ANZCA
FPM

Bulletin

Australian and New Zealand
College of Anaesthetists
& Faculty of Pain Medicine

SUMMER 2021

Perioperative anaphylaxis: What you need to know

Examinations:
The professor who failed the primary exam twice

ANZCA research:
$A1.55 million awarded for research projects in 2022

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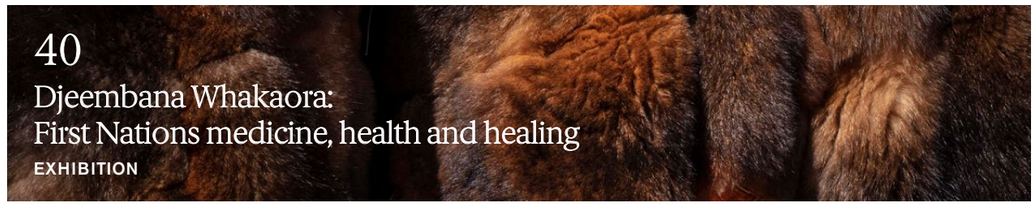

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Djeembana Whakaora:
First Nations medicine, health and healing
EXHIBITION

ANZCA Bulletin
The Australian and New Zealand College of Anaesthetists (ANZCA) is the professional medical body in Australia and New Zealand that conducts education, training and continuing professional development of anaesthetists and specialist pain medicine physicians. ANZCA comprises about 7500 fellows and 1700 trainees mainly in Australia and New Zealand. It serves the community by upholding the highest standards of patient safety.

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Cover: A routine elective day procedure for 11-year-old Joshua Traikos at a Melbourne hospital turned life threatening when he experienced a rare allergic reaction to propofol. Joshua now wears an emergency ID bracelet and necklace to alert healthcare workers.

Photo: Penny Stephens

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Victory for pandemic exam "war games"

IT'S THE TIME of year to look back and bask in the memories of the achievements and high points, while doing one's best to forget the low points.

The achievements and highlights of the year? There are many, but the one I appreciate most is the exams. Banal as it may seem, to have enabled the exams to go ahead for our trainees, when fellow colleges could not, is huge. The work of the examiners and the staff to pull this off, in the face of sudden lockdowns, travel and other restrictions, the logistical challenges with exam venues, hardware, and tech was extraordinary. There were so many variables that we started referring to the contingency planning as "war games". Success was also due, in no small part, to the personal collegial relationships and trust built up over many years with senior government officials and other decision-makers, that enabled us to gain the necessary permits and exemptions. And while we breathed a collective sigh of relief, I hope we don't have to do it like this ever again.

The ANZCA Annual Scientific Meeting in Melbourne was a highlight for me, as it occurred in the brief lull when there was a travel bubble between Australia and New Zealand, and I was able to attend in person. It was really uplifting to be physically in Melbourne. I could catch up with colleagues I hadn't seen for more than a year and, importantly, spend some time with the ANZCA staff who do so much for us. The convenors and organising committee did a fabulous job, exceeding all expectations for a virtual meeting. Again, we have learnt a lot, but I hope we don't have to do it like this ever again.

The Emerging Leaders Conference was another high point. It was a gruelling two days sitting in front of the computer, but it was so engaging, and so cleverly produced, that it was never tedious. I didn't even feel the urge to multitask, which is the usual risk with Zoom. Being together in person would always be better. Proverbially, in te reo Māori, you can't have the heart-to-heart without the face-to-face (*kanohi ki te kanohi*). Once more, though, I hope we don't have to do it like this ever again.

One of the heartening themes that emerged from that conference was the strong interest in, and commitment to, diversity and inclusion, equity, social justice, and the willingness to speak out against injustice. This is such a positive sign that altruism is alive. It adds so much to the public trust in, and the credibility of ANZCA.

The strategic plan is up for revision and the views of the fellows are integral to our future plans. To guide us, the fellowship survey was completed this year. About 2500 fellows had their say. Thank you for taking the time and trouble to do so. A more detailed analysis by ANZCA Councillor Professor David Story is in this *Bulletin*.

The four priorities valued most by the fellows are:

1. Training for fellowship.
2. Safety and quality.
3. Continuing professional development.
4. Professional documents, guidelines and statements.

There are often questions about how much ANZCA spends on each of its range of activities. Happily, the fellowship survey and the actual expenditure are aligned. Seventy-five per cent of our budget is spent on the top four priorities that you have identified. The alternative to face-to-face gatherings – the IT "solutions" are far more expensive than I would have imagined. While there are many advantages to not travelling (for example, helping the planet), I wouldn't want to keep on doing it like this all the time.

The Faculty of Pain Medicine has implemented the "Procedures Endorsement Program" (PEP). This is a clever piece of work that sets the standards required for those pain medicine fellows who are proceduralists, and offers flexible pathways to formal recognition. It is a simple (but not necessarily easy!) concept to formalise the training and practice of interventional procedures. This concept could potentially be translated into areas of anaesthesia, rather than the traditional "see one, do one, teach one".

No message from me would be complete without a plug for perioperative medicine. Progress towards the diploma has picked up speed again. There is now a curriculum framework. A "straw man" for how grandparenting might work is doing the rounds for consultation. Advocacy is a key part of the project, (not just the educational diploma), and that has commenced. The willingness of other colleges and specialties to enthusiastically (and robustly) engage in this work has been greatly refreshing. Again, relationship-building between the groups has been the key to developing the trust so necessary to advance this project.

Finally, none of the achievements, and highlights would have been possible without our fellows, trainees and specialist international medical graduates, who have freely and enthusiastically volunteered hours and hours of their time and energy to the committees, working groups and training. The intellectual horsepower of our group is enormous. We should continue to harness it for the benefit of our patients, our colleagues and our families.

I hope you all enjoy a summer break, and are refreshed to deal with whatever 2022 brings.

Dr Vanessa Beavis
ANZCA President

"Banal as it may seem, to have enabled the exams to go ahead for our trainees, when fellow colleges could not, is huge."

Upcoming elections

ANZCA Council elections

Fellows are invited to nominate for five vacancies on the ANZCA Council and one new fellow councillor position. Prior to submission, each nomination form must be signed by two fellows of the college, as well as by the nominee and submitted to the chief executive officer before 9am (AEDT) on Friday 11 February 2022.

If the number of nominations exceeds the positions vacant, an election will take place from Monday 28 February to Wednesday 30 March 2022.

Results of the ballot will be announced at the ANZCA Annual General Meeting which will be held on Monday 2 May during the 2022 ANZCA Annual Scientific Meeting in Perth.

FPM Board election

The call for nominations for the 2022 FPM Board have now closed. Four nominations for three vacancies have been received and the faculty will proceed to a board election. An electronic ballot will be held from Friday 14 January to Monday 31 January 2022, with results announced at the FPM Annual General Meeting on Sunday 1 May 2022.

ANZCA and FPM regional and national committee elections

The call for nominations for the 2022-2024 ANZCA and FPM Australian regional committees will take place in February 2022 and if elections are to proceed, electronic ballots will be circulated from midday Monday 21 March to midday Monday 11 April 2022.

Nominations for the New Zealand National Committee (NZNC) open on 14 February 2022 and close on 11 March, with the ballot, should it be needed, to be held from 21 March to 11 April 2022.

The next FPM NZNC election will be in 2023.

ANZCA trainee committee elections

The call for nominations and elections for the ANZCA Australian regional trainee committees were held in the last quarter of 2021 and have now closed. The next New Zealand Trainee Committee elections are in November 2022.

The chairs of the Australian and New Zealand trainee committees make up membership of the ANZCA Trainee Committee.

2021-2022 elections

Election	Nomination period	Election date
*Trainee committees	5 October 2021 – 29 October 2021	12 November 2021 – 26 November 2021
Faculty of Pain Medicine Board	23 October 2021 – 28 November 2021	14 January 2022 – 31 January 2022
ANZCA Council	16 December 2021 – 11 February 2022	28 February – 30 March 2022
ANZCA and FPM Australian regional committees 2020-2022	1 February 2022 – 22 February 2022	21 March 2022 – 11 April 2022
New Zealand National Committee (NZNC)	14 February 2022 – 11 March 2022	21 March 2022 – 11 April 2022
FPM NZNC	2023	2023

** The last NZ Trainee Committee election was in 2020, the next will be in November 2022.*

If you intend to vote in any of the elections, please ensure your preferred email address is up to date on the MyANZCA Portal or by contacting ceo@anzca.edu.au. To avoid your voting keys going to spam folders, please add noreply@electionrunner.com to your safe sender list.

For more information visit the ANZCA Council elections webpage (www.anzca.edu.au/about-us/our-people-and-structure/elections).

Reconnection is key after another challenging year

AS 2021 DRAWS to an end it is worthwhile to not only reflect on another year where we experienced variations of lockdowns across Australia and New Zealand, but also to look forward to what we hope will be a new and exciting 2022.

Ongoing COVID-19 restrictions have meant that 2021 has continued to be a challenge for the college, particularly for our Melbourne-based staff who endured 263 days in lockdown and continued to deliver college activities while working from home.

It goes without saying that delivering the training program and exams has continued to be a significant challenge. But we have successfully delivered exams across six locations in Australia and two in New Zealand, an unprecedented experience.

This would not have been achievable without the determined efforts of both the chairs of the final and primary exam sub-committees, Dr Fiona Johnson and Dr Julia Coldrey, and the respective dedication of these sub-committee members, our examiners, the ANZCA staff and, importantly, understanding from trainees. We've used variations of virtual and hybrid models to manage necessary work-arounds due to travel restrictions, the availability of examiners and COVID-safe limitations.

At the October ANZCA Council meeting a significant investment was approved for the 2022 ANZCA budget with the overarching theme of "Reinvesting in our greatest assets...our fellows, trainees, SIMGs and staff".

There are three key priorities that underpin this theme:

- Reconnecting our people; fellows, trainees, specialist international medical graduates (SIMGs) and our staff.
- Positioning for the future.
- Delivering an increased user experience.

This second priority is about investment in our core education systems and offerings. Essentially it is an investment in IT system uplifts, in addition to supporting our regional and New Zealand offices with the technology required to facilitate improved connectivity across the organisation.

We will be leveraging off ANZCA's sound financial base, achieved throughout the pandemic despite the tumultuous financial markets and the fact ANZCA will self-fund a deficit in 2022 as the impact of COVID-19 continues to impact college finances so we can position ourselves and invest in the organisation for the challenges ahead. Pleasingly there will be no fee increases for fellows, trainees and SIMGs for the second consecutive year.

The third priority is the development of the diploma of rural generalist anaesthesia, in collaboration with the Royal Australian College of GPs and the Australian College of Rural and Remote Medicine that is well advanced. The diploma of perioperative medicine being led by ANZCA in collaboration with the colleges representing physicians, intensivists, surgeons and GPs, will continue in 2022, ready for roll-out in 2023.

A key priority to reconnect our fellows, trainees and SIMGs is delivering face-to-face events again in 2022. While the use of virtual platforms in 2020 and 2021 allowed us to continue to deliver events and stay connected, we are mindful of the loss of collegiality among peers that can't be replicated easily on screens.

We hope the 2022 annual scientific meeting in Perth will be an important milestone event for the college as a face-to-face meeting, along with local continuing medical education and other events across Australia and New Zealand.

Research is a core pillar of ANZCA's 2018-2022 strategic plan. COVID-19 has resulted in the suspension of ANZCA Foundation research grants to enable clinicians to prioritise their frontline work in response to the pandemic. The funds that would have usually been awarded in 2021 will now be added to the research grants for 2022 and 2023.

The findings from the 2021 fellowship survey will be invaluable to help guide ANZCA Council and the FPM Board in the development of our new strategic plan and to establish priorities and resource allocations into what are viewed as the important core work of the college.

The top four priorities – training for fellowship, safety and quality, continuing professional development and professional documents and guidelines will clearly be fundamental to the development of the new three-year strategic plan (2023-2025) and currently represent 75 per cent of the ANZCA budget allocation to these top four priority areas.

On behalf of ANZCA staff we look forward to reconnecting with fellows, trainees and SIMGs in person in 2022. I would also like to acknowledge and sincerely thank the many fellows who have worked tirelessly, committing their time to the work of the college in such challenging times.

Nigel Fidgeon
ANZCA Chief Executive Officer

Letters to the editor


Letter to the editor

2021 Anaesthesia and Pain Medicine History and Heritage Grant

USE OF THE IPSILATERAL ARM

I applaud Dr Stuart Skyrme-Jones and support his call for a college policy statement on avoidance or use of the ipsilateral arm for cannulation and non-invasive blood pressure readings in patients with previous breast surgery and/or axillary sampling.

As he correctly states there is no supportive clinical evidence for the practice yet patients have the fear driven into them by unknowing nursing and, sadly, some medical practitioners, to the point that many are demanding unsafe practices (no blood pressure readings during anaesthesia or insertion of a central line being two I have had requested of me) rather than have an actual negligible risk cannula or non-invasive blood pressure reading.

What's frequently a problem is the "situational creep" that occurs. Unknowing people extend the range of applicable previous surgeries from breast cancer with axillary clearance, to breast cancer surgery only, to breast lumpectomy only to even minor procedures such as excision of benign skin lesions in the area of the breast. Once the fear is instilled in the patients it can sometimes be very hard to backtrack.

I have been involved in two hospital committees some 10 or more years apart that were instigated to develop a hospital policy on the practice, both being set up by nursing staff for the purpose of "rubber stamping" a pro-avoidance of use of the arm policy based on urban/nursing myth and in one case driven by the new provision by a manufacturer of pink arm-bands with the words "No IV or BP This Arm!" printed on them.

After an extensive literature search and presentation by myself both the committees and the policy were abandoned though the hospitals never published the outcome nor made any statements that the practice was not necessary. The status quo was tacitly encouraged to continue unofficially. The demands from nurses and patients continues to bubble away.

The demand becomes a significant issue when patients present for surgery where the ipsilateral arm is the only site available for the IV cannula and/or BP cuff – eg surgery on the other arm.

So in agreement with Dr Skyrme-Jones I think it is time for the college to make a statement on the topic.

Dr John Martin FANZCA
Director – Cairns Anaesthetic Group

MENDELSON'S SYNDROME

I would like to suggest that Australian anaesthesia may be starting down an inferior pathway for the protection from, and prevention of Mendelson's syndrome.

Curtis Lester Mendelson was an American obstetrician and cardiologist who brought this syndrome to notice in 1946. A fellow obstetrician, Hall, had reported 15 deaths due to pulmonary aspiration six years earlier and Mendelson set about elucidating its cause and effects.

Every three years the Special Committee for Deaths under Anaesthetics makes a detailed report of anaesthetic related deaths. On average there are 10 deaths per year that are solely attributed to anaesthesia. The leading cause is anaphylaxis, approximately 50 per cent closely followed by pulmonary aspiration, 40 per cent.

In the past 10 years there were 47 cases of death due to pulmonary aspiration and most involved the use of rocuronium.

Brian Arthur Sellick was an English anaesthetist, working at Middlesex hospital, whose colleague's wife died of pulmonary aspiration while undergoing a caesarean section. He set out to devise a method of preventing Mendelson's syndrome.

This Sellick did – and it is Cricoid Pressure (CP), applied in the correct manner.

Lately the efficiency of CP in preventing Mendelson's syndrome has been called into question. Sellick did his studies on cadavers and ipso facto, they must be called into question.

Modern imaging has shown that CP does work, if properly applied. Recent articles by those who wish to abandon CP cite inappropriate application of CP. Inappropriate application is not a reason to abandon a method of preventing a lethal complication – it is a matter of education.

I would suggest that Mendelson's syndrome is an even greater cause of morbidity and mortality, not captured in the above statistics, because A&E and retrieval medicine use protocols for intubation that use a modified rapid sequence intubation and no Sellick's manoeuvre.

A modified rapid sequence intubation has become popular with the introduction of rocuronium. Cochrane reviews of rocuronium verses the traditional use of succinylcholine in 2003, 2008 and 2015 all showed that succinylcholine provides better intubations than rocuronium, and that rocuronium only approaches the efficiency of succinylcholine with doses of 1.2mg/kg, twice the normal dose. Articles that were included in these reviews allowed 60 seconds or more between the giving of rocuronium and intubation.

Even with correctly applied CP, I believe the patient should be intubated as quickly as possible.

The use of a drug that has to be used at twice its normal dose and takes twice as long as succinylcholine to be adequate for purpose is in my opinion dubious.

"If you can fill that unforgiving minute with 60 seconds worth of distance run." Apologies to Rudyard Kipling, but your 60 seconds worth of distance run may not be unforgiving.

Dr David Cay FANZCA
New South Wales

ANZCA and FPM in the news

COVID-19, elective surgery, research hot topics

ARTICLES AND INTERVIEWS examining the impact of COVID-19 on hospital intensive care units in Australia and New Zealand and National Anaesthesia Day have dominated college fellows' media mentions since the Spring *ANZCA Bulletin*.

FANZCAs Professor Paul Myles (Monash University, Alfred Health) and Associate Professor Craig French (Western Health) were named as the top researchers in their fields of anaesthesiology and critical care in *The Australian* newspaper's *Research 2021* list of the leading 250 researchers on 10 November. FPM fellow Professor Michael Nicholas (University of Sydney) was singled out as the top researcher in the field of pain and pain management.

Associate Professor French was interviewed by *The Age* and *Sydney Morning Herald* for an online and print feature article on 7 November describing how frontline staff at Western Health in Melbourne have been verbally abused by patients and families of patients who do not believe in either COVID-19 or the vaccine. The article was syndicated to *WA Today* and the *Brisbane Times* and reached more than 600,000 people.

ANZCA councillor and Safety and Quality Committee chair Professor Dave Story was interviewed by *The Age* medical team in his role as head of the Department of Critical Care at Melbourne University's medical school on the impact of COVID-19 on Victoria's hospitals. The 1000 word article ran online in *The Age, Sydney Morning Herald* and *WA Today* on 6 October and reached an audience of 700,000 people. Professor Story was again interviewed by *The Age* and ABC Radio National's Drive program host Patricia Karvelas on 19 October about the delays to elective surgery in Victoria caused by COVID-19 cases in intensive care units. The RN interview ran for 10 minutes and attracted 150,000 listeners.

In New Zealand Dr Ryan Salter, an intensive care anaesthetist recently returned from the UK was interviewed by leading NZ current affairs host Kim Hill on Radio NZ National on Saturday 2 October. Dr Salter had worked at Royal Papworth Hospital in the UK where health services were rationed and severely strained by the second and third waves of COVID-19. He was also interviewed by stuff.co.nz for a *Dominion Post* page one article (right) on 11 October about his experiences in the UK during the COVID-19 surges.

ANZCA NZ chair Dr Sally Ure spoke with TV3Newshub on 1 October about how hospitals were gearing up for a Delta outbreak. Dr Ure was also interviewed about the country's backlog of elective surgery in an article on stuff.co.nz on 9 September.

Another NZ fellow, obstetric anaesthetist Dr Morgan Edwards of North Shore Hospital in Auckland was profiled by *Woman* magazine about her Instagram pregnancy and health posts which are followed by more than 45,000 people. Stuff.co.nz reprinted the article on 2 November with the headline "Meet Dr Morgan Edwards, the Kiwi doctor busting COVID myths online".

ANZCA issued a media release on 9 September "ANZCA backs calls supporting mandatory vaccination of all frontline healthcare workers". President Dr Vanessa Beavis was quoted in the release saying a "surge in COVID-19 case infections in Australia and in New Zealand highlighted the urgency of ensuring that all frontline health workers, including support staff, are vaccinated."

ANZCA's National Anaesthesia Day on 18 October attracted strong media coverage in Australia and New Zealand (see page 42).

The October launch of the new Diploma of Rural Generalist Anaesthesia received media coverage in Tasmania featuring ANZCA councillor Associate Professor Deb Wilson. *The Advocate* in Tasmania published an article by journalist Claudia Williams which was also syndicated to the *Launceston Examiner*.

Associate Professor Wilson was also interviewed by ABC Radio Northern Tasmania afternoon host Kim Napier about the diploma and ANZCA's role in developing the new qualification.

ANZCA was one of 12 medical colleges and doctors' groups who urged the Australian government in September to commit to stronger climate change targets ahead of the global climate summit in Glasgow, warning the health of Australians is being put at risk. In an open letter to Australian Prime Minister Scott Morrison, a range of organisations including ANZCA and the Australian Medical Association said the impacts of climate change were already being felt by people affected by extreme weather events. The letter was reported by the ABC and News Limited online mastheads including the *Daily Telegraph*, the *Herald Sun* and the *Courier Mail*.

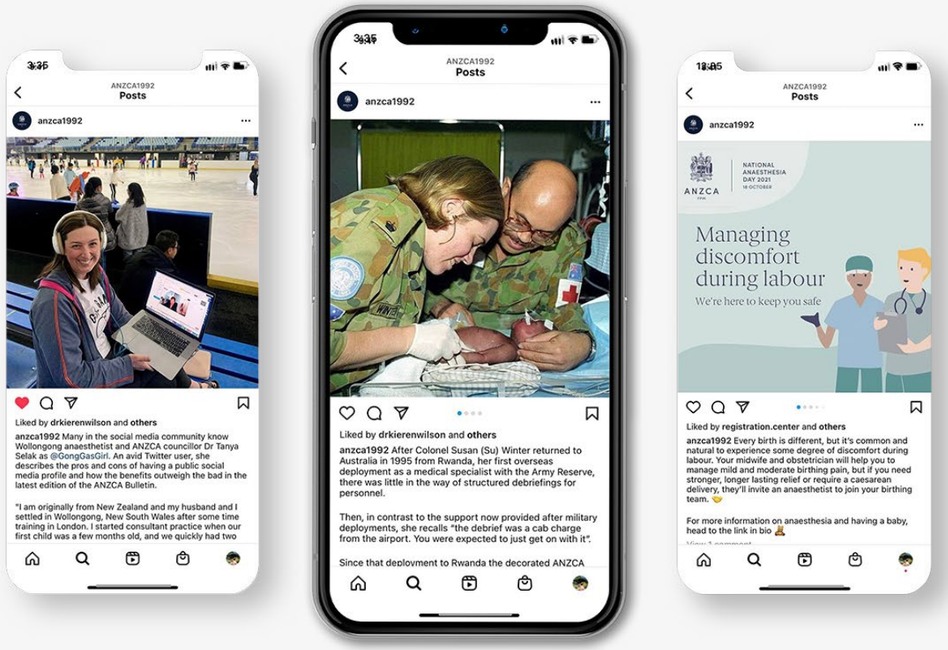
Pain management was the focus of an interview with FPM Dean Associate Professor Mick Vagg who discussed chronic pain in a 13-minute segment on ABC Radio Brisbane for the afternoon program on 3 October. Associate Professor Vagg was also interviewed about opioid tapering by *Australian Doctor* for a 20 September article on a report in the *Journal of the American Medical Association*. The study highlighted the potential pitfalls of opioid tapering for some patients.

Associate Professor Vagg featured in an article in *The Guardian* and MSN Australia "Strong opioids not better than milder painkillers after surgery for fractures, study finds" on 18 November about a NSW study examining opioid prescribing in orthopaedic patients after surgery. The article reached more than 400,000 readers.

FPM fellow Dr Olivia Ong, profiled on page 68, was interviewed in a 10-minute segment for the *Studio Ten* TV program on 26 October about her determination to walk again after a severe injury. The program attracted 40,000 viewers.

Carolyn Jones
Media Manager, ANZCA

Let's get social



Our social media channels continue to be a great way for us to communicate with you, share your stories and give you updates on what's happening at the college.

The launch of the new diploma of rural generalist anaesthesia was a big talking point in the past six months. The diploma is a joint initiative between ANZCA, the Australian College of Rural and Remote Medicine and the Royal Australian College of General Practitioners. This was met with a lot of excitement and positive comments. We also launched the new Critical Incident Debriefing Toolkit which was similarly praised. The toolkit provides a comprehensive, evidence-based resource including journal articles, fact sheets, podcasts, and videos for fellows, trainees and specialist international medical graduates.

Twitter continues to be our most active platform with almost 10,000 followers between our @ANZCA and @ANZCA_FPM accounts (follow us if you're not already!) Since June we've had almost 700,000 tweet impressions and tweeted 278 times. Twitter is an easy way for us to send instant updates, connect with you during events and share stories about fellows in the media.

SPOTLIGHT ON INSTAGRAM

You love to hear your friends', colleagues', and peers' stories; and we love to share them. We use Instagram to give our followers sneak peeks into some of the stories from the spring edition of the *ANZCA Bulletin* including Dr Matt Drake on the neural connector changeover; the military world of Colonel Su Winter; and the pros and cons of having a public social media profile from Dr Tanya Selak. These stories were well engaged with, receiving plenty of likes, comments and shares.

Instagram is not only a great place for us to share stories and videos of our members, but also to promote anaesthesia and pain medicine to the public in a visually appealing way. For National Anaesthesia Day this year we shared fact sheets about anaesthesia and having a baby in an easily digestible format with answers to common questions. This made it easy for you to share with your own network and for patients to save and come back to when they need it.

ANZCA and government

Working with government: A year in review

ANZCA has an experienced policy team that works closely with governments and other agencies in Australia and New Zealand on behalf of the college. Here is a summary of their work, with fellows, in this space in 2021.

2021 ADVOCACY IN REVIEW

The year commenced with the hope that the worst of the COVID-19 pandemic, at least from a health systems perspective, was behind us. However, the emergence of the highly contagious and virulent delta strain ensured that the pandemic again dominated many of the college's advocacy activities in 2021.

Access to personal protective equipment (PPE), its appropriate fitting and use and the suspension of elective surgery were the focus of early advocacy efforts in 2020. This year commenced with the college engaging with Australia's Chief Medical Officer Professor Paul Kelly, the Australian Technical Advisory Group on Immunisation and all state and territory chief medical officers to ensure frontline anaesthetists and anaesthetists in training were included in the priority 1a group for vaccination.

As the pandemic has continued and evolved, issues such as preparing the hospital system for the end of lockdowns, doctors' workload and welfare issues and the ongoing impact on patients and healthcare workers of the freeze in elective surgeries have been the focus of advocacy efforts. New Zealand's Ministry of Health has recently been focused on significant shifts to the COVID-19 pandemic response and will be moving the country to a new traffic light system in the COVID-19 Protection Framework.

Don't forget to visit the college's COVID-19 library guide which brings together a comprehensive body of resources including clinical and wellbeing resources, guides, articles, tools and podcasts – libguides.anzca.edu.au/covid-19.

In addition to the ongoing focus on COVID-19, the college continued to engage with government departments, agencies, non-government organisations and other stakeholders on non-pandemic issues. Pain services and the implementation of the National Strategic Action Plan for Pain Management remain a priority and the dean of the Faculty of Pain Medicine, Associate Professor Michael Vagg, and regional committee representatives met with the ACT Minister for Health Rachel Stephen-Smith in March and the South Australian Minister for Health and Wellbeing Stephen Wade in August.

In September, faculty board member Dr Susie Lord and faculty New South Wales (NSW) regional committee member Professor Paul Wrigley presented to the NSW parliamentary inquiry into health outcomes and access to health and hospital services in rural, regional and remote NSW. Dr Lord and Professor Wrigley recommended that the NSW Ministry of Health engage with the faculty and the NSW Pain Management Network in developing a NSW Action Plan.

In New Zealand, work on the biggest health reforms in more than 20 years – which will disband the 20 district health boards and bring them under one body called Health New Zealand – have been exercising the minds of the transition unit charged with putting the reforms in place. The Minister of Health, Andrew Little, is overseeing the legislative changes necessary for the reforms. The Health and Disability Review Transition Unit states: "The Pae Ora (Healthy Futures) Bill paves the way for localities – geographic areas that will be used to plan and deliver services. The bill also establishes the Māori Health Authority. This will transform Māori health by addressing issues and poor experiences that have traditionally resulted in people avoiding contact with healthcare services.

Health New Zealand and the Māori Health Authority have already been established as interim entities and the bill enables them to become permanent once the reformed health system comes into effect on 1 July next year.

The faculty has continued to work with the New Zealand Ministry of Health and is now in a co-design phase allowing for the Expert Advisory Group to create a model that will work alongside the health reforms. The model will be looking to address some long-standing issues with the delivery of pain medicine in New Zealand. The faculty has also been working with the Accident Compensation Corporation (ACC) to structure a new set of guidelines for the use of pamidronate. This is a major step forward for the faculty with the FPM NZNC having direct input in the upcoming changes to this funded therapy option. ACC will also be brought in to help review the work the faculty is doing on the Pain Model of Care in the next few months.

In 2021 the college made more than 50 written submissions in response to a range of policy initiatives and inquiries across Australia and New Zealand and participated in more than 80 meetings with government and non-government stakeholders in Australia and New Zealand.

SAFETY AND QUALITY

A number of safety and quality issues arose during the year that required significant advocacy and engagement with fellows, trainees, regulatory authorities and manufacturers, including:

- Working with the manufacturer to understand changes to the design of metered dose inhalers ("puffers") for salbutamol in Australia, which added a counter showing the number of remaining doses, and alerting anaesthetists that the new design precludes their use for urgent treatment of bronchospasm by administering salbutamol from inhalers down endotracheal tubes.
- Collaborating with the Australian Commission on Safety and Quality in Health Care on the changeover to the ISO 80369-6 small-bore medical device (neural) connector standard and providing input to the Neural Connector Device Working Group based on lessons learned from the changeover at Auckland District Health Board hospitals led by Dr Matthew Drake (pictured).
- Continuing to engage with other craft groups on safe procedural sedation in the context of the ongoing evolution in peri-procedural patient care, in association with the current review of ANZCA professional document *PS09 Guideline on sedation and/or analgesia for diagnostic and interventional medical, dental or surgical procedures* in collaboration with 27 other medical college and societies.

- Responding to concerns raised by anaesthetists about look-alike packaging of critical medications used in anaesthesia as they arise, including by collaboration with the Society of Hospital Pharmacists of Australia to explore solutions and raising concerns with regulators, manufacturers and distributors.

SPECIALIST TRAINING PROGRAM

The Australian government Department of Health's Specialist Training Program (STP) provides financial incentives to specialist medical colleges to extend vocational training for specialist registrars into settings outside traditional metropolitan teaching hospitals, including regional, rural and remote and private facilities.

ANZCA receives funding for about 54 training posts under different streams of the program. The college met with the Department of Health on several occasions during the year to secure a commitment to the program beyond the end of 2021. The Department of Health has advised that STP funding will continue beyond 2021 with a new four-year contract to be provided for 2022-2025. Specialist medical colleges will be required to undertake a review of all training posts in 2022, with the outcome of the review to determine funding allocations beyond 2023.

The 2021-22 Australian federal budget delivered on 11 May unveiled a new $29.5 million funding pool for non-GP medical specialist training from 1 January 2022. Subsequently named Flexible Approaches to Training in Extended Settings (FATES), the fund is designed for activities such as trials of networked training models, supervision models, and transition of junior specialists to practice in rural settings, and continuing professional development for rural medical specialists. The college has contributed to a number of consultations with the Department of Health to refine the guidelines for this initiative, with the first round scheduled to open prior to the close of 2021.

On 10 June the college hosted an STP stakeholder forum. Thirty-five participants joined the virtual forum including representatives from the Department of Health, other specialist medical colleges, state health services, metropolitan and regional trainings sites, regional training hubs, training hospitals, and universities as well as ANZCA representatives. Attendees received an update on the program from Department of Health representatives and discussed important aspects of training such as accreditation, recruitment, selection and trainee welfare.

REGIONAL AND RURAL WORKFORCE

During the year the college released its Regional and Rural Workforce Strategy that reflects our commitment to improving both health outcomes for rural, regional and remote communities and the health and wellbeing of our fellows, trainees and specialist international medical graduates living and working in these areas. Objectives of the strategy include:

- Engaging appropriately and strategically with government to secure support via funding and placements and advocate for equitable healthcare access.
- Developing and implementing a diploma of rural generalist anaesthesia in consultation with the Australian College of Rural and Remote Medicine and the Royal Australian College of General Practitioners.
- Promoting the benefits and rewards of working in regional and rural areas to anaesthetists and specialist pain medicine physicians.
- Developing holistic support, leadership and research opportunities for anaesthetists, specialist pain medicine physicians and specialist international medical graduates in regional and rural areas.
- Supporting the college's commitment to gender equity and implementation of the gender equity action plan in regional and rural areas.
- Supporting the wellbeing of anaesthetists, specialist pain medicine physicians, and specialist international medical graduates in regional and rural areas.

The college continues to build relationships with rural health stakeholders, particularly the Department of Health, regional health services and regional training hubs. In 2021 meetings were held with the Tasmanian, Northern New South Wales and Flinders Northern Territory regional training hubs. The college also has representation on the Royal Australasian College of Surgeons Rural Health Equity Steering Committee and the Rural Locum Assistance Program Steering Committee. In October the college launched a critical incident debriefing toolkit of resources to support and educate trainees, their supervisors and heads of department in regional and remote health services.

INDIGENOUS HEALTH

Under the college's 2018-2022 Indigenous Health Strategy we continue to implement initiatives to not only train more First Nations Peoples as anaesthetists and specialist pain medicine physicians, but also address broader issues such as racism in hospitals and inequities in health outcomes.

In Australia, 2021 saw the college commence development of our first Reconciliation Action Plan (RAP). A RAP working group was established comprising twelve fellows, trainees and college staff and one community representative, with seven of the 13 members identifying as Indigenous. Throughout the year the group consulted widely with college staff and external organisations including Reconciliation Australia, the Australian Indigenous Doctors' Association (AIDA) and the Leaders in Indigenous Medical Education network. Our draft RAP has over 80 deliverables and is currently being reviewed by Reconciliation Australia.

In Aotearoa, 2021 saw the college adopt a te reo Māori name – Te Whare Tohu o Te Hau Whakaora. The name was launched by New Zealand National Committee Chair Dr Sally Ure at the Cultural Safety and Leadership Hui held in Waitangi on 26-28 February 2021.

This year our Geoffrey Kaye Museum of Anaesthetic History also launched a new immersive exhibition – *Djeembana Whakaora: First Nations medicine, healing and health* which celebrates First Nations medicine and healing practices in both Australia and Aotearoa New Zealand (see page 40).

MBS ITEM COMPLIANCE NOTIFICATION

In October ANZCA Vice-President Dr Chris Cokis, Councillor Dr Michael Jones and CEO Mr Nigel Fidgeon met with representatives from the Department of Health's Compliance Assessment Branch and MBS Reviews Branch. Dr Mark Sinclair, Associate Professor David M Scott and Dr Michel Lumsden-Steel attended on behalf of the Australian Society of Anaesthetists (ASA).

The department presented an overview of possible compliance concerns, specifically:

Co-claiming an MBS Group "T10" anaesthetic item and a procedure for the same patient on the same day.

Improbable working hours for anaesthetic timed items Relative Value Guide (MBS items in Category 3, Group 10, Subgroup 21).

The purpose of the meeting was to provide feedback to the department on factors that might be influencing the claiming behaviour identified. The department will undertake further analyses based on the information provided at the meeting and will notify the college and the ASA if it determines that a compliance awareness or education campaign around the above concerns is warranted.

SUBMISSIONS

The college prepares submissions and makes representations to government and other stakeholders on a range of policy initiatives and inquiries, many of these in response to requests for college feedback and input. Our submissions to public inquiries are available on the college website following the inquiry closing date. Note that some inquiries and requests for college input are confidential. For a listing of recent submissions visit www.anzca.edu.au/communications/advocacy/submissions.

Australia

- Australian Commission on Safety and Quality in Health Care: Opioid analgesic stewardship in acute pain clinical care standard.
- Australian Commission on Safety and Quality in Health Care: Sepsis clinical care standard.
- Australian Medical Council: Review of the national framework for prevocational medical training.
- Healthcare Management Advisors: Streamlining and expansion of the Rural Procedural Grant Program and the Practice Incentives Program procedural GP payments.
- Society of Hospital Pharmacists of Australia: Standards of practice in surgery and perioperative medicine for pharmacy services.

New Zealand

- Medical Council of New Zealand/Te Kaunihera Rata o Aotearoa: What to do when you have concerns about another doctor.
- Ministry of Health/ Manatū Hauora: HISO 10094:2021 Māori Descent and iwi affiliation data protocols.

SUBSCRIPTIONS NOW DUE

Annual college subscriptions are now due and you should by now have received your invoice.

Please log on to the My ANZCA portal to pay your subscription online. Please visit the college website for any questions or email us at membership@anzca.edu.au.

Reflections on not passing exams

While we celebrate the successes of trainees who pass their ANZCA exams, we sometimes forget the many who fail each year. ANZCA councillor and Safety and Quality Committee Chair Professor David Story reflects on failing the primary exam – twice – and what helped him to eventually pass and start the journey to becoming a world-renowned anaesthetist.

I'M A PROFESSOR of anaesthesia who failed the ANZCA primary exam – twice. This is not a skeleton in the closet, this is something I often talk about, particularly with trainees.

