NEW ZEALAND

Anaesthesia

THE MAGAZINE OF THE NEW ZEALAND SOCIETY OF ANAESTHETISTS • DECEMBER 2023

Aotearoa NZ Anaesthesia ASM 2023

Highlights from Ōtepoti

PLUS NZ ASM23 SPEAKER FEATURES:

Hot Debrief Facilitator Workshops

Expect the Unexpected: the emergency responses to Whakaari White Island and Cyclone Gabrielle

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1. Internal test report CSR 2021 03 12 v.1.0 - CyberDERM S20-12.
2. MDT20028OXYLOV, Rev 2 - SpO2 Accuracy Validation of OxySoft.
3. RE00301248, RevA - System compatibility verification report.

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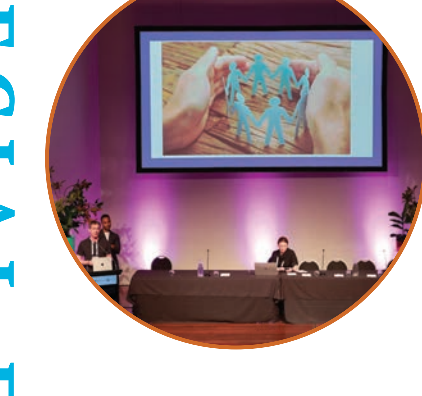

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Cover photo: Prof Emery Brown, international invited speaker at Aotearoa NZ Anaesthesia ASM.

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We welcome your comments on the magazine. If you would like to contribute ideas and/or an article please contact editor: comms@anaesthesia.nz

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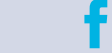
@theNZSA  New Zealand Society of Anaesthetists
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President's Column

The recent Aotearoa NZ Anaesthesia ASM was a great success. The organising committee put together such a diverse and engaging programme. They truly imprinted their mark on the event, and I thank them for their mahi that allowed us to challenge ourselves, develop our profession, and connect.

Congratulations to Dr Rob Burrell, recipient of this year's NZSA President's Award. Since it was first awarded in 2021 the award has highlighted the wide ranging interests and passions our anaesthesia community pursue, for the betterment of our colleagues and patients. Rob is an exceptional example of this. He is a tireless advocate in the environmental sustainability area and has played an integral role in reducing the carbon footprint of anaesthesia and healthcare.

I valued meeting many of our members over our few days in Ōtepoti. As we bring another year to a close and I reflect on the past twelve months, I must first thank our members for your ongoing support. It enables the NZSA to run events like the NZ ASM and to continue to serve our anaesthesia community in Aotearoa.

Advocacy

The year began with the NZSA and ANZCA NZ Council meeting with then Minister of Health, Dr Ayesha Verrall, to discuss pertinent issues affecting our profession. With our new government now formed, seeking opportunities to build connections and develop engagement with the Minster of Health, Dr Shane Reti, will be a primary focus in the year ahead.

Ensuring anaesthesia representation during the health reforms is a crucial focus for the NZSA. We have held meetings with Te Whatu Ora and facilitated representation on groups overseeing the future of Planned Care at a national level, in addition to discussing recommendations towards the National Clinical Networks. Monitoring requests for membership to these interdisciplinary networks ensure our specialty is represented in developing national standards, improving equitable services, and building workable solutions.

As expected, whilst the health reforms take shape, the NZSA has responded to several key consultations across the year. Alongside several of ANZCA's stakeholder reviews. I won't list them all here but do encourage you to visit the NZSA website to see copies of all submissions.

We are privileged to have such high-quality anaesthetic assistants here in Aotearoa. The NZSA has participated in a number of discussions throughout the year, working towards short and long-term solutions. The Society also participated in the Medical Sciences Council's (MSC) consultation on their proposed changes to the *Anaesthetic Technician scope of practice*. MSC attended many meetings with NZATS during the NZ ASM and we look forward to hearing the outcome of the consultation soon.

Community

We are grateful to the anaesthesia departments in Nelson, Waikato, and Rotorua for hosting members of the Executive Committee this year. These visits allow us to further understand the challenges you are facing in your areas and how best we can continue to serve you. Members of the Executive Committee will be reaching out soon to some of the departments we hope to visit in 2024.

The work of the subcommittees and networks continues to provide an important service to the anaesthesia community and optimal outcomes for our patients. They are an invaluable part of the NZSA's support to members. We have seen a few changes in Network Chairs this past year. Our thanks to outgoing and former Chairs: Dr Paul Baker (Airways), Dr Rob Burrell (Environmental and Sustainability), Dr Matt Drake (NOA), and Dr Allanah Scott (PANNZ).

The Global Health Committee (GHC) continues to guide the NZSA's connection with our colleagues in the Pacific. An update on the support provided towards the Pacific Society of Anaesthetists' Meeting and from the four PACT Fellows is provided later in this issue. Congratulations to inaugural PACT Fellow, Dr Cecilia Vaai-Bartley who completes her anaesthesia training this month and will return to Samoa to commence her work as a consultant. Through the GHC, the NZSA has agreed to sponsor two Pacific Anaesthetists to attend the WFSA's World Congress in 2024. Cecilia has been awarded one of these scholarships. The other is being administered through the WFSA's scholarship programme.

In September the Society welcomed its new CEO, Kylie McQuellin. We formally introduced Kylie through the e-zine and will get to know her a little more later in this issue of the magazine. Since starting Kylie has hit the ground running, supporting the Executive Committee and the team in the office to deliver the many projects already underway. Soon after her commencing in the role Kylie and I travelled to Edinburgh to meet with our fellow associations from Australia, the USA, the UK, Canada and South Africa where we discussed a myriad of shared topics including workforce, membership and value propositions of our organisations.

Education

This has felt like our first year of business as usual (well, within the new normal) for educational events. In addition to the NZ ASM, the annual Queenstown Update in Anaesthesia (AQUA) held in August, provided an informative range of updates. Thank you to JAFA and the organising committee for your efforts in coordinating this popular event.

> *“The NZSA has many projects on the horizon for the year ahead, including patient education resources, increasing te ao Māori resources to assist members and a digitised patient experience survey to help you in facilitating this CPD activity.”*

After so many disappointing delays and cancellations it’s been pleasing to see the Paediatric Anaesthetists Network (PANNZ) and Inpatient Pain Network annual meetings return this year in Rotorua and Wellington.

Looking ahead

The NZSA has many projects on the horizon for the year ahead, including patient education resources, increasing te ao Māori resources to assist members and a digitised patient experience survey to help you in facilitating this CPD activity. The survey is in its initial testing stages, and we look forward to rolling this out in the coming months. We will also be continuing to advocate for the profession through the health and disability reforms and seeking opportunities to promote environmentally sustainable practices.

Make sure to save the date for the 2024 Aotearoa NZ ASM, 7-9 November. To be held in Tāmaki Makaurau Auckland by the team from Waitematā. Prof Ki Jinn Chin, Prof Bobbie Jean Sweitzer and Associate Prof Joyce Yeung have already been announced as some of our international speakers.

Heading into the holiday season I wish you all a safe and enjoyable time. This year hasn’t been without its challenges, and I hope you find some time to recuperate over the summer, to spend some time with your whanāu and those important to you. I know that many of our members will also spend the busy summer period in our operating theatres, and we thank you immensely for this mahi. There is much to look forward to in the new year and the Society is here to support you.

Dr Morgan Edwards
President, New Zealand Society of Anaesthetists

Ngā mihi o Kirihimete me te Tau Hou -
Season’s greetings for Christmas and the new year.

The NZSA wishes members and health sector colleagues a wonderful holiday season. Thank you for all of your support.

Congratulations

President’s Award 2023

Congratulations Dr Rob Burrell, recipient of this year’s NZSA President’s Award.

The NZSA President’s Award recognises a member who has provided a sustained or specific contribution to the Society and anaesthesia community.

Rob is a tireless advocate towards environmental sustainability in healthcare. He has spearheaded the campaign to improve healthcare’s climate footprint in Aotearoa. Responsible for collectively reducing our impact through waste reduction, drug disposal and the reduction in volatile anaesthesia.

Rob is the former Chair of the NZSA’s Environmental and Sustainability Network and is currently the clinical sustainability lead for Te Whatu Ora. His nominations for this award demonstrated the appreciation his colleagues have for his work, his teaching, and the care Rob has for his patients and colleagues.

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Are you up to date in your listening?

NZ Anaesthesia Podcast

Are you subscribed to the NZ Anaesthesia podcast to keep up to date when new episodes are released?

Episode 12: In this episode, host Dr Morgan Edwards is joined by Chair of the NZSA's Environmental and Sustainability Network, Dr Sallie Malpas for a kōrero on the latest work of the network and how having open conversations can only help us to navigate the plethora of information available on environmentally sustainable healthcare.

