reported categories are Cardiovascular (17%), Medication (16%) and Respiratory (30%) events.

Anaphylaxis accounts for almost 7% of the first 8,000 reports submitted to webAIRS, made up of 1.3% classified as Cardiovascular, 4% as Medications, 1% as Respiratory and 0.7% as Other. In many cases the initial management targeted either the cardiovascular, respiratory or other manifestations. The Australian and New Zealand Anaphylaxis Allergy Group (ANZAAG)/The Australian and New Zealand College of Anaesthetists (ANZCA) Anaphylaxis Box has been mentioned as a useful adjunct to management, especially in later reports.

Early diagnosis and targeted management are key to a successful outcome in anaphylaxis management. The webAIRS reports highlight that the diagnosis of anaphylaxis is not always immediately obvious. Symptoms and signs of anaphylaxis such as cardiovascular collapse, hypotension or respiratory compromise may occur for many reasons during surgery. Multiple webAIRS reports describe hypotension, which is refractory to usual intraoperative vasopressors and fluid boluses. The early appearance of a rash was not characteristic of many severe cases and commonly appeared as a later manifestation, frequently after the blood pressure was restored.

An incorrect initial diagnosis might lead to less effective immediate management. It is important to avoid fixation error and confirmation bias, which may lead to becoming stuck in a loop and trying the same strategy repeatedly despite a lack of response. Techniques to avoid these errors have been built into algorithms, such as for the management of a difficult airway. One possible adage is that if you treat something three times in the same way without success then stop, review, and consider trying something else.

The ANZAAG/ANZCA Anaphylaxis Management Guidelines have been developed to assist clinicians to rapidly diagnose and manage this crisis. The ANZAAG/ANZCA Differential Diagnosis

card in the Anaphylaxis Box is designed to aid rapid diagnosis and treatment when a patient presents with symptoms which may be due to anaphylaxis.

Similar to the use of the Vortex Model in difficult airway management, the Differential Diagnosis card aims to prevent clinicians from becoming stuck in a loop, repeatedly using the same strategy without a response.

Where the diagnosis is thought to be anaphylaxis, it is essential to move on rapidly to the use of specific measures such as adrenaline and intravenous fluid boluses, which are titrated in accordance with reaction severity and response to treatment. The Immediate and Refractory Management Cards assist with timely delivery of all essential resuscitation measures. The cards are designed to be read aloud to allow team members to share a mental model of the resuscitation progress.

An interim analysis of the anaphylaxis cases was presented at the ANZCA ASM in 2017, and a further analysis is underway of the anaphylaxis cases reported amongst the first 8,000 reports to webAIRS.

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2. The ANZAAG/ANZCA Differential Diagnosis card. *Differential_Diagnosis_Card_2016.pdf* (anzaag.com)
3. The Anaphylaxis Box. www.anzaag.com/AnaphylaxisBox.aspx



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- Costs^{12,16,17,19-22}



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- Post-op delirium in elderly and at-risk patients^{7,12,14,15,18,20-22,24}



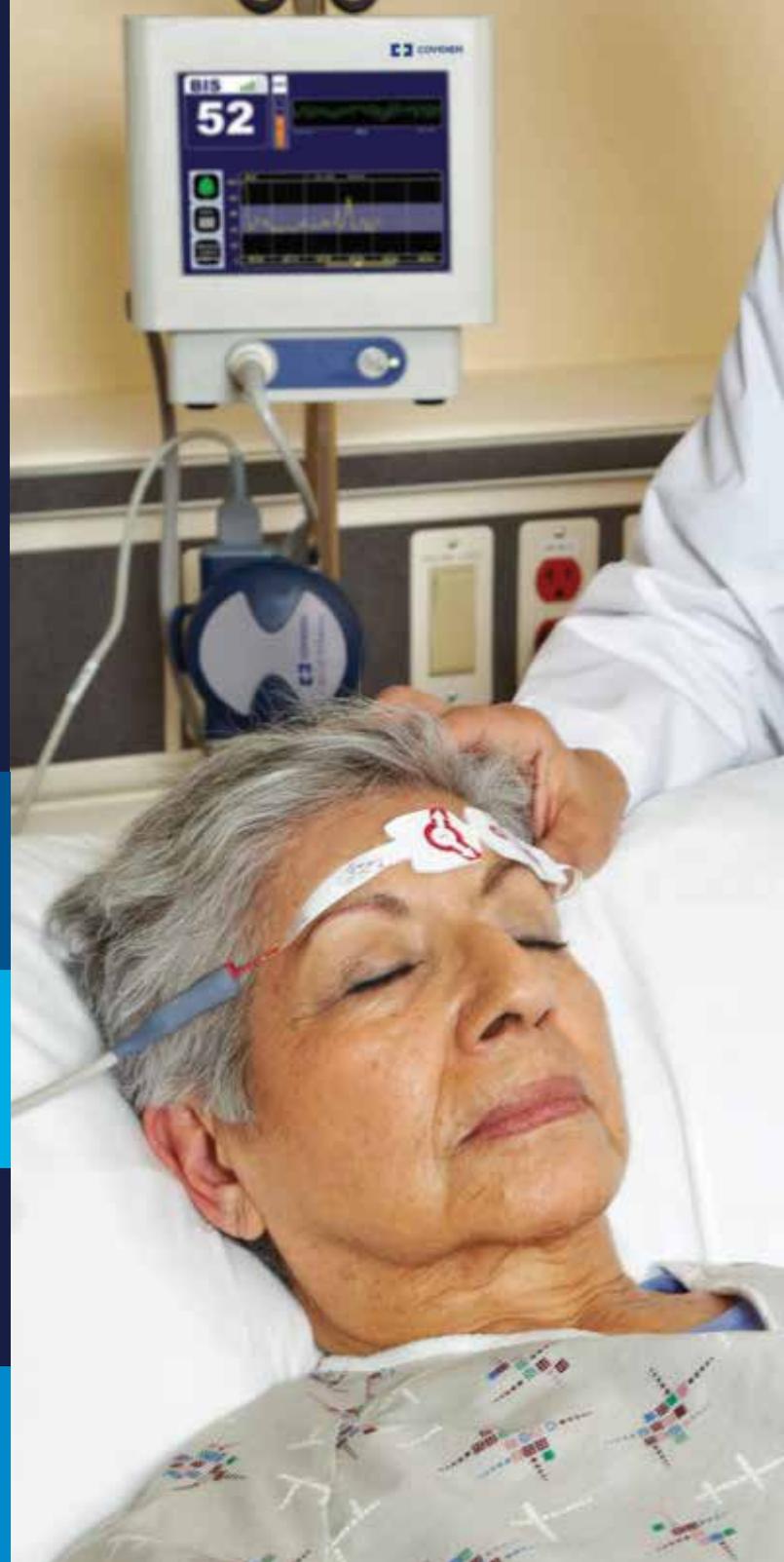
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- Patient outcomes^{4,6,19}
- Patient quality of life^{4,17}



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To learn more about optimising patient outcomes with the BIS Monitoring System, contact your local Medtronic Representative.

The above outcomes are based on comparisons against procedures utilising anaesthesia without depth-of-anaesthesia monitoring.

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