I started training in 1992 and first sat the primary exam in the second half of my first year of training. That time I failed the written so didn't get to experience the joys of viva exams. But in the first half of my second year I sat again and passed the written … then failed the vivas. Then in the second half of second year I successfully passed at my third attempt. But, my confidence was low and I went into the exam contemplating a career in another specialty despite a passion for clinical anaesthesia.

So looking back almost 30 years, having now been a primary examiner and having become a senior academic anaesthetist; what are the lessons?

The first lesson is that the trifecta of clinical care, learning and teaching, and research have a lot of overlap (I often rave on about Venn diagrams) but also have unique demands. Being good at research doesn't make you good at exams (or teaching).

Second, I am convinced that having exam study buddies is essential. Further, part of recovering from failing exams, when your study buddies succeed, is to quickly regroup with another set of study buddies.

A third (life) lesson is to embrace practice exams head on. Don't live in denial that your knowledge alone will get you through. During my first attempt, failure to do practice exams was one of my many limitations, which also included lack of knowledge and overconfidence from an emerging career in applied physiology research.

As someone who is not naturally organised I eventually learned the necessity of structuring what I say. I would like to acknowledge Bill Shearer, FANZCA who was my boss at Dandenong and taught me how to think in a systematic way about exam answers as a series of deepening levels of information.

Using controlled, systematic thinking is a major life lesson reinforced by others and I now have structured approaches to many things including interviews for senior academic positions. The exam structure of *Pharmaceutics, pharmacokinetics, pharmacodynamics* for "Tell me about the pharmacology of…" is now what, how, and who (content, process, relationships: CPR) for "How would you manage a crisis in your university department?" This is also the structured, mnemonic supported thinking of managing crises.

Professor David Story has been an important voice of anaesthetists at the height of the COVID-19 pandemic. Photo: Phoebe Powell (phoebepowellphotography.com)

A few weeks before his third attempt at the primary exam, David Story and his wife Cynthia Marwood went on a holiday to Kakadu which helped provide him with perspective.

"Opening results such as whether a journal will accept or reject a paper still gives me an anxiety reminiscent of looking up exam results."

I have no doubt that support from peers, senior colleagues and friends, and particularly my wife Cynthia, was central to getting through and ultimately succeeding during two difficult years as a junior anaesthesia trainee. Seek support and help early. Also a few weeks before my third attempt Cynthia and I went on a holiday to Kakadu that helped give perspective to the adage that there is more in life than exams.

As someone who served as a primary examiner for 12 years and as an examiner trainer assessor (the people sitting in the back of the exam cubicle), I often wondered how my own experience influenced my role as examiner.

I hope that I was good at the primary aim of an examiner which is to help the candidate demonstrate what they know. I deliberately adopted a positive reinforcement style rather than the poker face. When marking the short answer questions all that mattered was that the fact was there somewhere; I didn't mind how it was presented. I suspect my notoriously messy writing didn't help gaining marks in my own written exams but it has led me to try hard to decipher the hieroglyphics of others.

The final exam is more straightforward in many ways, particularly if you've had good clinical exposure during the training, and have asked others – senior and junior – why they do what they do as often as possible. I still found the final exam terrifying.

I know decades later I continue to avoid exams whenever possible. Opening results such as whether a journal will accept or reject a paper still gives me an anxiety reminiscent of looking up exam results. Exam anxiety is one reason I didn't pursue a joint qualification in intensive care. I have partly overcome this through professional coaching and should have sought help earlier.

The college and particularly supervisors of training work hard to support trainees, particularly those who are struggling with exams. The bottom line is while winning the Gold Laryngoscope for exams is a great achievement, but passing is fine for most of us.

Further, I say to colleagues: never feel you don't know enough to ask trainees practice primary exam questions. Examiners are often hitting the books.

Finally, is the primary exam worth the drama? The answer is a definite yes. The primary exam tests our knowledge of the scientific foundations of what we do. The point that anaesthetists are trained and examined in both scientific foundations and clinical practice helps advance, promote, and defend our specialty.

Professor David Story, FANZCA
ANZCA councillor

See the list of successful candidates on page 86.

What would you do?

Dr Peter Roessler explains ANZCA's professional documents using practical examples. In this edition he addresses health and wellbeing.

Feel free to sing along:

"In every life we have some trouble but when you worry you make it double. Don't worry, be happy … when you worry your face will frown and that will bring everybody down, so don't worry be happy."

What great advice – if only it were so simple! It could be extremely irritating for someone going through a crisis to be told "don't worry, be happy". It is likely to provoke antagonistic feelings towards the purveyor of such a message who might be perceived as lacking empathy.

However, it redeems itself from a wellbeing perspective when it goes on to say "Here, I give you my phone number, when you worry, call me, I make you happy." This is the offer of assistance rather than simply gratuitous advice.

Wellbeing is such a hot topic as the issue underscores people's behaviour, actions, performance, relationships, and health. Basically, everything in our lives. It is well established that our performance as clinicians and professionals is heavily reliant on our health and mental status, in being able to deliver to the best of our individual abilities. Personal contact fostering relationships is central to our mental health and wellbeing. Nowhere has this been better seen than during this pandemic.

Notwithstanding COVID, over time, I have witnessed progressive estrangement of social interaction whereby it used to be common practice and behaviour to greet each other and shake hands or embrace. These days, however, there is a tendency to acknowledge individuals with the nod of a head or a fleeting "hi" and no further engagement or socialisation. Or maybe this only happens to me! The impact of COVID and imposition of restrictions have exacerbated this. The effect of wearing masks has not been insignificant.

I was walking along the corridor recently and saw a colleague, and a friend. As is my usual greeting I asked, "how are you?" to which the brief reply was "ok". They have always been quite chatty, and this brief response triggered a concern within me.

WHAT WOULD YOU DO?

What would you have done at this point in time if you were in my position? Accept the response and walk on, or dig a little deeper?

I pressed them a little, with "is everything ok, you seem a bit out of sorts?" to which they then opened up with "on top of a few personal issues, I have been trying to help a colleague who is having some challenges at work." Then, the full story followed, of which I now became a part.

As anaesthetists, pain medicine specialists, and perioperative physicians we are constantly subjected to a barrage of stimuli. Invoking the physiological concept of receptor theory, it is not surprising to discover that there is a variability in responses. Consequently, responses to any given event or circumstances will be perceived differently by individuals, whereby some will be highly stressed and others perfectly calm. However, we each have a breaking point.

Triggers for stress include clinical challenges in our roles as medical experts, interactions with other people in our role as professionals and advocates, compliance requirements, and demands placed on us by patients and/or colleagues. Stressors may be external such as imposition of time pressures, regulatory requirements, or non work-related demands.

Internal stressors are self-inflicted stresses that often stem from being overly self-critical, which at some point escalates into anxiety. In addition, the simmering background of having to constantly face and address risk also fuels anxiety.

Our collegiality is prominently evident and at times a threat to our own wellbeing in those circumstances where we heavily invest ourselves in helping our colleagues in distress. Diverting our energies to serving others is commendable but can be very draining on our own energy.

In recognition of the stresses and their impact on doctors, ANZCA and the Faculty of Pain Medicine developed a professional document intended to support doctors and doctor's health and wellbeing. The revised and updated version of ANZCA professional document *PS49 Guideline on the health of specialists, specialist international medical graduates and trainees* will be available shortly. It, and its newly developed background paper will be an excellent resource, with inclusion of links to a range of toolkits. The principles of *PS49* are enshrined in ANZCA's recently published wellbeing charter.

The impact of the heavy demands resulting in fatigue and its adverse influence on wellbeing is addressed in *PS43 Guideline on fatigue risk management in anaesthesia practice*, which includes toolkits and cognitive aids to assist with managing the problems of fatigue.

PS62 Statement on cultural competence acknowledges the issues that stem from Australia and New Zealand being culturally diverse, as well as those particular to Indigenous peoples. The context of cultural safety applies to every encounter and plays a critical role in the wellbeing of those from different cultural backgrounds.

We can only operate at our peak if we are at our peak.

Dr Peter Roessler
Director of Professional Affairs, Policy

Survey to guide strategic planning

ANZCA AND FPM fellows seem to have a love-hate relationship with college surveys.

Compared to previous college surveys, the 2021 ANZCA fellowship survey was deliberately simplified to increase both engagement with the survey and reliability of the results. The 2021 survey primarily looked at fellows' opinions about priorities for the college rather than their experiences with the college.

One reason for doing this is that COVID-19 has meant 2020 and 2021 have definitely not been business-as-usual years and may have limited relevance to future years. The aim of the survey was to inform both strategic planning and operational activities of the college.

In collaboration with FPM, the same survey was sent to just over 7000 ANZCA fellows and 530 faculty fellows. The survey incorporated principles of good survey research methodology including piloting the survey and randomly ordering questions. It is worth emphasising that survey research is always harder than it looks.

The college contracted KPMG to conduct the survey. The first reason to do this was to allow data collection at arm's length so that fellows could be confident that results could not be identified at an individual level at ANZCA or FPM, while follow-up invitations to participate could be sent to those who had not responded rather than all fellows. Further, KPMG undertook analysis of the data. KPMG have been highly collaborative commercial partners. Other important players were ANZCA staff Hannah Sinclair, Alecia Savale and Mairead Jacques.

Almost 2500 ANZCA fellows (33 per cent) and 171 (32 per cent) fellows of FPM, responded to the survey. The demographics of the respondents (years of practice, gender and geography) were similar to that of the college overall which adds confidence to generalising the results to the broader college. The survey asked the same question of importance for 21 items (see figure 1) and with a 0 to 10 (11 points) rating scale from "not at all important" to "essential". The figure shows the average (mean) ratings for each of the items with the standard deviation as a measure of the breadth of the ratings where one standard deviation above (up to 10) or below the mean covers about 68 per cent of the observations.

The percentage of respondents for each of the 11 ratings were grouped into four broad groups: unimportant (0 to 3), neutral (4 to 6), important (7 to 8) and essential (9 to 10). A simplified version is: the four ratings of 0 to 3 represent unimportant and the four of 7 to 10 represent important, with 4 to 6 being neutral and providing separation between unimportant and important. The 95 per cent margin of error was less than 2 per cent for all percentage estimates, indicating precise results.

The four most highly rated priorities were:

- Training for fellowship.
- Safety and quality.
- Continuing professional development.
- Professional documents guidelines and statements.

Ninety-six per cent of fellows regarded training for fellowship as important and fewer than 1 per cent regarded it as unimportant.

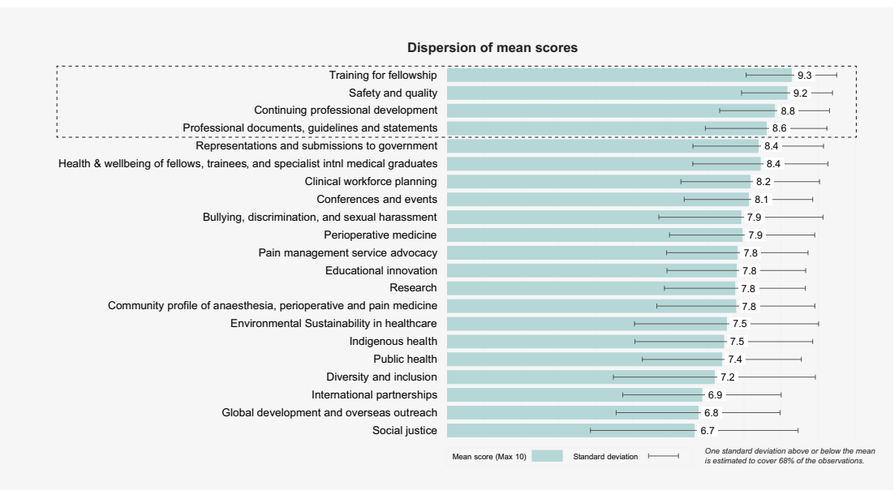
There was marked variation in ratings across the duration of fellowship (a reasonable surrogate for age) for items. Training for fellowship was most highly rated by more senior fellows. In contrast, bullying and harassment, wellbeing, and items such as environmental sustainability and social justice were rated more highly by respondents with fewer years of fellowship.

The college does not have the original free text comments but KPMG reported that some respondents made strong comments in free text section about "focusing on core college matters" and "not on social issues". However, this appears to be a minority opinion.

For environmental sustainability and healthcare 8 per cent consider this as unimportant while 74 per cent regarded it as important. For social justice, 15 per cent regarded this as unimportant while 61 per cent regarded social justice as important.

The only major difference between fellows of FPM and the broader fellowship was on the item of pain management service advocacy where 92 per cent of FPM fellows regarded it as important while 80 per cent of fellows of ANZCA thought it important. However, both were sizable majorities.

So where to from here? First, a detailed report on the survey results is available on the college website.



Second, the results will be an important guide for council in the development of the next strategic plan (2023-2025) that has commenced. The survey has confirmed that fellows have a broad range of opinions but that the majority see most, if not all of these items, as priorities for the college. It is clear that training for fellowship and post fellowship development are particular priorities, as is maintaining practice guidance and ensuring patient safety and high-quality care.

Professor David Story, FANZCA
ANZCA Councillor

CPD review project group initiated

A Continuing Professional Development (CPD) review project group has been formed to support the review of the ANZCA and FPM CPD Program and standard. The current CPD program/standard/online portfolio was implemented in 2014. The group first met in October 2021, with keen support for diversity to ensure all CPD participants' types were represented on the project group. Full details on the project group is available through a letter from chair and ANZCA Councillor, Dr Debra Devonshire, and FPM representative and board member, Dr Stephanie Oak, as our website news item – "CPD review project group".

The intention of the review is to align with the Medical Board of Australia's (MBA) Professional Performance Framework and revised CPD registration standard with an effective date of 1 January 2023, along with the Medical Council New Zealand's (MCNZ) recertification documents. Full details can be found in the article "New CPD standard: Our approach" in the previous *ANZCA Bulletin* (Spring 2021).

We support the medical regulatory bodies' response to provide the community with the highest level of healthcare and our CPD program will evolve to reflect these new regulatory requirements. There are no confirmed changes to the CPD standard or portfolio at this time. In 2022, the CPD review project group will seek to provide recommendations to reach the regulatory standards, and once approved, detailed communications will be made to all CPD participants. We ask that you continue to update your CPD portfolio to ensure you are best prepared for when changes need to be made.

2021 VERIFICATION OF CPD ACTIVITIES (AUDIT) PROCESS

The 2021 annual verification of CPD activities (audit) has commenced with selection and notification provided from September 2021. It is a requirement of the Australian Medical Council's accreditation of our CPD program that there is a random audit selection for CPD participants. To meet this requirement, we select a minimum of 7 per cent of participants to have their CPD records (CPD portfolio entries) verified.

The 480 fellows and CPD participants selected across our three active CPD triennium have a final submission date of 31 December 2021.

We appreciate as specialists the stressful encounters you experience each day to day, especially with the COVID-19 pandemic and its restrictions. To support you, and to help alleviate some of the stress that may come with the CPD audit process, we have provided a breakdown of our process and answered your commonly asked questions.

We encourage those selected or interested in our verification process to view our website news item "Annual CPD verification: your questions answered".

2019-2021 CPD TRIENNIUM FINAL SUBMISSION DATE – 31 DECEMBER 2021

Our 2019-2021 triennium's final submission date of 31 December 2021 is fast approaching. We encourage the 1193 CPD participants in this cohort to start updating their CPD portfolios and completing any outstanding CPD activities to meet this deadline. So far, 37 per cent of these CPD participants have submitted and met requirements. This is tracking 13 per cent ahead of the previous 2018-2020 triennium, was completed with 100 per cent compliance.

For those who are after additional support in meeting these requirements, we have put together some motivating statistics and an assortment of resources that we recommend you review on our website news item 2019-2021 CPD End of triennium.

EXTENSION FOR VIRTUAL/ONLINE RECOGNITION OF CICO AND CARDIAC ARREST

We have extended our pilot to allow flexibility for virtual and online education sessions to 1 January 2023. This is specifically for the hands-on requirements of airway management CICO, Cardiac arrest and Cardiac arrest specialist pain medicine physicians emergency response activities.

This decision caters to the COVID-19 pandemic restrictions by providing an alternative delivery for the hands-on learning objectives to be completed using virtual/online methods. It also supports the workforce learnings in these core areas, specifically airway management. This was most notably explored during the 2021 ANZCA Annual Scientific Meeting (ASM)'s CICO workshop (see the *ANZCA Bulletin* Winter 2021 – "ASM hosts world-first virtual CICO workshop").

This extension to 1 January 2023 acknowledges the ongoing pandemic's impact and is intended to align with the CPD program review. Further information is available through the college website news item Support for CPD emergency response activities as virtual/online sessions.

CONTACT US

If you have any concerns with meeting your CPD requirements, the verification process, or any CPD related enquiries please do not hesitate to contact the CPD team – cpd@anzca.edu.au.

Self matters

Supporting wellbeing through continuing professional development

Since this column began in late 2020, it has covered practical peer support, wellbeing of specialist international medical graduates, assisting distressed colleagues, sustainable wellbeing change within our hospital systems, and the clinician-led Pandemic Kindness Movement. As always, I welcome ideas for future topics and contributors to lroberts@anzca.edu.au.

This edition addresses thinking about our wellbeing when planning professional development. We all know that being at our best promotes the best in patient care – so wellbeing is now part of our CPD. I thank the contributors, each of whom is deeply committed to a practical and easy to use college CPD program.

I wish everyone well as our countries enter a new phase of the pandemic. Stay safe.

Dr Lindy Roberts AM
Director of Professional Affairs, Education


Dr. Debra Devonshire


Dr. Sarah Green

THE PAST TWO years have certainly provided challenges in all elements of our lives, personal and professional. While organisational systematic strategies are crucial to supporting doctor wellbeing, individual strategies are also critical.

The ANZCA and FPM Continuing Professional Development (CPD) program now supports wellbeing through your CPD plan and provides credit for Wellbeing education sessions activity. Including wellbeing is one means of supporting a sustainable workforce which can deliver the best patient care.

THE COLLEGE IS COMMITTED TO SUPPORTING WELLBEING

Pre-pandemic, the ANZCA and FPM CPD Committee started discussions about wellbeing and CPD. The demands of the pandemic have heightened the need for supporting wellbeing through professional development. This aligns with the college's Doctors' Health and Wellbeing Framework, and ANZCA and FPM'S 2018-2022 Strategic Plan, specifically "supporting the wellbeing of anaesthetists and specialist pain medicine physicians". It also reflects recommendations from the Trainee Wellbeing Project (please see page 84 for more information about trainee wellbeing).

In August 2021, our approach was strengthened by the launch of the Wellbeing Charter for Doctors involving ANZCA, the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG), the Australasian College for Emergency Medicine (ACEM) and the Royal Australasian College of Surgeons (RACS), promoting united cross-college support. Our new CPD wellbeing initiatives were notably highlighted in the Insight+ MJA article "Wellbeing Charter for Doctors: righting wrongs".

Importantly, wellbeing is also now a key part of our regulators' CPD requirements:

- Medical Board of Australia's Professional Performance Framework.
- Medical Council of New Zealand's strengthened recertification core elements.

WELLBEING IS NOW PART OF CPD PLANNING

For those in the 2020-2022 and 2021-2023 trienniums, a health and wellbeing question was included in your CPD plan: "What activities will I undertake to develop a greater understanding of my own health and wellbeing over the next three years?" This helps you consider your health and wellbeing on starting a new CPD cycle, as you plan your future professional development activities.

Since 2020, more than 5000 fellows, provisional fellows, SIMGs and other participants (75 per cent of those completing plans) have responded to this question. The remaining cohort (2019-2021) will see this question in their 2022-2024 triennium. Support for your CPD plan, including tips on responding to planning questions is in the CPD handbook, Appendix 17 CPD Plan.

WELLBEING CPD EDUCATION SESSIONS NOW ATTRACT CPD CREDITS

In April 2021, a new, optional wellbeing CPD education session activity was added to the knowledge and skills category of the CPD program. These activities attract one credit per hour, to a maximum of 10 per year.

The CPD Handbook – *Appendix 24 Guidelines for wellbeing CPD education sessions* provides information for participants and course providers on aims and outcomes of wellbeing activities. The guidelines have drawn inspiration from the Royal College of Physicians and Surgeons of Canada (RCPSC) draft CanMEDS key competency on physician health and wellbeing, currently in development.

The goal is to maintain and improve wellbeing. Credited activities may occur in various settings such as practical simulations, workshops, webinars and asynchronous online modules. Sessions can address (but are not limited to) motivational techniques, wellness principles, team roles and dynamics, responding to adverse events, peer support training, clinical supervision, managing difficult patient encounters and impacts of physician health on patient care.

In the first six months, 431 participants have recorded 746 wellbeing education sessions activities in their CPD portfolios.

WHERE CAN I FIND WELLBEING CPD ACTIVITIES?

- The Wellbeing SIG LibGuide is a collection of selected professional networks and support resources.
- The new online Critical Incident Debriefing Toolkit provides a comprehensive, evidence-based resource on defining critical incidents, how to hot debrief and care for a distressed colleague following a critical incident (please see page 80 for more information about the toolkit).
- The college offers wellbeing CPD education sessions, most recently at the 2021 Annual Scientific Meeting (ASM) and, with the societies, at the 2021 Combined SIG meeting.
- The dedicated college Events team is planning more opportunities for 2022, with details of upcoming events in monthly emails and on the college website.
- Opportunities are also available at many hospitals and practices, and through external providers.

Wellbeing CPD education sessions do not require prior recognition or approval from the college, but should meet the broad learning objectives in the CPD guideline.

We encourage all CPD participants to reflect on their professional development, and use these opportunities within the CPD program to support their ongoing wellbeing.

Key essentials

- The new CPD plan question and wellbeing education sessions activity support your wellbeing and attract CPD credits. These changes reflect the value of wellbeing in professional development for optimal patient care.
- More than 5000 CPD participants (75 per cent) have completed the wellbeing question in their CPD plans.
- The CPD handbook, *Appendix 24 Guidelines for wellbeing CPD education sessions*, has more information for participants and wellbeing course providers.
- College resources to support this new CPD focus include the Wellbeing SIG LibGuide and the recently developed critical incident debriefing toolkit. Watch out for forthcoming events at the ASM and SIG meetings.

WHERE CAN I GET ASSISTANCE AND PROVIDE MY IDEAS?

We welcome your inquiries and feedback on this important issue to cpd@anzca.edu.au. Further review of wellbeing in CPD and the supporting guidelines is planned in the upcoming CPD review project. The CPD team encourages participants and course providers to reach out to us with suggestions for improvements.

Dr Debra Devonshire
CPD Committee Chair

Dr Sarah Green
CPD Committee Deputy Chair

Ms Nadja Kaye
CPD Lead

Free ANZCA Doctors' Support Program

How to make an appointment:

To speak with a counsellor over the phone or make an appointment to see a consultant for a face-to-face session:

- Telephone 1300 687 327 in Australia or 0800 666 367 in New Zealand.
- Email eap@convergeintl.com.au.
- Identify yourself as an ANZCA/FPM fellow, trainee or SIMG (or a family member).
- Appointments are available from 8am to 6pm Monday-Friday (excluding public holidays).
- 24/7 emergency telephone counselling is available.

Converge

HELP IS ALSO AVAILABLE VIA THE

Doctors' Health Advisory Services:

NSW and ACT	02 9437 6552
NT and SA	08 8366 0250
Queensland	07 3833 4352
Tasmania and Victoria	03 9280 8712
WA	08 9321 3098
New Zealand	0800 471 2654
Lifeline	13 11 14
beyondblue	1300 224 636

Lis Evered: ANZCA's newest honorary fellow

ANZCA'S NEWEST HONORARY fellow Associate Professor Lisbeth Anne Evered is a PhD scientist and international leader in perioperative clinical cognitive science and perioperative medicine. She has been a longstanding contributor to ANZCA's academic activities including most recently being Deputy Scientific Convenor and also a judge for the Gilbert Brown Prize at the 2021 ANZCA Annual Scientific Meeting in Melbourne.

Since 2020 she has been living in New York where she is Visiting Associate Professor of Neuroscience Research in Anesthesiology at Weill Cornell Medicine (WCM) and Visiting Associate Professor of Neuroscience in Anesthesiology at the Feil Family Brain and Mind Research Institute. She will return to St Vincent's Hospital in Melbourne from early 2022 to continue her research and for the next two years will divide her time between WCM and St Vincent's.

In a Q and A session from New York for the *ANZCA Bulletin*, Associate Professor Evered provided some insights into her research.

You're a scientist making major contributions to evidence based perioperative medicine and neuroscientific research. What triggered your interest in pursuing this research path?

After starting my career in basic science I knew I loved research but I also knew I wanted to work with people. The opportunity arose to work with Brendan Silbert and David Scott on their first National Health and Medical Research Council funded trial, the ANTIPODES trial. I loved the participants and established such rapport with them that I developed a keen interest in how we could improve outcomes for these wonderful older people. I quickly became very passionate about this field of science and pursued further study and ultimately independent research hoping to improve outcomes for this group of people. I have been fortunate to have amazing mentors and colleagues who have provided opportunities and supported me in pursuing this passion.

> "By reducing the incidence of perioperative neurocognitive disorders, we have the opportunity to improve recovery and functional outcomes for millions of older individuals who undergo anaesthesia and surgery every year."

Your PhD explored the impact of cognitive change as a result of anaesthesia and surgery on functional outcomes and dementia. What is the focus of your research in the US and how will it help enhance our understanding of cognitive changes in the brain over time?

The focus of my research here at Weill Cornell is consistent with my research in Melbourne, investigating perioperative neurocognitive disorders (PND). At both institutions my work is focusing on interventions to reduce PND, particularly postoperative delirium, and also a lot of work on biomarkers, especially those of neural injury, which will help us understand the pathophysiology underlying PND and any overlap with other inflammatory and neurodegenerative diseases.

COVID-19 severely impacted getting my research up and going, but also presented a new opportunity. We see many parallels between the symptoms of PND and the so-called COVID "long-haulers". Our knowledge of the likely impact of inflammation as part of PND further overlaps with the known inflammatory mechanisms of COVID-19. We are undertaking research investigating the long-term impact of COVID on cognition and function. This study is close to completion and we hope it will yield information that informs both future PND and COVID research.

Perioperative medicine is a rapidly evolving specialty for anaesthetists. How does your research on cognitive function in patients at risk of cognitive decline help us better understand the needs of these patients?

Patients undergo surgical procedures for several reasons – to reduce pain, to improve function and quality of life or for diagnostic procedures. Knowledge of possible cognitive and functional decline, in both short or long term, should be an essential element of preoperative education and decision making. We also need to improve care management pathways to reduce or prevent these disorders, particularly postoperative delirium, and this requires a multi-disciplinary approach to surgical decision making and care management pathways for older individuals. Perioperative medicine including pre, intra and postoperative factors are key opportunities for prevention strategies to be introduced and place anaesthetists in an opportune position to advocate for, educate and implement preventive options. By reducing the incidence of perioperative neurocognitive disorders, we have the opportunity to improve recovery and functional outcomes for millions of older individuals who undergo anaesthesia and surgery every year.

Postoperative delirium and dementia are significant challenges faced by elderly patients. Why is ongoing research in this field of medicine and perioperative care so important?

PNDs are associated with distress, increased hospital stay, increased complications including falls and increased risk of mortality and dementia. These patients are also at risk of long-term depression, isolation, trauma and other psychosocial deterioration. Given approximately 50 per cent of anaesthetics administered are given to those aged 65 years or over, this impacts a large proportion of the community and adds an enormous social and economic burden to the healthcare system. It is critical we improve recovery for these patients by preventing PND, particularly delirium, by implementing preventive strategies to routine clinical practice.

You arrived in the US in early 2020 just before the onset of COVID-19 and experienced the height of the pandemic while living amongst millions of New Yorkers. What are your reflections from that time as you observed the pandemic affecting the daily lives of clinicians and frontline health workers you had come to know?

The pandemic hit New York hard and with no notice. I moved here and for the first time in my life was living completely on my own. I was quickly thrown into living alone as well as being locked down for over three months. Restrictions were tough and everyone was terrified.

We experienced 423 days of restrictions and emerged from the lockdown extremely slowly. Many people in my department remain worried and are hesitant to travel, even though we are all vaccinated – most of us now with our third dose.

Things are much better since May 2021, with a number of people in my department now happy to socialise in small groups. That said, there are a lot of people who are finding the transition back into a "normal" kind of life quite difficult.

The college's 38 honorary fellows

David Egmont Thelle

From its inception, the Faculty of Anaesthetists of the Royal Australasian College of Surgeons, had made provision for the appointment of honorary fellows.

Regulation 6 stated:

"The Board of the Faculty may confer Honorary Fellowship of the Faculty on distinguished persons who have made a notable contribution to the advancement of science and practice of anaesthesia and/or intensive care who are not practicing anaesthesia or intensive care in Australia or New Zealand."

The faculty's first honorary fellowship was awarded to Dr Bernard Johnson. Johnson was an invited speaker for the 1953 general scientific meeting. He had been a founding member of the Faculty of Anaesthetists of the Royal College of Surgeons, contributed to the design and implementation of the fellowship exam and, at the time of conferring the honour, was the dean of the English faculty. Johnson continued supporting the development of anaesthesia practice until his death in 1959.

Conferring honorary fellowship on visiting speakers for the annual meeting continued for many years. Invited speakers were making significant contributions to the advancement of the specialty, even if they weren't anaesthetists. Their invitation to speak was an acknowledgement of that work, and the board had decided honorary fellowship could not be conferred in absentia. Conferring this honour at the annual meeting was an excellent opportunity to meet all desired aims.

Despite the regulation stating honorary fellowship should be conferred on those not practicing anaesthesia or intensive care in Australia or New Zealand, five fellows were elected to honorary fellowship.

Margaret Mc Clelland (1971), James McCulloch (1973), Mary Burnell (1973), Alfred Slater (1973) and Geoffrey Kaye (1977) all received this honour. These five fellows had been foundation fellows and had been instrumental in the development of the faculty. Rather than being an award to recognise a contemporary "notable contribution", these appear to have been awarded in recognition of contributions to the development of the faculty, and for advancement of the specialty in Australia and New Zealand.

In the almost 70 years of awarding honorary fellowships, only two have been conferred on non-medical recipients. The first was Michael Gorton (1998), ANZCA solicitor and the second was Joan Sheales (2005), first ANZCA CEO.

Several honorary fellowships were awarded to surgeons. The faculty board minutes of June 1984 record conferment on John Clarebrough. Clarebrough was the immediate past president of RACS, was the council representative on the faculty board for the past six years and had made a "notable contribution to the welfare of the Faculty within the College".

David Theile was president of RACS when his honorary fellowship was conferred in 1994. His citation, read out at the college ceremony that year, stated that his contribution to the faculty as it separated from RACS "was in no small way responsible for the move being amicable and carried out in an orderly fashion enabling the two Colleges to remain in close co-operation".

The citation for physician Michael Denborough began with the lofty statement that "Anaesthetists owe [him] a great deal". A career spent, in large part, researching malignant hyperpyrexia was, and remains, a valuable contribution to the specialty.

ANZCA came into being in 1992, and that year conferred honorary fellowship on Sir Malcolm Sykes. It also set about reconfirming previously awarded fellowships from the faculty days. These included Michael Vickers (1977), James Robson (1968), John Riding (1977), Carlos Parsloe (1989), John Nunn (1984), Lucien Morris (1989), Anthony Jephcott (1990), Gaisford Harrison (1990), Cecil Gray (1960), David Davies (1976), Arthur Bull (1977), John Clarebrough (1984), Gustav Fraenkel (1986), Mary Burnell (1973), William Mushin (1959) and Douglas Lampard (1976).

Only 38 honorary fellowships have been awarded in the history of ANZCA and its predecessor. It remains one of ANZCA's most esteemed awards, with an impressive list of recipients.

Monica Cronin
Curator, Geoffrey Kaye Museum of Anaesthetic History

ANZCA'S HONORARY FELLOWS

1. Bernard Johnson (UK), 1953
2. Dr Mark Lidwell, 1954
3. John Gillies, (UK) 1956
4. Geoffrey Organe, 1956
5. Robert Reynolds Macintosh, 1956
6. William Mushin UK, 1959
7. Cecil Gray, 1960
8. Gordon Jackson Rees, 1963
9. James Gordon Robson, 1968
10. Margaret McClelland, 1971
11. James McCulloch, 1973
12. Mary Burnell, 1973
13. Alfred Slater (NZ), 1973
14. David Margerison Davies, 1976
15. Kenneth Bryn Thomas, 1976
16. Geoffrey Kaye, 1977
17. Alistair McEachern, 1976
18. John Riding, 1977
19. Michael Vickers, 1977
20. Arthur Bull
21. David Gordon McDowall (UK), 1981
22. John Kevin Clarebrough, 1984
23. John Francis Nunn, UK, 1984
24. William Derek Wylie, 1984 (faculty), 1993 (college)
25. Gustav Fraenkel, 1986
26. Carlos Parsloe (Brazil), 1989
27. Lucien Morris, 1989
28. Anthony Jephcott, 1990
29. Gaisford Harrison (Sth Africa), 1990
30. Douglas Lampard, 1976
31. Malcolm Keith Sykes 1992
32. Michael Antony Denborough, 1994
33. David Egmont Theile, 1994
34. Emmanuel Papper (US), 1995
35. Michael William Gorton, 1998
36. Archie Brain, 2000
37. Joan Sheales, 2005
38. Lis Evered, 2021

Tasty toasties provide a much needed frontline boost

From left: Dr Roumel Valentin (VMO anaesthetist), Ms Rachelle Evans (clinical nurse educator) and Ms Jennifer Morcom (registered nurse).

From left: Ms Moneisha McKenzie (MDOK), Dr Michael Paleologos (HOD Anaesthesia) and Dr Anand Rajan (VMO anaesthetist).

IT'S A WELL-LOVED comfort food but the humble cheese toastie is now being hailed as a simple yet effective wellbeing measure for frontline hospital staff.

At Sydney's Royal Prince Alfred (RPA) Hospital, a pilot wellbeing #theatretoastie initiative for operating theatre staff was formed in response to increased workload.

With the onset of the COVID-19 pandemic, a voluntary group of consultant anaesthetists formed the RPA Anaesthetic Wellbeing Team. This team covered numerous initiatives ranging from wellbeing talks, mentoring resources and other mental health measures. Visiting medical officer Dr Anand Rajan, a member of the team, created the #theatretoastie initiative with nursing staff and the RPA's MDOK doctors' wellbeing program.

Recognising that erratic shifts and a lack of food and sleep can have a detrimental impact on staff morale and teamwork, they came up with the idea of providing some basic food needs to sustain theatre staff during their long shifts.

Under a six-month pilot funded by MDOK, the hospital's food services team supplied fresh bread, fruit toast, butter and cheese throughout the week. Several sandwich presses were placed in the RPA's theatre tearoom.

There are 22 operating theatres at the hospital and up to 200 people, including anaesthetists, surgeons, nurses, and support staff work in the theatres every day.

An average of 363 servings a week were provided at a cost of $A136.12 and according to the RPAH head of anaesthesia Dr Michael Paleologos, the initiative "is a great example of a small investment producing a major return."

"The operating theatres have been one of the major contributors to the COVID response with a lot of COVID-related activity occurring in theatres or involving theatre staff. This has placed a lot of strain on the staff due to staffing shortages and unpredictable work patterns.

It is reassuring for staff to know that they can grab a quick snack or drink from the tea room, to give them a chance to re-fresh, rather than having to leave the theatre complex to do so. Moreover, out-of-hours, this becomes more important as there are limited options for getting refreshment," he says.

A staff survey revealed overwhelming support for the initiative with comments such as:

"It's all we need to make us feel appreciated and thanked!"

"It shows that the wellbeing of doctors matters to the hospital."

"Because even a toasted sandwich can improve your day."

"Great initiative which resulted in improved staff morale."

"Gives that extra boost and [brings] people closer."

"Helps those who [have] limited time to leave theatre to get food, and improves sense of well-being, and that we haven't been forgotten."

"With theatres being a 24 hour service, having something to eat when on call in the middle of the night is a great source of energy for staff."

"Felt valued by the organisation."