Look out for Episode 13, coming out this month. Featuring one of our speakers from this year's ASM discussing vaping and its potential impact on health.

What would you like to hear on the podcast? If you have some ideas please get in touch with NZSA Communications Manager, Rebecca Burton at comms@anaesthesia.nz

Coming soon!

Patient Survey Tool

To aid members in collecting valuable patient feedback as part of your CPD requirements the NZSA will soon be offering digital paediatric and adult anaesthetic surveys at no additional cost for all members of the Society.

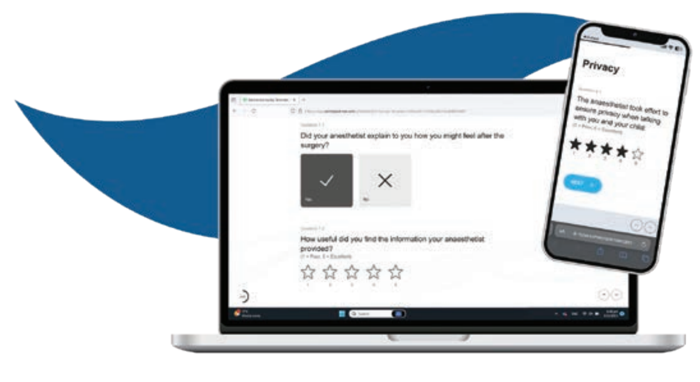
You will be able to access this tool through your NZSA member dashboard. The survey will be:

- Uniquely linked to you.
- Pre-built with questions based on ANZCA's patient survey examples, plus an additional question to aid in reviewing cultural competency.
- Ready for distribution with the option to email your survey to patients from within your member dashboard.

Your results will be collated and ready to download once you have received feedback from at least 15 patients.

Meeting ANZCA requirements, patient responses will be anonymous and will be aggregated with at least 15 other patients who have completed your survey within the reporting timeframe.

We are working through testing, to iron out any kinks before beginning to roll out access to members in the new year.



OASIS
Obstetric Anaesthesia Special Interest Symposium

Join us for OASIS24
1 - 2 March 2024

Our 2-day event, set against the picturesque backdrop of Napier, is tailored to empower you with essential insights and skills in the field of Anaesthesia for Obstetrics and Gynae-Oncology.

Day 1: Major Haemorrhage and Anaphylaxis Workshops with an obstetric focus.
Day 2: Thought-provoking lectures exploring the latest advancements in anaesthesia for complex maternal conditions, gynae-oncology, well-being topics and emerging technologies.

www.oasisconference.co.nz

Feature

New NZSA CEO Kylie McQuellin

"There is such an array of interests and many passionate members working above and beyond their day jobs"

The NZSA's new CEO Kylie McQuellin is motivated through her new role to support health specialists engaged in critical mahi for patients, particularly during a time of significant challenges and reform.

Kylie joined the NZSA in September from her most recent position as the Head of Membership at the Royal New Zealand College of General Practitioners (RNZCGP). As a member of the leadership team, her role supported those involved in advocacy, policy, standards, CPD, communications and events. Alongside holding close relationships with the College's committees and faculties.

"One of the core components of my role with the RNZCGP was a focus on its value proposition - to ensure the College was providing value for Fellows and registrars in training, beyond and alongside it being the CPD home. This was achieved through advocacy, community and supporting education which strongly aligns with the strategic functions of NZSA."

Working with staff and the Executive Committee to develop and strengthen the value proposition of membership to the NZSA is a key goal for Kylie. In addition to an increased focus on member retention of trainees after achieving their Fellowship. "Whilst keeping an eye on the sustainability of the Society to ensure it will be around to support anaesthesia in New Zealand well into the future" she adds.

Since starting she has been spending time building connections and relationships.

Kylie expresses her gratitude to the networks, "they have supported me to attend their meetings to further understand their work. There is such an array of interests and many passionate members working above and beyond their day jobs."

The timing of the Aotearoa NZ Anaesthesia ASM was opportune. "Whilst I had connected with some members and stakeholders over email or virtually the ASM allowed us to meet in person much sooner than may have otherwise been possible. Getting to know people over the few days and listening to the presentations enabled me to further understand the specialty and some of the challenges it faces."

"The NZ ASM was a thoughtful and engaging event and the organising committee from Ōtepoti did an amazing job."

"Much like the timing of the NZ ASM, I was also fortunate to travel to Edinburgh for the Common Issues Group meeting soon after starting in this role. Meeting the Presidents and CEOs of our fellow anaesthetist societies in Australia, Canada, the UK, the USA and South Africa allowed me to quickly become immersed in anaesthesia, particularly as a global discipline. We have many shared challenges both strategically and operationally. Including member value, having a seat at the table when it comes to addressing future concerns around planned care, and workforce shortages."

"These international relationships are an asset for the Society and the international focus of the NZSA alongside supporting its domestic members is something I haven't experienced in earlier roles. It has been heartening to see during such a dynamic time in health, particularly the strong focus on supporting anaesthesia in the Pacific."

These past few months have also been focussed on getting to know the NZSA team in Wellington and supporting their efforts in delivering projects of further benefit for members. Including the patient experience CPD survey and patient education resources.

"These new offerings will provide tangible value for members alongside the ongoing work of the Society. We have some clear strategic objectives for 2024 and I am excited to be working with the NZSA to see these launched in the coming months".

NZSA Trainee Column

TPS Tips (Part 1)

Common Confusions and Pitfalls

Dr Hannah Middleton
NZSA Trainee Representative

Training Time

As you'll be aware, training time needs to be recorded for each week. Time can be logged retrospectively to a maximum of four weeks, so try not to get too behind on this. If you're certain nothing could possibly prevent you from turning up to work, then training time can also be optimistically logged in advance.

Sometimes errors occur and should this happen the good people at ANZCA can help to correct this. You will also need a supervisor of training to contact them to confirm your requested amendment is correct. Leave can add up quickly, especially when factoring in time for study, exam courses, moving between hospitals or falling victim to the latest pandemic. Make sure you leave yourself a buffer in case the unexpected occurs as time requirements are absolute.

Some finer details to be aware of:

- Training time is designed to be logged as the percentage of your rostered week worked. If you are rostered to fewer than your normal clinical hours, but work all of them, then this is a 100% week worked. Equally, if you work in excess of a normal clinical week (e.g. out-of-hours shifts) but do not complete all rostered shifts (due to illness or otherwise) then this would be logged as less than 100% clinical anaesthesia. This can become confusing especially when completing highly shift-work based rosters with built-in recovery days, such as during intensive care placements. The calculator icon you may have overlooked within TPS aids you in working this out.
- Courses that are ANZCA training requirements (such as EMAC) can be logged as clinical anaesthesia time.
- It is also appropriate to log the day of your written and viva exam sitting as clinical anaesthesia time.
- Days rostered to pain rounds and pre-assessment clinics are still recorded as clinical anaesthesia time.
- You can complete a maximum of three years training at one center (excluding provisional fellowship). One of the implications of exceeding leave allowances is needing to complete this time at another hospital. This has the potential to be a logistical nightmare and short-term contracts may be difficult to acquire.
- The maximum allowable leave:
    - 3 weeks in introductory training.
    - 16 weeks in introductory training and basic training combined.
    - 16 weeks in advanced training.
    - 8 weeks in provisional fellowship training.

Meetings

This is an easy aspect of TPS to overlook and hides within the Scholar Role Activity tab. By the end of Provisional Fellowship, you need to have participated in at least 20 existing quality assurance programmes. This can include critical incident monitoring, audits, and most commonly morbidity and mortality meetings. Time flies and it can be difficult to meet requirements if you're not consistently logging these from early in training.

Volume of Practice

This is a huge topic and one I hope to cover further at a future date. My best advice would be to become familiar with the required targets as it can be easy to inadvertently not log aspects of your case or procedure, or to do so incorrectly. It also allows you to seek out opportunities when the more elusive VOP presents itself within reach. Some of these will be obvious, like awake fibreoptic intubations, however, others (like the surprising number of arthroscopies you need to log) are less so! Either way, being proactive will save you later pain.

Aotearoa NZ Anaesthesia ASM 2023

Impact

Our first business-as-usual annual scientific meeting for a few years was an engaging, thought-provoking, and entertaining event. With 450 delegates converging in Ōtepoti and online it was a privilege to host our uniquely Aotearoa event alongside the ANZCA New Zealand National Committee and NZATS.

The Dunedin organising committee, led by Dr Priya Shanmuganathan, should be commended for the immeasurable work they put into creating and hosting an outstanding event.