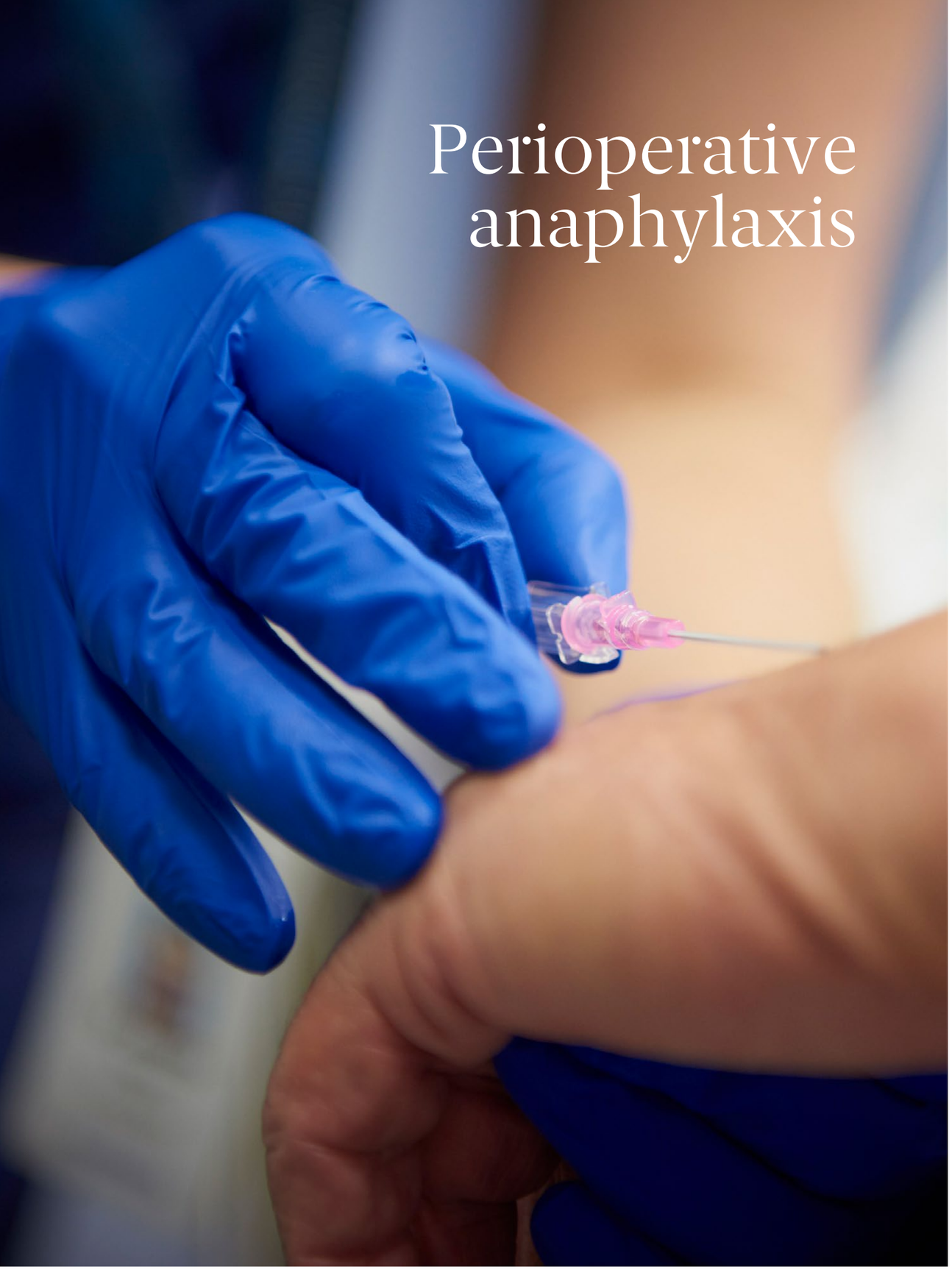
Following this widespread positive support and feedback, the toastie initiative was approved for rollout in hospital theatres across the Sydney Local Health District. At the time of writing it has now been approved as a pilot program at Bankstown-Lidcombe Hospital, with a plan to roll it out across other facilities in South Western Sydney Local Health District.

Dr Rajan hopes that this idea is something that could be considered across multiple hospitals as a simple, tangible wellbeing measure.

For further information on the project please contact dranandrajan@gmail.com.

Carolyn Jones
Media manager, ANZCA

Dr Bethan Richards (MDOK Director of Wellbeing), Dr Ryan Downey (staff specialist anaesthetist), Ms Stella Pillai (RPAH Theatres Nurse Unit Manager), Dr Anand Rajan and Ms Moneisha McKenzie.



Perioperative anaphylaxis

Anaphylaxis update:

The agents that cause the most problems

ANAPHYLAXIS IS A severe, life-threatening generalised or systemic hypersensitivity reaction that is characterised by being rapid in onset with life-threatening airway, breathing or circulatory problems, usually associated with skin and mucosal changes[1].

Anaphylaxis is most commonly IgE mediated (50-60 per cent) but it can also be triggered by other mechanisms including nonspecific activation of complement or activation of mast cells and basophils with release of mediators[2].

The clinical presentation of anaphylaxis produced by the different mechanisms is indistinguishable and should be treated in the same manner.

Anaphylaxis and pulmonary aspiration are the leading causes of deaths classified as category one (where it is "reasonably certain" death was caused by anaesthesia or other factors under the control of the anaesthetist[3]. Anaphylaxis results in one death in approximately every 2 million anaesthetics given in Australia[3,4,5].

The estimated incidence of anaphylaxis is approximately 10:100 000 anaesthetics[6]. Due to the low frequency of anaphylaxis anaesthetists need to train in the early recognition and appropriate treatment of perioperative anaphylaxis. The training should ideally be undertaken as simulation training utilising cognitive aids, with a focus on correct dosing of epinephrine and intravenous fluids (IVF) in the immediate treatment of perioperative anaphylaxis[2].

The Australian and New Zealand Anaesthetic Allergy Group (ANZAAG) and ANZCA developed the Perioperative Anaphylaxis Management Cards to be used as a cognitive aid by clinicians in the management of perioperative anaphylaxis.

Where a critical perioperative hypotensive event occurs, and perioperative anaphylaxis is one of several differential diagnoses, treatment for anaphylaxis should start promptly as there is little to be lost and much to be gained[6].

Generally, hypotension during anaphylaxis is a consequence of reduced cardiac preload and afterload rather than myocardial dysfunction. Afterload falls secondary to arteriolar dilation. Reduced preload is mainly due to fluid loss to the interstitium (30-37 per cent of blood volume) and increased venous capacitance[7]. Tachycardia may partially compensate for the reduced stroke volume. If the heart rate remains unchanged or bradycardia develops hypotension is likely to be more severe.

If hypotension does not respond to the administration of IVF and epinephrine, ensure that the epinephrine dosing is appropriate and that the recommended volumes of IVF have been given. Consider other measures as found on the Refractory Management Perioperative Anaphylaxis Management Card.

Inadequate IVF and excessive epinephrine may cause myocardial dysfunction secondary to dynamic left ventricular outflow tract obstruction with systolic anterior motion of the mitral valve (LVOTO/SAM) and severe mitral regurgitation or Takotsubo cardiomyopathy. LVOTO/SAM can be corrected by reducing epinephrine administration and increasing intravascular volume.

The treatment of Takotsubo cardiomyopathy is complex, and advice should be sought from an intensivist or cardiologist. Echocardiography is a useful tool in the management of refractory anaphylaxis to determine left ventricular volumes and cardiac function.

EPIDEMIOLOGY

Almost all agents that a patient is exposed to during their perioperative journey may produce anaphylaxis. There are no reports of anaphylaxis to volatile agents.

The 6th National Audit Project of the Royal College of Anaesthetists, Anaesthesia, Surgery and Life-Threatening Allergic Reactions[6] collected data over a one-year period from 2015 until 2016 including usage data that allowed the true incidence of perioperative anaphylaxis in the United Kingdom to be calculated.

A total of 266 cases of grade 3 to 5 anaphylaxis (grade 3 – severe hypotension, bronchospasm or swelling that potentially compromises the airway, grade 4 – cardiac arrest, grade 5 – death) were analysed. The table below shows the causative agents, the anaphylaxis rate and the annual exposure for a selected number of agents.

Perioperative anaphylaxis incidence in the UK (2015-2016)

Agent	Anaphylaxis rate per 100 000 administrations	Confirmed cause of anaphylaxis	Exposures
Teicoplanin	16.4	36	220 000
Patent Blue	14.6	9	7000
Suxamethonium	11.1	16	126,000
Co-Amoxicillin	8.7	46	533,000
Gelatin	6.2	3	48,000
Rocuronium	5.9	34	459,000
Vancomycin	5.7	1	18,000
Atracurium	4.2	32	555,000
Mivacurium	3.3	1	31,000
Sugammadex	1.6	1	64,000
Cefuroxime	0.94	4	424,000
Chlorhexidine	0.78	18	2,298,000
Propofol	0.046	1	2,155,000
Vecuronium	-	0	24,000
Cisatracurium	-	0	19,000

From the 6th National Audit Project of the Royal College of Anaesthetists

"Almost all agents that a patient is exposed to during their perioperative journey may produce anaphylaxis. There are no reports of anaphylaxis to volatile agents."

Anaphylaxis rates show geographical variation. The rate in Australia and New Zealand may be quite different to the rate shown here.

Australia and New Zealand data regarding the causes of perioperative anaphylaxis is limited. Incidence cannot be determined for many agents as there is no information as to the annual usage.

CAUSATIVE AGENTS

Beta-lactam antibiotics

Penicillin is a leading cause of drug hypersensitivity reactions and fatal anaphylaxis worldwide. It is also the most common drug allergy recorded in medical records, with a prevalence ranging from 6-15 per cent[8]. Yet in only 5 per cent of documented penicillin allergy is the patient likely to be hypersensitive to penicillin[9].

When a patient labelled with a penicillin allergy requires perioperative antibiotics the allergy label needs to be reviewed to ensure that the patient receives the most appropriate antibiotic. Most labels will carry no or low risk of penicillin allergy and the use of a beta-lactam antibiotic in these scenarios may be appropriate.

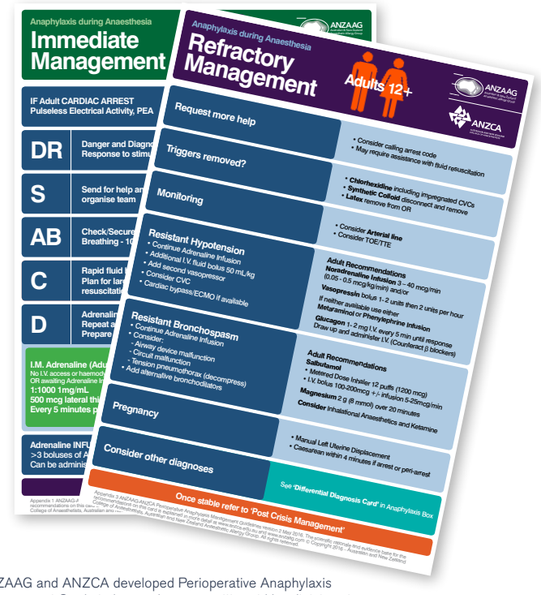
Labels that carry no risk of future allergy include minor gastrointestinal symptoms, thrush, headache, a metallic taste and a history of penicillin allergy in a family member. These patients can have their penicillin allergy label removed. They have the same likelihood of an allergy to penicillin as the general population.

Benign rash (transient morbilliform or maculopapular rash that may be mildly pruritic and is not associated with other symptoms) more than five years prior to review is a low-risk scenario.

Current literature[10] supports performing an oral challenge to a penicillin in order to de-label this group of patients. Cefazolin shares no similarity in its side chain with any of the penicillins and the majority of penicillin allergy is mediated by side chains thus cefazolin administration to these patients can be considered low risk.

There is limited evidence[11,12] that administration of cefazolin to patients with a history of mild urticaria to a penicillin, more than five years prior to review, carries low risk.

Patients with penicillin allergy labels in the following scenarios should be referred to an allergist or immunologist for further assessment and all beta-lactam antibiotics should be avoided until such a review. These scenarios include patients that developed hypotension, wheeze, dyspnoea, angioedema, anaphylaxis, collapse and severe cutaneous adverse reactions such as Steven-Johnsons syndrome (SJS), toxic epidermal necrolysis (TEN), drug reaction with eosinophilia and systemic symptoms (DRESS) and acute generalised exanthematous pustulosis (AGEP).



ANZAAG and ANZCA developed Perioperative Anaphylaxis Management Cards to be used as a cognitive aid by clinicians in the management of perioperative anaphylaxis.

Neuromuscular blocking agents (NMBAs)

NMBAs are among the most frequent causes of perioperative anaphylaxis. Succinyl choline is twice as likely as either rocuronium or atracurium to cause anaphylaxis[6]. The low usage of cisatracurium and vecuronium in the NAP 6 data made interpretation of their incidence unreliable.

A West Australian study concluded that rocuronium was associated with an increased risk of anaphylaxis compared to vecuronium[13]. This study also addressed the issue of cross reactivity among NMBAs. Patients diagnosed with anaphylaxis secondary to rocuronium were skin test positive to both suxamethonium and vecuronium on about 40 per cent of occasions and to cisatracurium on 5 per cent of occasions.

Patients diagnosed with vecuronium anaphylaxis were skin test positive to both suxamethonium and rocuroniumon on about 80 per cent of occasions.

Cisatracurium cross reactivity data was not presented due to low usage rates at the time, but patients diagnosed with anaphylaxis secondary atracurium were skin test positive to succinylcholine but not to rocuronium or vecuronium.

Patent blue

NAP 6 data showed that it has one of the highest incidences of anaphylactic reactions. The incidence is likely to be similar in Australia and New Zealand[14,15].

Chlorhexidine

While chlorhexidine is a rare cause of anaphylaxis its use is ubiquitous. If a patient presents to a hospital with a history of chlorhexidine anaphylaxis every effort must be taken to ensure that the patient is not inadvertently administered chlorhexidine.

The theatre and all other environments that the patient is exposed to during their hospital stay should be emptied of all chlorhexidine containing products prior to the patient's arrival to prevent accidental exposure.

Sugammadex

The estimates of the incidence of anaphylaxis to sugammadex vary widely. In Japan sugammadex is the predominant agent used to reverse neuromuscular blockade. Estimates of the incidence in Japan vary from 20/100 00016 to 2.5/100 00017.

The incidence quoted in NAP 6 was 1.6/100 000 exposures due to a single case of anaphylaxis. The limited population exposure to sugammadex makes this figure unreliable.

Reported symptoms of sugammadex induced anaphylaxis are commonly respiratory system-related, including oedema of the airway and bronchospasm[17]. Anaphylaxis may develop after the patient has been extubated and after they have left the operating room.

Recent literature suggests that the use of sugammadex rather than neostigmine decreases postoperative pulmonary complications[18]. More definitive randomised clinical trials are awaited.

Based on current knowledge, sugammadex cannot be recommended as appropriate in the treatment of suspected rocuronium allergy[19].

Propofol

Propofol is a rare cause of anaphylaxis. Current literature supports the administration of propofol in patients allergic to egg, soy and peanuts[20-23].

Povidone iodine

Patients with shellfish allergy or allergy to contrast material have the same risk of allergy to povidone iodine as the general population.

Povidone iodine allergy has been reported but less frequently than allergy to chlorhexidine[19].

"The estimated incidence of anaphylaxis is approximately 10:100 000 anaesthetics."

Local anaesthetic

True hypersensitivity reactions to local anaesthetic drugs are considered rare. Many reports of allergy prove to be spurious, often related to side-effects of injections (for example, vasovagal reactions), adverse effects of rapid absorption of vasopressor or toxic serum levels of local anaesthetic[19].

Gelatin

Patients may present with a gelatin allergy or a red meat allergy (likely allergic to gelatin also). Gelatin is often a hidden agent. It is contained in many medical products including Haemaccel or Gelofusine which may be used by gastroenterologists when tattooing the bowel during colonoscopy. It is also contained in Gelfoam, SurgiFlo and FloSeal and in the coating of many oral medications.

FOLLOW UP

When a perioperative anaphylactic reaction occurs, the patient should be referred for investigation of the cause.

The ANZAAG website has a list of referral centres, a referral form and other resources. Mast cell tryptase should be taken at 1, 4 and 24 hours.

Referral is appropriate even when tryptase levels are normal.

Dr Richard Scolaro
Chair, Perioperative Allergy Sub-Committee

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Harry, Jo, Joshua and Stephania Traikos

THE PATIENT'S STORY:

Propofol reaction prompts protocol review

A routine elective day procedure for the then 11-year-old Joshua Traikos at a Melbourne hospital turned life threatening when he experienced a rare allergic reaction to propofol. His mother Jo Traikos writes how the experience has given her family an appreciation of the crucial role of anaesthetists before, during and after surgery.

JOSHUA WAS ADMITTED to our local private hospital for elective day surgery on 14 July 2020. As the surgery was scheduled during COVID-19 restrictions he was only allowed to have one parent with him so on the morning of the surgery my husband Harry and our daughter Stephania drove us to the hospital and gave Joshua a big hug and kiss goodbye and wished him well. It was important to us that Joshua's first time in hospital and recovery was positive and as enjoyable as it could be.

I kept reminding myself that Joshua was a healthy, athletic child with no previous or existing medical conditions and that this was simply a quick 25-minute procedure and he would be out of surgery and back home in no time. At the hospital Dr Sebastian Corlette introduced himself as Joshua's anaesthetist and asked Joshua a series of standard questions. Once this process was complete, I hugged Joshua and told him I would be sitting in reception waiting to take him home in a few hours.

Unfortunately, these few hours became a week of sheer devastation, heartache, anxiety and fear. In summary Joshua had a life-threatening anaphylactic reaction to propofol. Joshua required cardiac compressions and was immediately transferred from the private hospital to Monash Children's Hospital in critical condition.

While I was sitting in the reception area waiting for Joshua's surgeon to appear saying "all went well, you can see him now" I heard a code blue in theatre two being called over the hospital PA. I asked the administration staff what theatre Joshua was in and if he was ok. I was told not to worry as code blue is sometimes announced as part of test protocol in hospitals. I sat down but I felt something wasn't right.

Joshua's surgeon finally appeared with a nurse and escorted me to a room where I was told that Joshua was now in an induced coma and required an immediate transfer to the Monash Children's Hospital by the paediatric infant perinatal emergency retrieval (PIPER) team. Thankfully the hospital had called my husband to the hospital so I was not alone.

Before the transfer Dr Corlette went above and beyond everything we expected. He saved Joshua's life in theatre with his medical colleagues. He took full control, remaining calm and focused while acting extremely quickly during this critical "life and death" situation. Once Joshua was placed in the induced coma ready for transfer Dr Corlette explained to Harry and I what had happened. He answered our questions and comforted us through the shock, fear and devastation we were feeling.

We found out later that propofol was administered to Joshua during the PIPER transfer and again in intensive care. This was not anyone's fault as the medical teams needed to keep Joshua in an induced coma so they could quickly diagnose the cause of his condition.

Once Joshua arrived at hospital the medical team were extremely challenged by his rapidly deteriorating condition. He wasn't responding to treatment and we were advised to prepare for the worst. COVID-19, underlying issues and anaphylaxis to anaesthetic were discussed by the medical teams. COVID-19 was ruled out after testing and so too any underlying issues. Hours later Monash Health confirmed that Joshua had had a life-threating reaction to the anaesthetic via the tryptase tests results. He was in intensive care for two days and then moved to a recovery ward.

After Joshua was discharged as fit and healthy we needed to identify the culprit drug that had caused the life-threatening reaction. An anaesthetic is a cocktail of many agents and Joshua was administered propofol, remifentanil, paracoxib, dexamethasone and clonidine. For peace of mind and in the event Joshua requires future procedures or surgeries our goal was to identify the culprit drug. We met the Royal Children's Hospital's (RCH) department of allergy and immunology for the allergy, oral drug and allergy IV/subcut drug challenge tests.

> "We tend to praise and acknowledge surgeons however we also should be thanking, praising, acknowledging and recognising the crucial role an anaesthetist plays."

The "challenges" began six weeks after his mast cells returned to normal and the whole process took three to four months. Before and during every drug challenge test we had to mentally prepare ourselves that Joshua would most likely have the same life-threatening reaction he had in theatre. I knew I needed to remain calm, positive and strong for Joshua during each challenge but I was overwhelmed with fear and anxiety.

Finally, after a process of elimination, propofol was identified as the allergen drug and Joshua now wears an emergency ID bracelet and necklace to alert healthcare workers.

Our journey didn't end there. We continued to collaborate with Dr Corlette and the RCH immunology and allergy department as we all agreed the process and protocol regarding the transfer of patients suspected of anaphylaxis to an anaesthetic agent needed to change.

We worked with the RCH to review the protocols for medication administered during the PIPER transfer when there is suspected anaphylaxis to an anaesthetic agent. This would ensure that patients like Joshua are not given any agent that may have triggered anaphylaxis during the transfer or on arrival in hospital.

We received formal confirmation a few weeks ago that the PIPER referral form now has an added trigger box of "Anaphylaxis – allergens stopped". This is a direct result of discussions around Joshua's case and will be evaluated as an ongoing project with the PIPER team. We couldn't have achieved this outcome without the support of Dr Corlette, the RCH allergy and immunology team and RCH anaesthetist Dr Ian McKenzie.

Joshua Traikos having allergy tests at the Royal Children's Hospital, Melbourne.

I never truly understood the depth and extreme importance of the role an anaesthetist plays and unfortunately, I don't believe I'm alone.

We tend to praise and acknowledge surgeons however we also should be thanking, praising, acknowledging and recognising the crucial role an anaesthetist plays and their role in caring for patients before, during and after the surgery.

Joshua is a super happy, positive, healthy and fit young boy and continues to live life to the fullest. Sixteen months ago, we were told to prepare for the worst but now we're celebrating his selection into the 2021 U12s Victorian state football team.

We are truly blessed!

THE ANAESTHETIST'S STORY:

Propofol the culprit in mystery reaction

Joshua Traikos' anaesthetist Dr Sebastian Corlette recounts the boy's case of life-threatening anaphylaxis to propofol.

JOSHUA WAS AN 11-year-old boy who presented for minor elective surgery in a small private hospital in Melbourne in July 2020. He was a very active child having had no previous general anaesthesia.

Anaesthesia was induced with sevoflurane and nitrous oxide and then transitioned to total intravenous anaesthesia using propofol and remifentanil once venous access was secured. The airway was managed with a laryngeal mask. Other drugs administered included dexamethasone, parecoxib and clonidine, as well as regional anaesthesia by the surgeon using bupivacaine prior to incision.

As the procedure neared completion the propofol infusion was paused to lighten the plane of anaesthesia. In this setting partial airway obstruction was noted and treated as laryngospasm with sevoflurane and the propofol infusion was soon recommenced. Ventilation became progressively more difficult with obstructive capnography and reduced lung compliance on manual facemask ventilation at which point he was rapidly intubated (without muscle relaxants). Joshua then became tachycardic and his carotid pulse, which was initially palpable, faded to nothing beneath my fingers. Chest compressions were commenced immediately and continued for multiple rounds of the advanced life support algorithm.

A peripheral adrenaline infusion was commenced and titrated up to 0.3mcg/kg/min while arterial and central venous access were secured. A diffuse blanching rash subsequently developed across his torso. He was transferred to a paediatric intensive care unit with sedation maintained using propofol.

That evening, the propofol infusion was weaned and the adrenaline infusion soon followed. Joshua was extubated soon thereafter and made a full recovery. The peak tryptase level was 21.6ng/mL and baseline level after 24 hours was 6.8ng/mL. Allergen specific antibody tests for latex and chlorhexidine were negative.

Subsequent allergy testing was jointly undertaken by the departments of immunology and anaesthesia at Melbourne's Royal Children's Hospital (RCH). Intradermal testing was negative for all agents, except for propofol. Intradermal testing for propofol is highly unreliable due to its unique physical properties and so it was possible that the initial result was a false negative. In this context, the pre-test probability could no longer be assumed to be very low, and we faced the ethical dilemma of whether to administer a full-dose challenge of propofol to a child where viable alternatives are commonplace. This was countered by the likelihood of Joshua encountering propofol at some point in his life given the increasing prevalence of propofol regimens in anaesthesia practice today. Furthermore, we considered the severity of the reaction and Joshua's lack of competence to participate in decision making for an elective procedure with a reasonable risk of life-threatening outcome. We consulted with immunology and anaesthetic allergy experts and arrived at a consensus decision not to test with intravenous propofol, but to offer this testing once Joshua has come of age.

A general anaesthetic without any procedure was electively undertaken at RCH with sevoflurane and nitrous oxide only to demonstrate the safety of this option for Joshua. This was a significant milestone for him and his family, to be able to move forward in life as an active young man without fear of any future hospitalisation.

Although unusual and not beyond any doubt, the consensus allergy opinion is that propofol was indeed the most likely culprit to have caused Joshua's anaphylaxis. The initial propofol infusion was considered to be the priming event and the subsequent restarting of the infusion to be the allergy trigger.

It is with great pleasure that this case is reported here to inform the discussions that continually improve the quality of our care.

Dr Sebastian Corlette FANZCA
Royal Children's Hospital Melbourne

Anaphylaxis leads in Australia and New Zealand

In 2022 the college's Safety and Quality Committee will set up a network of anaphylaxis leads in ANZCA-accredited training hospitals, in collaboration with the Australian and New Zealand Anaesthetic Allergy Group.

The NAP6 project (www.nationalauditprojects.org.uk/NAP6home) of the Royal College of Anaesthetists recommended that there should be a departmental lead for perioperative anaphylaxis in each department of anaesthesia, acting as a point of contact to provide support and ensure all cases are optimally managed, investigated and followed-up.

The college's plans for a network in Australia and New Zealand build on the findings of this important audit project and will support anaesthetists who take on an anaphylaxis lead role to:

- Make perioperative hypersensitivity education and training available and ensure learning points from departmental meeting are acted on.
- Act as a reference point for case management and referral to local allergy clinics, and for information provided to patients and general practitioners.
- Coordinate participation in local, regional and national audits.
- Maintain familiarity with allergy documentation and alert systems.

New PIVC clinical care standard launched

An elderly woman with a fractured neck of femur arrives in your anaesthesia bay. The intravenous cannula in her antecubital fossa was placed by paramedics in the cramped bathroom where she fell. The dressing is peeling, and the insertion point is not clearly visible. Re-siting this cannula is part of routine anaesthesia care for this patient. This is reflected in the new care standard.

The recently launched[1] *Management of Peripheral Intravenous Catheters Clinical Care Standard*[2] aims to reduce the number of peripheral intravenous catheters (PIVC) inserted unnecessarily, reduce the number of failed canulation attempts and reduce the number of PIVC-related infections and complications through ten quality statements and a set of indicators (see figure 1).

As recognised vascular access experts, anaesthetists need to understand this guidance so that we can include it when we teach cannulation, provide input to escalation protocols, and practise in accordance with facility-wide standards for patients requiring a cannula for more than 24 hours. While this is an Australian clinical care standard, ACC New Zealand have developed similar resources[3].

Nineteen professional organisations, including ANZCA, have endorsed the care standard. Feedback from ANZCA regarding the need to balance clinical priorities against potential PIVC complications was incorporated. For instance, it is generally recommended to avoid the antecubital fossa (ACF) as PIVCs are affected by patient movement – causing discomfort and disruption to flow and thus pumps to alarm when the arm is bent. The catheter movement associated with arm flexion may also increase risk of phlebitis and infection[4] compared with a forearm PIVC.

Figure 1.

Quality Statements

1. Assess intravenous access needs	2. Inform and partner with patients	3. Ensure competency	4. Choose the right insertion site and PIVC	5. Maximise first insertion success
6. Insert and secure	7. Document decisions and care	8. Routine use: inspect, access and flush	9. Review ongoing need	10. Remove safely and replace if needed

However, in an acute resuscitative scenario, or a short procedure where the cannula is to be removed afterward, the ACF may well be the ideal place to site a cannula. The clinical care standard indicators reflect this (see figure 2) and focus exclusively on PIVCs that remain in situ for 24 hours or longer.

The new care standard highlights the impact we can have as anaesthetists. A general anaesthetic offers an incredible opportunity to assess and replace a cannula that may have been inserted in suboptimal conditions because of urgent clinical need. An ACF cannula can be re-sited by an expert, while the patient is unaware, improving their comfort with ongoing therapy, reducing sleep disruption from alarming pumps, reducing complication risk, and avoiding a potentially painful and distressing experience.

For the many of us who work outside theatres, such as on acute pain rounds or ward patient reviews, there is also an opportunity to improve care by making the PIVC part of our assessment of each patient, thereby recognising issues with dressings, inflammation, or lack of ongoing need for an existing PIVC.

Another important goal of the clinical care standard is to reduce the number of cannulation attempts. First insertion attempts fail in up to 40 per cent of adults and 65 per cent of children. Anaesthetists are often the "phone a friend" to help after failed attempts.

The clinical care standard highlights the importance of establishing an escalation pathway, starting with appropriate identification of anticipated difficult IV access and escalating to more experienced colleagues, and equipment such as ultrasound. As experts, we should promote a culture where early referral to minimise failed attempts is encouraged, where resources permit.

Cannulation practices in Australia and New Zealand rely disproportionately on doctors compared to majority nurse-led cannulation worldwide. Compared with Asia (84 per cent nurse-insertion), Europe (79 per cent), North America (69 per cent) and the Middle East (96 per cent), Australia and New Zealand have a paltry 26 per cent nurse-insertion rate[5]. It might therefore be timely to consider a shift to greater nurse involvement. Indeed, the clinical care standard's indicators may be useful in forming an argument for a dedicated vascular access team in large hospitals, freeing anaesthesia resources and improving timeliness of care.

Figure 2.

Indicators

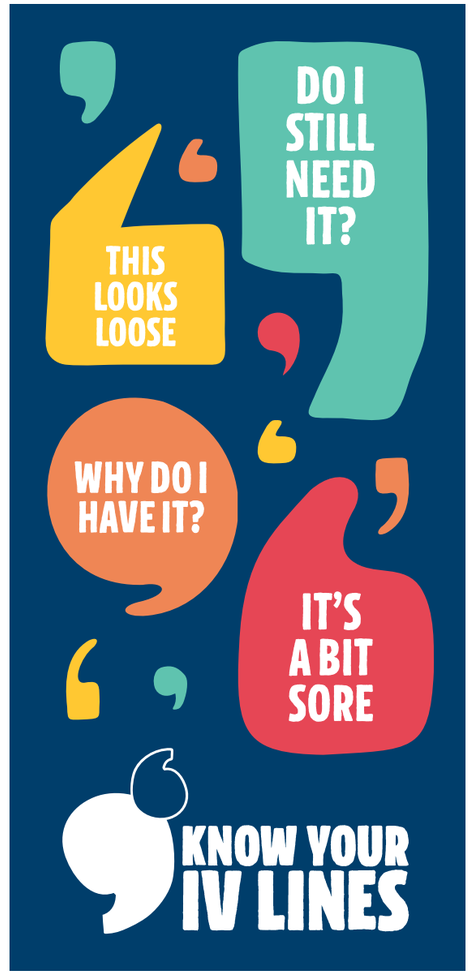
Patients with a PIVC in situ that has not been used since inserted	Patients who can identify the reason for their PIVC	Locally approved policy for competency	Systematic support for decisions about PIVC devices	Local protocol to support PIVC insertion on first attempt
	Locally approved policy for documentation	Patients who have insertion site inspected every 8 hours	Patients who have been assessed to determine ongoing need for PIVC	Patients who have a PIVC in situ that has not been used

Operating theatres are an excellent teaching environment for cannulation. This clinical care standard is a useful teaching tool to show the broader context of PIVC care, including factors that should guide insertion and replacement. ANZCA trainees may also find it useful for their scholar role with many quality indicators included that may be useful in conducting an audit. There is also practical advice for patients, which may be useful when discussing the challenges of cannulation.

PIVC literature does not strongly support "time-based" or "clinical indication" strategies as the superior means to determine the timing of PIVC replacement. The clinical care standard accordingly does not mandate either approach, which empowers local health services to form their own protocols for PIVC removal in line with local resources and infection control guidelines.

The *Management of Peripheral Intravenous Catheters Clinical Care Standard* is not intended as a "one size fits all" nor to be prescriptive in limiting clinical judgment but as recognised experts we need to familiarise ourselves with its contents.

Associate Professor Jennifer Stevens, FANZCA FFPMANZCA
Dr Tiffany Fulde, FANZCA
St Vincent's Public Hospital, Sydney



Kensington Hospital, NZ "Know your lines".

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Anaesthesia-related deaths: Example case from SCIDUA's 2018 Special Report

The NSW Special Committee Investigating Deaths Under Anaesthesia (SCIDUA) has been reviewing deaths associated with anaesthesia and sedation since 1960. Example cases from the 2018 special report are being reproduced in the *ANZCA Bulletin* in an effort to enhance reporting back to the medical community.

EXAMPLE CASE 3: CARDIO-THORACIC SURGERY

A 50-year-old male presented for redo cardiac surgery – aortic root, ascending aorta and arch replacement +/- CABG (Coronary Artery Bypass Grafting).

A very high mortality risk was predicted preoperatively.

Background history:

Multiple cardiac procedures secondary to rheumatic heart disease, immunocompromised with long hospital stay.

Anaesthetic details:

Premedication with Lorazepam, induction with Midazolam 5mg, Fentanyl 500 mcg and Propofol 20mg. He was paralysed with Pancuronium 12mg.

Intubation was uneventful and under aseptic technique central venous access was obtained – quad lumen central venous catheter (CVC), pulmonary artery catheter and 18F right internal jugular (RIJ) venous cannula. The line insertion was time consuming given the patient's extensive history of multiple cardiac procedures.

After an hour of stable anaesthesia, once all access was obtained, a Vancomycin infusion was started. Almost immediately there was hypotension refractory to adrenaline and noradrenaline. The patient became asystolic and non-responsive to resuscitative efforts. Given his extremely poor preoperative state he was not considered a candidate for extra corporeal membrane oxygenation (ECMO).

This death was presumed to be due to anaphylaxis, but a tryptase was not taken.

Learning points:

- Anaphylaxis can occur with any drug.
- Even with immediate recognition and treatment (adrenaline and fluids) the outcome can still be poor.
- Common agents involved in anaphylaxis events include muscle relaxants, antibiotics, blue dyes and chlorhexidine.
- With any suspected anaphylaxis event every attempt should be made to send off a tryptase sample.

Source:

Clinical Excellence Commission, 2019. Activities of the Special Committee Investigating Deaths Under Anaesthesia, 2018 Special Report. Sydney, Australia.

SHPN: (CEC) 190448; ISBN: 2201-5116 (Print)

The Blue Book is here!

The 2021 edition of *Australasian Anaesthesia* (the Blue Book) is now available at anzca.edu.au/safety-advocacy/advocacy/college-publications.

The Blue Book is published every two years by ANZCA and covers a diverse range of topics of interest to anaesthetists and specialist pain medicine physicians.

You can download the Blue Book in digital format to all devices from the ANZCA website.

In recent years many fellows and trainees have voiced concerns at receiving hard copies of ANZCA publications citing environmental and cost considerations for material that can be accessed electronically. However, we are aware that a number of fellows and trainees would prefer a hard copy of the book to be posted to them.

A limited number of copies will be available at a small cost for postage and handling. For those based in Australia and New Zealand, this will be $A20 and for those elsewhere overseas the cost will be $A40.

If you would like a hard copy, please email bluebook@anzca.edu.au to request a form.

EXPRESSIONS OF INTEREST: AUSTRALASIAN ANAESTHESIA EDITOR

ANZCA is seeking expressions of interest in the role of editor, *Australasian Anaesthesia* (the Blue Book). The position involves commissioning and editing chapters of the book and working with the regional editors. The editor should be an ANZCA fellow of a high professional standing with a good understanding of issues considered important to fellows and trainees. Please email communications@anzca.edu.au with your application and CV by 31 March 2022 or for a copy of the terms of reference.

WebAIRS update

REFLECTIONS ON 2021

In common with all walks of life, 2021 has posed challenges for webAIRS and the Australian and New Zealand Tripartite Anaesthetic Data Committee (ANZTADC).

The 2021 ANZCA Annual Scientific Meeting became a virtual meeting. WebAIRS data was presented in the session "Designing Safe and Effective Systems" and is available to registered delegates until the end of April 2022. A new initiative for 2022 will be developing a platform to show past presentations in a virtual format to registered webAIRS users on the webAIRS website.

Incident reporting continues to be strong with more than 9000 reports submitted.

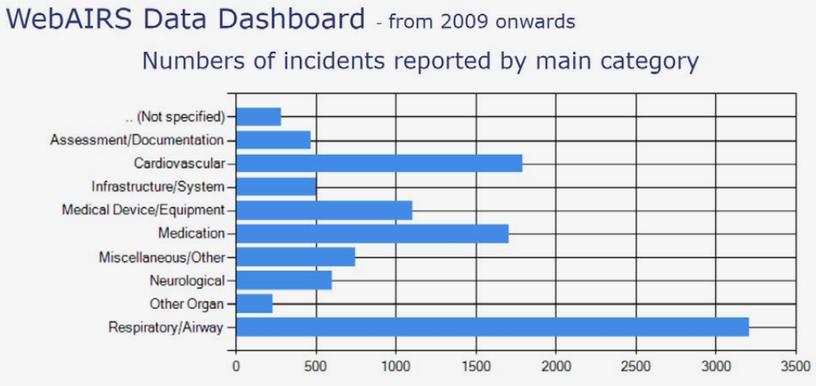
The webAIRS dashboard (pictured) shows the breakdown of the main categories for the 9386 incident reports submitted up to 7 December 2021.

Respiratory and airway events were the most common types of incidents, forming 30.1 per cent of all reports. This was followed by cardiovascular (16.8 per cent), medication (16.0 per cent), and medical devices and equipment (10.4 per cent). As noted in June, we now have many reports relating to topics that have rarely been analysed in the past, such as assessment and documentation (4.4 per cent), infrastructure/system (4.7 per cent), neurological (5.6 per cent) and other organ (2.2 per cent). Although the percentages are low with the latter groups, each 1 per cent now corresponds to approximately 92 reports.

In addition, there are now 49 incidents reported where the treating anaesthetist mentioned COVID-19. On a first review, many of these involve issues relating to personal protective equipment (PPE), difficulties with precautions required or equipment, rather than the patient directly. The analysis team will analyse these incidents in more detail in the near future. It is anticipated that the potential opening of interstate borders will increase the number of COVID-19 positive patients requiring anaesthesia care and an increase in reports to webAIRS. WebAIRS has created a COVID-19 specific data collection page, and colleagues across the country are encouraged to report related incidents.

A list of magazine articles published by ANZTADC, either relating to the main incident categories above, case series, or case reports, is available on the webAIRS website in the public area under the green menu button labelled "news".

WebAIRS data was presented at the following national and international meetings in 2021: the ANZCA ASM and the Airway Special Interest Group meeting in Melbourne, the Australian Society of Anaesthetists' (ASA) National Scientific Congress in Brisbane, the American Society of Anestheiologist's meeting in San Diego, the All India Difficult Airway Association meeting in India, and the Difficult Airway Society meeting in the UK. Due to the pandemic, webAIRS sessions were by necessity all virtual presentations, even if some of the conferences such as the Aotearoa New Zealand Anaesthesia Annual Scientific Meeting in Christchurch had some face-to-face sessions for local delegates. Details are available on the webAIRS website under "events".



Incident Main Category	Percent
.. (Not specified)	2.7%
Assessment/Documentation	4.4%
Cardiovascular	16.8%
Infrastructure/System	4.7%
Medical Device/Equipment	10.4%
Medication	16.0%
Miscellaneous/Other	7.0%
Neurological	5.6%
Other Organ	2.2%
Respiratory/Airway	30.1%

WebAIRS published five papers in 2021:

- "Iatrogenic uvular injury related to airway instrumentation: A report of 13 cases from the webAIRS database and a review of uvular necrosis following inadvertent uvular injury". Bright MR, Concha Blamey SI, Beckmann LA, Culwick MD. Anaesthesia and Intensive Care. 2021;49(2):133-139. doi:10.1177/0310057X20982623.
- "A Proposed System for Standardization of Color-Coding Stages of Escalating Criticality in Clinical Incidents". Stavros Prineas, Martin Culwick, Yasmin Endlich, Current Opinion in Anesthesiology, Online First Oct 2021.
- "Medication errors during Anaesthesia". Jee-Young Kim, Matthew Moore, Martin Culwick, Jacqueline Hannam, Craig Webster and Alan Merry – in press 2021.
- "The use of Sugammadex in critical events in Anaesthesia – A retrospective review of the webAIRS database". Dr Benjamin L Olesnicky, Dr Rosie Trumper, Dr Vanessa Chen, Dr Martin Culwick – in press 2021.
- "A cross-sectional overview of the second 4000 incidents reported to webAIRS, a de-identified web-based anaesthesia incident reporting system in Australia and New Zealand". Neville. M. Gibbs, Martin Culwick, Yasmin Endlich, Alan F Merry – in press 2021

The list of journal publications by webAIRS has grown to 25. These are available by selecting "publications" using the green button on the home page. One of the papers published in 2020, "Difficult and failed intubation in the first 4000 incidents reported on webAIRS" by Yasmin Endlich, Julie Lee and Martin Culwick, was a joint winner of the *Anaesthesia and Intensive Care* Jeanette Thirlwell Best Paper Award for 2020.

A new initiative was trialled in late October 2021. This was an online morbidity and mortality workshop using Zoom and hosted by Dr Suzi Nou. It is hoped that these will be run regularly in 2022, with the topics and critical discussion points summarised into magazine articles for the ANZCA, ASA and NZSA. We thank Suzi for her input as ASA president (2019-21) and welcome her ongoing interest and input into webAIRS and ANZTADC.

Alan Merry retires from ANZTADC

After 15 years of service, Professor Alan Merry retired from ANZTADC at its last meeting for 2021 in November.

Professor Merry was the inaugural chair of the committee, serving from 2006 to 2013, and chaired the ANZTADC Publications Group from 2013 to 2021. Dr Yasmin Endlich is the new chair of this group.

Other members of the inaugural committee were Dr Wally Thompson ANZCA President (2006-2008), Dr Christine Jorm and Dr Frank Moloney, both ANZCA representatives, Dr Mike Richards ANZCA CEO, Dr Gregory Deacon ASA President (2006) and ASA representative (2006-18), Dr Richard Clark ASA President (2006-09), Mr Peter Lawrence ASA CEO (2006-11), Dr Nigel Symons ASA representative (2006-11), Dr Graeme Murrell ASA representative (2006-11), Dr Graham Sharpe NZSA President (2006-2007), Ms Phillipa Bascand NZSA Executive Officer (2006-13), Dr Michal Kluger NZSA representative (2006-11), and Ms Cherie Wilkinson ANZTADC Executive Officer.

Pofessor Alan Merry

The committee formed following work undertaken by the ANZCA Safety Taskforce and the ANZCA Data Taskforce which decided in about 2005 the committee should be tripartite.

The mission of ANZTADC was to improve the safety and quality of anaesthesia for patients in Australia and Aotearoa New Zealand by providing an enduring capability to capture, analyse and disseminate information about incidents (de-identified). In about June 2006, Dr Thompson, Dr Deacon and Dr Sharpe signed a memorandum of understanding.

Dr Martin Culwick was appointed medical director of ANZTADC in November 2007, and contributed to the design and programming of the webAIRS website, a craft group-specific anaesthetic incident reporting system in Australia and Aotearoa New Zealand.

Committee members and webAIRS registered users have strongly contributed to the success of webAIRS with the progression from collecting a substantial number of reports, to the numerous publications which are listed on the website.

ANZTADC has published peer-reviewed articles since 2011 and now has 25 publications, which can be viewed on the webAIRS website.

ANZTADC thanks Professor Merry and all past committee members for their contributions over the years.

ANZTADC Case Report Writing Group

How to get involved

Are you contributing to quality anaesthesia? Login in or register ANZTADC homepage for webAIRS – anztadc.net.

For further inquiries contact anztadc@anzca.edu.au.

Djeembana Whakaora: Putting First Nations Voices First

Clockwise from top left: Jeremy Nikora with taiaha on the beach at sunrise. Image by Jeremy Nikora; Fipe Preuss inspecting chocolate, freshly made from Sāmoan cacao beans. Image by Fiafia Arts; Leah Lindrea-Morrison is wearing an Aboriginal flag t-shirt and draped in a possum skin cloak. Image by Peta Clancy; Amos Roach, sitting on a rock formation, playing the Yidaki/Didgeridoo. Image by Kat Clarke.

OVER THE PAST few years, the Geoffrey Kaye Museum of Anaesthetic History has been looking more at the social history of anaesthesia and pain medicine. We began to ask who was missing from the stories we were telling, whose perspectives needed to be included. We quickly realised we were missing the stories of women, and created an exhibition that would highlight their struggles to gain acceptance in a profession once dominated, and zealously guarded, by men.

But a greater omission also came to light. The museum had failed to include the perspectives, stories or practices of any First Nations peoples.

Djeembana Whakaora: First Nations medicine, health and healing is a platform for the voices of First Nations people of the land known as Australia, of Aotearoa New Zealand, and of the Pacific Islands. This exhibition explores the very concept of what constitutes health, wellbeing and healing.

The first crucial step was to engage First Nations curators. The museum has been incredibly fortunate to work with Kat Clarke, a Wotjobaluk writer, artist and curator, and Paris Norton, a Gomeroi/Gamilaraay, Māori artist and curator. Both curators came to this project with a wealth of experience, strong connections to culture and community, and a commitment to First Nations peoples' stories, knowledge and understandings being voiced by First Nations people. Irihipeti Waretini of Ngāti Rangi descent is a visual and vocal storyteller, who joined the curatorial team recently and brought incredible energy and insight. Without the time, energy, vision and commitment of these incredible artists and curators, this exhibition would never have got off the ground.

Djeembana Whakaora is unlike any other exhibition the museum has undertaken. It draws on thousands of generations of knowledge and knowledge transference but is not an exploration of history. Instead, it's a contemporary expression of how First Nations peoples define health and have always responded to their own health needs, within the dominant European model of health.

Djeembana is a Boon Wurrung word meaning a place to gather for special occasions. Whakaora is a te reo Māori word meaning to heal or convalesce. Together, they tell us this exhibition is a place for people to gather to heal.

This exhibition has been curated by First Nations curators, with First Nations contributors, providing First Nations insights to medicine, health and healing. All of whom reside on the sacred lands now known as Australia.

The concept of health within First Nations communities is commonly understood as more than the care and management of physical manifestations of illness. Indigenous health includes the social, spiritual, emotional and ecological wellbeing of the land, individuals and our communities.

Our practices are diverse, complex and inclusive. They are understood as holistic, cyclical care, and are maintained through intergenerational transmission of knowledge to people, places and objects.

Indigenous healing involves a variety of storytelling and sensory experiences, utilising sight, sound, touch, smell and taste, from the plants we use to the language we speak.

This exhibition therefore is guided by the interconnectedness of five key pillars: the physical, the mental, the spiritual, of place, and kinship and community.

Each contribution is aligned to a pillar but not defined by it. They allow us to explore the complex and creative weaving together of holistic cultural and healing practices.

Kat Clarke, Paris Norton and Irihipeti Waretini

About the pillars

PHYSICAL PILLAR

Our body is our home, our shelter. Our physical senses are how we engage with life and create it. The physical relates to the body, and how best to nurture and care for it using touch healing, herbal remedies, medical foods and cultural practices. It is all about growth and development.

MENTAL PILLAR

The mental pillar represents emotional and mental wellbeing that seeks healing from trauma and transgenerational pain. The mental is how we see ourselves, others and the world. Through meditation, sound, dance and song, we begin to heal those negative burdens and find a more relaxed and empowered mindset. It's a grounding technique that requires an open mind.

KINSHIP PILLAR

Kinship embodies who we are as First Nations people and is about understanding how those connections contribute to our wellbeing. It is holistic and entwined with identity and community. It provides us with strength and personal foundations.

Connection to our families and loved ones, the kinship element within healing and medicine, forms from generational storytelling and transferring of knowledge. This is the link to our ancestors, our ties with the past, the present and the future. Kinship represents the importance of having community with us when away from Country.

PLACE PILLAR

Connection to the land and a particular place can be a form of healing. Place/Country provides all the tools required in life. It is sacred, alive, and our kin. It is about being one in a space that allows you to open the senses and be present in the moment. Deep listening and observing the natural world, can ground the spirit and ease the mind.

SPIRITUAL PILLAR

The spiritual pillar encompasses faith, energy, the life force of a person – all of which defines us as an individual and part of a collective.

Spiritual is where we come from.

Spiritual health responds to non-tangible practices represented through song, the elements, ancestral beings and higher powers. This support and care is given throughout life, and as part of the transition to the afterlife.

Pillar artwork design by Mandi Barton

DJEEMBANA WHAKAORA

Exhibition name:	Djeembana Whakaora: First Nations medicine, health and healing
Online:	www.geoffreykayemuseum.org.au/djeembana-whakaora/
When:	December 2021 to December 2022.
Please note:	The physical exhibition of Djeembana Whakaora will run from March 2022 to March 2023 at the Geoffrey Kaye Museum of Anaesthetic History, 630 St Kilda Road, Melbourne.

Celebrating 2021 National Anaesthesia Day

ANZCA'S NATIONAL ANAESTHESIA DAY on Monday 18 October was well supported in Australia and New Zealand despite COVID-19 lockdowns and restrictions in both countries.

Our 2021 theme "Anaesthesia and having a baby" focused on anaesthesia during pregnancy, birth and afterwards and enabled the college to not only raise the profile of obstetric anaesthetists but provide practical advice to the community about anaesthesia during pregnancy and labour.

With many hospitals and fellows unable to organise foyer displays our social media activity and promotion was crucial in helping to get the message out on the day and in the lead-up to our celebration.

The centrepiece of our 2021 campaign was our new animated patient information video that we launched simultaneously on Twitter, Facebook, Instagram, YouTube, LinkedIn and the ANZCA website on the day and via a special 7am (AEDT) National Anaesthesia Day edition of the *ANZCA E-Newsletter*. The video has been shared with the Royal Australian and New Zealand College of Obstetricians and Gynaecologists and midwifery colleges in Australia and New Zealand.

Our digital communications team compiled a special #NAD21 Social Media Toolkit to make it as easy as possible for people to support our campaign and share key messages. The toolkit included Instagram stickers, animated GIFs, and a selection of ready-to-go branded factoids (including some in te Reo Māori) for Facebook, Twitter and Instagram.

Fifteen of our obstetric anaesthetist fellows recorded personal video messages and these were shared on YouTube and our social media platforms.

CHAMPIONS

In a first for National Anaesthesia Day we created our NAD posters and fact sheets in both English and te Reo Māori. As in previous years, we produced a wide range of new patient information resources for champions and fellows on our website including:

- Three downloadable fact sheets.
- Four A1-sized posters (including one in te Reo Māori).

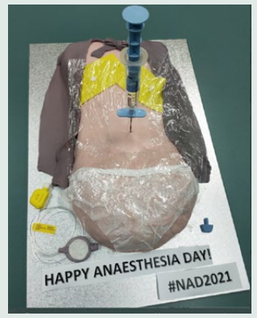
In New Zealand 92 sets of posters and factsheets were sent to NAD champions at 25 public hospitals, urgent care medical centres and Māori health providers.

In Australia, 31 hospitals responded to our call for champions, representing a vast network of regional and metropolitan clinicians. Some of the hospitals included Sunshine Coast University Hospital in Queensland which featured a large outdoor screen display image to celebrate the day, Lismore Base Hospital in NSW, Royal Brisbane and Women's Hospital, Mater Health Services in Brisbane, Royal Hobart Hospital, Wagga Wagga Base Hospital, Royal Darwin Hospital, Goulburn Valley Health, Townsville Hospital, the Royal Children's Hospital Melbourne, the Auburn Anaesthetic Department in Sydney and Bankstown Hospital.

Some of the NAD champion highlights include:

- The anaesthesia team at Ipswich Hospital in Queensland embracing the day by baking their own epidural cake for their #NAD morning tea (pictured right).
- Dr Rhys Thomas from John Hunter Hospital posting a list of names put forward in 1846 to describe the new procedure before "anaesthesia" was formally adopted. Possibilities included "stupefication", "lethargic state", "letheonisatist" and "aethereal influencer".
- Dr Mary-Anne Fox from the Royal Adelaide Hospital sharing a photograph of herself and her son born on 16 October (the date when ether anaesthesia was first demonstrated publicly in Boston) in 1993.
- Dr Emily Buddicom from the Auckland DHB (which celebrated NAD with Krispy Crème donuts) creating her own video to celebrate the work of colleagues in safely welcoming babies into the world.

We also had a special presentation from Associate Professor Alicia Dennis on the history of obstetric anaesthesia for History Month and launched an obstetric anaesthesia Library Guide. Our tweet about this received nearly 4645 impressions.



Clockwise from top: Staff at the King Edward Memorial Hospital; the epidural cake from Ipswich Hospital; the display at the Mater Hospital in Brisbane; staff at the Lismore Base Hospital.

SOCIAL MEDIA

Our tweet sharing the new "Anaesthesia and having a baby" video on Twitter has so far had 5227 impressions and 106 engagements. It received 393 engagements on Facebook and has reached 509 accounts on Instagram.

Our tweets with the hashtag #NAD21 earned 1.1 million impressions and our videos on Facebook have reached nearly 20,000 people and nearly 5000 accounts on Instagram.

Apart from the animated patient information video, New Zealand fellow Dr Morgan Edwards' video was the next most watched on Facebook with over 2800 people reached and eight shares. She also shared her own facts about anaesthesia and having a baby and did an Instagram Live on her Instagram page which has more than 40,000 followers.

Some fellows used our NAD themed GIFs on Twitter and others used the Instagram stickers via their own Instagram stories.

MEDIA

ANZCA released two NAD media releases in Australia and New Zealand – the first detailed the 2021 theme and the role of obstetric anaesthetists in childbirth. The second release focused on Queensland fellow Associate Professor Victoria Eley's new pilot research study on antibiotics given to women during labour and whether there is a possible link to allergies in children. This study featured in an exclusive Nine News Sydney report on October 13 by medical reporter Gaby Rogers and reached more than 400,000 viewers.

In New Zealand, obstetric anaesthetist Dr Morgan Edwards was interviewed in a 22-minute segment on Radio New Zealand's *Nights* program with host Bryan Crump reaching an audience of 180,000 listeners.

Pre-recorded radio "grabs" with ANZCA President Dr Vanessa Beavis were distributed to Australian radio networks under embargo and were broadcast on news bulletins on 2SM Sydney and syndicated to nearly 80 AM and FM stations in NSW and Queensland reaching nearly four million listeners. Nearly 200 radio stations affiliated with the National Indigenous Radio Service also used the pre-recorded segments for broadcast.

Carolyn Jones
Media Manager, ANZCA

Visit the college website or ANZCA's YouTube channel to watch the "Anaesthesia and having a baby" video

Associate Professor Victoria Eley, Professor Jason Roberts, Associate Professor Jayesh Dhanani and Dr Julie Lee

Research

Research grants for 2022

It was very pleasing to see the high number of applications received for grant funding in 2022, despite the deferment of the ANZCA grant round for 2021 due to the COVID-19 pandemic and the ongoing pressures in many areas due to clinical workloads.

For 2022, the ANZCA Research Committee awarded funding of just over $A1.55 million through the ANZCA Foundation for research grants, including the Douglas Joseph Professorship (deferred from 2021), the Academic Enhancement Grant and Simulation/Education Grant, 20 new project grants, five novice investigator grants, and an allocation for Clinical Trials Network pilot grants.

Twenty-eight investigators and teams will be supported in 2022. Their important research will be carried out in leading hospitals and universities in Australia, New Zealand and Hong Kong, and is a vital part of ANZCA's continuous advancement of safe, high-quality patient care in anaesthesia, intensive care, perioperative medicine and pain medicine, through high quality medical research and translation to clinical practice.

This year, 36 per cent of successful grants were from first-time applicants. We are striving to encourage applications from as representative a range of fellows as possible, so that senior and emerging investigators can be well supported.

The foundation is very appreciative of all of its supporters and sponsors, especially those who provide the named research awards: Mrs Ann Cole, the late Dr Robin Smallwood, the late Dr John Boyd Craig, the estate of the late Dr Lillian Elaine Kluver, Professor Barry Baker, Mrs Asoka Vallipuram and Auckland's North Shore Hospital.

Professor David A Scott, Chair, Research Committee
Mr Rob Packer, General Manager, ANZCA Foundation

DOUGLAS JOSEPH PROFESSORSHIP

ANZCA congratulates Professor David Story on being awarded the quadrennial Douglas Joseph Professorship for 2022. This is a prestigious award which is awarded for fellows who are making an outstanding contribution to the advancement of the specialty to pursue scholarship and research in human anaesthesia in Australia, New Zealand, Hong Kong, Malaysia and Singapore. The tenure of the professorship is one year and Professor Story will hold the courtesy title "Douglas Joseph Professor of Anaesthesia".

Predicting mortality in metabolic acidosis using a Bedside Stewart analysis (The MORIA study)

The aim of this study is to determine the prognostic value for mortality of the base-excess effect parameters derived from the Bedside Stewart approach to analyse the metabolic component of clinical acid-base changes. This Bedside Stewart approach was developed by Professor David Story and the Department of Critical Care at the University of Melbourne. The hypothesis is that elements of the Bedside Stewart approach, particularly the base-excess effects of unmeasured and lactate ions, will have prognostic value in a multivariate model for in-hospital mortality for patients with metabolic acidosis at the time of ICU admission.

In the MOIRA study, data routinely collected from thousands of patients admitted to the ICU will be used to examine how well these indirect Bedside Stewart measures of abnormal acids can predict the mortality outcome of patients with high levels of these acids.

Currently the Bedside Stewart approach has clinical diagnostic utility but would have added value if the elements of the analysis also had important prognostic utility. That is, the Bedside Stewart approach could provide a detailed quantitative diagnostic analysis of a patient's acid-base status with added important prognostic information. Knowing this would help us plan care for patients and help inform them and their families about potential risks.

Professor David Story, Melbourne Medical School, The University of Melbourne.

$A66,358

NAMED RESEARCH AWARDS

Harry Daly Research Award

Management of systolic blood pressure during thrombectomy by endovascular route for acute ischaemic stroke: The MASTERSTROKE trial

Endovascular thrombectomy (EVT) is the standard of care for acute ischaemic stroke patients with large proximal cerebral artery occlusion. Blood pressure (BP) management is critical in the hyperacute phase of ischaemic stroke. Acute ischaemic stroke and drugs used for general anaesthesia (GA) are known to impair cerebral autoregulation, which is a protective mechanism to preserve cerebral blood flow (CBF) over a wide range of systolic blood pressures (SBP). In the presence of impaired autoregulation due to stroke and GA drugs, blood flow to penumbral ischaemic regions through collateral vessels will be BP-dependent. A major therapeutic goal for clinicians treating stroke is to protect the ischaemic penumbra until the restoration of blood flow to the ischaemic territory. Induced hypertension in the presence of impaired cerebral autoregulation is a plausible treatment to increase regional blood flow to the ischaemic penumbra via collateral vessels thereby improving functional outcomes. Induced hypertension could increase peri-procedural side effects such as groin haematoma, symptomatic intracranial haemorrhage, or reperfusion injury. This large randomised clinical trial will test for overall benefit of induced hypertension during EVT.

Dr Douglas Campbell, Dr Carolyn Deng, Dr Robyn Billing, Professor Tim Short, Professor Alan Barber, Auckland City Hospital, New Zealand; Dr David Highton, Princess Alexandra Hospital, Queensland.

$A69,560

The Russell Cole Memorial ANZCA Research Award

Brain regions responsible for analgesic responses to spinal cord stimulation

Chronic pain is a significant clinical and societal issue, with current management strategies remaining inadequate. One treatment option that has been shown to be effective in some individuals is spinal cord stimulation (SCS). While SCS is effective at reducing pain in more than 50 per cent of individuals with chronic pain, the mechanism via which SCS relieves pain and why some individuals respond and others do not remains unknown. This study aims to establish the underlying cortical, subcortical and brainstem changes associated with the analgesic effects of spinal cord stimulation (SCS). Functional magnetic resonance imaging (fMRI), arterial spinal labelling and anatomical MRI will be used to determine brain activity patterns associated with pain relief during SCS, with particular focus on the brainstem. In addition, the investigators will use fMRI and arterial spinal labelling (ASL) to determine if the state of the brain can predict treatment efficacy. The goal is to understand how SCS reduces pain and also to establish a biomarker that can predict who will respond to SCS. If we can determine a treatment efficacy biomarker, we may be able to determine whether implanting a SCS is going to be of benefit in an individual subject.

Dr Alister Ramachandran, Westmead Pain Management Centre NSW; Professor Luke Henderson, University of Sydney; Professor Chris Peck, Westmead Hospital, University of Sydney.

$A66,000

John Boyd Craig Research Award

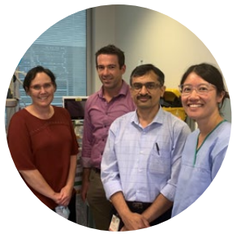
Central nervous system disturbances in complex regional pain syndrome

Despite recent major advances in clarifying neuro-immune disturbances in complex regional pain syndrome (CRPS), mechanisms that maintain pain remain unclear. From this perspective, identifying the source of sensory disturbances in CRPS is crucial because, once mechanisms are better understood, these mechanisms could be targeted to manage sensory disturbances and pain more effectively. The studies in this project will be the first to use advanced neurophysiological techniques to systematically examine subcortical processing of nociceptive stimuli in CRPS and to examine links with brainstem activation (reflected by pupillary responses) and pain. We hope that this study will clarify the source of sensory disturbances and pain in CRPS and, in turn, encourage new approaches to treating this intractable complaint.

Dr Philip Finch, Professor Peter Drummond, Dr Hakuei Fujiyama, Murdoch University, WA; Dr Flavia Di Pietro, Curtin University, NSW.

$A65,323

Robin Smallwood Bequest



Comparative pharmacokinetics (PK) of nebulised and intravenous ketamine and dexmedetomidine in ventilated patients

Currently, there are no clinical data on the pharmacokinetics of nebulised ketamine and dexmedetomidine which limits our ability to select appropriate doses for appropriate clinical effects. Mechanical ventilation provides the ideal setting to evaluate the drug delivery systems in a safe manner. Nebulised drug delivery is influenced by factors including particle size (ideal 2-5µm), nebuliser type (mesh nebuliser better than jet), and patient factors (breathing patterns, rate and tidal volume). Thus, defining the lung dose prior to clinical studies is essential. A comparative plasma pharmacokinetic study of nebulised versus intravenous ketamine and dexmedetomidine will allow us to derive the dose equivalency for the two different administration routes (intravenous and nebulised). The data can be used to generate dosing guidelines for clinical trials in diverse patient groups. The study fulfils an important and urgent requirement for investigation into a novel and non-invasive route of analgesic and sedative administration leading to a positive impact in the field of clinical medicine, health service and research.

Dr Julie Lee, Associate Professor Jayesh Dhanani, Associate Professor Victoria Eley, Royal Brisbane and Women's Hospital, Queensland; Professor Jason Roberts, University of Queensland.

$A66,165

The Elaine Lillian Kluver ANZCA Research Award

Flexible Bronchoscopy Insufflated and High-Flow Nasal Oxygen: BUFFALO

Rescue oxygenation for hypoxaemia is common during anaesthesia for procedures in children with abnormal airways due to the complexity of balancing adequate depth of anaesthesia with maintenance of spontaneous breathing and providing an uninterrupted field of view for the proceduralist.

Inadvertent hypoxaemia during flexible bronchoscopy has implications for both procedural efficiency, efficacy, and patient safety. Infants and children desaturate more quickly than adults and are more prone to apnoea. Nasal High Flow oxygen insufflation can prolong safe apnoea time, preventing hypoxaemia and can facilitate oxygenation during anaesthesia for children with abnormal airways and lungs whilst spontaneously breathing. To date, there is no high-grade evidence comparing Nasal High Flow (NHF) with the standard face mask/laryngeal mask oxygen delivery techniques during flexible bronchoscopy. We aim to conduct a pilot randomised controlled trial, in 80 children, to establish feasibility of Nasal High Flow for children presenting for elective flexible bronchoscopy at Queensland Children's Hospital and Perth Children's Hospital. We will compare NHF with LMA/Facemask to determine if NHF is a feasible oxygenation technique, and the incidence and severity of hypoxaemic events requiring rescue oxygenation. This has the potential to both improve both the safety and the success of these procedures for children.

Associate Professor Susan Humphreys, Queensland Children's Hospital, Queensland; Professor Britta Regli von Ungern-Sternberg, Perth Children's Hospital, WA; Professor Kristen Gibbens, Child Health Research Centre, The University of Queensland.

$A89,999 (including scholarship)

Darcy Price ANZCA Regional Research Award

General vs regional anaesthesia on arteriovenous fistula patency (GiRAF): A randomised controlled pilot and feasibility trial

More than 2500 people in Australia start hemodialysis for kidney failure every year. The preferred surgical technique for establishing haemodialysis is through a native arteriovenous fistula (AVF), however this is beset with high AVF patency loss over time. Based on observational studies, a brachial plexus block (BPB) may improve AVF patency compared to general anaesthesia (GA). However, no well-designed pragmatic randomised controlled trial (RCT) has compared BPB to GA with regards to AVF patency, and both techniques are still commonly employed.

The primary objective of the study is to determine if it is feasible to conduct a pragmatic multi-centre RCT comparing BPB to GA. Secondarily, to compare BPB to GA with regards to: a range of definitions of AVF patency; cost-utility measures; and adverse events. The study is a multi-centre assessor-blinded RCT. Inclusion criteria: all consented adult patients with planned *de novo* creation of upper limb AVF. Exclusion criteria: pregnancy, clinician refusal, contraindications to BPB. Randomised patients will receive either a brachial plexus block (any approach) or GA requiring instrumentation of the airway. Endpoints will be measured at 24 hours, 4-6 weeks, 12 week and 24 weeks. This study has the potential to establish best practice for AVF creation that is meaningful to patients.

Dr Raymond Hu, Professor Philip Peyton, Associate Professor Peter Mount, Associate Professor Jason Chuen, Austin Health, Vic; Dr Andrea Viecelli, Princess Alexandra Hospital, Brisbane.

$A58,674

Skantha Vallipuram ANZCA Research Scholarship

Capturing xenon; an exploration of the chemistry required to capture xenon gas

Many of the advantages of anaesthesia with xenon, such as greater haemodynamic stability and faster recovery, have been known and understood for decades. There is now growing preclinical evidence that xenon can provide significant protection against noxious insults to several organs, including the brain. As a monoatomic element xenon also has no global warming effect when released into the atmosphere.

Despite its significant promise, the cost of xenon anaesthesia has severely limited its clinical use. The conduct of large clinical trials to investigate the neuroprotective benefits of xenon has also been restricted due to its cost.

This project seeks to address this problem by utilising novel adsorbent technology pioneered at the University of Melbourne. Metal-organic frameworks (MOF) differ from other adsorbents in that their structure can be manipulated to capture specific gas species. The aim of the project is to synthesise, characterise and test the ability of several MOFs to absorb xenon. We will aim to pelletise promising MOF materials, rendering them suitable for use in recapturing xenon from a scavenged gas stream.

The efficient recapture of xenon should significantly increase the feasibility of xenon research and potentially more widespread clinical use.

Dr Steven McGuigan, St Vincent's Hospital, Melbourne; Associate Professor Forbes McGain, Western Health, Melbourne; Professor Brendan Abrahams, The University of Melbourne; Associate Professor Lisbeth Evered, Weill Cornell Medicine, New York, USA; Dr Keith White, La Trobe University, Victoria; Dr Lauren Macreadie, University of Sydney, NSW.

$A82,456 (including scholarship)

Provisional/New Fellow Research Award

Pharmacokinetic profile of sugammadex in the obstetric population

General anaesthesia (GA) with muscle paralysis remains an essential anaesthetic technique used for approximately 6.1 per cent of pregnant women delivering by caesarean section. This subset of patients consistently experiences higher rates of maternal morbidity and mortality compared to obstetric patients who are administered neuraxial anaesthesia.

Traditionally suxamethonium has been the muscle relaxant used for caesarean delivery performed under general anaesthetic. However, the newer combination of rocuronium and sugammadex for caesarean section has been shown to provide better surgical conditions for fetal delivery and faster surgical access. This results in safer delivery especially in technically more complicated caesarean section surgery. The benefits of sugammadex have been demonstrated in several patient populations however current pharmacokinetic models and dosing guidelines do not cater for the obstetric population. Pregnant patients may manifest markedly different pharmacokinetic parameters compared to non-pregnant patients.

The investigators will measure plasma levels of sugammadex in obstetric patients at the end of surgery to develop a pharmacokinetic model for a single bolus dose of sugammadex that will guide safe and effective dosing. These results will be used to inform clinical guidelines for the dosing of sugammadex in pregnant patients undergoing elective or emergency GA Caesarean section at the Royal Brisbane and Women's Hospital.

Dr Anthony Hodge, Royal Brisbane and Women's Hospital, Queensland.

$A19,999

ACADEMIC ENHANCEMENT GRANT

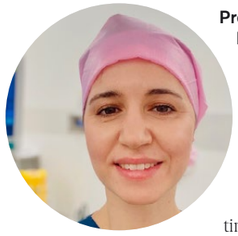
Establishing registry-based clinical trials in perioperative medicine

The aim of this project is to set up an evaluation environment to support establishing a national infrastructure for registry- based clinical trials. This multicentre registry environment will be based on ANZCA's Perioperative Clinical Outcomes Registry (PCORE) initiative, which is coordinated by Dr Jennifer Reilly, and will comprise additional high-quality routine perioperative care data and commonly accepted clinical outcomes, from adults undergoing non-cardiac surgery. This expanded registry (PCOREx) will be used to evaluate the feasibility of various additional components to ANZCA PCORE to facilitate registry-based clinical trials, including innovative methods for collection of long-term clinical outcomes, traditional and novel clinical trial designs, and novel methods for informed consent. PCOREx has the potential to accelerate advances in evidence-based perioperative medicine, and thereby benefit a large number of patients undergoing surgery each year. Furthermore, it will provide the ANZCA research community with an opportunity to further strengthen their leading global position in clinical anaesthesia research.

Associate Professor Stefan Dieleman, Westmead Hospital, NSW; Dr Jennifer Reilly, The Alfred hospital, Melbourne.

$A90,148

NOVICE INVESTIGATOR GRANTS



Preoperative ultrasound assessment of rectus femoris size as a marker of frailty in patients undergoing heart transplantation

Appropriate selection of patients for heart transplantation is vital. Various frailty assessment tools have been used to risk-stratify patients referred for heart transplantation, and have been able to predict a range of outcomes. However, current methods are complex, subjective, time consuming and effort-dependant.

Lack of muscle bulk is an objective, effort-independent marker of frailty in many different patient populations. Traditionally, muscle mass is measured using abdominal CT-scan cross-sectional area of the psoas muscle. Recently, ultrasound measurement of the rectus femoris has been used to predict outcomes in other patient populations. This measurement is rapid, simple and safe.

This study will explore whether reduced size of the thigh muscle using a simple test will improve the predictive capability of an existing frailty score. This is the first study investigating ultrasound measurement of muscle mass and frailty in patients undergoing heart transplantation. It will also examine whether patients who have low thigh muscle mass have worse outcomes after heart transplantation.

The incorporation of an objective, effort-independent, bedside measurement of muscle mass may enhance risk stratification in transplant patients. In the future, these patients could be targeted in prehabilitation programs and information about muscle mass preservation may be applicable to wider patient populations.

Dr Catherine Ashes, St Vincent's Hospital, NSW.

$A15,631

A randomised controlled trial of dexmedetomidine to reduce pain after spinal fusion surgery (The Spade Study)

Posterior spinal fusion is a major surgical procedure that is performed to treat back pain or nerve injury associated with spinal instability due to degenerative disease, trauma, pathological fractures or compression from tumours. It is associated with significant post-operative pain and high analgesia requirements despite the use of multi-modal analgesia. This is a significant problem to address as poorly controlled post-operative pain is associated with increased morbidity including delayed functional recovery, quality of life, prolonged opioid use and increased risk of developing persistent post-surgical neuropathic pain. The SPADE study aims to assess if the addition of intra-operative infusion of dexmedetomidine, an alpha2-agonist, to standard practice, is an effective treatment for pain after posterior spinal fusion surgery. The trial is a randomised controlled trial where patients are randomised either to receive dexmedetomidine infusion intraoperatively or placebo in addition to standard practice. Our primary outcome is the patient's pain score at one hour post-operatively. Other exploratory outcomes including use of opioids and recovery after surgery as well as potential side effects such as excessive sedation, low blood pressure and low heart rate will also be monitored. We hope that our findings will add to the evidence base for the use of dexmedetomidine infusion in this context.

Dr Alex Koh, Dr Kaylee Jordan, Dr Jonathan Chiong, Royal Melbourne Hospital, Melbourne.

$A12,830

Comparison of different N95/P2 filtering facepieces on quantitative fit testing in an Australian healthcare setting

Fit testing is the process of ensuring that the P2/N95 respirator or filtering facepiece (FFP) that is worn has the ability to protect healthcare workers from airborne viruses such as SARS-CoV-2, which causes COVID-19 disease. Previous studies have found that certain FFPs have a higher chance of passing fit testing than others. However, quantitative fit testing studies comparing different FFPs have not been conducted in an Australian healthcare setting. This is significant because health services may purchase large quantities of FPPs which do not fit a large proportion of healthcare workers, which is only discovered after money has been spent buying and fit testing the FFP. Therefore, we sought to determine the pass rate of four different styles of P2/N95 FFP via quantitative fit testing in Australian healthcare workers. We will also assess other factors which affect compliance with wearing FFPs correctly including ease of donning, doffing and comfort. This is an observational study, which will be conducted in a major metropolitan teaching hospital in Melbourne, Victoria, Australia.

Dr Caitlin Low, Box Hill Hospital, Melbourne.

$A15,671

A randomised controlled trial of lidocaine for post-traumatic and post-surgical neuropathic pain: Does dose or patient profile modify the outcome?