It took a couple of days but Ōtepoti eventually put on the promised 'Dunner stunner'. Our host city holds a special place in the history of Anaesthesia and this year's theme *Impact* was inspired by the impact Dunedin's Prof John Ritchie had on the Anaesthesia specialty. The theme was reflected throughout the scientific programme with sessions that explored the impacts of communication, post-operative outcomes, research, global anaesthesia, leading local studies, and future impacts on the profession.

Local Māori performing arts group, He Waka Kōtuia, opened the meeting with a Mihi Whakatau and a kapa haka performance. Followed by this year's Alan Merry Oration delivered by Ahorangi Prof Jo Baxter, Dean of the Dunedin School of Medicine, who shared learnings and plans for the future on how we can build a health workforce more reflective of the community it serves.

Convenor Dr Priya Shanmuganathan shared she found the Alan Merry Oration a highlight. "I always look forward to the opening Alan Merry oration. Our selection this year was a fierce opener and set the scene for the remainder of the programme. Ahorangi Baxter wove her personal experience and how it has guided her professional career with grace and dignity while tackling ongoing issues that need attention from us all."

This year's international invited speakers were Professors Emery Brown and Frances Chung. "We as a committee have appreciated Profs Brown and Chung's extensive body of work for some time now." Priya shared. "When they both accepted our invitation to present at Ōtepoti, we were thrilled. The ongoing conversations that have occurred in the corridors of our hospital since echo the impact they had."

Both spoke across numerous sessions. Professor Emery Brown, challenged delegates to 'rethink' general anaesthesia and delved into the theory and practice of multimodal general anaesthesia. Alongside Professor Frances Chung who shared insight from her research into patients with obstructive sleep apnea and brain health and cognitive impairment.

The learning didn't stop with the scientific programme and workshops either. The other highlight for our Convenor (and no doubt many delegates too) was Friday night's function – A night at Tūhura Otago Museum, that saw delegates engage with the hands-on scientific exhibition, travel our solar system in the planetarium and network amongst the butterflies in the museum's tropical garden. "Mingling with giants in our field amongst the tropical jungle surrounded by butterflies, whilst playing extremely competitive Pacman or sampling a liquid nitrogen ice cream next to a wall of dessert was an almost surreal highlight for me."

There are so many people to thank. All of the speakers, session chairs and workshop facilitators - many of whom volunteer their time to present. The sponsors and industry exhibitors whose help makes it possible to run these events. And finally, but importantly, all of our 2023 delegates.

Delegates have access to recordings of the full scientific programme until January 31st 2024.

Ōtepoti Dunedin Organising Committee.

Delegates enjoy the tropical gardens at Tūhura Otago Museum.

Clockwise from top left: Industry Exhibition.
Conference Convenor, Dr Priya Shanmuganathan opens the NZ ASM.
Kapahaka performance following the mihi whakatau.
Delegates enjoy the science exhibition at Tūhura Otago Museum.
Ahorangi Professor Jo Baxter delivering the Alan Merry Oration.
Professor Frances Chung.

Prize Winners

Congratulations to this year's prize winners. Presented at the Aotearoa NZ Anaesthesia ASM.

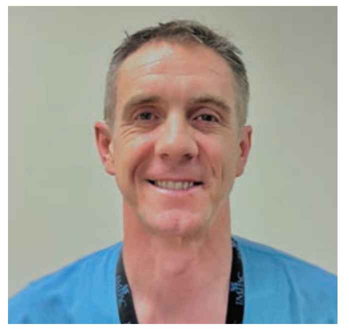
- John Ritchie Prize: Associate Professor Ross Kennedy. *Fresh-gas flow rates correlate with liquid sevoflurane use.*
- BWT Ritchie Scholarship: Dr Jason Goh.*
- Aotearoa NZ Anaesthesia ASM Poster Prize: Dr Eilidh Menzies. *Audit of Tranexamic Acid use in surgery with a risk of moderate blood loss.**
- Best Paper with a Sustainability Focus: Dr Adele Macgregor. *Evaluating the environmental footprint of nitrous oxide for inhalational induction.*
- Commendation: Dr Anna Liu. *Comparing preoperative high-intensity interval training programmes in the hospital and at home.**

Top: John Ritchie Prize presentation. Dr Jonathan Panckhurst (L), Associate Professor Ross Kennedy (R).
Bottom: Best Paper with a Sustainability Focus Prize Presentation. Dr Adele Macgregor (L), Dr Morgan Edwards (R).

**Not photographed.*

Hot Debrief Facilitator Workshops

Andy Barr & Dr Abhi Charukonda



Evidence and literature support critical event debriefing becoming part of daily practice. How they can contribute to improved understanding and comprehension of events, organisational learning, staff well-being and ultimately patient safety.

A group of passionate staff at Te Toka Tumai Auckland identified some of the barriers to conducting a hot debrief. Acknowledging the challenge it posed for individuals, often with no prior training, to initiate it based solely on internet resources—particularly after involvement in a critical incident. With the goal of empowering their teams to facilitate more effective hot debriefs, they combined their skills, knowledge, and experiences to explore potential solutions.

This led the group to develop a facilitator workshop. Seeing it as a key step towards hot debriefs becoming more embedded in business as usual within their directorate.

The group consisted of Andy Barr (Simulation Educator and Charge Anaesthetic Technician in the Cardiothoracic/ORL Theatres), Dr Abhi Charukonda (Provisional Fellow in Hepatobiliary/Transplant and Regional anaesthesia), Iris Fontanilla (Consultant Health Psychologist), Dr Jaime O'Loughlin and Dr Stephanie Clark (Specialist Anaesthetists), and Sarah Viggiano (Nurse Educator). Since its inception, the group has gained additional collaborators who have also joined its ranks.

Eager to boost awareness about the advantages of their workshops, Barr and Dr Charukonda shared its development, implementation and results thus far, at the Aotearoa NZ Anaesthesia ASM.

Barr knew from his own experience how education and practical training with experts allowed him to feel more empowered to facilitate debriefs.

"The intended learning outcome of these workshops is fundamentally for people to walk away happy to run a debrief." Barr shared. "But more than that, we want them to have a deeper understanding of their structure and phases, as well as the knowledge and understanding to create a psychologically safe environment for a successful hot debrief."

The half-day workshops start with a didactic session covering the basics. "From there we show a video of a model hot debrief with explanations on what the participants are seeing and why it's being done in that way."

The workshop then focuses on running simulations. This, Barr explains is where the bulk of the learning happens. Multiple simulations are run, each building in case complexity as well as adding in a participant who has had a strong emotional reaction.

"We can't run an actual event because we need specific outcomes to allow participants to be able to discuss specific issues." Barr likens it to a murder mystery game. The simulations use role play – each participant representing different members of the perioperative team. "We show slides with shared information about an event they have taken part in. In line with the structure of the hot debrief, each participant will have a different take on the event, how they feel about it, what went well and what they would do differently next time. We encourage participants to adapt and react organically in the simulated hot debrief as they would in real life."

Scaffolding the complexity of the simulations allows participants to practise managing someone who has been emotionally impacted by the event in a controlled environment. "One of the key goals of this scenario is for attendees to identify that there is an individual on the team who is in crisis." Barr shares.

"We then run a debrief of the debrief. In these, we often discuss how we cannot always resolve everyone's emotional response. We cannot train people to become psychologists in three and a half hours, but we can train people to identify those who might need some emotional support and give them the specific tools to put that support in place."

The workshops continue to evolve to address what attendees identify as their main barriers to facilitating. "We now include how to actively choose a facilitator rather than defaulting to the most senior person who may be carrying a heavy emotional load or feel responsible for the critical incident. As well as strategies to facilitate building a combined narrative when individuals feel unsure of what occurred and therefore apprehensive to facilitate."

Te Toka Tumai has run 11 workshops over 18 months with 140 participants. They began with the perioperative directorate, but word is spreading across different departments so the team are adapting and creating new simulations to serve each area of need.

Dr Charukonda presented participant feedback that demonstrated only 15% of participants had facilitated a hot debrief before attending the workshop and only 2% had felt comfortable doing it. Meeting their desired outcome, Charukonda shared, "Almost all attendees have expressed their increased confidence to facilitate a hot debrief in their clinical setting, if and when required."

Expect the Unexpected

NZSA Sponsored Speaker, Dr Craig Ellis

Hato Hone St John's Deputy Clinical Director, Dr Craig Ellis, knows the importance of planning for the unexpected.

He also knows the possibility of the next disaster being one we may not expect. Such as the annual risk of a 'city killer' asteroid hitting Earth is 1:10,000 – 50,000. Compared to the chance of you winning Lotto being 1:38,000,000.

Dr Ellis was the NZSA-sponsored speaker at the recent Aotearoa NZ Anaesthesia ASM. Speaking as part of the closing plenary he shared lessons learned from the clinical co-ordination of the emergency responses to the Whakaari White Island eruption and Cyclone Gabrielle in Hawke's Bay and how these can influence our future preparedness.