Intravenous lidocaine has been used for decades to treat refractory neuropathic pain, however there have only been a modest number of studies with low participant numbers, inconsistent doses and variation in protocols to treat neuropathic pain post trauma or surgery. The significance of this pilot randomised comparison of dose and placebo is that it will immediately provide best-available evidence to inform which clinical dose achieves the best combination of reduced pain intensity at one week post infusion, weighed against the risk of adverse events for this cohort. The duration of analgesia (recorded up to 12 weeks post infusion) and the effect size for each dose will inform power calculations for larger subsequent clinical trials. Exploratory survival analysis with data from quantitative sensory testing and questionnaires will give new insight into mechanisms of effect and patient profiles that respond best to intravenous lidocaine. The battery of outcomes recorded will provide the foundation for judicious selection of a smaller number of key variables for subsequent clinical trials and evidence to support *a priori* hypotheses to test the associations between patient profile and response to lidocaine infusion.

Dr Gunjeet Minhas, Tess Cramond Pain and Research Centre, Queensland.

$A19,902

SIMULATION/EDUCATION GRANT

The airway decision and planning tool: Scenario-based assessment and non-technical skills in paediatric airway care

In the setting of paediatric airway management, it is well established that difficult airway management is most often an anticipated event, rather than being unpredictable. The evidence also shows that clinicians continue to make decisions that make airway management less likely to be successful, with potentially significant consequences for patients. Providing a displayed prompt, or "cognitive aid" has been shown to reduce errors in situations similar to this. With this in mind, anaesthetists at The Children's Hospital at Westmead designed the Airway Decision and Planning Tool (ADAPT), an approach to airway assessment and planning that emphasises the need to involve the team in making the best possible plan for the patient and to choose the best strategy to achieve their goals. This study has been developed by those anaesthetists working with experts from the Sydney Clinical Skills and Simulation Centre (SCSSC) and the Centre for Health Innovation at The Alfred hospital. Simulation sessions undertaken with participants as part of this study will be delivered at the SCSSC.

This research will share new insights into how teams work together, and how cognitive aids can facilitate better performance across a group operating in high stress situations. This new knowledge will have applications across any area where patients require time critical interventions by teams of health professionals.

Dr Andrew Weatherall, Dr Philip Cheung, The Children's Hospital at Westmead, NSW; Dr Adam Rehak, Sydney Clinical Skills and Simulation Centre Sydney, NSW; Associate Professor Stuart Marshall, Centre for Health Innovation, Alfred Health, Melbourne.

$A34,756

PROJECT GRANTS

Immune-to-brain signalling in CRPS: unravelling the detrimental relationship between inflammation and autonomic dysfunction

Complex regional pain syndrome (CRPS) is a highly debilitating chronic pain condition that develops following minor limb trauma (for example, distal radius or ankle fracture) in 4-14 per cent of cases. CRPS presents similarly to neuropathic pain, characterised by pain that is disproportionate to the injury, hyperalgesia and allodynia, motor impairments and co-morbid depression. Unfortunately, the efficacy of anti-neuropathic agents (for example, Gabapentin) and opioids, is poor.

The outcomes of this study will be highly significant. Firstly, using the latest high-parameter imaging technology we expect to identify novel inflammatory changes that underlie reduced nerve terminal density and increased α1-adrenoceptor expression. Secondly, through the use of ultrahigh-resolution brain imaging, we will undertake the first analysis of changes in brain activation patterns in the autonomic control network in CRPS. Thirdly, by interrogating the dataset with machine learning algorithms, previously undetectable relationships between blood-borne immune biomarkers, inflammatory changes in the affected limb and dysfunction in brain circuitry controlling sympathetic output will be identified.

Understanding how interactions between the immune and autonomic nervous systems leads to the development and maintenance of CRPS, is critical to identifying diagnostic markers, pathological sub-types of CRPS, and developing new and effective treatment options.

Dr Marc Russo, Hunter Pain Specialists, NSW, Dr Paul Austin, Professor Luke Henderson, Brain and Mind Centre, University of Sydney, NSW, Professor Peter Drummond, Dr Philip Finch, Murdoch University, WA, Dr Peter Georgius, Sunshine Coast Clinical Research, QLD, Associate Professor Andrew Harman, Westmead Institute for Medical Research, NSW.

$A70,000

Improving patient safety by resolving latent safety threats identified through in-situ simulation: A multi-centre mixed methods study

In-situ simulation for healthcare teams can provide a stress test for the team and their environment, uncovering previously unidentified threats to patient safety. NetworkZ is a national in-situ simulation team-training programme for operating and emergency department teams across New Zealand. In a recent retrospective study of reports from 77 NetworkZ courses across 21 public hospitals we identified around 4-5 patient safety threats per course, many of which remained unresolved. This lack of resolution is also apparent in reports from patient incident reporting systems.

In this research we will prospectively study latent patient safety threats uncovered during in situ simulations, using an online reporting system. We will follow up reports for actions taken to resolve threats and interview key staff to explore how threats are actioned and resolved.

The research will help us understand the facilitators and barriers to collating and resolving threats to patient safety identified during in-situ simulation, and the potential for in situ simulations to stress test systems to improve their resilience.

Professor Jennifer Weller, Dr Jennifer Long, The University of Auckland, New Zealand.

$A55,314

GENetic profiling: Mechanism and Immunity, compare intraoperative Cell Salvage and allogeneic blood transfusion – the GEN-MICS study

Many advances in surgery have been underpinned by the ability to remedy blood loss. Allogeneic (donated) blood transfusion (ABT) is often lifesaving during major surgery. Intraoperative cell salvage (ICS) is increasingly accepted as a safe alternative to ABT. Transfusion related immune modulation (TRIM) describes delayed modulation of immune responses and subsequent adverse outcomes following ABT, including increased risk of cancer recurrence and postoperative bacterial infection. Even though the precise mechanism of action is still unclear, TRIM can be reduced by using ICS instead. When challenged by infection the human immune system responds through the activation of specific immune pathways and the production of mediators (for example cytokines). The world first TRIMICS study (funded by ANZCA and National Blood Authority grants) provided evidence of improved immune competence and a reduction of immune modulation in monocyte and dendritic cell function when ICS was used. Subsequently this GEN-MICS study will enable RNA sequencing analysis to assess changes in the transcriptome following exposure to ICS and/or ABT. The team will investigate specific changes in key pathways driving the immune response and facilitate discovery of potential biomarkers of immune modulation leading to poor patient outcomes (such as infection), potentially translatable to many surgical sub-specialties.

Dr Michelle Roets, Associate Professor Kerstin Wyssusek, Professor Andre van Zundert, Royal Brisbane and Women's Hospital, Queensland; Associate Professor Melinda Dean, University of the Sunshine Coast, Queensland; Associate Professor David Sturgess, Surgical Treatment and Rehabilitation Service Hospital, Queensland; Professor Robert Flower, Australian Red Cross Blood Service, Queensland; Dr John-Paul Tung, Dr Alexis Perros, Australian Red Cross Lifeblood, Queensland.

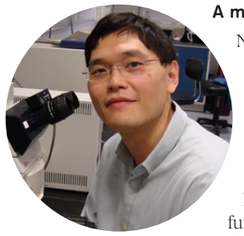
$A66,500 (including scholarship)

Preventing hypoxia, hypercapnia and gas narcosis in rebreather diving

Exploration divers often use so-called "rebreather" underwater breathing apparatus to extend their depth range and duration. Rebreathers are more complicated than the simple scuba equipment that most divers are familiar with. With this complexity comes increased risks of user error and technical failure. The cumulative goal of this work is real-time detection of impending 3-H events (hypoxia, hyperoxia, and hypercapnia) and narcotic impairment that may predispose to causative errors through either monitoring technologies or enhancement of diver recognition (or both). The work will afford a better understanding of the relationship between cerebral oxygenation and cognitive performance in human subjects, and may identify potential real-time hypoxia or hypercapnia monitoring strategies in the form of eye tracking, quantitative EEG analysis (qEEG) and functional near infrared spectroscopy (fNIRS). In the case of qEEG, this work will complete the accumulation of indicative human EEG data in exposures to gas narcosis, hyperoxia, hypoxia, and hypercapnia, facilitating the possibility of an integrative EEG-based monitoring package for all relevant gas effects / toxicities. In addition, the results will identify (or refute) easily implemented training exposures to improve diver recognition of critical 3-H events. This will also be of great interest to the military and civilian aviation communities who already conduct hypoxia exposures for this purpose largely without evidence of efficacy.

Professor Simon Mitchell, The University of Auckland, New Zealand.

$A70,000



A mechanistic study of the pro-nociceptive effect of gut microbiota in neuropathic pain

Neuropathic pain is a disabling condition that affects 1-2 per cent of patients in the general population. Central sensitization of the secondary nociceptive neurons in the spinal dorsal horn is thought to be the key process in the initiation of neuropathic pain. Emerging studies have demonstrated the neuromodulatory functions of gut microbiota. However, the molecular mechanism mediating the analgesic effect associated with gut microbiota depletion has not been fully defined.

In a series of experiments, the investigators will determine the effect of gut microbiota depletion on hyperalgesia/allodynia in murine models of neuropathic pain. The immune microenvironment and transcriptomic profile of the spinal dorsal horn will be characterized. Finally, the pro-nociceptive effect of gut microbiota in germ-free mice with or without microbiota reconstitution will be determined.

Efficacy data from this animal study will provide pre-clinical evidence that paves the way for future clinical trials on gut microbiota manipulation with antibiotic or probiotic treatment in the management of neuropathic pain.

Professor Matthew Chan, The Chinese University of Hong Kong, Prince of Wales Hospital, Hong Kong.

$A70,000

Mechanistic understanding of how preoperative exercise improves outcomes: A substudy of the NHMRC-funded PRIORITY trial

Major gastrointestinal cancers collectively carry significant morbidity and mortality and are one of the leading causes of disease burden in Australia. They are amongs the most expensive cancers to treat surgically owing to the complexity of operative interventions and high rates of postoperative complications (ranging from 40 to 70 per cent). Postoperative complications have a number of deleterious effects, including prolonged hospital stay, increased healthcare cost, greater chronic disease, functional limitation and reduced quality of life.

It has long been known that physical fitness determines postoperative outcomes and increasingly preoperative exercise has been evaluated as a means of improving patients' outcomes, but the mechanistic effects remain poorly explored. In this randomised controlled trial, inflammatory biomarkers and indices of organ injury will be collected before and after major abdominal cancer surgery in patients randomised to either structured exercise or usual care. This sub-study of the NHMRC funded PRIORITY trial (Preoperative exercise for patients undergoing major abdominal cancer surgery) will disambiguate whether exercise improves outcomes through the modulation of inflammation and whether modulation of inflammation is associated with changes in perioperative cardiac and neuronal injury, delirium or long-term cognitive decline. Even a negative study will be highly relevant as it challenges the accumulating dogma about the role of the inflammatory response in determining clinical outcomes.

Dr Neil Pillinger, Associate Professor John Loadsman, Dr Tim McCulloch, Royal Prince Alfred Hospital NSW;Dr Hilmy Ismail, Peter MacCallum Cancer Centre, Melbourne.

$A69,968

Computational simulation of the molecular ion channel targets of ketamine and its analgesic analogues

Although it is widely believed that ketamine exerts its anaesthetic and analgesic action via its binding to N-methyl-D-Aspartate (NMDA) channels, there are significant data to suggest that this is not entirely correct, and that other non-NMDA pathways are critical for ketamine analgesia.

Using computational simulations of molecular dynamics, this proposal seeks to discover the important molecular binding sites – and subsequent alterations in transmembrane ionic current – of ketamine and non-NMDA target ion channels. In particular we will look for a Meyer-Overton relationship between various ketamine analogues and different potassium channels, to determine which channel is likely to be causing the analgesia. The detailed understanding of the interaction between ketamine and its various molecular targets could pave the way for the development of more specific ketamine analogue analgesia drugs that are devoid of ketamine's serious side effects.

Professor Jamie Sleigh, Waikato Hospital, New Zealand.

$A55,000

Tranexamic acid to reduce delirium after gastrointestinal surgery: the TRIGS-D trial

Delirium is a devastating complication of medical and surgical care, associated with increased morbidity and mortality, dementia and impaired long-term cognition, and loss of independence. Delirium occurs in 24 per cent of gastrointestinal surgical patients, and incurs a huge societal burden. Critically, delirium is bereft of therapies. It is important to understand how events such as delirium may accelerate cognitive decline, and the onset of dementia.

This study will focus on whether Tranexamic acid (TxA) can reduce the cognitive changes and delirium seen in some people after major surgery. The investigators have recently shown that blood loss and inflammation are two key underlying mechanisms associated with confusion after surgery. This seems to be associated with a breakdown in the protective barrier within the brain that otherwise insulates it from the rest of the body. Animal studies have shown that TxA provides some protection of the brain's protective barrier. We will study TxA administration compared to placebo in a study of patients undergoing abdominal surgery. Baseline cognitive testing will be performed with follow-up of these patients for 3 days postoperatively to monitor the onset and severity of confusion.

This trial will provide important information about the use of TxA to prevent postoperative delirium.

Professor Paul Myles, Dr Mark Shulman, The Alfred hospital, Melbourne; Professor Robert Sanders, Dr Tim McCulloch, Royal Prince Alfred Hospital, NSW; Associate Professor Lisbeth Evered, Visiting Fellow, Weill Cornell Medicine, New York, USA; Associate Professor Stefan Dieleman, Westmead Hospital, NSW.

$A70,000

Effect of phenylephrine vs norepinephrine on cerebral blood flow in patients for non-cardiac surgery general anaesthesia

Reduced cerebral blood flow (CBF) has been proposed as a mechanism or exacerbating factor in major cerebral complications post-operatively including delirium, post-operative cognitive dysfunction, and stroke. It is currently unclear whether vasopressor agents cause a decrease or increase CBF when used to elevate blood pressure (BP). Recent studies have demonstrated reduced cerebral oxygenation on near-infrared spectroscopy, and increase in middle cerebral artery velocity using transcranial Doppler, which may reflect cerebral vasoconstriction. However, both methods have inherent inaccuracies as blood flow is not measured directly. This knowledge is critical for safe patient management during general anaesthesia (GA), especially for patients with or at risk of brain injury.

This study will compare the effect on CBF using two commonly used vasopressors during GA – norepinephrine and phenylephrine. We wish to determine if one is better at maintaining CBF using a novel technique, Doppler ultrasound of the internal carotid artery, which measures both blood vessel diameter and velocity in real time to assess flow more accurately.

The findings may provide clinically significant guidance on vasopressor selection during anaesthesia which both maintains BP and CBF. This may potentially reduce the incidence of cerebral complications post-operatively and translate to improvement in patient outcome.

Dr Chen Chen, Dr Douglas Campbell, Auckland City Hospital, New Zealand; Associate Professor James Fisher, Dr Mickey Fan, University of Auckland, New Zealand.

$A17,255

Lidocaine for the Prevention of Myocardial Injury After Noncardiac Surgery (LEMONADE TRIAL)

Myocardial injury after noncardiac surgery (MINS) is the most common perioperative cardiovascular complication affecting up to 8 million adults worldwide annually. Patients who suffer MINS are at increased risk of postoperative morbidity and mortality.

Lidocaine is a cheap, safe, and widely available local anaesthetic agent with pleiotropic effects. Based on pilot data from the ANZCA funded *Volatile Anaesthesia and Perioperative Outcomes Related to Cancer* (VAPOR-C) feasibility study, lidocaine was associated with a significant reduction in the occurrence of MINS.

The VAPOR-C trial is a large NHMRC funded international study of lung and colorectal cancer patients, comparing the effect of propofol anaesthesia to volatile anaesthesia and lidocaine to placebo on cancer outcomes and survival. The LEMONADE trial will be run as a sub-study of VAPOR-C and aims to examine the effect of intravenous lidocaine on the occurrence of MINS postoperatively. The LEMONADE trial will co-enrol 1200 participants and collect serial troponin assays preoperatively and for two days postoperatively.

At present, potential treatments for MINS are limited. If the results of the LEMONADE study find intravenous lidocaine to reduce the incidence of MINS, it provides a unique opportunity to intervene early to prevent the occurrence of this increasingly recognised and significant postoperative complication.

Dr Justin Nazareth, Austin Hospital, Melbourne; Dr Tim Coulson, The Alfred hospital, Melbourne; Dr Julia Dubowitz, Professor Bernhard Riedel, Peter MacCallum Cancer Centre, Melbourne.

$A70,000

Māori experience of anaesthesia in the perioperative setting: A qualitative assessment

Māori, the Indigenous people of New Zealand, continue to experience disparities in access to care and poorer health outcomes. Māori also continue to experience higher rates of socioeconomic deprivation, disability and disease. This has most recently been highlighted in the latest report from the Postoperative Mortality Review Committee, which found that Maori living in the most deprived areas, who had an elective admission with general anaesthesia, had a much higher 30-day perioperative mortality rate than New Zealand Europeans. Investigation of Maori patients' experiences of care in the pre-operative setting and the need for both quantitative and qualitative research was recommended.

The chief investigator is both a Māori doctor and fellow of ANZCA with an ongoing commitment to advocating for Māori health. Through her PhD, she aims to identify facilitators of and barriers to engagement with Māori patients in the perioperative setting and perform a qualitative assessment of their experience to identify what is being done well and what could be improved. This information will be utilised to inform practice, improve engagement with Māori patients and develop resources to assist anaesthetists in delivering culturally safe care for Māori patients in New Zealand.

Dr Courtney Thomas, Christchurch Public Hospital; Professor Jennifer Weller, The University of Auckland, New Zealand.

$A46,550 (including scholarship)

Dementia biomarkers and long-term cognitive decline following hospital admissions

Recent advances in blood-based biomarkers (BBBs) promise a revolution in diagnostic capabilities for Alzheimer's disease and related dementias, with high diagnostic sensitivity and specificity in the earliest phases of disease that manifest years before clinical symptoms. This provides a critical window in which early interventions and secondary prevention strategies could be deployed, when the possibility to arrest disease progression is likely to be greatest. During this window of vulnerability prior to the onset of dementia, hospital admissions exert a cumulative cognitive burden. Medical and surgical admissions can be associated with cognitive impairments, yet the mechanism as to how they may exert a long-term cognitive impact remain unclear. Given that ageing is associated with increased acute illness and hospital admissions, the opportunity to prevent cognitive harm with these admissions is a promising concept. Nonetheless identification of neuroprotective therapies requires a thorough understanding of how medical and surgical admissions can modulate the underlying pathology of cognitive decline.

This study will evaluate a range of biomarkers associated with cognitive decline and as secondary outcomes we will determine whether these other neuropathological BBB are associated with cumulative hospital admissions. Using model comparison with Deviance Information Criterion (a Bayesian implementation of the Akaike Information Criterion) we will detect which BBB is best explained by cumulative hospital admissions.

Associate Professor John Loadsman, Professor Robert Sanders, Royal Prince Alfred Hospital, NSW; Professor Fiona Blyth, Professor Sharon Naismith, Professor Sally Cripps, The University of Sydney; Professor Louise Waite, Concord Hospital, NSW.

$A70,000

A quality improvement intervention to enhance the educational environment in clinical anaesthesia

Anaesthesia training relies on an apprenticeship-type model and clinical immersion. The investigators propose that the use of a deliberate teaching tool will bring structure to what is currently an ad hoc process, improving the teaching and learning experience. Teaching encounters will be guided by initial goal-setting and conclude with feedback to gauge if goals were achieved and to plan for future learning. It is a verbal and formative process, without the use of forms or any grading scheme.

In this quality improvement study, departments implement the framework in all operating room teaching encounters for a four-week period, excluding cases done after-hours. Specialists will be provided with a short guide and video aid to learn to use the framework. The impact of the framework will be evaluated using a tool designed to measure the educational environment, which is the social system that includes the learner and their interactions.

This is the first deliberate teaching tool designed for or evaluated in clinical anaesthesia training. This study has the potential to significantly improve teaching from current unstructured and ad hoc practice, to one that implements best-practice elements, improving the quality, efficacy, and efficiency of teaching.

Dr Navdeep Sidhu, North Shore Hospital, New Zealand; Professor Kirsty Forrest, Bond University, Queensland; Dr Alana Cavadino, The University of Auckland, New Zealand.

$A44,935

Grant review process

On behalf of the college, the ANZCA Research Committee thanks all reviewers who reviewed one, or often more, grant applications for your invaluable contributions to the award process. A full list of reviewers can be found on the ANZCA website.

Much effort goes into ensuring that the process is as fair and rigorous as possible. It starts each year with ANZCA Research Committee members considering the grant applications and determining the three reviewers for each grant who are selected for their relevant expertise. One reviewer is the "Spokesperson" and a member of the Research Committee, while the other two are usually from outside the committee. These reviewers include expert researchers from anaesthetics as well as other specialties if needed. The reviewer comments are sent back to the researcher applicant for response, and the spokesperson then collates the information (including the reviewer scores, comments, and applicant's responses) into a synopsis with a score. Each grant is then discussed by the whole Research Committee during a day-long face-to-face meeting, with their final scores determined by the averages of secret ballot scores (out of seven) from each committee member.

Conflicts of interest are declared and recorded and members of the committee are excluded from consideration of any grants for which they have a conflict. The presence of Dr Angela Watt, our Community Representative adds an extra safeguard in this regard as does our external committee member, Professor Andrew Klein (Editor in Chief of Anaesthesia). Neither of these members actively compete for grants, and are not eligible to do so.

Finally, funding is allocated to grant applications in descending order of the final averaged committee member scores, within the limits of the funds available. Inevitably, in any competitive process some applicants are unsuccessful. As with most grant programs, detailed feedback is not provided to applicants after the committee has finalised its grant decisions, except to novice investigators. However, detailed feedback on grant applications is formally provided during the review process through reviewers' comments to applicants, which reflect most or all of the factors that will influence committee decisions. Most of the senior members of the committee have experienced many unsuccessful grant applications to ANZCA and other granting agencies such as NHMRC and HRC. This is usually considered an essential part of the development of grant writing skills for future success, and perhaps it is this persistent pursuit of continual improvement that most characterises all ANZCA grant applicants. The Research Committee recognises the very significant time and effort involved in writing research grants, and extends its thanks and encouragement to all applicants.

Every year committee members, reviewers and ANZCA staff put a great deal of work into the maintenance and continuous improvement of our high quality research grant process. For committee members and reviewers, this is often in their own time. We would like to express our very sincere thanks to all of them, and to the Council and CEO of ANZCA for their ongoing commitment to research – as a vital contribution to continuous improvement in quality, safety and patient outcomes.

Finally, I would particularly like to thank Dr Angela Watt who is stepping down as our 'community' member after 12 years working with the committee, and Professor Andrew Klein, who has provided an expert perspective from outside the ANZCA research community for the last 7 years. Both Angela and Andrew have given substantial time to the committee. Their contributions have improved our processes, and are greatly appreciated.

Professor David A Scott, Chair

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Professor Andrew Davidson (Vic), CTN chair
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Research grants for 2023

ANZCA and ANZCA Foundation Grants Program

Applications are invited from fellows and registered trainees of ANZCA and the Faculty of Pain Medicine for research grants and awards for projects related to anaesthesia, resuscitation, perioperative medicine, intensive care medicine or pain medicine.

Grants available for 2023:

- **Lennard Travers Professorship.**
- **Academic Enhancement Grant.**
- **Project Grants including Simulation/ Education Grants.**
- **Novice Investigator Grants**
  Early application by novice investigators is invited for mentoring during the application process. Further details available on the website.
- **Skantha Vallipuram ANZCA Research Scholarship.**

The foundation is pleased to offer the following new grants to commence in 2023:

- **Environment and Sustainability Research Grant**
  This grant is the initiative of a group of anaesthetists to encourage and support research exploring the environmental impact of anaesthesia and related products and activities.
- **ANZCA Patrons Emerging Investigator Grant**
  A dedicated grant to support emerging researchers transitioning from the novice investigator grant level. The grant is named in honour of the foundation patrons who are high-level donors to research.

Full details of the ANZCA grants program and each of the grant categories with the relevant application forms and guides for applicants are available on the college website. **The closing date for all grant applications is 5pm AEDT 1 April 2022.**

Further information contact:

Ms Susan Collins
Research and Administration Co-ordinator
ANZCA Foundation
+61 3 9510 6299
research@anzca.edu.au

New horizons in 2022

This year saw the landmark PADDI trial being published in the *New England Journal of Medicine* in May 2021 and many new funded trials get under way.

Despite the success of the Clinical Trials Network (CTN) , 2021 has been another challenging year for CTN with a downturn in clinical trial recruitment and with many of our anaesthesia research co-ordinators redeployed to clinical work. Despite the changing clinical trials landscape, CTN continued its core business to develop new clinical trial proposals through the virtual CTN Strategic Research Workshop held in August 2021, our largest meeting to date!

CTN has a bright outlook in 2022 with the planning of two CTN strategic research workshops to develop new proposals, a shorter one to be held virtually on 4 March 2022, and the flagship workshop in Brisbane from 4-7 August 2022. The Friday 5 and Saturday 6 August program will be offered with some features for participation and input for delegates who are unable to travel to Brisbane. Both meetings will open for registration in early 2022.

The part 1 workshop in March will run from 10am to 2pm AEDT and will include an interactive session on real life research scenarios experienced by our CTN hospital sites convened by the Anaesthesia Research Co-ordinators Network (ARCN) Sub-Committee. This will be followed by new proposal presentations by investigators selected from submitted abstracts, which will provide the opportunity to troubleshoot protocols with peers and statisticians. Delegates will also have an opportunity to participate in a virtual networking session and our (now) infamous CTN bake off challenge and CTN trivia!

The running of the March meeting aims to respond to changing funding environments where ad-hoc funding opportunities, and in particular the Medical Research Future Funding, are often announced with short submission deadlines. Major federal funding deadlines along with the ANZCA Research Grant scheme also fall ahead of the August meeting. We hope the virtual meeting held in March and the hybrid meeting held in August will improve the equity for the wider ANZCA membership and research coordinators to attend either or both meetings and to present their ideas in advance of submission in major funding rounds.

The CTN office plans to build on the ACRN in-service sessions to develop an inclusive college-wide virtual education program throughout 2022 to meet its core aims to mentor and provide educational opportunities for all members and research co-ordinators. The CTN Executive will be also undergoing major changes in 2022 as the executive matures from a successful group of "pioneers" to serve an ever-growing number of emerging trialists. This will involve changing the scope of practice of the executive and how members are selected for the executive. This will ensure a dynamic representative executive into the future that can continue to connect with the wider CTN community. We are very excited about what 2022 will bring to our network!

Professor Andrew Davidson
CTN Executive Chair

Ms Karen Goulding
CTN Manager

Ms Allison Kearney
ARCN Sub-Committee Chair

Thank you to all ANZCA Foundation donors

These generous donors gave over the last year to assist the work of fellows and trainees in research, global development, and Indigenous health through the ANZCA Foundation.

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Social activities which foster reconnections with your colleagues, a re-ignition of your celebratory spirit and a renewal of your wardrobe as you attend luncheons, dinners and cocktail receptions.

Workshops providing opportunities for professional development across all three CPD categories; practice evaluation, knowledge and skills and emergency response.

Experiences intrinsic to Western Australia encompassing adventure, culture, health, luxury, learning and family-oriented optional activities.

How to emerge:

As the year draws to a close and we start to emerge from the pandemic here's a to-do list brought to you by the Perth Regional Organising Committee:

- **Visit the website to make your plan for the week of the ASM**
  (something for everyone, science, social, travel....)
- **If you are a prospective author or researcher, submit your abstract**
  (submissions close 16 January, 2022)
- **Register for the ASM**
  (early bird closes 4 March, 2022)
- **Plan any pre/post conference travel early as WA accommodation is limited due to COVID-19-postponed bookings.**
  (See our Perth travel page on the ASM website)

Faculty of Pain Medicine

What is the point of pain medicine?

“We may not be the doctor who saved their life, but we may be the doctor who showed the way to make it worth living again.”

HAVING JUST COMPLETED two days of Zoom workshops and conferences on topics including a primary fellowship pathway, strategic planning in a post-pandemic landscape, and planning to stand up a national research and translation alliance for pain, it’s fair to say I’ve been thinking a lot about a couple of questions:

- What is the pain management enterprise trying to do?
- What is valuable about having FPM fellowship?

A lot of these thoughts arise when trying to explain to those outside our immediate pain bubble what the faculty is and why it does what it does. Our vision statement is a good place to start, asserting as it does that we are striving to “reduce the burden of pain on society through education, advocacy, training and research”. This articulates the main areas that the faculty is involved in, and I’m pleased to report that the results of our fellowship survey show that these areas are critically important to our members. Thinking about why a junior doctor would choose a career in pain medicine, I wonder whether this really cuts through. We need to understand the factors that influence the career choices of current medical school graduates and increase our visibility and appeal at a time when they are forming preferences as to spend the rest of their working lives.

I would suggest that a real benefit of attaining fellowship of FPM is having access to the phenomenal intellectual capital and professionalism of our diverse craft group. We have the challenge of influencing for the better the lives of people who have had little to thank the medical system for in many cases. We may not be the doctor who saved their life, but we may be the doctor who showed the way to make it worth living again. This road is not an easy one, still less is it a materially rewarding one compared to many other fields. As a group we are dedicated and caring professionals with endlessly fascinating stories of human struggle and triumph to tell. We need to learn how to tell them better to our healthcare colleagues and to the community at large.

Being part of a relatively small specialty that is actively growing and evolving means that there is both opportunity and risk. We need to be clear about what constitutes the body of knowledge, skills and attributes that define a specialist pain medicine physician. As we contemplate the development of a pathway to fellowship that does not require an initial fellowship, this task becomes pressing. If we are to be part of a major research and translation initiative that is seeking millions of dollars of funding to dramatically impact the lives of people with pain in both our countries, we as a group need to have a compelling story to tell about why we are the right people to entrust with that mission. If we fail at these challenges, we will not thrive as a specialty, and the value of our hard work will decline. We will struggle for relevance in the health system, especially in the public sector where competition for resources is currently overwhelming.

As we emerge from experiences of lockdown and isolation, into a world of exploration and reassessment of our priorities, this is a good time to think hard about the value that our specialty brings to the community, the health system, and our own work and life. Then we need to start talking about ourselves in meaningful, impactful ways so we are listened to and understood.

Associate Professor Michael Vagg
Dean, Faculty of Pain Medicine

Pain management health practitioner education strategy project – update

IT IS A VERY exciting time for the national pain management education strategy project as the team move into the final stages of stakeholder consultation and continue drafting the strategy document.

As reported in previous *Bulletins*, the initial phase of stakeholder consultation encompassed a national roadshow of three face-to-face and four virtual consultation workshops. Although the workshops were well attended by 120 stakeholders from a broad range of disciplines and geographical locations, there were clear gaps in the collected data. These gaps specifically related to insufficient data to inform the implementation of identified goals; a lack of input by Indigenous stakeholders; minimal engagement with regulatory bodies and a lack of data regarding culturally and linguistically diverse communities.

In an effort to address these gaps, we have embarked on a further phase of stakeholder consultation. In October, the team conducted three high-level virtual roundtable discussions. Attendees included representatives from national health and education regulatory and accrediting bodies, councils of health discipline deans and health professional associations. The facilitated discussion focused on gaining high-level perspectives and recommendations regarding strategy implementation. The roundtable discussions were extremely valuable, not only in informing the project, but also in creating new connections with stakeholders who will play an important role in the acceptance and rollout of the new national strategy.

The discussions included an exploration of perceived barriers and potential enablers associated with the implementation of major educational change strategies. The participants also proposed high-level strategies to facilitate the successful implementation of the national education strategy. Some suggestions included targeted engagement with additional strategic stakeholders as part of the strategy dissemination plan; collaboration with community members to illustrate the need for a pain management education strategy; and development of a communication and resource package to help educators implement pain management education without its inclusion in standards.

In addition to the roundtable discussions, we have commenced further consultation separately with Indigenous stakeholders and representatives from the culturally and linguistically diverse community. These activities will be undertaken in partnership with ABSTARR Consulting and the Federation of Ethnic Communities' Councils of Australia respectively. We hope to hold specific consultation workshops for both of these groups in November.

As part of their work package, ABSTARR Consulting have conducted a cultural safety training workshop for the project team as well as key fellows and staff within the faculty and wider college to facilitate respectful and meaningful engagement with Indigenous stakeholders moving forward.

It is exciting to see the strategy taking shape. We envisage that there will be a draft document out for consultation broadly in early 2022 and will welcome feedback from fellows and their multidisciplinary teams.

Associate Professor Meredith Craigie
Clinical Lead, Pain Management Health Practitioner Education Strategy project

Updates to *By-law 19*

Over the past two years, the Training Unit Accreditation Committee (TUAC) has been reviewing *By-law* 19 Accreditation of units offering training in pain medicine and its accompanying Accreditation Handbook. As a result of the review several opportunities to improve the process were identified.

The accreditation process has been adapted to formalise the accreditation of practice development stage (PDS) training sites. This will ensure trainees can easily access various training opportunities during their second year of training and easily design their own programs to include other areas of interest in pain medicine. PDS training sites will be accredited by remote review held via Zoom. Interested units are encouraged to apply via fpm@anzca.edu.au.

With the introduction of PDS unit accreditation the decision has been made to retire level 2 accreditation. TUAC have worked with current level 2 units to ensure they retain their accreditation into 2022. These sites will either become an accredited PDS unit or pair up with an existing level 1 unit as a satellite site to become a level 1 unit or both. The criteria under each standard was reviewed and where supported, streamlined or enhanced. Trainees in the PDS who wish to work at a site that is not accredited may still apply to the assessor for individual approval.

The faculty would like to thank all the TUAC members, reviewers, FPM assessors and unit directors who contributed to this piece of work. The updated versions are available on the website.

Medicinal cannabis – community information

The FPM Board has developed "Prescribing medicinal cannabis for chronic non-cancer pain – community information" to assist healthcare consumers have informed conversations with their treating physician. The one-page fact sheet summarises the key points of the professional document PS10(PM), which outlines FPM's position on prescribing medicinal cannabis to manage patients with chronic non-cancer pain and highlights the importance of an evidence-based approach to medicine.

Some cannabis-related substances have, or may soon, become available for doctors in Australia and Aotearoa New Zealand to prescribe. But there is not enough evidence to say that they are safe or effective to prescribe for chronic pain. The benefits of broadening the audience of our professional documents include:

- Connecting the faculty with the communities we serve.
- Ensuring the accuracy of public messaging in relation to important issues.
- Providing a substrate for advocacy and communications plans.
- Empowering people who experience pain by providing accessible, high quality information.

We encourage you to disseminate the document and welcome any feedback via fpm@anzca.edu.au.

FPM Centralised Trainee Tutorial Program

In 2021, the faculty introduced its online Centralised Trainee Tutorial Program enabling all trainees to have access to a weekly tutorial program.

The faculty would like to thank the convenor, Associate Professor Paul Wrigley, who extended his existing tutorial program to all pain medicine trainees. We also would like to thank all the presenters who dedicated their time to present a topic. The tutorials had a strong attendance, averaging 25 trainees.

The tutorials have received positive feedback from trainees, and will resume next year in March. FPM fellows are invited to express their interest via fpm@anzca.edu.au if they would like to present a trainee tutorial in 2022.

In 2021, we also introduced a trainee dedicated WhatsApp group that helped trainees connect in a year where state wide and international travel was not possible. The WhatsApp group will also continue in 2022 which will enable trainees to connect early on during their training time.

NEW FELLOWS

We congratulate the following doctor on her admission to FPM fellowship through completion of the training program:

- **Dr Hannah Bennett,** RACGP, FFPMANZCA (Qld)

We also congratulate the following doctor on his admission to FPM fellowship through the assessment pathway:

- **Dr Anand Natarajan**, FANZCA FFPMANZCA (Qld)

TRAINING UNIT ACCREDITATION

The following units have been accredited for pain medicine training in the Core Training Stage:

- Austin Health (Vic).
- Geelong University Hospital (Vic).
- Hunter Integrated Pain Service (NSW).
- Middlemore Hospital (New Zealand).
- Prince of Wales Hospital (NSW).
- Royal Prince Alfred Hospital (NSW).
- Singapore General Hospital (Singapore).
- Queen Elizabeth Hospital (Hong Kong).

Procedures endorsement program update

The pilot of the Supervised Clinical Experience Pathway of the Procedures Endorsement Program commenced at the beginning of 2021.

Seven endorsees participated in the program during the year gaining experience in nominated pain medicine procedures under the guidance of five accredited procedural supervisors. Endorsees recorded their cases in an app which allowed their supervisors to provide regular feedback on their progression.

The supervisors regularly participated in meetings with the Procedures in Pain Medicine Project Steering Group who monitored the delivery of the pilot program. Supervisors and endorsees also kindly gave of their time to join evaluation sessions on the program. The faculty has now endorsed our first fellows in pain medicine procedures who undertook the Supervised Clinical Experience Pathway.

Given the success of the program, the pilot has formally closed and the program transitioned to an ongoing program. The Procedures in Pain Medicine Project Steering Group has been replaced with the Procedures in Pain Medicine Committee and the Procedures Endorsement Program Reference Group will review applications for endorsement and accredited procedural supervisors. Throughout the year we received some valuable feedback and evaluation from our supervisors and endorsees which has allowed modifications and fine-tuning to the program.

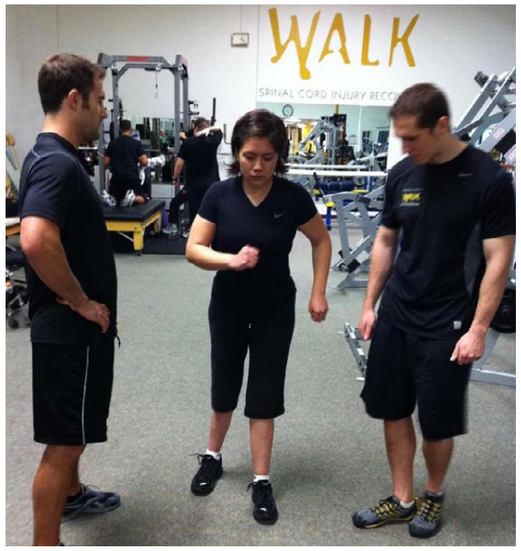
The list of accredited supervisors has been expanded and we look forward to welcoming our endorsees for 2022. The Practice Assessment Pathway (PAP) will open in early 2022 for fellows with established experience in pain medicine procedures who wish to seek endorsement. The PAP will remain open until 2026.

We would like to thank everyone involved in the pilot year, particularly our accredited supervisors and endorsees, for making it such a success.

Learning to walk again a catalyst for change

In 2008 after a horrific car accident in the car park of the Melbourne rehabilitation centre where she was in the first year of her registrar training, Dr Olivia Ong was told she would never walk again.

Dr Ong had been run over by an elderly driver and her spinal injury was so severe that orthopaedic surgeons told her she should expect to be a paraplegic and in a wheelchair for the rest of her life.



Above: Dr Ong during one of her intensive rehabilitation sessions at Project Walk in San Diego.

The FPM fellow spent two years in a wheelchair as she recovered from her extensive surgeries and injuries but she learnt to walk again after moving with her husband John to San Diego for two and a half years so she could attend the Project Walk spinal cord injury recovery centre as an outpatient.

She now divides her time between public and private practice as a specialist pain medicine physician in Melbourne and is building a reputation for her insights into physician burnout, resilience and compassionate leadership.

Dr Ong is a member of the Wellbeing Special Interest Group (SIG) and was a guest speaker at the recent virtual Spring FPM meeting "Moving with pain" where she spoke about physician burnout and self-compassion.

"I told myself that I had to give myself a chance to walk again – I would do anything to walk again – so I think that drive and determination helped me to walk again after two and a half years of intensive rehabilitation and training for five hours a day, five days a week," she told the *Bulletin*.

"I got back some mobility after the end of my stint in San Diego and I was able to walk with the aid of sticks. I still walk with a limp because my right leg has never regained normal function."

Left: Dr Ong with her husband John and their young family.

Dr Ong started her FPM fellowship in August 2016 after she returned from maternity leave, a year after her son Joseph was born. She sat the FPM exam in November 2017 when Joseph was two and began practising as a specialist pain medicine physician in August 2018. She says her own experience as a patient recovering from a major trauma and finding herself dealing with a myriad of medical specialists has given her a unique perspective as a clinician when treating her own patients.

"I do believe that my experience has made me more empathetic and compassionate towards my patients. I finally understand what it's like to be a patient so I can understand why they often feel so overwhelmed and frustrated. Even as a healthcare professional I felt lost. You can be the most knowledgeable physician and yet when you're a patient it's a very different, eye opening experience."

After returning to full-time practice it wasn't until 2019 that she reached a turning point with her own self-care. She admitted that she was burnt out.

"I was dealing with my injury, working full time, juggling motherhood and I had seen a lot of my peers burn out, not just myself but anaesthetists and physicians. Eighty per cent of people I know have experienced burnout at some stage.

"We were burnt out way before COVID but in some ways COVID is like the straw that broke the camel's back. Everyone has different barometers for knowing when they're burnt out but diagnosing it early is the best prevention tool.

"I detected my burnout fairly late. I muddled through burnout which is what a lot of fellow anaesthetists and pain physicians do and before we know it we are burnt out. Now people are open to talking about it and we're also a lot more aware of the early signs such as exhaustion, not being able to switch off from work, feeling isolated and feeling irritable. Having at least a few habits of self-care that keep burnout at bay are key."

Dr Ong recently launched her first book, *The Heart-Centeredness of Medicine*, which tells not only her own story of recovery but also includes chapters on personal development and wellbeing.

In addition to practicing as a specialist pain medicine physician she is regularly approached to provide wellbeing and resilience workshops for healthcare networks.

To read more about Dr Ong visit www.drolivialeeong.com.

Carolyn Jones
Media Manager, ANZCA

Virtual Spring Meeting

"MOVING WITH PAIN" was the theme for the Combined FPM and HKCA Virtual Spring Meeting successfully held on 16 October 2021. A total of 130 delegates registered for the meeting – 86 from Australia, 19 from New Zealand and 25 from Hong Kong. The ever-evolving internet media technology permitted live attendance for speakers, session chairs, and delegates from Australasia, Europe, and the UK. We appreciate that some of the times were quite early in the day for our overseas speakers and attending delegates.

The planning committee, including representatives from Hong Kong, New Zealand and Australia, selected topics to facilitate getting people of different ages, abilities, disabilities, and cultures moving again. Of particular interest was the session on the expanding role in pain management of the complementary therapies yoga, Tai Chi, Qigong and acupuncture presented by Dr Tim Brake, Dr Emma Patrick and Dr Simon Chan. Dr Steven Wong provided an interesting perspective of the strategies used by the elderly in Hong Kong. Dr Agnes Strogicza, based in Hungary, provided an exciting look at bio tensegrity applications for interventional pain management that we're sure will cause some to modify their current practice. The ever-insightful Professor Michael Nicholas addressed psychological strategies. Dr Kath Cooke presented a helpful model for paediatric pain, highlighting the ongoing issue of unequal access to pain management for this age group.

Dr Olivia Ong presented her inspiring story and strategies for preventing physician burnout and encouraging self-compassion (see page 68 for more). Finally, it was great to have the opportunity to hear from leaders in pain management from four different countries on issues addressing national pain strategies and advocacy. Thank you to Associate Professor Mick Vagg from Australia, Professor C W Cheung from Hong Kong, Dr Tipu Aamir from New Zealand, and Professor Paul Cameron from Scotland.

If you missed anything or want to see a particular presentation again, these will be available for the next 12 months to view at your leisure – use the same login details provided to you for the meeting.

The meeting committee extends a huge thanks to the speakers and chairs for volunteering their time, the delegates for attending, our generous sponsors, Seqirus and Medistar and the ANZCA events team, without whom this would not have happened.

We hope to see you, in person at the 2022 FPM Symposium in Perth on 29 April and the 2022 FPM Spring Meeting in Noosa from 14-16 October.

Dr Yvonne Murray
Co-Convenor, Combined FPM & HKCA Virtual Spring Meeting

Top row, from left: Dr Fiona Tsui, Professor Chi Wai Cheung, Associate Professor Michael Vagg; middle row, Professor Paul Cameron, Dr Tipu Aamir, Dr Clara Wong; bottom row (middle) Dr Yvonne Murray.

DPA vacancy (FPM)

We're inviting all FPM fellows to apply for the role of Director of Professional Affairs (DPA) – Education

RESPONSIBLE TO THE Executive Director of Professional Affairs (EDPA), the Director of Professional Affairs, Faculty of Pain Medicine – Education role focuses on guidance and support for training and assessment within the Faculty of Pain Medicine, providing back-up to the DPA, FPM, advising on relevant issues, identification of options and appropriate responses, and analysing and preparing reports. The role may also be involved in assisting with development of professional documents and regulations, providing advice on clinical matters, and working with the other DPAs as required.

This is a part-time (0.3 FTE) role. While the position is based within the corporate office of ANZCA at 630 St Kilda Road, Melbourne, residence in Melbourne is not necessary. In addition to being a fellow of the Faculty of Pain Medicine, familiarity with the FFPMANZCA training program is highly desirable, as is having an understanding of medical education and being a practising specialist pain medicine physician.

HOW TO APPLY

If you're interested in applying for this position, please email ceo@anzca.edu.au for a position description. Applicants will be asked to supply a resume and covering letter by 31 December 2021.

Attitudes, opportunities and barriers to environmental sustainability in anaesthesia

CLIMATE CHANGE HAS been described as "one of the greatest threats to the health of humanity" [Horton 2018]. Healthcare is responsible for approximately 7 per cent of Australia's carbon footprint [Malik 2018] and 1-5 per cent of total global environmental impact [Lenzen 2020]. Clinicians are uniquely positioned to advocate for and lead action to reduce healthcare-related emissions.

The ANZCA Environmental Sustainability Working Group (ESWG) conducted a survey between April and May 2021, to better understand the attitudes and practices of anaesthetists and trainees towards environmental sustainability in anaesthesia. It was conducted via an online platform, with ANZCA fellows and trainees invited to participate on a voluntary and anonymous basis via social media, the 2021 ANZCA Annual Scientific Meeting and distribution within the anaesthesia departments of ESWG members.

The Trainee-led Research and Audit in Anaesthesia for Sustainability in Healthcare (TRA2SH) is a collaborative network of trainees, aiming to encourage more sustainable anaesthesia practice. Operation Clean Up (OCU) was an event held by TRA2SH in May 2021 to promote an evidence-based bundle of sustainable practice. Alongside this event, surveys (designed by Dr Sophia Grobler) about practices and attitudes at a personal and department level were distributed.

ESWG SURVEY RESULTS

The ESWG survey received 551 responses during this period, with responses from all states within Australia and from New Zealand and all age ranges, levels of practice and both public and private practice represented.

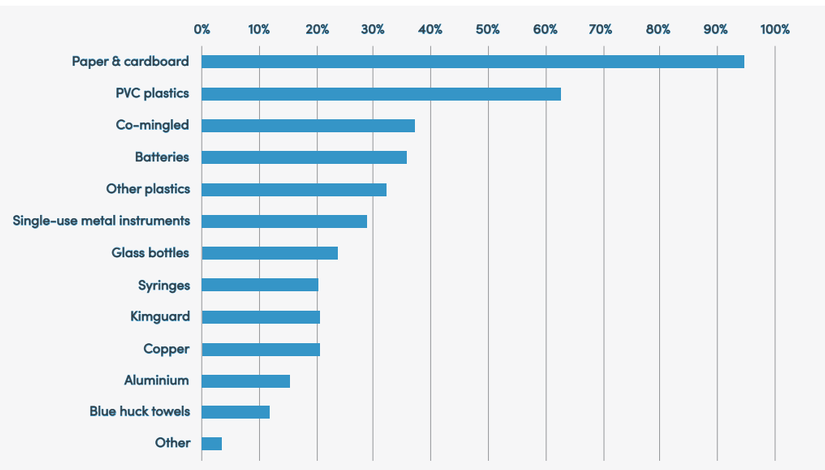
Respondents to this survey demonstrated a significant concern about environmental stewardship and the environmental impact of anaesthesia practice. When asked about these attitudes, 96.19 per cent of respondents reported that they were concerned about the future of the environment and 88.93 per cent reported that environmental sustainability was an important consideration in their clinical practice. In regards to action, a substantial majority of respondents wanted to see more done to reduce this impact by suppliers, hospitals and the profession more broadly. Specifically, 93.64 per cent of respondents believe that more needs to be done to reduce the environmental impact of anaesthetic practice and 97.09 per cent believe that more action is needed to reduce waste in operating theatres. There is clearly potential for industry engagement, with 94.91 per cent of respondents agreeing that manufacturers of anaesthetic equipment should do more to reduce plastic waste associated with their products. The ESWG survey also explored views regarding waste associated with multiple products, and found that respondents had a strong preference towards options that reduce waste associated with anaesthetic practice.

RESULTS FROM TRA2SH SURVEY

The TRA2SH survey incorporated a broader set of questions but was of smaller scale, with 59 responses. Two-thirds of respondents were Australian with one-third from New Zealand. Half were aged less than 35 years, 60 per cent were anaesthesia trainees, and all but two work primarily in public hospitals. At an institutional level, 44 per cent of respondents' hospitals have a sustainability officer and almost one-third have an active theatre sustainability group, with a similar number developing one. These are both important elements, as implementing change can be challenging without multidisciplinary support.

All respondents expressed frustration about the amount of waste produced in daily anaesthetic practice, similarly reflected in the ESWG survey, with great variability in waste streams between hospitals. The most commonly recycled items are shown in figure 1. Half indicated that their department is not educating new staff on different waste streams – a key step to maintain consistent and appropriate use.

Figure 1. Items recycled in hospitals reported by TRA2SH survey respondents



Practice also varies considerably at an individual level, with a few interesting points:

- 80 per cent use one syringe per drug in at least 80 per cent of cases.
- One in 10 draw up emergency drugs for every case.
- Only 7 per cent use IV paracetamol in at least 80 per cent of cases, with 11 per cent never using it and 40 per cent using it in fewer than 20 per cent of cases.
- Few (7 per cent) believe that drug trays for daily anaesthetic practice have to be sterile.

Turning off powered devices while not in use is a simple way to reduce our carbon footprint. Our results suggest that this is largely an issue of awareness. Most respondents were unsure if anyone switches off the anaesthetic machine (58 per cent) or the scavenging (75 per cent) and 44 per cent were unsure if anyone switches off the theatre lights.

Sevoflurane was first choice for maintenance of emergency general anesthesia in the majority of anaesthetics < 4 hours, maintenance of major trauma and general anaesthetic emergency caesarean section. Propofol TIVA maintenance was preferred by the majority for >4 hours surgery, BMI >35, high risk anaesthetic and known difficult airway. Respondents rarely used desflurane and most (97 per cent) expressed that if desflurane were to disappear overnight, it would not have a significant effect on their practice.

For volatile anaesthesia, more than 80 per cent used end tidal control in every case and 42 per cent used fresh gas flows of less than 0.5 L/min. Propofol waste was discarded in the sharps bin (47 per cent), drug waste bin (39 per cent) or general/clinical waste, reflecting varied guidelines and availability of pharmaceutical waste bins.

The majority of respondents (68 per cent) used personal vehicles to commute with a substantial minority cycling or running.

Barriers to sustainable travel included lack of public transport service, time efficiency and large commute distances.

Barriers identified to sustainable practices include infection control requirements, hospital executives, waste management companies, and binding contracts with suppliers. Most (61 per cent) feel supported by their anaesthesia department leadership to make environmental changes and 69 per cent feel that they have the ability to influence and instigate positive environmental practices.

We attempted to canvas a broad representation of the ANZCA and TRA2SH membership base and acknowledge that there is likely selection bias towards those with an interest in environmental sustainability.

CONCLUSIONS

The results of our surveys indicate that many anaesthetists and trainees in Australia and New Zealand are keen to implement more sustainable practices and see a reduction in waste associated with clinical care. There are many steps that can be taken at individual, departmental and institutional levels. Some of these opportunities are highlighted below. We encourage you to engage with TRA2SH, the ANZCA Environmental Sustainability Network, and other groups helping to build a more sustainable future.

Dr Rose Cameron, Dr Richard Seglenieks and Dr Jessica Hegedus on behalf of the ANZCA Environmental Sustainability Working Group (ESWG) & Trainee-Led Research and Audit in Anaesthesia for Sustainable Healthcare (TRA2SH)

**The authors would like to acknowledge Dr Stephen Lightfoot, Hannah Sinclair, Dr Verity Nicholson and Dr Ross Kennedy for their input in the ESWG Survey.*

OPPORTUNITIES FOR CHANGE: WHAT CAN YOU DO?

Personal practice	▪ Use end-tidal control with inhalational anaesthesia. ▪ Use an IV fluid bag instead of saline/water ampoules to draw up drugs. ▪ Avoid drawing up emergency drugs routinely.
Departmental level	▪ Consider reusable drug trays instead of single use products. ▪ Remove rarely used items from sterile packs. ▪ Improve staff education and signage for recycling bins. ▪ Promote avoiding desflurane in your department. ▪ Enquire about departmental drug waste management and ensure appropriate methods of drug disposal. ▪ Utilise the ANZCA Environmental Sustainability Audit Tool.
Institutional level	▪ Encourage telehealth pre-assessment clinics for appropriate patients. ▪ Support infrastructure to encourage cycling/running/walking to work, for example, secure cycle storage. ▪ Employ a sustainability officer. ▪ Establish and support a multidisciplinary theatre sustainability team.

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4. Malik A, Lenzen M, McAlister S, McGain F. The carbon footprint of Australian health care. Lancet Planet Health. 2018 Jan;2(1):e27-e35.

Next steps to greener healthcare:

ANZCA Environmental Sustainability Network

ANZCA REMAINS COMMITTED to minimising the health impact of climate change and supporting the profession in delivering high quality and safe care to patients and the community that is environmentally sustainable. The college, with the assistance of the environmental sustainability working group (ESWG), has demonstrated its commitment through:

- Developing *PS64 Statement on environmental sustainability in anaesthesia and pain medicine practice*, providing guidance to clinicians and facilities to develop and maintain practices that promote environmental sustainability.
- ANZCA Council's statement on climate change recognising the need for a unified and community-wide approach to action.
- Promoting the leadership of fellows, trainees and SIMGs through *ANZCA Bulletin* articles and webinars.
- Creating resources including the library guide and audit tool.
- Supporting the establishment of a new research grant.

With the ESWG completing its work, ANZCA Council approved the establishment of the Environmental Sustainability Network (ESN) to harness the expertise and enthusiasm of fellows, trainees and SIMGs to deliver change and demonstrate leadership in environmental sustainability.

The ESN will be a community of practice with the purpose of advocating, collaborating and promoting initiatives and projects related to environmental sustainability within anaesthesia, perioperative medicine, and pain medicine. The vision is for the network to position ANZCA as a proactive leader and advocate for environmental sustainability.

The work of the ESN will be encompassed in three key areas:

- Advancing sustainable practice – working with healthcare industry and healthcare services to reduce their environmental impact.
- Promoting sustainability research – driving research and translation through collaboration and mentorship.
- Supporting sustainability education – creating materials to inform the profession and the wider community.

The network will be guided by an executive and supported by the college's Membership Services team. Following expressions of interest, ANZCA's Professional Affairs Executive Committee approved the appointment of the ESN executive members.

ENVIRONMENTAL SUSTAINABILITY NETWORK - EXECUTIVE

Dr Scott Ma, SA (chair)
Dr Adam Crossley, WA
Dr Isabel Cooper, Vic
Dr Beth Hall, NZ
Dr Andrew Iliov, Vic
Dr Maggie Keys, Qld
Associate Professor Forbes McGain, Vic
Dr Raj Pachchigar, Qld
Dr Brenton Sanderson, NSW
Dr Archana Shrivathsa, WA
Dr Cas Woinarski, Tas

We would like to welcome individuals with a strong interest in environmental sustainability to join the ESN. To join or to find out more information please visit our environmental sustainability page at www.anzca.edu.au/about-us/our-culture/environmental-sustainability.

We look forward to building on the momentum already within the profession to deliver impactful change for the community.

Dr Scott Ma, FANZCA
Chair, ANZCA Environmental Sustainability Network

Exam success for Papua New Guinea candidates

Three new anaesthetic consultants in Papua New Guinea, (from left) Dr Rosemary Andrews, Dr Sohana Totori and Dr Indira Vele, who recently passed their Master of Medicine in Anaesthesiology II examinations.

THE ONGOING RAPID spike of COVID-19 cases in Papua New Guinea in recent weeks threatened the viability of the University of PNG School of Medicine and Health Sciences annual Master of Medicine (Anaesthesiology) I and II and Diploma of Anaesthesiology examinations from 22 October to 1 November.

Previously, the college's Global Development Committee supported all the exams with two external examiners travelling to PNG. However in 2020, with the inability to travel overseas, the exams were held with external examiners participating in the viva assessment via Zoom, reviewing theses and marking written papers. This year, the committee again assisted, with various members and other fellows acting as remote external examiners.

About 75 per cent of patients in the Port Moresby General Hospital are COVID-19 positive and hospital staff are stretched providing clinical services. A significant number of hospital staff were also in isolation, including some senior medical officers which necessitated a last minute restructuring of the exams to minimise time away from work for the clinicians. Two of the candidates became COVID-19 positive and were in isolation before the exams. Fortunately both remained well and were able to sit the exams, however further rescheduling was required to fit in with their period of isolation. Both of these candidates passed.

As the number of cases increased, hospital management considered cancelling all medical and nursing exams at the last minute, which would potentially delay training for another year as the current outbreak could continue for many months. To further complicate the process there was also a candidate from the Solomon Islands with two Solomons anaesthesia senior medical officers sitting in via Zoom, while two external examiners from Victoria lost power due to a major storm during an exam.

Despite these challenging circumstances the examination processes went smoothly, due largely to meticulous planning by Dr Pauline Wake and Dr Michelle Masta from the University of Papua New Guinea. Dr Wake and Dr Masta worked incredibly hard to structure and provide fair and comprehensive exams – both writtens, vivas and clinical cases. None of this would have been possible without their enthusiasm, drive and commitment to the development of anaesthesia in Papua New Guinea, which demonstrates the vital importance of academia for anaesthesia in Papua New Guinea and indeed throughout the Pacific.

The Global Development Committee has provided major educational support to Papua New Guinea and the greater Pacific through the Pacific Online Education (POLE) regular teaching sessions led by Dr Yasmin Endlich and supported by many fellows. More than 100 doctors and other healthcare professionals from over eight countries in the Asia Pacific participated in the 17 sessions held throughout 2021.

Thanks are also due to Dr Harry Aigeeleng (Madang) and Dr Lucas Samof (Alotau) who both travelled to Port Moresby to act as local examiners and Dr Arvin Karu, Dr Keno Temo, Dr Kenny Aaron, Dr Maria Maguna, Dr Lisa Akelisi, Dr Magea Pole and the other senior medical officers at Port Moresby General Hospital who were able to juggle their significant clinical commitments to examine their trainees.

Assistance outside of Papua New Guinea was provided by Dr Kaeni Agiomea and Dr Jack Puti, senior medical officers in anaesthesia in the Solomon Islands, and external examiners from ANZCA and the College of Intensive Care Medicine of Australia and New Zealand – Professor Terry Loughnan, Dr Anna Loughnan, Dr Richard Morris, Dr Mick Stone, Dr Roni Krieser, Dr Yasmin Endlich, Dr Chris Acott and Dr Mark Nicholls (CICM).

A special commendation goes to Terry Loughnan for his long-term commitment to the development of a sustainable anaesthesia workforce in Papua New Guinea who has acted as the external examiner for 13 years. This was Terry's last year as external examiner and unfortunately he was not able to be there in person. His daughter, Anna, assisted in this year's exams and will continue to support the Papua New Guinea health anaesthesia community. Many thanks Terry for your devotion to anaesthesia education in the Pacific.

Four oxygen concentrators and other items arrive at ANGAU Hospital, Lae on 8 October 2021 after a long and delayed journey from the UK.

2021 SUCCESSFUL CANDIDATES

Master of Medicine in Anaesthesiology (MMed II)
Dr Indira Vele
Dr Rosemarie Andrews
Dr Sohana Totori

Master of Medicine in Anaesthesiology (MMed I)
Dr Nellie Evo'o
Dr Imelda Bal
Dr Priscilla Mathew Nonge

Diploma of Anaesthesiology (DA)
Dr Jeremey Low
Dr Newman Berry
Dr Koani Lohia
Dr Ramokasa B Stanton (Solomon Islands)

Finally, the exams would not have proceeded without the support of the Society of Anaesthetists of Papua New Guinea and their president, Dr Arvin Karu and Professor John Vince, Professor Nakapi Tefuarani and the School of Medicine and Health Sciences at the university in holding the exams throughout the pandemic.

All this hard work was rewarded with all 10 candidates passing the exams – this is a fantastic achievement both for them and the people of Papua New Guinea who will benefit from their expertise and commitment in the years ahead. This is one of the largest graduating groups since the MMed (Anaesthesiology) program began in 1992. Also, six anaesthesia scientific officers (ASOs) passed their one year Diploma of Anaesthetic Science course at UPNG this year. These non-physician anaesthesia providers are invaluable in the provision of anaesthesia services in the remote provincial hospitals of Papua New Guinea.

Dr Indira Vele was awarded the college's Garry Phillips medal and prize for outstanding achievement in anaesthesia within the Masters of Medicine program at the School of Medicine and Health Sciences, University of Papua New Guinea.

Dr Jeremy Low was awarded the college's best Diploma of Anaesthesiology candidate who continues on to Masters of Medicine (Anaesthesiology) training.

The college's best final year medical student in anaesthesia prize will also be awarded in due course.

The college also donated personal protective equipment to the University of Papua New Guinea, with thanks to Multigate Medical Products who supplied N95 masks free of charge and the Royal Australasian College of Surgeons who donated hand sanitiser and provided logistical assistance in transporting the goods.

Earlier this year the Global Development Committee and the Rotary Clubs of Central Melbourne and Lae Huon Gulf donated four oxygen concentrators to the ANGAU Hospital in Lae. These were purchased from Medical Aid International in the UK and despite considerable delays in transport due to COVID-19 related global logistical issues, were handed over to Morobe Provincial Health Authority Chief Executive Officer Dr Kipas Binga on 8 October 2021. Dr Alfred Mel, Consultant Medical Oncologist Radiation and oncologist in-training provided invaluable help in the organisation, working closely with Rotary Club members in Lae and reports that the concentrators are proving to be very useful during the current COVID surge.

The Global Development Committee has a long history of supporting our colleagues in Papua New Guinea and working with them to sustainably build the anaesthesia workforce. The success of such a large cohort of final examinations candidates during some of the most challenging circumstances reflects on the high quality teaching being provided and demonstrates the value of consistent, long-term educational support initiatives.

Papua New Guinea is also unique in having a higher postgraduate diploma (HPGD) in subspecialty medicine. To date, in anaesthesia there has only been one – in cardiothoracic anaesthesia. Next year in 2022 sees several anaesthetists enrolled in higher postgraduate diplomas in intensive care, two in paediatric anaesthesia and one in obstetrics and gynaecology anaesthesia. There is a need to develop future HPGD curricula in pain medicine and head and neck anaesthesia in Papua New Guinea.

Adjunct Professor Michael Cooper, FANZCA
Chair, Global Development Committee

Remembering a pioneering paediatric anaesthetist

Westmead's great reputation as a paediatric hospital is due in no small part to the work of Dr Tom Voss in its early days. Peter Gibson remembers a pioneering paediatric anaesthetist.

DR TOM VOSS, who died earlier this year at the age of 95, was one of the outstanding and pioneering paediatric anaesthetists of his generation.

Tom began his medical career in South Africa in the shadows of World War II and, enamoured with the novel field of specialist paediatric anaesthesia, made an outstanding contribution to its advancement.

He was particularly involved in anaesthesia for neonatal cardiac surgery and postoperative intensive care. He emigrated to Australia in 1977 and helped establish paediatric anaesthesia services at Sydney's Westmead Hospital, training a generation of anaesthetists to his exacting standards for the safe and compassionate care of children.

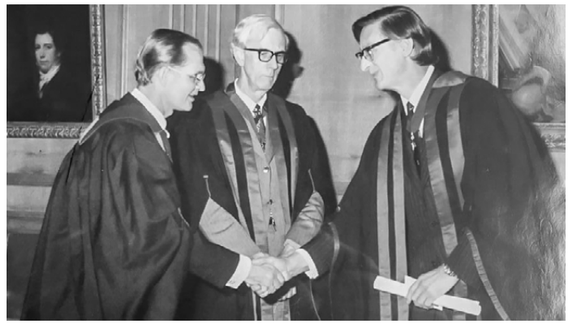
Tom was born in Windhoek, South West Africa (which later became Namibia), on 26 March 1926. In his junior years he moved schools every six months between Cape Town and Pretoria as his father was South Africa's solicitor to the Crown and travelled with the parliament.

He completed the first year of his medical degree before volunteering at 18 for service in the army medical corps. Near the end of the war he was flown into Venice in the forward glass turret of a Marauder B-26 aircraft at very low altitude which made an unforgettable impression on him. He was present in Milan at the time of Mussolini's death and saw his body hanging in public display.

Completing his medical degree at Cape Town University in 1950, he moved to London and passed the conjoint diploma in anaesthesia. He returned to Cape Town where he married Barbara, "the light of his life", in 1953. He was appointed as a specialist anaesthetist at Groote Schuur Hospital in 1958 and in 1961 he became department head at the Red Cross War Memorial Children's Hospital.

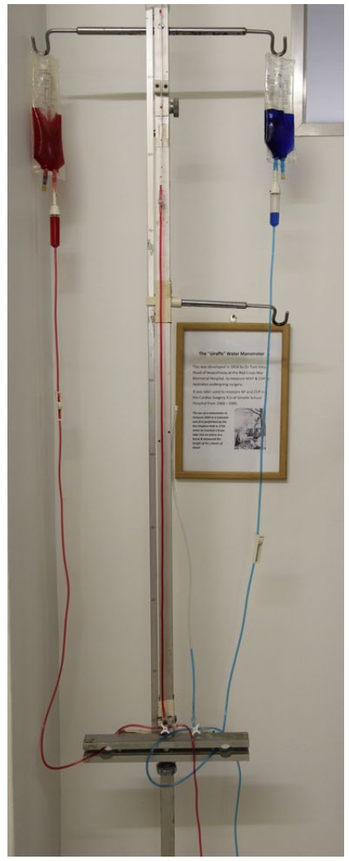
Tom had a passion for the development of paediatric-appropriate equipment. He researched dead space in paediatric circuits and ventilatory systems. He was one of the designers of the "Cape Town Circuit", a minimal dead-space breathing circuit for children.

He designed a system integrating the Bird ventilator with a circle system on a Boyles machine to allow ventilation of anaesthetised children including neonates. It became widely adopted throughout South Africa for use in children and adults until superseded by electronic microprocessor-controlled ventilators. It was used by Dr Joseph Ozinsky to anaesthetise the recipient of the world's first successful heart transplant at Groote Schuur Hospital in December 1967.



From top: Tom Voss in his retirement at home with his mandolin. Photo: Penelope Beveridge; Tom Voss receiving his certificate after being elected to fellowship of the FARCS.

"Tom's vast experience, calm demeanour and leadership ... enabled Westmead to become a centre of excellence and innovation, finally providing tertiary level paediatric services where most children in Sydney lived."



"He subverted the usual anaesthetist-surgeon relationship. When I asked him about working with Christian Barnard he said, 'Oh yes Peter, he used to cut for me'."

Tom developed a warm-water humidifier for use under anaesthesia and water manometers to measure arterial and central venous pressure during cardiac surgery. In 1973, in the SAMJ, he jointly published on the "Treatment of Congenital Heart Disease in Infants", with the pioneering cardiac surgeon Christian Barnard and his brother, Marius, describing their experience in the techniques of surface cooling, cardiac bypass and deep hypothermic cardiac arrest.

In the same issue he published on "The post-operative intensive care after cardiac surgery in the neonate." Marius Barnard, in his memoir *Defining Moments*, describes Tom as "meticulous and highly skilled in keeping neonates alive". In 1974 Tom co-authored an article in the BMJ detailing the Cape Town experience of treating severe neonatal tetanus over 20 years.

In 1974, Tom became the first South African to be awarded a fellowship of the Royal College of Anaesthetists by election, one of the college's highest accolades. In 1976 he was invited to join the British Association of Paediatric Anaesthetists as part of a limited overseas membership.

Tom emigrated to Australia with Barbara, sons, George and James, and daughter, Susan, in 1977.

In 1980 Tom was recruited to oversee paediatric anaesthesia services in the newly opened Westmead Hospital. While the bulk of elective paediatric services were provided in the more established paediatric hospitals, Westmead became the busiest neonatal service.

Tom's vast experience, calm demeanour and leadership allowed this to happen safely and enabled Westmead to become a centre of excellence and innovation, finally providing tertiary level paediatric services where most children in Sydney lived.

Tom was meticulous in his approach and he taught this to all trainees. Before a case, every single detail was pre-ordained and checked. He loved it if, by any small chance, you could come up with a more efficient or safer way of doing things and would incorporate it into his practice.

He was an early adopter of parental presence at induction and encouraged the use of epidural analgesia in neonates allowing early extubation after major surgery.

At Westmead, his practice extended to adults. On the dental list he would explain the physics of his enclosed Mapleson-A circuit while teaching the art of blind nasal intubation, an important skill to have prior to the advent of the fibreoptic bronchoscope.

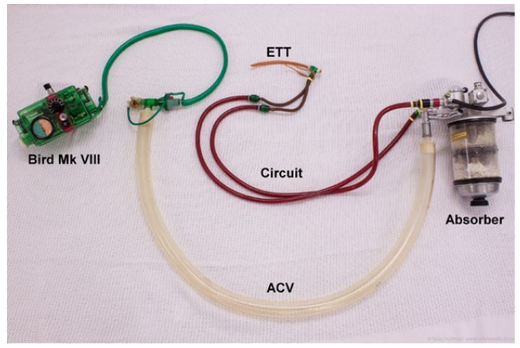
He had a dry self-deprecating sense of humour. He subverted the usual anaesthetist-surgeon relationship. When I asked him about working with Christian Barnard he said, "Oh yes Peter, he used to cut for me."

In 1992, Tom retired from Westmead Hospital where his daughter is now a senior anaesthetist. He continued to work part time until 2000. He was devastated by the loss of his wife, Barbara, in 2003 just before their 50th wedding anniversary.

Tom had many interests outside work. He was a cricket tragic and an ardent admirer of spin bowling. He had an extraordinary knowledge of the fauna and flora of Southern Africa. Tom loved music and played both the flageolet and a mandolin given to him by his father in 1933.

He became a much-loved member of the Sydney Mandolin Orchestra in 2004. The orchestra became a big part of his life, so much so, that at the age of 80, when asked for his profession by a zealous bank manager, he replied, "Mandolinist!" He became increasingly ill and frail in the last year of his life but remained unfailingly polite and positive, beloved by those who cared for him.

The Society for Paediatric Anaesthesia in New Zealand and Australia awarded Tom honorary membership in 2003 in recognition of his service to paediatric anaesthesia. It was a privilege to have known him and to have been taught by him.



Top left: "Giraffe" water manometer, developed in 1958 by Dr Tom Voss, head of anaesthesia at the Red Cross War Memorial Hospital, to measure MAP and CVP in neonates undergoing surgery. Above: Equipment Dr Voss developed while working in Capetown.

ANZCA Library resource selection: From suggestion to collection

Have you ever wondered how the library decides which resources to purchase and provide access to? One of the critical parts of maintaining the ANZCA Library collection is ensuring the collection is kept up-to-date and meets the ongoing needs of all its users. We consider:

- Requirements: The differences in the needs of a trainee to the needs of a fellow.
- Specialisations: Anaesthesia, pain, perioperative and critical care medicine require quite different resourcing.
- Locality: With users in different countries, the educational, organisational and cultural differences need to be kept in mind.
- Accessibility: Our resources need to be accessible – and that generally means online.
- Authority and quality: Ensuring resources are peer-reviewed or from an authoritative source, and avoiding predatory journals.

However, there are also crucial differences between how we resource our books and journals.

BOOKS AND E-BOOKS

Online medical texts can be very expensive to purchase, and with a limited budget, pragmatic selection decisions need to be made. Statistics show that that our trainees are overwhelmingly the biggest users of our books and e-books. Accordingly, the priority of our book budget tends to be anaesthesia and pain medicine exam-related titles. This means a new edition of any Primary Exam Recommended Reading List text will automatically go to the top of the online purchase list – often with a print copy – while other titles tend to go through a more rigorous selection process. This involves liaising with various faculties and SIG representatives to ensure appropriate texts are selected.

Fortunately, many of our key online texts are made accessible through ongoing specialty collection agreements. So if an anaesthesia or pain medicine e-book is published by Elsevier, Springer, McGraw-Hill or LWW then we'll often get it automatically as part of that agreement. Those titles, which include new editions, flow through to our discovery service seamlessly.

However, there are many publishers where we have to identify each and every title we might like to purchase, arrange quotes, negotiate the number of users who can access the title, and then purchase, invoice and enable them on our library system. This is a time-consuming and expensive process, and occasionally a title gets missed among the several thousand medical texts being published each year.

This is where our user suggestions often come to the "rescue". We receive a number of new book requests during the year from users who have spotted a new title, or, increasingly, are involved in the writing of a new title and want to give us a heads up. The latter are usually purchased, although not always online. Local titles are often published through smaller publishers – or are self-published – and it can be difficult to get institutional online access.