Starting with what "may seem obvious" he shared, "you need to be able to run a communication network that works in a disaster. Technology is now so good that it brings more people into the front line and that interface is problematic."

During the Whakaari response, Dr Ellis received 200 phone calls in just eight hours. "There was too much information and too many people wanting that information. You need two channels for communication – external and internal. Over-communication can interrupt scene management and blur the lines between strategic and operational responsibilities."

Likewise, we need to be prepared for when technology falls over. "Cyclone Gabrielle was the complete opposite. Everything stopped," he says. "Only satellite phones and Starlink dishes worked. Hospitals do have satellite phones but you need to know where they are, that their software is up to date, and you need to know how to use them".

Alongside communication tools, expectations on the quality of information need to be adapted during a disaster. "Don't expect miracles," he cautions. "Rules and processes need to be flexible when we are working under the pump. It may not be possible to communicate a victim's full name or date of birth, let alone complete referral forms".

We also need to consider how business as usual will be managed alongside potential patients from an incident.

"New Zealand is small and has limited clinical capacity. Even though geographically spread these disasters affect the whole country."

Both the Whakaari response and Cyclone Gabrielle were major disruptions and our national health infrastructure and systems only just coped. "The response to the Whakaari eruption required almost all available helicopters from across the country and victims were taken to tertiary burn units nationwide" he shared.

"Business as usual won't stop for a disaster, although we did learn during Cyclone Gabrielle that many of the general public, particularly during the first 24 hours waited to get help. Then they fell apart and presented late to a system that was still broken and the ambulance couldn't get to them."

A key area that can be prepared for any potential event is establishing support structures for staff. "Our experience has taught us the importance of looking after staff as well as patients", he shared. "It's easier to have the support in place beforehand than afterwards or on the fly. These events can continue for some time. Then there can be court cases and investigations as well and it often isn't until everything slows down that some may hit the wall".

We can prepare personally too. Although planning our life as a lotto winner may be more interesting, Dr Ellis encouraged delegates to consider if they could not go home. "Do you have somewhere to sleep? Do you have a ready bag at work with some food, a change of underwear and walking shoes?"

He advises hospitals to consider building storage that is first in, last out rather than 'just in time' deliveries. "How long can you provide anaesthetics, drugs and kits without resupply? As clinicians, do you know how long you can continue using operating theatres?"

"Engage with emergency planning in your hospital. The more clinicians involved in emergency management can only help ensure plans will work."

"The 9/11 Commission found one of the biggest failures was a lack of imagination. When they were looking at Hurricane Katrina they said there was a failure of initiative." He concludes, "We need to show initiative and imagination in our planning of major critical incidents, or we will be in a world of hurt."

"New Zealand is small and has limited clinical capacity. Even though geographically spread these disasters affect the whole country."

The global anaesthesia community to convene in Singapore on 3–7 March 2024

For the first time in eight years, the world's leading anaesthesia stakeholders will be convening in person in Singapore for the World Congress of Anaesthesiologists (WCA) on 3-7 March 2024.

Co-hosted by the World Federation of Societies of Anaesthesiologists (WFSA) and the Singapore Society of Anaesthesiologists the 18th WCA will welcome 5,000 delegates from over 50 countries for five days of talks, workshops, socialising, and exhibitions to discuss cutting-edge anaesthesia policies and practices. Those who are not able to attend in person can register to attend virtually.

For the WFSA, with its membership of 135 Member Societies representing approximately 500,000 anaesthesiologists from over 130 countries, the WCA is a major component of its work uniting and empowering anaesthesiologists from around the world to improve patient care.

Associate Professor Wayne Morriss, WFSA President, said, "The World Congress of Anaesthesiologists is a global anaesthesiology event like no other! WCA2024 will provide an unparalleled opportunity for anaesthesiologists from all over the world to connect, learn and share, after the enforced hiatus of the COVID-19 pandemic. The scientific programme will offer an incredible learning experience and, of course, WCA2024 is taking place in Singapore, a must-visit destination for us all."

One of the key strengths of WCA is the depth of its education programme that brings together cutting-edge expertise from across the globe to practically inform and strengthen anaesthesia practice.

WCA 2024 with its innovative and ambitious scientific programme maintains this educational tradition, with 18 scientific tracks covering the full array of anaesthesia specialities from Airway Management through to Technology, Pharmacology and AI.

With over 500 internationally renowned anaesthesia experts presenting over 170 sessions the WCA scientific programme provides delegates the opportunity to learn new techniques, access unpublished data first and be introduced to the latest technology and equipment.

Research is a key component of WCA, with over 1,000 abstract submissions and a wealth of research sessions and poster presentations, WCA participants are able to discuss research findings with some of the biggest names in the field as well as meet the next generation of rising stars.

Another educational component of WCA is the workshops and problem-based learning discussions which will be held across the 5-day congress.

Ranging from 60-minute sessions to full-day events lasting up to eight hours, 59 different workshops will provide attendees with an opportunity to engage deeply with a broad range of topics. Led by renowned experts in their respective fields, these workshops offer an immersive learning experience designed to enhance participants' practical knowledge and skills in various aspects of anaesthesiology, such as pain management, airway management, regional anaesthesia, and more.

A global networking opportunity

With approximately 5,000 delegates from over 50 countries expected to attend in person with many more joining virtually, WCA offers a unique opportunity to connect, collaborate and partner with the wider global anaesthesia family.

To enable and facilitate networking a Global Anaesthesia Village will bring together an exciting mix of WFSA Regional Sections, Member Societies, and other organisations to host stands to highlight their national programmes and expertise.

Kristine Stave, CEO of WFSA, said 'We're delighted to hold WCA2024 in the beautiful and vibrant city of Singapore. The Suntec Conference Centre is a fabulous venue and is right in the heart of the city. It's going to be a lot of fun."

There truly is no other event like this for anaesthesiologists. For all of the information on how you can register, where to stay, the programme and details on the competitions, visit the WCA2024 website: www.wca2024.org. Your WFSA looks forward to seeing you in Singapore!

Pacific Society of Anaesthetists' Meeting

Providing cover in the Pacific

Twenty-two SMOs and Provisional Fellows travelled to the Pacific last month to provide volunteer locum cover during the Pacific Society of Anaesthetists' annual meeting. This is the largest number of locums the Global Health Committee has sent to date, with representation from all corners of Aotearoa. Teams spent the week in hospitals across Fiji, Samoa, Tonga and Niue covering both elective and emergency theatre work and intensive care duties.

For many of the delegates, their attendance at CME opportunities such as this is only possible due to the support of the locums. For the locums, it is an opportunity to work with our Pacific colleagues and patients in their environment, thus providing them with a unique understanding of the working and culture of these countries.

If you are interested in volunteering for 2024, you can express your interest on the NZSA website through the GHC contact form and the GHC will keep in touch: www.anaesthesia.nz/global-health-committee

Staying Connected in the Pacific

Dr Toni Anitelea, Basic Trainee, Wellington

The Pacific Society of Anaesthetists' (PSA) 32nd annual meeting was held in Savusavu, Fiji. It was both a celebration and a reinvigoration of knowledge for old friends, colleagues, and new faces. I attended the PSA conference as a New Zealand-born-Samoan ANZCA trainee thanks to the New Zealand Society of Anaesthetists (NZSA) and their Global Health Committee (GHC) Trainee Grant. The Pasifika Medical Association (PMA), the Australian Society of Anaesthetists (ASA), the South Pacific Commission, and Aspen Medical as primary sponsors ensured this collaboration was a successful one.

The theme of 'staying connected' was embraced by both speakers and delegates, with a great variety of topics covered over the week. Talks included trauma management, mass casualty cases, debriefing in a medical context, burns management, leadership, pain services, obstetrics, and paediatrics. However, the overwhelming take home message of the week was the importance of well-being and the recognition of burnout or moral injury and how to manage this.

Many of the Pacific nations continue to fall well below the World Federation of Societies of Anaesthesiologists (WFSA) target minimum density of physician anaesthesia providers (PAP) of 5 per 100,000 population. Some entire countries have only one or two anaesthetists. During the conference, I heard of the burden of providing care in these settings and the daily sacrifice of time with family and loved ones. For many, attendance at the conference was only possible due to the support of volunteer locums.

Every year, each country shares updates and highlights of their clinical experiences. Samoa, Tonga, Vanuatu, Fiji (Suva, Lautoka, and Labasa), Solomon Islands, Niue, Tuvalu, and Kiribati all shared cases that would prove difficult even in our most advanced tertiary hospitals in New Zealand. Kiribati shared a case of a blind nasal intubation of an awake patient who had an occluding tongue mass after presenting to the hospital with significant weight loss. Anaesthetists from Papua New Guinea, who were attending the PSA for the first time, shocked us with their stories of spear warfare amongst the isolated tribes in their highland regions. For one unfortunate man, a spear piercing his right ventricle caused cardiac tamponade whilst in a community more than eight hours journey from a hospital and access to blood products. A junior, non-training registrar was talked through how to deliver appropriate anaesthetic care to him over the phone.

Savusavu was the backdrop for sharing knowledge and lessons learnt across the Pacific and provided a welcome opportunity for our colleagues to reconnect, refocus, revitalise, and restore after another busy year of working in anaesthesia and intensive care. For me, it was not just a learning experience, it was a chance to make connections with my people and find my place in the world of anaesthesia as a Pacific ANZCA trainee. I had many discussions about how we can do better for our people in New Zealand, Samoa and throughout the Pacific, and for the first time during training, I was not a minority. I look forward to a future where I can return to the PSA with a FANZCA and continue to strengthen these relationships.

NZ delegates at PSA: Dr Kate Campbell, Dr Dan Ramsay, Dr Toni Anitelea, Dr James Dalby-Ball, Dr Saleimoa Bill Sami.

Feature

Supporting Anaesthesia Training across the Pacific

Dr Indu Kapoor, Dr Cecilia Vaai-Bartley, Dr Esjae Sesega, Dr James Dalby-Ball at the PSA Meeting.

The Pacific region needs financial support to reach the global safe surgery target of five anaesthetists per 100,000 people*. Funding a Pacific Island anaesthesia trainee through the four-year Fiji National University's MMed Anaesthesia programme costs approximately $20,000 NZD per year. While Pacific Islands struggle to fund trainee development, the generous contributions from Anaesthetists across Aotearoa to the PACT programme and additional support from the Ralph and Eve Seelye Education Trust are helping to develop a safe, sustainable anaesthesia workforce across the Pacific.

PACT (Pacific Anaesthesia Collaborative Training) currently supports four Fellows at various levels of their anaesthesia training. Inaugural PACT Fellow, Dr Cecilia Vaai-Bartley, completes her training this year and will commence working as a consultant in Samoa in the new year. All four Fellows are grateful for the ongoing support that makes it possible for them to reach their goals and contribute to their home nations.

References

*Kempthorne, P., Morriss, W.W., Mellin-Olsen, J., & Gore-Booth, J. (2017). The WFSA Global Anesthesia Workforce Survey. Anesthesia and analgesia, 125(3), 981-990.

Sweta Mudaliar

Second year,
MMe in Anaesthesia
Colonial War Memorial Hospital, Fiji

This year has been a rigorous and comprehensive journey that I have found both demanding and rewarding. A stand-out moment in my training so far was the successful management of a complex pediatric surgical case. The patient's condition required meticulous planning and coordination. The experience tested my clinical skills and exemplified the collaborative and multidisciplinary nature of anaesthesia practice.

The generous contributions of the PACT programme, Seelye Trust, and the NSZA have been instrumental in shaping my journey as a budding anaesthetist. I am profoundly thankful for the impact it has had on my professional development.

Esjae Sesega

First year,
MMe in Anaesthesia
Anaesthesia Department,
TTM hospital, Motootua,
Samoa

This year has been a remarkable journey. Working in a completely different environment with diverse people and patient populations has pushed me out of my comfort zone, exposed me to complex cases, and provided invaluable experiences. I'm determined to gain as much knowledge as possible, with the goal of contributing to my dedicated team when I return home to Samoa.

The support from PACT has been exceptional. They've been supportive and genuinely concerned about my well-being. As the year comes to an end, the pressure is mounting with final exams on the horizon. I need to remain focussed and am reminded of a saying from home: *don't let the last hit bend the nail.*

Discover more on the PACT programme or make a contribution

www.anaesthesia.nz/global-health-committee/pact-donations

Cecilia Vaai-Bartley

Senior Registrar
Anaesthesia and ICU department, Tupua Tamasese Meaole Hospital, Samoa

All going well I will graduate this December. I'm currently completing my research project, a descriptive study on admissions to ICU during the 2019 measles epidemic in Samoa. Although it was a tragic time for Samoa, there are many lessons to be learnt. Alongside my studies, I have also been stepping up to take on more clinical leadership responsibilities to help our acting HoD. The additional work is a challenge but I am finding it very enjoyable.

Words are not enough to express my gratitude and appreciation for every contributor to PACT. Your contribution is helping Samoa's health sector and most especially the people of Samoa. May God bless you all and return your kindness thousandfold. Faafetai tele lava.

Cecilia is also the recipient of an NZSA scholarship to attend the WFSA World Congress in Singapore this March. Her first international anaesthesia conference.

Nikish Narayan

First year,
MMe in Anaesthesia
Anaesthesia Department, Lautoka Hospital

This is my first year in the MMe in Anaesthesia programme. The support from PACT, Seelye Trust and the NZSA has enabled me to recommence my studies after taking a break due to financial constraints. The academic year has been very fruitful and gaining practical experience has really helped me consolidate my learning.

Due to the geographical spread and patients presenting late, I have had to administer anaesthetics outside of Lautoka to provide life-saving surgery. Without access to the usual equipment and drugs, I've had to rely heavily on foundational principles and apply a level of dexterity to ensure successful outcomes. Every challenge is a learning opportunity and I strive to continue learning and improving in the coming academic year.

Reduce & Remanufacture

Aotearoa New Zealand is one of the most wasteful countries in the OECD and The Ministry for the Environment has a vision: "That by 2050, Aotearoa New Zealand is a low-emissions, low-waste society built upon a circular economy. We cherish our inseparable connection with the natural environment and look after the planet's finite resources with care and responsibility".

As many other countries have already begun to do, the intention is to shift our nation from a linear economy – take, make, use, and throw it away, to a circular economy - one that is more resource efficient: preserving energy, keeping products in use, and enrichening the resources we take from our planet.

Medsalv and TRA2SH, are two initiatives already adopting the principles of a circular economy within our healthcare sector here in Aotearoa. As Medsalv founder Oliver Hunt puts it "an industry that is solely focused on keeping people healthy surely must extend that to keeping the planet healthy too, because human and planet health are inextricably linked."

Both initiatives are examples of opportunities to reduce, remanufacture, and encourage rethinking of the single-use mantra.

Reduce

Operation Clean Up is an annual event run by TRA2SH (Trainee-Led Research and Audit in Anaesthesia for Sustainable Healthcare), an Australasian initiative that invites trainees to motivate their department or hospital to tackle chosen targets.

Dr Rose Cameron, Counties Manukau based Trainee and NZ representative on the TRA2SH steering committee, describes the targets of the event as "low-hanging fruit".

"They have a high carbon cost with sustainable alternatives that uphold excellent patient care. For example, TRA2SH traced an 'Australian-made' disposable absorbent pads (blueys, greenies, incopads, chux) cradle-to-grave journey and discovered that up to 12 countries are involved; Each step involves significant air, water and/or soil pollution. Further, disposable absorbent pads (DAP) breakdown in landfill exceeds 100 years."

DAPs were the first target of the OCU day when the event was piloted in 2020. The event now offers five targets.

Rose explains "a TRA2SH survey showed that DAPs are used for many purposes other than their intended use, to reduce prolonged skin exposure to fluids; therefore, contributing to preventable waste. Plus, if incorrectly disposed of in clinical waste streams (when not used for biohazardous fluids) they incur a higher financial cost on the healthcare system."

"There are lots of items we use freely without appreciating their environmental impact. We encourage OCU day participants to try and think 'lean'. Some questions we think help in choosing an item to focus on for the day include: what adds value to patient care and what does not? Is there a more sustainable alternative? Is the alternative harmful? To consider your use of items whilst upholding excellent patient care, and anything that will prolong a patient's hospital stay is environmentally worse."

TRA2SH encourage OCU Day participants to collect data from their hospital. "Local data is a powerful way to inform people" Rose shares. "From my personal experience running an OCU day, if you have data that directly relates to your own workplace that you can share prior to the day; the engagement on the day and going forward is greatly improved. Knowledge of local procurement data makes it more personal and the next time you or your colleague reach for a DAP, they may think – what else could I use here? And that small change can make a big difference".

Remanufacture for Reuse

Christchurch based social enterprise, Medsalv, collects used single-use medical devices that would ordinarily go to landfill, remanufactures these and sells them back to participating hospitals for less than the device's original price – usually around 30 to 60% less.