JOURNALS

There is no getting around the fact that medical journals are expensive, and that publishers/societies regularly ask for price increases in excess of 5 per cent every year (well above CPI). The compound effect of these increases over time mean that we sometimes have to drop other journals in order to compensate. This is where statistics are critically important, as it makes more sense to drop an underperforming journal and fulfil any gap using our document delivery service. Statistics also give us a valuable negotiating tool with regard to the relative value of a title when discussing price with a vendor.

This does tend to mean that there is little room for new journal subscriptions, unless they are low cost or come as part of a package, such as with ClinicalKey. Even then, it's not uncommon for journals to fall out of these packages with little notice, leading to further hard decisions about retention.

We rely on the robust relationships we've forged with our major vendors over years – all of whom we meet with regularly. As a result, most have a good understanding of the college, its mission and its users, which can make negotiations simpler. This doesn't always lead to a subscription but it does mean that discussions are productive and ongoing.

One factor we have little control over is when a journal moves to a different vendor. This is often a decision made at the behest of the society publishing the journal, and – depending on the reasons for the move and to which vendor – it can occasionally result in the loss of that journal. This was the case several years ago when we lost a major journal due to the new vendor/publisher making the decision to move away from large institutional subscriptions. As a result, there are now very few Australian hospitals/institutions with access to that particular journal. That doesn't mean we stop asking however, as shifts in policy happen all the time, particularly with the increasing move to open-access worldwide.

Overall, libraries are the original consortium buying and we take the responsibility of appropriately supporting our fellows and trainees seriously. In an online world where publishing and resources are changing, the ANZCA Library is keeping its finger on the pulse and following developments.

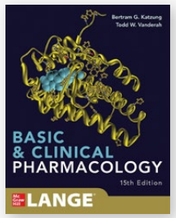
CONTACT THE LIBRARY: +61 3 9093 4967 library@anzca.edu.au anzca.edu.au/resources/library

New books

A complete list of new books can be found at:

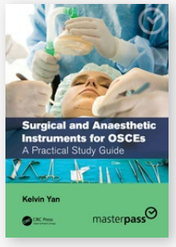
https://libguides.anzca.edu.au/latest/

NEW EXAM BOOKS



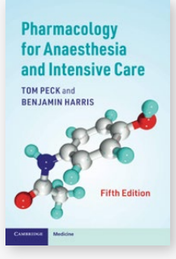
Basic & clinical pharmacology, 15e

Katzung BG, Vanderah TW. New York: McGraw-Hill, 2021.



Surgical and anaesthetic instruments for OSCEs: a practical study guide

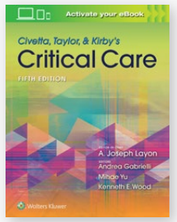
Yan K. Boca Raton, FL: CRC Press, 2021.



Pharmacology for anaesthesia and intensive care, 5e

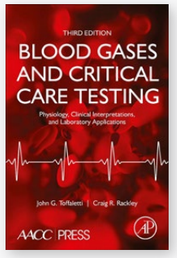
Peck T, Harris B. Cambridge: Cambridge University Press, 2021.

NEW CRITICAL CARE BOOKS



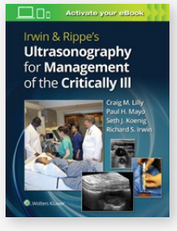
Civetta, Taylor, & Kirby's critical care medicine, 5e

Layon A J, Gabrielli A, Yu M, Kenneth E Wood K E, [eds]. Philadelphia: Wolters Kluwer, 2018.



Blood Gases and Critical Care Testing

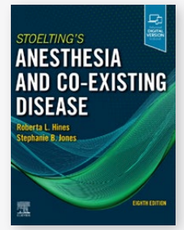
Toffaletti, JG, Rackley CR. Amsterdam: Academic Press, 2021.



Irwin and Rippe's Ultrasonography for the Management of the Critically Ill.

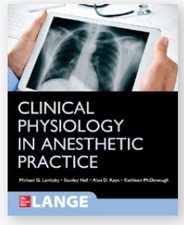
Lilly CM, Mayo PH, Koenig SJ, Richard S Irwin RS, [eds]. Philadelphia : Wolters Kluwer, [2021].

NEW EBOOKS



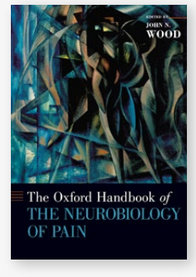
Stoelting's Anesthesia and Co-Existing Disease, 8e

Hines RL, Jones SB, Stoelting RK. [eds]. Amsterdam: Elsevier, 2021.



Clinical pediatric anesthesiology

Ellinas H, Matthes K, Alrayashi W, Bilge A [eds]. New York: McGraw Hill, 2021.



The Oxford handbook of the neurobiology of pain

Wood J [ed]. New York: Oxford University Press, 2018.

Toolkit for debriefing and support

ANZCA's new Critical Incident Debriefing Toolkit is supported through a grant from the Australian government's Specialist Training Program. Liz Crowe, a specialist in the field of critical care debriefing and staff wellbeing, was commissioned to develop a suite of resources focusing on critical incidents, "hot" debriefing and how to support a colleague. Here she explains how the toolkit works.

Anaesthesia is a complex and dynamic subspecialty of medicine. Due to the nature of the work and the vulnerability and acuity of patients, most anaesthetists will experience at least one adverse event in their career[1].

Experiencing a critical incident, near miss or adverse outcome creates stress and burden on anaesthetists with few hospitals or services providing a clear framework of support[2].

How leadership and systems respond to a critical event and how impacted individuals experience support is predictive of long-term outcomes for clinicians[3]. Healthcare professionals frequently depend on their colleagues more than family and friends to debrief and share work experiences due to confidentiality, concerns of burden or trauma and because they understand the environment. Yet, many anaesthetists irrespective of experience and seniority may struggle to be that supportive colleague or supervisor of training (SOT).

In 2019/2020 ANZCA and the Trainee Wellbeing Project Group recognised these gaps in knowledge and the significant impact this has on trainees.

RESOURCES FOR THE EXHAUSTED

Many of us have the great intention to become more knowledgeable or engage in debriefing or support however at the end of a busy shift or long week in order to restore our own wellbeing we don't take this any further. This toolkit has been designed to address your needs. It is divided into three clear sections so that busy anaesthetists can quickly go to the section that is of relevance to them.

1. What is a critical incident?
2. How to hot debrief.
3. How to care for a trainee or colleague in distress.

The Critical Incident Debriefing toolkit sits within the ANZCA library guides, however, can be googled and accessed easily on your smart phone.

The three resources are divided into sections dependent on your time restraints. If you have under three minutes there is a one page fact sheet that summarises everything you need to know. If you have 10-15 minutes there is a more detailed guide on the topic. Then, for those who want to immerse themselves in the literature, there is a whole toolkit inclusive of suggested TED talks, contemporary journal articles (many hyperlinked for ease of access), podcasts and videos. Each of these resources is stand alone.

If the thought of reading is too overwhelming you can listen to one of the three podcasts developed specifically for this resource.

WHY SHOULD I INVEST IN LEARNING HOW TO DEBRIEF?

Hot debriefing as a process should take between five to 10 minutes. While some people feel this time is not available during a busy theatre list, a failure to debrief often leads to delays, errors and time wasting due to the invisible cognitive load of people who are distressed or distracted[2]. When we don't debrief staff may "tea-brief" (work through processes and events over a cup of tea). Tea-briefs do not always lead to correct insights and change in organisational practice.

Hot debriefing is a tool for clinical safety and quality as well as an avenue of support and learning for those involved. During a hot debrief participants have the opportunity to defuse emotions, reflect and build on clinical excellence and recognise systems and skills that need to be adapted in the future. Debriefs allow us to capture work as experienced rather than work as imagined which fits the Safety II model[4]. Hot debriefs can also be used to capture data to advocate for change in processes or for additional resources.

SUPPORTING COLLEAGUES BENEFITS EVERYONE

Social support has been identified as having a profound effect on alleviating distress and contributing to the overall wellbeing of colleagues and the higher functioning of teams[5]. When you feel like your colleagues "have your back", or you can share a laugh you are more confident and engaged.

Research demonstrates that people who have a strong sense of support at work are less likely to experience burnout or post traumatic stress disorder and are more likely to be engaged and experience wellbeing[6,7]. When there is strong support in an anaesthetic department there is also strong psychological safety. This keeps you and your patients safer and happier.

We strongly urge you at whatever stage of your career to explore these resources: libguides.anzca.edu.au/criticalincident/home

Familiarise yourself with the format and consider printing the steps for a hot debrief and hanging them in theatres? Let us know what you think of the resources. This is a dynamic resource that will be changing and updated as required.

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The college welcomes your feedback on the CID toolkit to ensure it is remains relevant and we can update to meet your needs and expectations. Please email membership@anzca.edu.au.

Unconscious bias and interview panels

ANZCA is committed to advocating for gender equity in all the reaches of ANZCA and FPM activity and culture. The Gender Equity Sub-Committee (GESC) was established in 2017 to support this goal.

The focus areas of ANZCA's Gender Equity Action Plan include achieving equitable access to meaningful training, employment and leadership roles[1]. The GESC has identified that the recruitment process is an area where inequity can occur.

To this end, we set about designing a resource that interviewers could draw on to guide them in creating a fair recruitment process. This resource, the Unconscious Bias Toolkit, is now available on the ANZCA website.

Achieving a fair process involves minimising the influence of bias on an interviewer's decision-making. Bias influences the way we analyse and interact with others, both within a recruitment setting and also more broadly. Medical staff are trained to avoid conscious bias, however we all naturally have unconscious biases and it is important to be mindful of them.

Unconscious bias is an unintentional tendency to favour one group over another[2]. Without our knowing, unconscious bias affects the way we appraise others, be they peers, trainees and/or job candidates. In recruitment it can impair an interviewer's ability to make an objective assessment of a candidate's skillset and ultimately results in a less diverse workforce. It has also been shown to influence the way doctors interact with patients and, concerningly, may influence patient outcomes[3-5].

The toolkit contains introductory guidance on best practice for facilitating a recruitment process which minimises bias. It also provides resources for fellows to address their own unconscious biases. There is further information about types of bias, tools to confidentially self-assess unconscious bias, and practical suggestions to help address individual or system biases.

We believe the resources in this toolkit are not only relevant to recruitment, they are also relevant to patient care, teaching, supervision and our lives beyond medicine. We hope that fellows who have limited prior training or awareness in this area find it a valuable introduction.

To access the toolkit scan the QR code or visit the Gender Equity webpage – anzca.edu.au/about-us/our-culture/inclusion-and-diversity.

This toolkit was created in consultation with ANZCA Membership Services staff, Ms Hannah Sinclair and Ms Gabby White, who contributed to its planning, research and writing. We also acknowledge the support of other college staff and members of the GESC.

Dr Adele MacMillan (Vic) and Dr Louisa Lowes (NSW)
Members, Gender Equity Sub-Committee

References:

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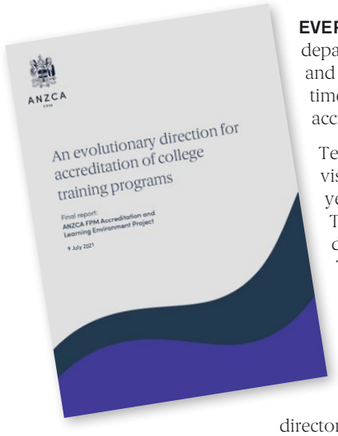
Clinical learning environment the key to world class training

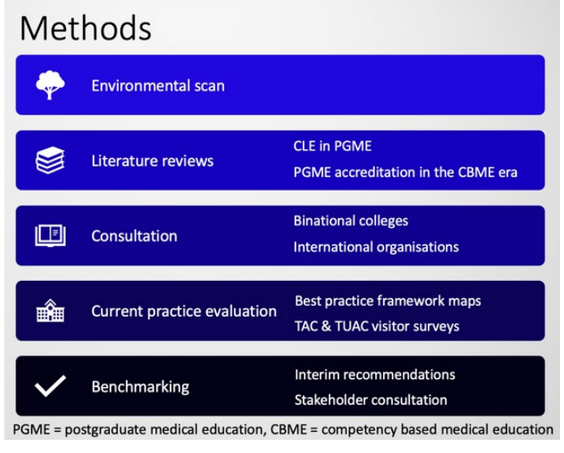


EVERY YEAR, ANAESTHESIA departments, pain medicine units and the college invest significant time and effort in training accreditation.

Teams of accreditors voluntarily visit training sites every five years (at least) as peer reviewers. Their findings support careful determinations by the ANZCA Training Accreditation Committee (TAC) and the FPM Training Unit Accreditation Committee (TUAC). There are surveys and meetings with key players – trainees, supervisors of training, department directors, consultants and hospital administration. For departments, there is considerable work and, not surprisingly, sometimes stress in collating evidence against the seven college accreditation standards, the visit and responding to TAC/TUAC requirements.

Given that accreditation is high stakes and consumes substantial resources, it is crucial that the college ensures it is both effective and efficient for all involved. From 2019 to 2021, the college convened a joint ANZCA and FPM Accreditation and Learning Environment project (ALEP). Mixed methods research (see Figure 1) benchmarked college processes against best practice and investigated how accreditation can better evaluate the clinical learning environment (CLE). This article is a high-level summary – the more-detailed final project report is on the college website (anzca.edu.au/news/training-programs-news/college-sets-strategic-direction-for-evolution-of).

Figure 1



Our environmental scan identified seven main areas that impact training accreditation – community expectations and professional accountability, jurisdictions and workforce, accreditation in other sectors such as health services and universities, cultural safety and security, contemporary educational developments, data sources and intergenerational considerations. Examples of each are in the report.

An early step was to define key terms for common understanding:

- Accreditation: The process by which a credible, independent body assesses the quality of an education program to provide assurance that it produces graduates who are competent to practise safely and effectively as specialists. *International Association of Medical Regulatory Authorities*
- Clinical learning environment: How trainees experience the curriculum in their workplaces. It includes interpersonal interactions, culture and resources. *Developed for ANZCA and FPM by ALEP*

Not surprisingly, CLE is a key driver of training outcomes. Higher quality CLE improves trainee learning, satisfaction and assessment performance, along with trainee and supervisor wellbeing. There is some evidence that CLE also impacts future specialist practice, with complication rates and consultant decision-making influenced by where the doctor trained. CLE components (domains) are shown in Figure 2. CLE measurement tools have been developed and validated. Three were developed for anaesthesia training, including two in our own training program. None is specific to pain medicine, although there are at least three relevant generic measures. The project determined that trainee safety requires at least five responses.

Figure 2

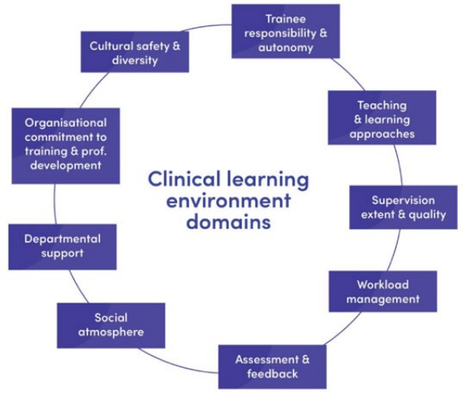


Figure 3

We interviewed key representatives of selected binational colleges in our region and accrediting bodies in the USA, Canada, the UK and Ireland and two extensive literature reviews. Using this evidence, we defined PGME accreditation best practice (see Figure 3). An overarching finding is that competency-based medical education (CBME) requires outcomes-based accreditation. While process measures remain useful, increasingly the "holy grail" of accreditation is measuring training outcomes, ideally the quality of specialist practice. However, practically is intermediate outcome measures like achievement of training milestones and assessment performance. Additionally, high quality accreditation combines quality assurance measures (for minimum training standards) with continuous quality improvement (to promote striving for training excellence).

TAC and TUAC visitors completed surveys of current practices to identify strengths and areas for improvement; survey results are in the report. To identify gaps, current anaesthesia and pain medicine accreditation standards and processes were mapped to best practice frameworks and accreditation standards of the Australian Medical Council (AMC) and Medical Council of New Zealand (MCNZ). Departures from best practice were considered in our context and expressed as recommendations for accreditation evolution over the short (within 2 years), medium (3-5 years) and longer term (out to 10 years). Draft recommendations were tested with college groups and individuals to produce final recommendations (see Figure 4). Each of these was assessed for opportunity and risk (see final report).

Project group members

Dr Kieran Davis
Dr Jeff Kim
Dr Vaughan Laurenson
Dr Cate McIntosh
Dr Craig Noonan
Dr Bronwyn Posselt
Dr Lindy Roberts
Dr Natalie Smith
Professor Michael Veltman
Associate Professor Deb Wilson
Dr Mark Young

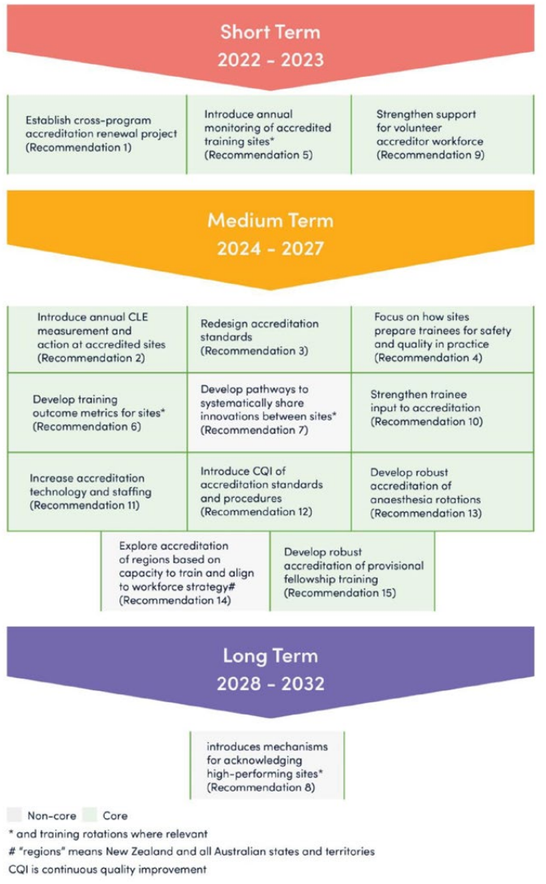
Invitees

Associate Professor Leonie Watterson
Professor Jennifer Weller
Dr Jennifer Woods

Staff

Ms Caroline Beaney
Ms Stephenie Cook
Ms Phoebe Navin
Associate Professor Robert O'Brien
Ms Ellen Webber
Ms Elizabeth Short

Figure 4



The final report has been approved by the ANZCA Council and the FPM Board reflecting their commitment to progress this work. Our overarching proposal is a cross-program accreditation redesign project that introduces effective practices college wide. This includes generic standards applicable to all college training programs plus specialty-specific standards, an approach that is scalable for future training program development. Next steps include planning how the redesign work will proceed, starting with short-term recommendations in 2022 and 2023. This coincides with AMC and MCNZ college reaccreditation in 2022. Those with an interested in planned changes will be consulted to ensure these are practical and acceptable.

A huge shout out to members of the project group, invitees and college staff whose dedication and energy over several years (and despite the pandemic) have led to robust outcomes. We also thank the ACGME, CAI, GMC, RCPSC, ACEM, CICM, RACMA, RACP, RACS, RANZCOG and RANZCP for generously sharing their practices; and TUAC & TAC visitors and others for thoughtful survey responses.

Dr Lindy Roberts AM
ANZCA Director of Professional Affairs (Education)

Dr Kieran Davis
FPM Vice Dean

Co-chairs on behalf of the ALEP

Trainee wellbeing project achievements celebrated

IT'S A WRAP! Recently the Trainee Wellbeing Project Group (TWPG) held its final meeting to mark its achievements.

Over the past couple of years, small groups led by trainees have developed practical resources to improve anaesthesia and pain medicine trainee wellbeing. Project members also contributed to related activities across the college.

Key outcomes

- Updating "the part zero course" content for hybrid delivery (online and face-to-face) so all trainees, no matter where they live and work, access orientation to training through the renamed "introduction to anaesthesia training program", for launch in 2022.
- Timely notification of supervisors of training when trainees receive news of exam failure.
- The "Fundamentals of success: primary exam" workshop.
- "Tips on feedback conversations", for launch at the 2022 Annual Scientific Meeting (ASM).
- Improved trainee access to the ANZCA educators program.
- Revised emails and letters to trainees for better empathy and support.
- A "trainee lead" role description for departments to improve trainee input into matters that affect them (in development).
- Library guides on doctors' health & wellbeing – libguides.anzca.edu.au/wellbeing/ – and leadership and management – libguides.anzca.edu.au/leadership
- New video resources in the communicator role library guide, for a 2022 ASM launch.
- A wellbeing advocate role description and increased college support for advocate networks in Aotearoa New Zealand and the Australian regions.
- Renaming "the trainee experiencing difficulty process" as "the trainee support process", better reflecting its intention and hopefully reducing stigma for trainees requiring additional support.
- A critical incident support toolkit – libguides.anzca.edu.au/criticalincident/home – and resources, recognised for continuing professional development (CPD) credits.
- The ANZCA and FPM CPD Program credit for wellbeing sessions, with guidance for course providers.
- A wellbeing question in each senior trainee, specialist international medical graduate (SIMGs) and fellow's CPD plan.
- Review of professional document *PS49 Guidelines on the health of specialists and trainees*.
- Fundamentals of mentoring resources – https://networks.anzca.edu.au/d2l/home/7600 – (on Networks) developed and recognised for CPD credits.
- Triangulation of ANZCA trainee survey results with the Medical Board of Australia medical training survey for a better understanding of trainee experiences and needs.

Of course, support for wellbeing of trainee, fellow and specialist international medical graduates will always be a work in progress. Many initiatives will be picked up in ongoing and future educational and fellowship projects. Details of outcomes, ongoing work and future plans are on the website – www.anzca.edu.au/about-us/doctors-health-and-wellbeing.

So many committed and hard-working contributors and so much achieved. Thank you all!

Dr Lindy Roberts AM ANZCA DPA (Education)

Ms Mairead Jacques,
Operations Manager, Fellowship Affairs

THANKS TO ALL TRAINEES, FELLOWS, STAFF AND OTHER EXPERTS WHO CONTRIBUTED

Dr Helen Abbott
Dr Myat Aung
Dr Michael Barlev
Dr Rachel Bell
Dr Hannah Bellwood
Dr Suzanne Bertrand
Dr Jenny Bird
Dr Suze Bruins
Dr Rose Cameron
Mr Christopher Campbell
Dr Alison Corbett
Dr Julia Cox
Ms Liz Crowe
Dr Julius Dale-Gandar
Dr Greg Downey
Dr Harry Eeman
Ms Laura Foley
Dr Patrick Galloway
Dr Alyssa Gardner
Dr Mikaela Garland
Dr Beth Hall
Dr Emily Hamilton
Dr Alice Hickey
Dr Kushlin Higgie
Ms Mairead Jacques
Dr Alison Jarman
Mr Olly Jones
Ms Nadja Kaye
Ms Margaret Kerr
Dr Rebecca Lewis
Ms Lily Lian
Dr Jessica Lim
Dr Nick Lower
Dr Scott Ma
Dr Claire Maxwell
Dr Stuart McKnown
Dr Leesa Morton
Dr Emily Munday
Dr Susan Nicoll
Ms Nicole Pulitano
Dr Emilia Reece
Ms Liane Reynolds
Dr Lindy Roberts
Ms Tamara Rowan
Dr Amutha Samuel
Dr Richard Seglenieks
Dr Kanan Shah
Ms Jan Sharrock
Dr Maryann Turner
Ms Shilpa Walia
Ms Gabby White

Successful candidates

Primary fellowship examination

2021.2 Exam
A total of 146 candidates successfully completed the primary fellowship examination:

AUSTRALIA

Australian Capital Territory

Brandon James Kirsten Barks
Nikitshika Keshwan
Shruti Krishnan
Erika Strazdins

New South Wales

Marko Vojislav Bajic
Cheyne Bester
Jarrod Brady
Andrew Stephen Casey
Marena Cosman
Elizabeth Heather Dalton
Simon Luke Danieletto
Sophie Therese Faehrmann
Shun Hin Kenjo Ho
Anthony Hodsdon
Bahaven Jeyaratnam
Riddhi Piyush Joshi
James Chan Hee Kim
Nitesh Kumar
Dulitha Lakwin Kumarasinghe
Kathleen Anne Leaper
Sang Mi Lee
Ivy Thuy Lien
Kyle John Lindfield
Susannah Maria Lyes
Tanya Manolios
Andrew David John Mckeown
Alexander Thomas Mende
Sian Louise Myers
Laura Jayne Noble
Paul Hoang Nguyen Pham
Madison Peta Reynolds
Haydn Robert Sawtell
Annie Shi Ruo Shaw
Melissa Cathryn Smith
Adam Avram Sonnabend
Patrick Nicolas Stapleton
Darren Kenneth Tiao
Shelly Ying Bin Wen
Yao Lin Yang

Queensland

Jonathan Alexander Alcock
Justin Azzopardi
Xavier Douglas Chadwick
Lynsey Maree Cochrane
Andrew Kevin Cook
Brett William Delahunty
Rasmeet Singh Dhaliwal
Daniel Philip Gillespie
Jake Robert Greentree
Taissa Irene Groch
Abir Guha
Catherine Victoria Hampton
Steven Alexander Hocken
Robert Charles Hoffman
Nicole Filipa Jacobs
Dayal Gamunu Jayawardena
Antony Ji
Rafid Shahriyar Karim
Tommy Lam
Paul Cheng Chee Lim
Yu-Hsuan Liu
Joel Alexander Jonathan O'Brien
Amy Elizabeth O'Sullivan
Naomi Piyaratna
Melissa Jane Sharpless
Yoni Shor
Veeranjit Singh
Hannah Marie Woodcock

South Australia

Mendel See Hok Au
Alyssa Jane Gardner
Sam Douglas Kirchner
Jolene Ralph
Lara Christina Schemeczko
Jarmila Sterbova

Tasmania

Terence Guan Hui Kwok
Matthew Lyndon Pitkin

Victoria

Joseph Ross Annetta
Katarina Arandjelovic
Nigel Thomas Arulanandam
Jacqui Bell
Hannah Elizabeth Vereker Bergin
Brandon Guan-Fu Chan
Yunn Li Chen
Ru Dee Chung
Lisa Christine Marstrand Dahl
Meredith Anne Davies
Katherine Ann Davis
Lauren Jane De Koning
Mark Patrick Engelbrecht
Adam Fambiatos
Luke Robert Fletcher
Samuel William Fraser
David Konstantin Frishling
Tyler James Goodall
Mason Ross Habel
Sean Angus Harris
Madeleine Xi Xian Hollitt
James Cheng Jiang
Ifrah Afreen Khan
Janette Law
Kathleen Rose Macintire
Thomas Donald James Martin
Andrew McNiece
Philip John Moore
Mary Thien-An Nguyen
Emma Louise Paxton
John Robert Elliott Pearson
Andrew Rabinovich
Christine Louise Shanahan
Matthew Alastair Stewart
Andrew Seong Kiat Tan
Heidi Helene Graham Thies
Kristen Mary Tuffin
Benedict Wong

Western Australia

Kim James Maher
Emily Catherine Scott
Dr Lee Thompson
Rebecca Francisca Ruth Wood

NEW ZEALAND

Helen Frances Abbott
Dennise Angela Castaneda
Devika Chandra
Daniel Ching-Hsuan Chiou
Timothy Clarence Crampton
Daymen William Huband
Dominic Michael Johnpillai
Catherine Anne Liddle
Cecilia Elsa Linudottir
Vernon Alexander Mcgeoch
Aidan Shaun Joseph McGrinder
Jack Bartholomew McNally
Eilidh Gladys Menzies
Louis Garvan O'Faherty
Chinmay Pandit
Thomas Kevin Macintosh Scott
Millie Settle
Vimu Matthews Sinhalage
Sean Smyth
Nippun Sofat
Bhavan Srikumar
Philip Charles Sugden
Leo Taylor Urquhart
Pranav Raj Pranav
Lucinda Jane Wahlers
Kailun Wang
Caleb Wei Hong Watene
Emma Catrin Williamson
Lewis Hamish Wixon

RENTON PRIZE

The Court of Examiners recommended that the Renton Prize at this sitting of the primary examination be awarded to:

Mason Ross Habel, Victoria

MERIT CERTIFICATE

The Court of Examiners recommended that a merit certificate at this sitting of the primary examination be awarded to:

Katherine Ann Davis, Victoria

Renton Prize

The Court of Examiners recommended that the Renton Prize for the half year ended 31 December 2021 be awarded to:

Mason Ross Habel, Victoria

"In my final year of medical school at the University of Tasmania, I undertook a two-week selective placement in anaesthesia at Western Health in Victoria. What started as an attempt to sneak my way into the Victorian internship applicant pool, piqued interests I'd already developed competing in the Australian Medical Students' Association Emergency Medical Challenge.

I began my anaesthesia training in 2021 through the North-West Training Scheme in Victoria and was fortunate enough to find myself part of an impeccable study group and teaching program. Despite not meeting half the members of my study group in person until we had been studying for nearly four months, Dee, Luke and Katherine had the unique pleasure of joining me on Zoom each Sunday evening for close to a year.

After nearly two years of training applications, exams and lockdowns I'm slowly finding my way back to a sense of normal life. I look forward to spending more time (not via Zoom) with my friends and family and I hope that I can repay the support that I received from every level of the anaesthesia profession to future trainees in the years to come."

The Court of Examiners recommended that the Renton Prize for the half year ended 30 June 2021 be awarded to:

Natalie Sarah Elizabeth Smith, WA

"I consider myself very fortunate to have grown up and studied in Perth. Although I entertained many potential career paths, critical care was an early passion, and after my first exposure to anaesthetics, I was hooked. I was subsequently incredibly grateful to be offered a training position in Western Australia, and so the primary exam journey began.

It was a challenging year, particularly with the uncertainties brought by the COVID pandemic. My family and friends were supportive and understanding throughout, always there for a debrief, or with some much appreciated home cooking. I am thankful to all of the consultants and senior trainees who relived their primary exam experiences to help me study. Most of all, I could not have got through it without my amazing study group – both colleagues and friends – who provided support, knowledge and camaraderie.

Since the exam, I have enjoyed travelling through the south-west and Tasmania, and spending more time with my friends and family. I have become involved in teaching primary exam candidates, which is both challenging and rewarding. I am looking forward to the remainder of my specialty training and future as an anaesthetist, truly the best job in medicine."

Final fellowship examination

2021.2 Exam
One hundred and thirty-eight candidates successfully completed the final fellowship examination:

AUSTRALIA

Australian Capital Territory

Timothy Robert Charles
Daniel Yung Jian Foong
Michael Yonghong Li
Sanjeev Prakash Naidu

New South Wales

Jack Bellamy
Melissa Xiao Ling Chin
Jonathan Kok Kwan Chua
Ashley Claire Davis
Andrew Gerard Duckworth
Thomas Charles English
Kaitlin Maree Faulkner
Angus Hume Fisher
Justin Gee-Yun Fong
Lachlan Christopher Frawley
Jimmy Yen-Chun Fu
Jessica Lauren Gani
Arghya Gupta
Nathan Harvey
Sarah Jane Hayes
Karolin Sophie Heck
Riffat Jannat Islam
Sam Lucas Jacobsen
Nicole Loren Kalish
Sameeka Kariyawasam
Natalie Bree Kent
Sophie Joy Klaassen
Oh Ryong Kwen
Christopher Hoi Ching Kwong
Jacqueline Van Lai
Sarah Leighton
Amy Chur-Yee Liu
Holly Eliza Martin
Samuel Michael McCormack
Suraj Sukumar Nair
Mitchell Peter Nolan
Anthony Peter Notaras
Malin Anna Mary O'Leary
George Edward Thomas Perrett
Sam Alexander Phillips
Ganesh Prabu Ramanathan
Richard Pieter Ruberti
Paul Sochor
Nicholas James Taylor
Nicholas Graham Walker
Sheung Kai Benjamin Wan
Timothy James Webb
Chantelle Mary Leggett Willard
Shaun Michael Young

Queensland

Stuart Tremayne Andrews
Brendan Anthony Bates
Anthony David Brown
Dominic Jonathan Cauldwell
Andrew Chazan
Hayley Elizabeth Collis
Robert Crowley
Priyanka Dhillon
Robert Charles Eccleston
Tessa Louise Jessica Finney-Brown
Anita Maria Flynn
Nicole Elise Galletly
Brendan Edward Frederick Goodwin
Ella Louise Houston
Robyn Julie Ison
C'havala Ruth Jaramillo
Mitchell James Hedley Kelly
Siobhan Eileen Elizabeth Lane
Kathleen Dominique Lanigan
Yingrui Liu
Hugh Speed Frank Mackenzie
Lois Clare Mackley
Andrew Duncan McGregor
Rhys William Morgan
Sean Elliott Morrow
Nathan Christopher Pratley
Thomas Benjamin Roberts
Hashan Dinuk Samarasinghe
Emerald Aree Stewart
Catherine Stephanie Stirzaker
Zach Daniel Tappenden
Gemma Caroline Todd

South Australia

Lucy Barker
Andrew Wesley Thomas Burch
Thomas Peter Fox
Matthew David Higgins
Tu Nhat Nguyen
Aimee Som
Joanne Ming Hui Tan

Victoria

Marian Louise Biddle
James Alexander Cole
Jason Calder Denny
Perdita Alexandra Gregory
Grace Breanna Hollands
Andrew Huang
Huw David John
Jason Bob Kong
Harsch Kothari
Jennifer Lay
Kevin Jerome Murphy
David Paul Phillips
Moon Hae Pyo
Morgan Quinn
Michael John Remilton
James Edward Roth
Katherine Amanda Steinfort
Stuart Noel Watson
Angela Lian Jeen Wong
Amr Mohamed Essam Zahran

Western Australia

Paige Ashton Bavich
Lee Daniel Jervis
Yvette Claire Francoise Landels
Siaavash Maghami
Fionn O Laoire
Heather Isabel Patterson
Nathanial Adam Teo
Claudia Alexandra Von Peltz

NEW ZEALAND

Oliver Bennett Ashby
Ciaran Mark Barr
Michael James Carpenter
Jacky Ka Chun Chan
Georgina Rose Denning-Kemp
Ciaran Patrick Downey
Joseph Frederick Follows
Rao Fu
Jason Ming Hong Goh
Sarah Joanne Goodwin
Jennifer Elaine Greenwell
Joseph Thomas Hayward
Catherine Madge McGinnity
Lisa Newby
Daniel Paul Ramsay
Kathryn Louise Travis
Qi Hong Wong

SIMG EXAMINATION

Six candidates successfully completed the specialist international medical graduate examination:

AUSTRALIA

New South Wales

Stefan Lang

Victoria

Ashok Kumar Jayaraj
Bijaya Kumar Shadangi

Western Australia

Balaji Kumaresan
Jignesh Kumar Parmar
Muhammad Samin

CECIL GRAY PRIZE

No candidates were awarded the Cecil Gray Prize for the 2021.2 final examination.

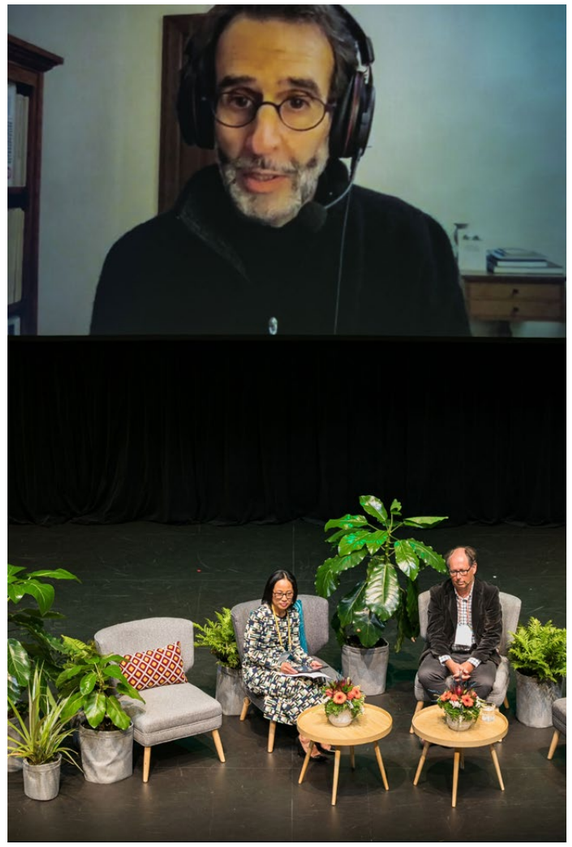
MERIT CERTIFICATES

Merit certificates were awarded to:

Jacqueline Van Lai, New South Wales

Ella Louise Houston, Queensland

Aotearoa New Zealand Anaesthesia ASM – He tangata, he tangata, he tangata



Dr Veronica Gin (left) chairs the session – Data driven decision-making which featured Dr Dan Sessler from the US (big screen) and Associate Professor Ross Kennedy (right) plus Dr Doug Campbell live from Auckland.