As Medsalv founder Oliver Hunt puts it: "The waste generated by healthcare is just tremendous. It's also made up of really expensive products (when new) that come a long way before they get to our shores. It's a massive issue, almost nothing is

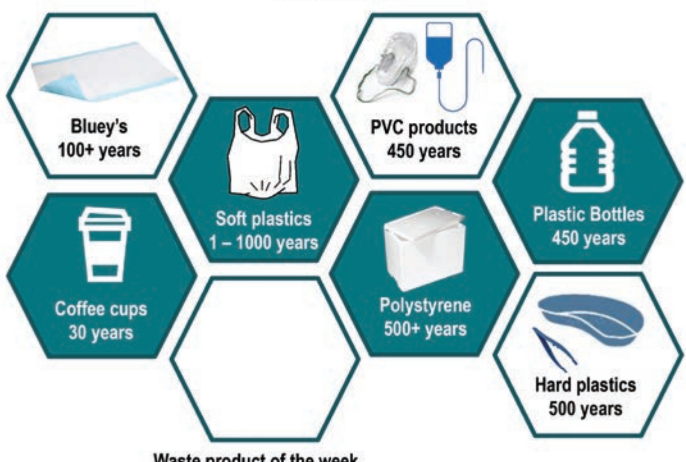
getting done about it, and I thought we'd be able to make a change - and so here we are."

Medsalv works with varying levels of interaction with 57 of New Zealand's 66 Hospitals and is currently diverting one or more tonnes of waste from landfill every week. Based on USA activity Medsalv estimates that there's potential to eliminate 1,700 tonnes of unnecessary waste through remanufacturing every year, and this could save New Zealand around $110 million a year.

The process is simple: Used devices are collected by Medsalv and taken to their Christchurch based remanufacturing facility where they are sorted and tagged with a unique identifier before being passed through a proprietary cleaning and testing process. Every device is thoroughly inspected multiple times during remanufacturing procedures, to ensure it performs substantially equivalently to the original devices before being packaged and made available for safe clinical reuse. All of Medsalv's operations are Carbon Zero and Climate Positive Accredited, too.

Devices that are rejected from the process due to strict quality standards are broken apart into constituent materials and where possible are recycled. For example, waste PVC which they send to Matta in Kapiti, who turn it into playground matting.

The perception of the term single-use has been a learning curve for Medsalv. Oliver shares, "Initially we didn't do a great job of sharing with hospitals, particularly infection control or procurement, that the single-use medical devices we target are primarily single-use because the manufacturer has labelled them that way – the manufacturer has chosen not to conduct the studies needed to show they can be reused or to market them as reusable – with a clear commercial driver here. Provided the right processes and checks are performed on these single-use devices, they can be safely reused multiple times."



"The biggest barrier we're currently facing is competing against the linear economy model that the majority of current suppliers use, instead of a focus on reuse and a circular economy. This unfortunately causes some restrictions on the hospitals we can help, and the fact that our health system is married to this linear model poses a challenge too. But many companies see the writing on the wall. We have been lucky enough to work with organisations like Obex (who supply the original devices) who are receptive and willing to make changes to their business model and work with their manufacturing facilities to increase the robustness of their single-use medical devices for reuse."

Oliver mentions that there are other avenues that Medsalv is exploring too, when remanufacturing isn't possible: "On occasion, a particular type of original products can't be remanufactured – maybe the material is barely strong enough for its normal use, it won't withstand a cleaning process, or the design means it is always damaged during use. We've seen a few products like this, so recently invested in developing a new product that entirely replaced a single-use one at the hospital we worked with, with a reusable one. Because hospitals can send it to their laundry for reuse, it's just as convenient, but it's approximately 100 times less potential waste to landfill, and around 65% cost savings over its lifetime once you factor in laundering costs."

There will be many more positive examples and we appreciate different facilities require different procedures and processes. These two examples are shared with the intention of offering awareness and insight into some of the initiatives happening here in Aotearoa. Featuring these is not an endorsement or recommendation. Our thanks to Rose on behalf of TRA2SH, and Medsalv for agreeing to be included in this article.

An update from Te Tāhū Hauora

Health Quality & Safety Commission

Submitted by Te Tāhū Hauora Health Quality & Safety Commission

Updates from Te Tāhū Hauora Health Quality & Safety Commission about topics of interest.

Trauma Exchange audio interviews

An audio interview series featuring health care professionals and researchers involved in trauma care and rehabilitation is available on the Te Tāhū Hauora and National Trauma Network websites. Called Trauma Exchange, the interviews cover a range of topics including research, Māori experiences of care and rehabilitation, critical haemorrhage and the history of the National Trauma Network.

Aotearoa Patient Safety Day 2023

The theme for Aotearoa Patient Safety Day | Te Rā Haumaru Tūroro o Aotearoa 2023 on Friday 17 November was 'Engaging consumers and whānau for patient safety' with the tagline 'Elevate the voice of consumers and whānau'. A video promoting consumer and whānau engagement was launched by Te Tāhū Hauora, featuring a consumer and health care professional talking about the value and importance of co-design and working with consumers and whānau when designing health care services. Support and free resources about co-design are available on our website.

Healing, learning and improving from harm: National adverse events policy 2023

Te Tāhū Hauora released the Healing, learning and improving from harm: National adverse events policy 2023 on 1 July. The policy uses a systems safety approach, moving toward understanding and learning about our complex health care systems and how they influence care, risks and outcomes. We recommend and provide education on the 'learning review' method. Health care providers have a year to implement the policy and five years to build capacity and capability in restorative practice.

Paediatric early warning system

Ninety-five percent of the main hospitals providing paediatric services in Aotearoa have successfully rolled out the national paediatric early warning system and all remaining hospitals will have it in place by January 2024. The system ensures consistent recognition of children at risk of deterioration and tailors response protocols to the resources available locally. While the system is designed for non-operating room settings, anaesthetists may encounter it during pre-anaesthetic assessments and postoperative care. Anaesthetists can contribute observations to the paediatric vital signs chart for patients transitioning from post-anaesthesia to wards.

Improving sepsis care in Aotearoa

Following a recent stocktake of sepsis management in Aotearoa, which revealed differences in clinical practice, protocols and patient care, Te Tāhū Hauora is scoping a national sepsis project with the Sepsis Trust aimed at improving these areas. Scoping includes various health settings and emphasises Te Tiriti o Waitangi principles, improving equity and learning from consumer experiences.

Safer use of anticoagulants

We are developing a package to help health care providers improve the systematic management of anticoagulants. The package will take a stewardship approach and be tested by hospitals in early 2024. It will focus on equity (Te Tiriti o Waitangi and Māori health) and consumer and whānau engagement as per the code of expectations. Elements will include governance and leadership; measuring, reporting and monitoring; improved clinical processes and practices; and education. Once ready, the package will be recommended for use across the motu to improve health outcomes.

Reducing bloodstream infections associated with peripheral intravenous catheters

Our infection prevention and control team is developing a national quality improvement project to reduce bloodstream infections associated with peripheral intravenous catheters in hospitals. It aims to reduce the harm associated with healthcare-associated Staphylococcus aureus bacteraemia in Aotearoa, often caused by medical device use. We ran four regional workshops and collected thoughts from other relevant stakeholders using ThoughtExchange (an engagement and survey platform) to understand what contributes to these infections here and how to address them. A summary of results will be available shortly. An advisory group has been set up and development of the project starts in 2024. See our website for updates.

Subscribe to the Te Tāhū Hauora newsletter or follow us on Facebook, Instagram, X (@HQSCNZ) and LinkedIn.

NZATS Column

Matthew Lawrence
President NZATS

As the suns sets, it will rise again!

As the now outgoing NZATS President, this will be my last article in this role. What a ride it has been!

We have had our good, bad, and ugly moments and I'm sure there are still many to come! I do hope I have been positive in my approaches. Under the considerable pressure we are all under these days it's easy to become negative and retreat into one's shell. I do urge you to take time out to take care of yourselves, as this machine of a health service is unlikely to! The pressure we face is unsurmountable at times, so remember you will not do anyone any favours if you are also broken! I know this too well myself of late.

I would like to thank everyone I have been involved with during my Presidency. Firstly, the NZATS Executive whom it has been a real honour to work, laugh, and at times cry beside. They are a special bunch of people who at times do not get the recognition they deserve. So from the bottom of my heart, I thank them. Thanks also to all of our NZATS members, for all of their hard mahi throughout the year. I know too well the hardships and conflicts that have been around. Turning up to work, day in and day out is a real achievement. So once again a big thank you from the profession and patients too, I'm sure.

I would like to thank the team down in Wellington in the office, especially NZSA, for helping me with many of the jobs I found less familiar or new. Sorting out things like governance, roles and actions of boards, the list can go on. You truly have been an asset and I'm sure you will continue that support, which can only help to improve our Societies going forward.

NZATS Executive at the NZ ASM evening function.

Our combined national conference was a grand occasion to catch up, share ideas, share the struggles, and generally learn something new. I enjoyed being able to catch up with some of you.

We all had the opportunity to comment on the Anaesthetic Technician scope of practice review. Now we are calling on ATs to be a part of this once again -to form an expert advisory group shaping these changes going forward. We have successfully worked with the Medical Sciences Council on getting these mandates through to a conclusion. Initially we have been successful in our approach and will in the future be named Perioperative Practitioners and have a broader scope. There is still a lot of work to do, but with positivity, perseverance, and of course some hard mahi we can shape ourselves as leaders in Aotearoa's healthcare system. I believe this is the future and a truly historical time for our profession. Well done to everyone involved and to those who gave feedback!

Some moments to celebrate - we have voted positively, and the pay equality and holiday pay are being sorted. However, good things take time and unfortunately for some the change is yet to come. But I am sure it will be with us all very soon.

There is a lot of work going on in the background and I encourage you to get involved. It is with support across all of our memberships that we can do more and in larger numbers, we are stronger!

I encourage you to support placement students entering your workplace. They are our future; they need our help. We are still learning, still trying to improve systems and processes, so once again get involved, heck you may just enjoy it. Infact I am sure you will.

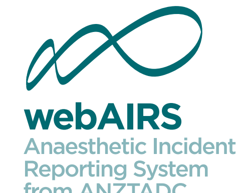
The team at NZATS have great ideas going forward I believe we can reach for higher things.

Stay positive as much as you can, do not let the negative take over! Once again thank you to everyone who has helped me throughout my Presidency, you are truly wonderful and amazing people.

President for one last time,

Matthew Lawrence
NZATS President

webAIRS News



Burns in the operating theatre! A webAIRS review

Despite significant efforts to improve the safety of the operating theatre environment, burns to patients under anaesthetic care still occur. Burns may be caused by thermal energy from fire or heat, or chemical reactions, potentially causing serious and permanent physical and psychological harm to the patient.

Advancements in technology for surgery and anaesthesia have contributed to the rise in intraoperative fires and consequently thermal injury to patients. Electrocautery is the most commonly reported ignition source of fire in the operating theatre. Increased utilisation of high flow nasal oxygen devices, providing supplemental oxygen ranging from FiO2 30% to 100% during the concurrent use of electrocautery has become a dangerous oxidiser completing the 'triangle of fire' in the operating theatre.

Several case reports of fire in the operating theatre in Australia and New Zealand have been published over recent years.

This analysis of incidents causing thermal and chemical burns reported to webAIRS aims to raise awareness of the possibility of these events and to examine the contributing factors.

A narrative search using Structured Query Language (SQL), searching for incidents with the words or parts of the words "burn" and "fire", was used across all incidents reported to webAIRS. One hundred and eleven records were identified of which 88 records were excluded due to irrelevance. A total of 23 records were included for analysis (Figure 1).

Results

The highest incidence of thermal injuries occurred during superficial surgery to the head and neck region under monitored anaesthesia care, during plastics, vascular and

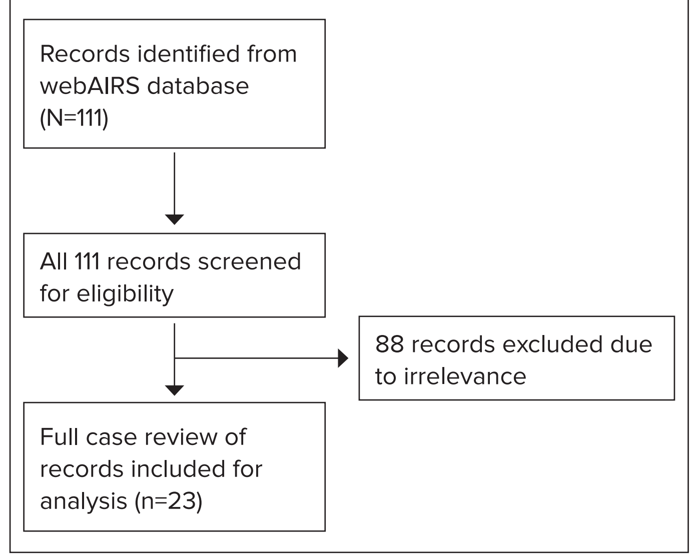


Figure 1.

cardiology procedures. These accounted for half of all thermal injuries reported. Ten cases were associated with delivery of supplemental oxygen via an open system, nine of which resulted in patient harm to the face and airway (six superficial burns, two partial thickness, two inhalational). Oxygen delivery devices implicated in the thermal injuries included simple face mask (n=5), low-flow nasal prongs (n=1) and high-flow nasal prong devices with humidification (n=4). Variable oxygen concentrations were delivered by these devices ranging from approximately FiO2 30% up to 100% at variable flow rates between 3L/min up to 70L/min.

Fuel sources included facial hair (eyelashes, eyebrows, and nasal hair), surgical drapes and one incident involving the plastic of the oxygen delivery device. Alcoholic skin preparation was implicated in two of the nine cases. The most common ignition source was electrocautery (57%).

Two cases of operative room fire occurred from the laparoscopic light source in general surgical procedures, one of which resulted in a superficial thermal burn to the patient's inferior eyelid. In both incidents the laparoscopic light source was placed on the surgical drapes, which subsequently became ignited.

Chemical injuries accounted for three cases, two involving the eye (partial thickness injury to the cornea) from inadvertent contamination with alcoholic chlorhexidine. In both cases the eyes were protected, one with Micropore™ tape and one with Tegaderm™ dressing. No cases reported ongoing sight-threatening injury. All were managed with ophthalmology

Summary of results *Table 1.*

Characteristic		n=23	%
Burn type	Thermal	20	87%
	Chemical	3	13%
Oxygen source	Nil supplemental O_2	13	57%
	Simple face mask (i.e Hudson)	5	22%
	High Flow Nasal Prongs	4	17%
	Low Flow Nasal Prongs	1	4%
Ignition source	Electrocautery	13	57%
	Light source	2	9%
	Other	4	17%
	NA	4	17%
Fuel or heat source	Tissue/Hair	9	39%
	Drapes	7	30%
	Chlorhexidine/alcohol	5	22%
	Body warming devices	3	13%
	Oxygen delivery device	1	4%
Site of injury	Face	6	26%
	Periocular (incl. Lid & brow)	5	22%
	Lower body	4	17%
	Upper body	2	9%
	Airway	2	9%
	No injury	3	13%
	Unspecified	1	4%
Depth of injury	Superficial	14	61%
	Partial	7	30%
	No injury	2	9%
	Full	0	0%
ASA	1	6	26%
	2	7	30%
	3	6	26%
	4	2	9%
	Not specified	2	9%
Urgency	Elective	16	70%
	Emergency	6	26%
	Not specified	1	4%
Sex	Female	11	48%
	Male	10	43%
	Not specified	2	9%
Grade of anaesthetist	Specialist Anaesthetist	19	83%
	Trainee	2	9%
	Not specified	2	9%
Type of anaesthesia	GA	11	48%
	Sedation	10	43%
	Regional	1	4%
	Not specified	1	4%

follow-up. Recommendations from the reporting anaesthetists in both cases included vigilance both when securing eye protection and at the time of surgical preparation in addition to timely ophthalmological assessment. The third case also was due to alcoholic chlorhexidine preparation with likely prolonged contact with the wet solution resulting in a superficial chemical burn to the lower back region of the patient.

Thermal and chemical injury to patients undergoing procedures in the operating theatre continue to occur despite an abundance of published literature on the issue over the years, particularly since the introduction of electrocautery and LASER surgical techniques in addition to the advancement in high flow nasal oxygen delivery devices. Whilst the reported annual incidence of operating room fires across Australia and New Zealand averages one to two cases per year, slightly below published rates from other countries (~4-5 cases per year); it is important to highlight that underreporting of such events is an inherent limitation to the webAIRS system and hence it is likely that the numbers presented in this analysis are underrepresenting the actual incidence. Data published from the United States of America in 2009 estimated 200-350 operating theatre fire cases per year, 20-30 resulting in serious disabling or disfiguring harm to the patient and 1-5 deaths per year. The webAIRS data is comparable to the published literature where approximately half of the reported thermal injuries occurred in the head and neck regions and over 70% are related to electrocautery as the ignition source across similar surgical specialties (otolaryngology, vascular and plastic surgery) in patient's receiving monitored anaesthesia care.

Patient harm from burns injuries due to the combination of electrocautery and open system delivery of supplemental oxygen whilst receiving monitored anaesthesia care is well established in the literature. These injuries are considered reasonably foreseeable and preventable. It is imperative that risk reduction strategies are employed to mitigate harm from occurring in these seemingly innocuous settings. The ANZTAD committee strongly encourages the reporting of any thermal or chemical injury cases to the webAIRS database to improve our understanding of how these incidents occur and provide targeted recommendations for future prevention strategies.