SHOWING REAL-LIFE EXAMPLES of how health services, systems, people, and even buildings can become safer and more resilient following disasters was one of the take-home lessons from a captivating Aotearoa New Zealand Anaesthesia Annual Scientific Meeting that was broadcast from Christchurch on 27-30 October.

The theme this year, Whakaora (To Heal): Our patients, Ourselves, Our City, Our Planet, was ambitious. However the convenors delivered that and more with session after session of hard-hitting, sometimes confronting and always edifying presentations.

From the high-powered content delivered by the keynote overseas speakers Professor Carol Peden, Professor Dan Sessler and Professor Bernhard Riedel, to the compelling stories from the Christchurch earthquakes and mosque attacks, the running narrative was about learning and doing things differently.

Professor Peden, a world expert on emergency laparotomy audit, probably best summed this up when she quoted a proverb that is relevant to us now as we navigate a pandemic – *He aha te mea nui o te ao? He tangata, he tangata, he tangata | What is the most important thing in this world? It is people, it is people, it is people.* In her Alan Merry Oration, she talked about using big data for emergency laparotomies to change practice – but she said data alone is not enough. "You have to tell the stories. Data does not motivate people. For change to happen you have to get the why ... the emotion as to why we have to do things differently."

Professor Sessler used the power of big data sets to show that every minute of hypotension counts when it comes to outcomes for our patients in 30-day mortality, myocardial injury, acute kidney injury and post-operative cognitive dysfunction. Not only that, most hypotension occurs before the surgeon touches the patient, so we are accountable. In a subsequent session, he further elaborated on myocardial injury after non-cardiac surgery, telling us that pre-operative screening is problematic and the single best predictor for myocardial Injury after non-cardiac surgery (MINS) is N-terminal pro B-type natriuretic peptide (NT-proBNP).

In the Perioperative Essentials session, Professor Riedel discussed prehabilitation, describing it as the "yin" to the "yang" of postoperative ERAS and reducing clinician variability to improve outcomes. He emphasised the importance of multimodal prehabilitation, including improving nutritional status, and functional capacity with exercise to improve VO2 max and anaerobic threshold. It takes 12 weeks to build a kilogram of muscle, and alarmingly only seven days to lose it in the catabolic state post operatively.

The session called Reshaping our city for the future, brought up some strong emotions for doctors who worked through the quakes and mosque attacks. The session was about the failure of the buildings from the engineering perspective, the lessons learnt from a hospital under siege during the earthquakes with limited power, light, water and food, and the remarkable few hours in Christchurch Hospital following the mosque attacks in that city.

Clockwise from above; The organising committee – back row from left: Dr Amanda Gimblett, Dr Ross Scott-Weekly, Dr Graham Neilson, Dr Richard Seigne, Dr Andrew Marshall, Dr Kelly Tarrant and Dr Daniel Hartwell, front row: Dr Christian Brett, Dr Ben van der Griend, Dr Veronica Gin, Ms Elise Hemmingsen; The Māori welcome from Dave Brennan; Dr Doug Campbell on the big screen and Associate Professor Ross Kennedy in the Q&A session looking at how data can change the way we practice.

These also led into a fascinating session on simulation and human factors. Christchurch anaesthetist and inventor Dr Dan Hartwell explained his new respect for doors that work after leading some of the trouble shooting in his new theatres in a new building still under warranty. He talked about how simulation is becoming a preferred start to a new procedure or piece of equipment instead of the add-on at the end.

In the ANZCA-sponsored presentation, Professor Victoria Brazil from Queensland spoke about translational simulation and team training. Rather than creating simulation programs and hoping people will come, Professor Brazil says we need to use simulation "to solve real clinical problems, using goals co-created with the colleagues we aim to serve".

Auckland Intensivist Dr Carl Horsley looked at how you can build safety and planning into a system if you move away from the industrial, neoliberal obsession about outputs and concentrate more on relationships and team resilience. The response of the Middlemore Intensive Care Unit to the Whakaari/White Island burns victims proved the work they are doing is paying off.

The equity session put out a challenge to the college, to employers and to colleagues: We have a long way to go both in cultural safety, health equity and gender equity. Professor Suzanne Pitama named her speech "Educating for equity – the role of constructive alignment between medical schools and ANZCA". Professor Pitama reduced the big questions to the five "Ps" and challenged ANZCA to consider its strategy and the education it provides to trainees and fellows. She asked: Is there purpose in addressing Indigenous health needs? Is there partnership with local community organisations and the Indigenous health sector? Are we recruiting the right people, retaining Indigenous trainees and are we making sure that non-Indigenous colleagues are culturally safe? Are we on point? Do we have training and a curriculum that is inclusive of the history and culture of Indigenous peoples? Are we including evidence of current systemic racism that maintains inequity in the health system (including within secondary and tertiary care)? Do we include evidence of clinician bias that impact on Indigenous patient care? And are we advocating for placements? Do we need to make sure there is ongoing exposure, and different experiences to embed skills to support diverse realities for trainees, and avoid stereotyping?

With more than 400 registrations and a virtual option to view recorded sessions until the end of January, the Aoetearoa ASM is proving to be up there with the best attended yet.

Dr Sally Ure
Chair, ANZCA New Zealand National Committee

Adele Broadbent
Communications Manager, NZ

Victoria

Melbourne Winter Anaesthetic Meeting

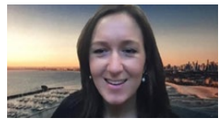
Dr Michelle Horne and Dr Kaylee Jordan (co-convenors) welcomed more than 200 attendees to a "Perspectives" themed program, echoed in the many presentations, workshops and small group discussions on offer over the last weekend in August. They equally expressed their excitement in hosting this annual event for the first time on a virtual platform.

The meeting consisted of sessions "Plenary", "Progress or practical perspectives", "Population or perioperative perspectives" and "Quality assurance" on the Saturday, and engaging workshops and small group discussions on the Sunday.

This virtual meeting was a huge success as attendee feedback results indicated 87 per cent would be very likely to participate again if hosted in a similar virtual style in the future.

"Well organised, interesting and diverse program"

"These are diabolical times – Zoom is a practical way for people to get together with great logistics (and pants optional) and low costs for organisers. Thank you for a great meeting!"



From top: Dr Michelle Horne; Dr Kaylee Jordan.

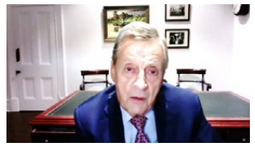
CME Evening Meeting

On 9 September, 420 people joined the CME Evening Meeting "Why the universe loves anaesthetists but loves barristers more" to hear presentations from Dr David Daly (MBBS, FANZCA, MClinEpi) and Mr Ross Gillies QC, led by convenor, Dr Lucky DeSilva. It has been our largest meeting to date!

Dr Daly spoke to considerations confronting clinicians when dealing with litigation outcomes including cross examination responses, and insurance.

Mr Gillies pointed out, to determine whether the universe loves one profession more, over another, rests with the definition of "love" being paralleled to "good fortune". It is understood both professions have "good fortune" not only in terms of loving their occupation, or being needed by their respective professions and the public, but also mentioned other common factors.

In his closing remark, Mr Gillies concluded that the universe loves anaesthetists more than barristers because "barristers cause pain while anaesthetists remove it... but are equally lucky".



From top: Dr Lucky DeSilva, Dr David Daly and Mr Ross Gillies.

Quality and Assurance Meeting

The meeting, "Your pain management toolkit: An update on what's available for the complex pain patient" was opened by Dr Lucky DeSilva (convenor) on 16 October and began with a lecture session from Dr Gloria Seah (FFPMANZCA, FANZCA) on "Case discussions" and Dr Sarah Donovan (FFPMANZCA) on "Pain adjuncts – ketamine, lignocaine, buprenorphine, methadone, intrathecal morphine in complex cases".

After the presentations, participants moved into breakout rooms to carry on small group case discussions.

Victorian Registrars' Scientific Meeting

This meeting is a solid platform for trainees' to present their pioneering research and audits. On 12 November this brought together a great line up of trainees and those who joined to support their colleagues, convened by Dr Kaylee Jordan.

We also heard inspiring talks from our adjudicators and nine abstracts were received across two categories. The first prize winners are -

Scientific research: Dr Michael Le "Intravenous fat emulsion to suppress 18F-fluorodeoxyglucose uptake in non-ischemic myocardium for cardiac positron emission tomography".
Audit: Dr Nathaniel Hiscock "Day case paediatric tonsillectomies in a small outer metropolitan hospital – Adherence to a new Clinical Practice Guideline".

Second prize winners: Dr Kent Lavery (scientific research) and Dr Grace Andrews (audit).

Well done to all who participated in the VRSM this year!

FPM VRC CME Evening Meeting

Dr Louise Brennan opened the final CME meeting for the year on 25 November, "Evidence for the use of ketamine in chronic pain". After a warm welcome, Dr Kylie Hall (FANZCA, FFPMANZCA) presented her views following a literature review on the use of ketamine.

Dr Hall shared her insights with a particular focus on the controversial uses of ketamine with further consideration to ketamine increasingly used for depression and PTSD, guidelines on intravenous ketamine infusions for chronic pain and dosing. The Q&A session generated a lot of interactive discussion.

From top: Dr Louise Brennan, Dr Kylie Hall.

Australian Capital Territory

After the unfortunate postponement of this year's event, we are excited to announce that the Scan and Ski workshop will take place in Thredbo from Thursday 11 August to Saturday 13 August 2022. The workshop will feature world-renowned ultrasound specialists including Dr Ross Peake, Dr Alwin Chuan, Associate Professor David M Scott, Dr Peter Hebbard, Dr Andrew Lansdown, Dr Brad Lawther, Dr Bojan Bozic and Dr Chris Mitchell. Hands-on ultrasound scanning and instruction will be held during the morning and evening sessions, leaving the middle of each day free for skiing or sightseeing in the beautiful NSW Snowy Mountains. The workshop will cover upper-limb blocks, lower-limb blocks, trunk, and spinal blocks, among other topics. We are also pleased to announce the inclusion of a CICO (Can't Intubate Can't Oxygenate) workshop into the 2022 program, to be run by Dr Freya Aaskov. Head to the ANZCA website for all the details and online registration.

ACT Trainee Committee

In 2022 we will welcome a new trainee committee and look forward to getting to know them over the next year. The committee members are: Dr Fabio Longordo, Dr Dharan Sukumar, Dr Shruti Krishnan, Dr Cristy Rowe and Dr Laura Staples. We look forward to working closely with the committee during 2022.

Queensland

QARTS

The Queensland Anaesthetic Rotational Training Scheme (QARTS) process for recommending trainees to the 2022 hospital rotations occurred between July and August. The shortlisting and assessment process was a busy time, with 281 new applications. Thank you to the QARTS Coordinating Committee for contributing their time in making this process a success.

Interviews were held over four days, with 95 candidates interviewed. All interviews were held virtually via Zoom. Thank you to Dr Mark Young for leading the interviews, and to all the interviewers who assisted with this process.

The process concluded with the QARTS Selection Meeting held on Friday 20 August 2021.

Queensland Trainee Committee

The last Queensland Trainee Committee meeting for 2021 was held on Tuesday 2 November. Thank you to all current members for your time and dedication to the committee's activities over the past year. We wish outgoing committee members all the best. We look forward to continue working with you in the years to come, and also to welcoming new Trainee Committee members in 2022.

From left: Dr Romitha Ranasinghe, Dr Joseph Bauer, Dr Sophie Turner, Dr Larissa Cowley (co-chair), Dr Cecilia Xu, Dr Louven Menzies, Dr Hannah Bellwood (co-chair), Dr Martha Ghaly and Dr Shelly Lee.

2022 Queensland ACE meeting

Save the date for the annual Queensland ACE meeting to be held on 16-17 July 2022 at Peppers Noosa. More information will be available on the ANZCA website in early 2022. We look forward to seeing you there.

2022 courses – save the dates!

- Queensland Introduction to anaesthesia training program 2022 – Saturday 12 February 2022
- Queensland final refresher course 1, 2022 – Monday 28 February to Friday 4 March 2022
- Queensland primary lecture program series 1, 2022 – Saturday 19 February, 12 March, 9 April, 21 May and 18 June 2022
- Queensland primary lecture program series 2, 2022 – Sat 23 July, 20 August, 10 September, 15 October and 19 November 2022

New South Wales

Dr Andrew Couch Memorial Award

The Dr Andrew Couch Memorial Award is awarded to a resident, registrar, provisional fellow or fellow within one year of admission to fellowship of ANZCA who has been involved in an audit or original research related to anaesthesia within their workplace. Following the outstanding presentations, on Thursday 2 December 2021, by four outstanding trainees, the Dr Andrew Couch Memorial Award 2021 was awarded to Dr Alexander Peng for his presentation discussing, "Is Cerebrovascular Autoregulation associated with outcomes after major noncardiac surgery? A Prospective Observational Pilot Study".

SAVE THESE DATES!

- NSW ACE Winter Meeting Sydney – Saturday 18 June 2022
- NSW ACE Spring Meeting Terrigal – Saturday 12 and Sunday 13 November 2022
- NSW ACE Anatomy Workshop Sydney – Saturday 26 November 2022

South Australia and Northern Territory

Opioid-sparing analgesia; the Holy Grail?

The combined ANZCA/ASA South Australian Burnell-Jose ACE Conference was held in the Adelaide Hills on Saturday 4 September.

Overlooking the glorious Piccadilly Valley and surrounded by botanic gardens, delegates were enthusiastic about the opportunity to meet face to face and learn more about management of acute perioperative pain.

From top: Dr Andrew Burch, Dr Tom Druery, Dr Shaun Campbell, Dr Alyssa Gardner and Dr Ben McDonald; Dr Lisa Biggs, Dr Rachelle Augustes, Dr Laura Willington, Dr Peter Webb, Dr Marni Calvert and Dr Charlotte Taylor; Burnell-Jose convenors and presenters: Dr Sam Lumb (co-convenor), Dr Tim Semple, Professor Lorimer Moseley, Professor Mark Hutchinson, Dr Richard Walsh (co-convenor) and Associate Professor Anne Burke.

Annual Trainee Dinner

Forty registrars enjoyed an evening at Electra House for the annual South Australian trainee dinner. Professor Guy Ludbrook gave a thought-provoking presentation on the "Future of anaesthesia".

Clockwise from top: Mendel Au, Lara Schemeckzo, Jarmila Sterbova, Scott Hannah and Annie Lin; Rebecca Madigan, Alyssa Gardner and Emma Panigas; Tu Nguyen, Aimee Som and Matthew Higgins.

SA/NT Trainee midyear get-together

The SA/NT Trainee Committee have been eager for trainees to engage in social catchups throughout the year. Trainees met for drinks and nibbles at one of Adelaide's most vibrant bars, Bank Street Social.

Tasmania

Tasmanian ASM

Dr Stephanie Cruice and Dr Jana Vitesnikova, convenors for the Tasmanian combined ANZCA/ASA Annual Scientific Meeting for 2022 welcome you to the launch of this meeting with registrations now open.

The theme for our meeting is "Making Connections" and after another year of border closures and lockdowns, we are inviting delegates to remake connections in the airway management, perioperative and pain medicine fields, and to build connections with the sustainable future of anaesthesia.

From the Grand Chancellor Hotel, overlooking the picturesque Hobart harbour, we offer delegates the opportunity to engage with a broad range of sub-specialty experts. The program we present includes an exciting line up of interstate and local speakers.

Our perioperative session will be led by Professor Bernhard Riedel from the Peter Mac Centre, followed by local palliative care expert, Dr Guy Bannick and our Royal Hobart Hospital perioperative lead. Pain specialist, Dr Suyin Tan from Nepean Hospital will be guiding us through the connections of analgesia and anaesthesia in a patient's journey, with local anaesthetist Dr Harry Laughlin discussing the contribution of regional anaesthesia. Our scientific session will cover airway and onco-anaesthesia updates from Professor Reny Segal, from the Royal Melbourne Hospital, local anaesthetist Dr Savas Totonidis and Professor Bernhard Riedel, respectively.

Our presidents will provide an insight to the last year of change and we will be hosting an open discussion around sustainability in anaesthesia to close the day's events.

Our workshop sessions on Sunday will provide delegates with a variety of options to add to their CPD and extend their learning and knowledge.

Beyond our conference experience, Hobart has an enormous variety of fun activities for you to enjoy! Make a holiday of your journey south to Hobart and make connections with this gorgeous island – take the ferry out to MONA, hike a trail around the stunning kunanyi/Mt Wellington and enjoy a meal in one of Hobart's world-class restaurants. And for the adventurous delegates, step beyond the Hobart city limits for more adventures on the East Coast, Derby and more! We invite you to discover a bit of Tasmania and welcome you to our meeting.

Dr Jana Vitesnikova and Dr Stephanie Cruice
Co-Convenors

Tasmanian Trainee Day

Continuing a well-appreciated tradition, sees Trainee Day 2022. This tradition has been going strong for over eight years and is held on the Friday preceding the Tasmanian ASM at Hadley's Orient Hotel which has a long history with anaesthetists in Australia.

This unique meeting is the only one of its type in Australia and provides an avenue for trainees to meet with keynote interstate speakers attending the Tasmanian ASM in a relaxed and congenial atmosphere as well as listen to local specialists providing their time and expertise on topics particularly relevant to trainees.

Convenors Dr Dheeraj Sharma and Dr Bing Chang welcome trainees from anywhere in Australia to register for the meeting and trainees are welcome to attend both the Tasmanian ASM and Trainee Day and associated social events for the cost of registering for the ASM. The convenors are enthusiastic about the program and encourage trainees to come along and enjoy the day.

Western Australia

ACE WA Country Conference – "All The Small Things"

The Anaesthesia Continuing Education WA Country Conference was held in the last weekend of October. Following the postponement of 2020's conference, this year's event was held at the beautiful Bunker Bay in south-west Western Australia.

The conference was entitled "All the small things" and convened by Perth Children's Hospital (PCH). The aim was to provide an update in paediatric practice for those who do occasional paediatric anaesthesia, such as our colleagues who work in remote locations and those with mixed private lists.

A variety of speakers shared their knowledge with the attendees, including Dr Craig Sims, one of the editors of *A Guide to Paediatric Anaesthesia*, who presented some of the pearls he has gathered during his long career. Professor Britta Regli-von Ungern-Sternberg, who leads the dynamic research department at PCH, gave an update on paediatric anaesthetic research.

Other highlights included a paediatric regional masterclass and a perioperative anxiety workshop given by two of our EPIC (Effective Peri-Procedural Communication, SPANZA) facilitators. Attendees got the chance hone their airway skills in a dedicated paediatric airway workshop and complete life support training and revalidation. The conference concluded with an interactive discussion about challenging airway management cases.

The program included a couple of innovative additions: The Children's Conference gave kids the opportunity to escape their parents for a short period – they got their limbs plastered and took part in Halloween-themed games, while earning extra CPD points that could be exchanged for rewards at a later date! The Sunday morning started with the inaugural WA ANZCA trail run along the stunning coastline towards the Cape Naturaliste lighthouse.

The conference dinner took place at Bunkers Beach House. Guests were treated to lovely food and drinks overlooking the stunning scenery of Bunker Bay. The weekend was blessed by beautiful weather, which meant the pool and beach was busy with families, friends and delegates. Fortunately, some whales decided to make an appearance just offshore with multiple breeches which was very exciting.

The course convenors would like to thank all the presenters for their time and effort. We also express our gratitude to the anaesthesia department at Perth Children's Hospital for their support. Special thanks goes to Melanie Roberts and Ineke Krom from the WA ANZCA office for their tireless hard work, which made this conference a success.

Dr Paddy Cowie and Dr Chris Gibson
Co-Convenors

Clockwise from top: The beautiful Bunker Bay; Conference Convenors Dr Paddy Cowie and Dr Chris Gibson opening the event; Delegates enjoying the Saturday evening conference dinner; Thanks to Perth Children's Hospital and our industry sponsors; Vicky Lewis (PCH) preparing for the paediatric regional workshop with her sleeping (not anaesthetised) daughter.

WA ANZCA Office

The WA ANZCA Staff are now working from the new office, located at Garden Office Park on Scarborough Beach Road in Osborne Park.

Trainees

Trainees can contact the members of WA Trainee Committee confidentially. If you have any queries or concerns that you would like to discuss with a member of the WA Trainee Committee, you are welcome to contact them direct via their private email: anzca.watc@gmail.com.

Combined SIG meeting

ON SATURDAY 2 OCTOBER more than two years of planning and replanning finally came to fruition with the Combined SIG half-day virtual meeting presented to around 200 registrants across Australia and internationally.

The theme of the meeting was "Failing to succeed" and was a living embodiment of the process of bringing forth success from failure. The emergence of COVID-19 in early 2020 resulted in postponement of the original July 2020 meeting in Cairns. Much effort then went into re-structuring the conference with the absence of our international speakers for July 2021. Sadly, the Delta wave precipitated a second cancellation at short notice in July. With much soul searching, the convenors decided to present some of the planned content as a virtual meeting in October. Many of the original registrants demonstrated great loyalty to the meeting and traded their original registrations for the virtual meeting.

Following welcome and acknowledgement of country from co-convenors Professor Kirsty Forrest and Dr Suyin Tan, the meeting commenced with a presentation from Professor Lara Varpio and Associate Professor Meredith Young from the Centre for Health Professions Education at the F Edward Hebert School of Medicine in Bethesda, USA. Their joint presentation included videotaped interviews with many doctors and educationalists discussing their personal experience of failure, how they responded and how they integrate failure into their personal and professional development. Their qualitative research is helping to bring new perspectives on how we teach students and trainees and start up the broader conversation around failure.

Their presentation was followed by an engaging talk from Associate Professor Will Bynum from Duke University School of Medicine USA speaking on shame in medical education. These topics of shame and failure are almost taboo words within medicine and especially in anaesthesia where failure to perform may have serious consequences. It was fascinating to hear speakers "normalise" these experiences.

The final presentation was from Dr Dash Newington who is well known in Australia for her work on Indigenous representation within anaesthesia. Dash's talk was both moving and inspirational and demonstrated that there are clear and workable solutions to improving the number of Indigenous people who study medicine and also move on to become anaesthetists.

The morning session was followed by a Q&A session with our overseas speakers joining us live. There were a wide variety of questions and no technical glitches!

The next session focussed on the launch of ANZCA's Critical Incident Debriefing Toolkit. Jan Sharrock, Executive Director of Fellowship Affairs introduced the topic with Dr Myat Aung and Dr Richard Seglenieks providing an insight into how the project originated and the development process. The grand finale to the morning's proceedings was Liz Crowe's presentation of the toolkit and its practical application for anaesthetists. Liz is a very experienced critical care social worker from Brisbane with a wealth of knowledge in this field and really made the topic come to life.

There was a further Q&A session with much lively debate before the meeting concluded.

The convenors extend a special thanks to Sarah Chezan, Senior Events Officer ANZCA who tirelessly emailed, rescheduled and reorganised to bring about the meeting. Thanks also go to the team at Wallfly who also provided the high quality audio visual experience.

Finally the success of the Combined SIG meeting continues in 2022 with what will be our first face to face meeting in more than two years. The meeting will be in Cairns from 9-11 September and hosted by the Wellbeing SIG which is very apt given the difficulties so many of us have encountered over the past two years. We are all hoping to see you there!

Dr Suyin Tan
Co-Convenor, 2020 and 2021 Combined SIG meeting
Chair, Communication in Anaesthesia SIG

Clockwise from top left: Dr Dash Newington, Professor Kirsty Forrest, Associate Professor Meredith Young, Dr Suyin Tan, Associate Professor Will Bynum and Professor Lara Varpio.

Broadening horizons with 2021 ANZCA Emerging Leaders Conference

THE 2021 ANZCA Emerging Leaders Conference (ELC) was held virtually on 10 and 11 September. Planning for the conference began in February 2019, with the conference scheduled to be held at Mitchelton in Nagambie, Victoria before the ANZCA Annual Scientific Meeting.

However, with COVID restrictions and border closures the ELC was postponed until September in a bid to maximise the chances of being allowed to host an in-person event. With COVID restrictions in the lead up to the deferred conference date, the decision was made to convert to a virtual meeting. The theme of the conference was "Broadening horizons".

Organisers hoped to present an expansive perspective on leadership from in and outside the hospital, and challenge delegates to broaden their frames of reference on what it could mean to be an anaesthetist or pain specialist and a leader. To achieve this goal, a diverse array of speakers were invited from a variety of backgrounds and professions. Speakers included philosophers, political economists, human rights lawyers, behavioural psychologists, global and public health professionals, tech executives and other medical specialists. Delegates were encouraged to explore how their own perspectives and personalities might impact their leadership styles. With a focus on emotional intelligence and self-reflection, delegates were encouraged to ask honest and difficult personal questions, and grapple with how the answers to these questions invariably affect their strengths and weaknesses as leaders. It was hoped that these insights would provide a useful foundation on which delegates could build throughout their leadership journeys within ANZCA and beyond.

Twenty-three delegates participated from Australia, New Zealand and Papua New Guinea (PNG), representing both ANZCA and FPM. The convenors thought it important to include future leaders from our PNG neighbours so they could benefit from the learning opportunities and attempt to create networking opportunities between ANZCA fellows and our PNG colleagues. The delegates from PNG were selected in consultation with ANZCA's Global Development Committee.

SESSIONS

The conference began with delegates breaking into small groups of four to five people, supported by senior college leaders who acted as mentors. These small groups stayed together with the same mentors for the duration of the conference in an attempt to create an intimate and familiar recurring setting in which delegates would feel comfortable being honest and vulnerable. Creating such an environment was a priority for the convenors. The goal of the day one sessions was to explore central leadership concepts and were bound together by themes of self-awareness, introspection and a multi-faceted appreciation of diversity within and between people.

Sessions on the second day took a broad lens to health, equity, society and advocacy. These sessions were connected to day one by themes of diversity, inclusion and emotional intelligence and included presentations by global surgery expert Dr Mike Lipnick and public health specialist Professor Rob Moodie. Delegates had also been asked to watch pre-recorded presentations from Professor Kate Leslie AO, Dr Harry Eeman and Mr Julian Burnside AO, who then participated in an extended interactive panel. The talks and panel covered gender equality, human rights advocacy and Dr Eeman's unique perspective as a pain specialist with his own harrowing personal story as a patient, and subsequent journey as the first quadriplegic Australian doctor.

Another session on first nations' health featured Dr Dash Newington and Dr Owen Sinclair explaining the systemic forces impacting Indigenous peoples' health and wellbeing, the need for greater Indigenous representation in our specialties and the potential for us to become leading voices for change in "closing the gap".

The formal conference schedule ended with an expert panel for an interactive discussion on mentorship and the next generation of ANZCA leaders featuring Dr Vanessa Beavis, Associate Professor Michael Vagg, Professor David Story, Dr Maryann Turner, Associate Professor Nicole Phillips and Dr Simon Hendel. The social program ended with a mixology class facilitated by Melbourne Gin Co. Delegates were sent either alcoholic or non-alcoholic cocktail packs in advance. The session was relaxed and jovial, and was a great way to relax after an educational and stimulating conference.

Dr Julia Dubowitz and Dr Elliot Wollner
Co-Convenors, 2021 Emerging Leaders Conference

Upcoming events

For further information on the meetings, please contact events@anzca.edu.au.

March 2022	CTN Strategic Research workshop – Part 1, virtual, 4 March. Obstetric SIG webinar – more information coming soon.
April/May 2022	FPM Symposium – PCEC, Perth, 29 April. ANZCA Annual Scientific Meeting – PCEC, Perth, 29 April - 3 May. ANZCA College Ceremony – PCEC, Perth, 30 April.
June 2022	ANZCA Environmental Sustainability Network and Mackay Anaesthetic Community joint meeting – Airlie Beach, 3-5 June. Rural SIG meeting – Darwin, 24-25 June.
August 2022	CTN Strategic Research workshop – Part 2, Pullman Brisbane, 4-7 August. Peter MacCallum & Austin Health Perioperative Symposium – Melbourne, 26-28 August. Obstetric Anaesthesia SIG webinar – more information coming soon.
September 2022	Combined SIG meeting, Riley Crystalbrook – Cairns, 9-11 September.
October 2022	FPM Spring meeting – Peppers, Noosa, 14-16 October. Neuroanasthesia SIG meeting – Te Papa, Wellington, 20 October.
November 2022	The inaugural Tri-Society Cardiac & Thoracic Symposium (3SCTS) – Cairns Convention Centre, 6-19 November. Perioperative Medicine SIG meeting – Peppers Noosa, 24-26 November.

Dr Elaine Langton

1952-2021

DR ELAINE LANGTON went to medical school in Auckland and did her anaesthesia training in Invercargill, Greymouth, and Christchurch, with a fellowship at Liverpool Hospital in Western Sydney.

She was a trailblazer for women and completed her anaesthesia training as a mother of three – an accomplishment of tenacity and endurance. It is no mean feat to gain a specialist qualification as a parent. She described a gruelling four years with 70-plus-hour working weeks and additional study. She was supported by her husband Graham, an early feminist, who put his career in education aside to become a full-time parent and keep the home fires burning.

Dr Langton became a staunch advocate for part-time training. Anaesthesia now has a strong reputation for delivering flexible training options for parents of young children, and this is in no small part due to the steadfast efforts of women like Dr Langton, and those around her who could see the benefit in supporting excellent, well-rounded clinicians into the specialty.

Dr Langton's first consultant post was in Palmerston North, where she joined a small, male-dominated department. She introduced many innovations. Palmerston North is well known for having the highest prevalence of malignant hyperthermia (MH) in the world. During her time in this regional hospital, Dr Langton was passionate about caring for MH whānau, and tracing their whakapapa to identify those at risk. She continued this work later in Wellington.

We don't know how she did it, but Dr Langton had a sixth sense for sniffing out patients susceptible to MH who had been admitted to hospital for other conditions, and making contact with them. As they were recovering from pneumonia, or greeting their new baby, she would visit them and gather new family tree information and contact details, and then co-ordinate offers for MH testing. She also organised visits to local marae for DNA blood testing drives.

Dr Langton was also an active member of the European MH group (EMHG) an inherently Eurocentric organisation. New Zealanders are very small fish in the pond. However, she won the prize for the best paper presented at the 2017 international meeting. This was a large feather for her cap, and even more notable for having been delivered the day after her husband Graham had been injured in a bus accident. He made a full recovery!

Dr Langton was passionate about the provision of safe, high quality care to hapū māmā and their pēpi and introduced many innovations both in Palmerston North, and in Wellington where she was appointed to clinical leader for obstetric anaesthesia. An enthusiastic educator of the next generation of anaesthetists, midwives and obstetricians, she became a managing obstetric emergencies and trauma (MOET) instructor and frequently taught in New Zealand, Australia, and the UK. She was instrumental in developing the multi-disciplinary in-situ PROMPT course in Wellington, which encourages teamwork and communication to ensure the best outcomes for patients in birthing suites. This work led to opportunities on a number of important committees including the National Maternity Monitoring Group. The outpouring of condolences from our midwifery and obstetric colleagues demonstrates the high regard in which Dr Langton was held, and the significance of her contribution to women's health.

Dr Langton became a spokesperson for wellbeing at work after facing her own health challenges. She gave an enlightening and inspiring talk to her colleagues about her personal journey. This helped provoke a sea change in our working environment to a strong wellbeing focus where we are encouraged to reach out for help and support for ourselves and our whānau.

Dr Langton had a gradual and gracious retirement process, utilising her skills in pre-assessment clinic in latter years, continuing her interest in MH both clinically and by mentoring new specialists into the field.

She planned a busy retirement, continuing her work with the Citizens Advice Bureau, and taking up a role doing COVID-19 vaccinations. She continued to visit us in the department as, ever the perfectionist, she attended to outstanding MH paperwork.

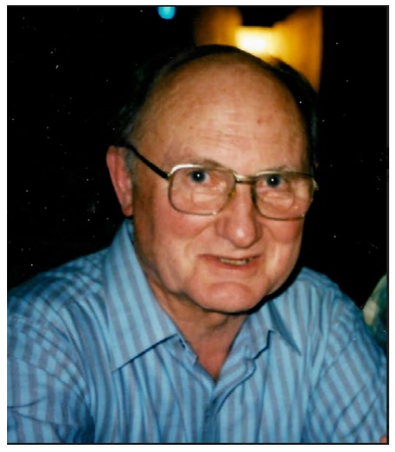
She was smiling and happy, content to have moved on from medicine. To fully appreciate the sparkle in her very blue eyes, all you needed to do was ask about her true love – her family. She was so looking forward to spending time with them and in particular her adored grandchildren.

Arohanui ki te whānau from all of us who worked with Dr Langton – Elaine. She will be sadly missed.

Dr Sally Ure FANZCA
Dr Terasa Bulger FANZCA

Dr Cressy William Free

1933 – 2021



BORN IN CHRISTCHURCH in 1933, Dr Cressy Free was the oldest of six children. His unusual name was a tribute to his grandfather, also Cressy, and the name of one of the first four settler ships to Lyttleton in the New Zealand South Island carrying the Free family forebears.

Dr Free's academic abilities were evident early in his life, being dux at Elmwood Primary School and coming ninth in New Zealand in the junior scholarship exams while at Christchurch Boys' High.

Dr Free met his wife Prue at Otago University. Their romance began when they had to share a seat on an overcrowded train on a tramping trip to Stewart Island and they were married following his graduation in 1957.

He travelled to Nigeria with Prue in 1960 and was a senior house officer in University College Hospital in Ibadan. The hospital was only three years old and had 500 beds which was large for its time.

Dr Free spent a year there as a paediatric senior house officer (SHO) , and the next two years in anaesthesia, one as an SHO and one as a registrar. He then spent time as a registrar in several UK hospitals, including a spell at Alder Hay Children's Hospital in Liverpool, regarded as a world leader in paediatric anaesthesia. Dr Free returned to New Zealand in 1966, joining Wellington Hospital as a junior consultant in anaesthesia, becoming a consultant in 1968, and spending the next 30 years in that post until retirement in 1998. He worked primarily at Wellington Hospital with particular practice in cardiac and obstetric anaesthesia. He was one of the go-to paediatric anaesthetists at a time when they were all basically generalists with some extra interests. He also worked at Hutt Hospital, St Helen's Maternity Hospital and at the Home of Compassion – a not unusual practice make-up for anaesthetists at that time.

Former colleagues remember Dr Free for being a caring and thoughtful teacher and mentor. He took a personal interest in the registrars – often he and Prue would host them and others at their home in Island Bay. He was not shy at organising specialists from other departments in the hospital to ensure the training program was boosted with excellent tutorials in cardiology, renal medicine and pharmacology from his physician colleagues.

A challenging time for Dr Free was his experience of a case of malignant hyperthermia (MH).

With Prue's help he traced early family trees of affected patients given the genetic basis for the disease. New Zealand, particularly the Manawatu, has the highest incidence of MH in the world. Dr Free played an early and important part in managing MH in Wellington. He organised for stocks of dantrolene, the MH antidote, to be available at the various hospitals in the region and set up a response where the police could take extra supplies from Wellington Hospital if it was needed urgently elsewhere. This was important given dantrolene's expense and short shelf life.

In his later career much of Dr Free's efforts were focussed on the complex issue of the management of chronic pain. He opened one of the first pain clinics in New Zealand in 1976, running it almost singlehandedly until he retired. He focused on helping these patients manage their pain by a combination of drugs, psychotherapy, and physical therapy. This was a hard road, an often thankless task with little interest from others, and few drugs apart from opiates, which of course bring problems of their own. Dr Free must be regarded as a pioneer in this branch of medicine.

He was a devoted husband and a fun and creative father, grandfather, and great grandfather. He was selfless in caring for both Prue and his daughter Carol while they were suffering from multiple sclerosis.

Dr Free enjoyed a long and fruitful retirement with Prue, celebrating 60 years of marriage a few months before Prue passed away in 2018. Lions, U3A (University of the Third Age), family events, singing groups, mah-jong and dancing (he was described as a "very stylish" ballroom dancer), kept them busy and fulfilled until his stroke in 2017.

Dr Free passed away peacefully at Village of the Park in Wellington on 19 August 2021.

Sarah Free
Peter Free
Dr Graham Sharpe, ONZM FANZCA

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[1] McGrath S et al. *J Patient Saf.* 2020 14 Mar. DOI: 10.1097/PTS.0000000000000696. [2] McGrath S et al. *The Joint Commission Journal on Quality and Patient Safety.* 2016 Jul;42(7):293-302. [3] Taenzer A et al. *Anesthesia Patient Safety Foundation Newsletter.* Spring-Summer 2012. [4] Estimate: Masimo data on file. [5] Published clinical studies on pulse oximetry and the benefits of Masimo SET® can be found on our website at http://www.masimo.com. Comparative studies include independent and objective studies which are comprised of abstracts presented at scientific meetings and peer-reviewed journal articles.
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