Dr Anna Steer and ANZTADC Case Report Writing Group

ASA = American Society of Anaesthesiology;
GA = general anaesthesia

Obituary

Dr Trevor L. Dobbinson

1936 – 2023

Dr Trevor Dobbinson (Trevor) passed away peacefully in his home on Sunday August 6th 2023. He was a dedicated family man who lived a very full life pursuing his many passions.

Trevor's contributions to the anaesthesia specialty, particularly within cardiac anaesthesia and intensive care, are reflected in his extensive research in clinical anaesthesia, positions in training and education of anaesthetists and his service to the New Zealand Society of Anaesthetists. He served on the executive of the NZSA as the President from 1985 to 1986, Vice President from 1983 to 1984, Treasurer from 1981 to 1984 and Honorary Secretary from 1974 to 1980.

Born in Wellington, and growing up in Hawke's Bay, Trevor showed an early aptitude as an academic with an inquisitive mind and interest in science. During his secondary school years, the family relocated to Christchurch to be closer to a university. Applying himself to catch up to the different curriculum at his new school, Christchurch Boys' High School, Trevor's hard work saw him become a top student and leader amongst his classmates. The latter was a quality recognised by his teachers when he was appointed as Cadet Leader, a position usually reserved for students born in the area.

After secondary school, Trevor chose to pursue a medical career and moved to Dunedin to attend medical school. During Trevor's university years he met and married his wife, Kathleen, and juggled the demands of study and providing for a young family by utilising skills from his childhood. Shooting rabbits on a nearby rifle range and contracting jobs painting and paper hanging through his father's business, during the breaks.

In 1962 Trevor graduated with an MB ChB from Otago University. Forging close friendships during these student years' he remained in touch with the 'class of 62' through regular reunions.

Trevor was a House Surgeon at Kew Hospital in Invercargill 1963-1964 when he decided to pursue anaesthesia, seeing it as a pathway where he could combine his interests in clinical pharmacology, applied technical skills, and acute and emergency medicine.

He returned to Dunedin to begin his anaesthetic registrar training at Dunedin Hospital under the guidance of the late Dr John Ritchie, a pioneer in anaesthesia in New Zealand. Former colleague, Dr Jim Clayton, expressed how early on in his training Trevor demonstrated a keenness for learning and building the evidence base for clinical practice. Methoxyflurane was a new volatile anaesthetic agent at the time and Trevor undertook a study of its use in Dunedin, presenting his results in his paper *Methoxyflurane*. Which won the NZSA's Registrars' Essay Prize in 1967.

Pursuing his early interests in paediatric anaesthesia and intensive care Trevor travelled to complete his post graduate studies at the Melbourne Women's Hospital and Children's Hospitals in 1968, the Royal Adelaide Hospital in 1969 and the Hospital for Sick Children in Toronto Canada in 1970 where he was a clinical and research fellow.

Late in 1971 Trevor and his family returned to Dunedin where he took up a post as a Senior Lecturer at the Medical School, and Consultant Anaesthetist at Dunedin Hospital. In 1972 a cardiac surgery unit was proposed for Dunedin, the second of its kind in the country following Auckland. Returning with expertise in post-cardiac intensive care, Trevor was one of the first cardiac surgical anaesthetists in Dunedin. Alongside the late Professor Pat Molloy and the late Dr Mack Holmes, he was heavily involved in establishing the cardiac surgery and cardiac surgical intensive care units and continuing training for registrars.

The Senior Lecturer position afforded Trevor the time to undertake a number of investigations, producing publications on paediatric, respiratory and cardiovascular research. He published 25 papers in medical journals across his career and is attributed for his prominent contribution towards the advancements of cardiac anaesthesia in New Zealand. Prizes and recognition for his work included being awarded The Canadian Anaesthetists' Society Prize of 1974 alongside Dr H I A Nisbet and Dr D A Pelton for their paper *Functional Residual Capacity and Compliance in Anaesthetized Paralysed Children*. A New Zealand Postgraduate Medical Federation Visiting Lectureship (1974), and from the Medical Research Council Grants: 78/68, *Study of Optimum PEEP after cardiac surgery* (1978) and 81/28, *Study of weaning from artificial ventilation after cardiopulmonary bypass surgery* (1981).

Dr Trevor Dobbinson with his Dunedin Hospital colleagues in the early 1970s.

International postings appealed to Trevor, in part through his appetite for adventure and pursuit of new challenges, whilst also drawn to the possibilities to gain more variety and skills in clinical practice and research. In 1986 Trevor responded to an advertisement for a job in Riyadh, Saudi Arabia. Taking a post as a Cardiac Anaesthetist and Associate Professor of Anaesthesia and Intensive Care at the King Khalid University Hospital at King Saud University. The experience allowed Trevor the opportunity, both clinically and academically, to meet people from all over the world. A unique experience for him was working in the hospital with translators and within a vastly different culture.

Living in Riyadh during the onset of the Gulf War, he also became the New Zealand warden, responsible for leading a convoy of expats out of Riyadh should evacuation be required. Taking the potential threat of chemical warfare seriously Trevor sourced German and British WWII masks for himself and Kathleen. Thankfully neither needed to be used, although they did experience attacks from scud missiles close to where they lived.

In the early 1990s, Trevor and Kathleen returned to Australia where Trevor took a role as the Director of Intensive Care at the Canberra Hospital until his retirement from clinical practice in 1999.

Throughout his career Trevor shared his personal passion for learning through his contributions as a lecturer, examiner for the Faculty of Anaesthesia and Intensive Care Nurses Programme and his role in establishing the Continuing Education Committee of Anaesthetists (CECANZ) – known today as ANZAEC.

The NZSA and New Zealand Committee formed CECANZ in 1986. Attribution is given to Trevor for "his vision and initiative in getting CECANZ off the ground"[1]. Trevor assumed the first leadership role overseeing the initial committee for a few months before departing for Saudi Arabia. In the NZSA newsletter of December 1986 Dr M E Turner also acknowledged the considerable time and effort that Trevor put into getting CME established in New Zealand.

Following his retirement from clinical practice Trevor returned to the committee assuming a position as its Medical Director until 2003.

As highlighted earlier, further to his contributions to anaesthesia in New Zealand, Trevor served on the executive of the NZSA in a number of roles. Dr David Jones recalls Trevor as a passionate advocate for the NZSA and his desire to ensure its long-term financial stability through his work looking after the Society's investments. Trevor was awarded a NZSA Life Membership in 2003 for his contributions to both the Society and anaesthetic profession in New Zealand.

During his NZSA Presidency Trevor shared a message that continues to resonate today, "Much of the respect and status that anaesthesia has secured in recent years has come from the contribution anaesthetists have made to improve patient care outside the operating room."

As consistently spoken about by family and friends, Trevor was also a passionate angler. Walking for miles to pursue the challenge of outwitting the fish. An activity that brought him many peaceful hours dropping a line to balance the very busy life he led.

Our thanks to the family, friends and colleagues who shared their memories of Trevor during the writing of this obituary.

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Podcast Suggestions

Podcasts

Some podcast shows and episodes with a wider theme of health to explore. Once you're all caught up on the NZ Anaesthesia podcast of course.

The Imperfects

Recommended episode: Dr Richard Harris - "That Thing in Thailand".

Australian deep diving Anaesthetist Dr Richard Harris is the guest of this episode answering many questions on his involvement in the Thai cave rescue in 2018 and his thoughts on the 'art of risk'. (August 2023)

PSNZ – Pharmacy in Focus

Recommended episode: Ep11 – Pharmaceutical Waste Disposal with Sara Hanning.

We don't often get to hear research and statistics based here in NZ. In this episode Sara Hanning shares insight from early research, waste management strategies and what research is being done on alternative solutions. (August 2022)

Wellness with Ella

Recommended episode: How to sleep well, reducing cravings and matcha versus coffee with Russell Foster.

Russell Foster, professor of circadian neuroscience at Oxford University shares insights from his research centres around sleep, the body clock, the impact of evolution on it, and how much it affects our biology and health. Plus, a short comparison of coffee vs matcha which would be better described as a measured discussion. Perhaps not an episode to listen to coming off the back of a night shift. (August 2022)

Flightless Bird

Recommended episode: Healthcare Part II.

You may or may not be familiar with NZ Journalist David Farrier's podcast exploring the differences between the USA and New Zealand with at times, a very American point of view. In this episode David shares his personal experience to get help for his back in America then having to flee home to New Zealand where healthcare was less scary!
(September 2023)

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