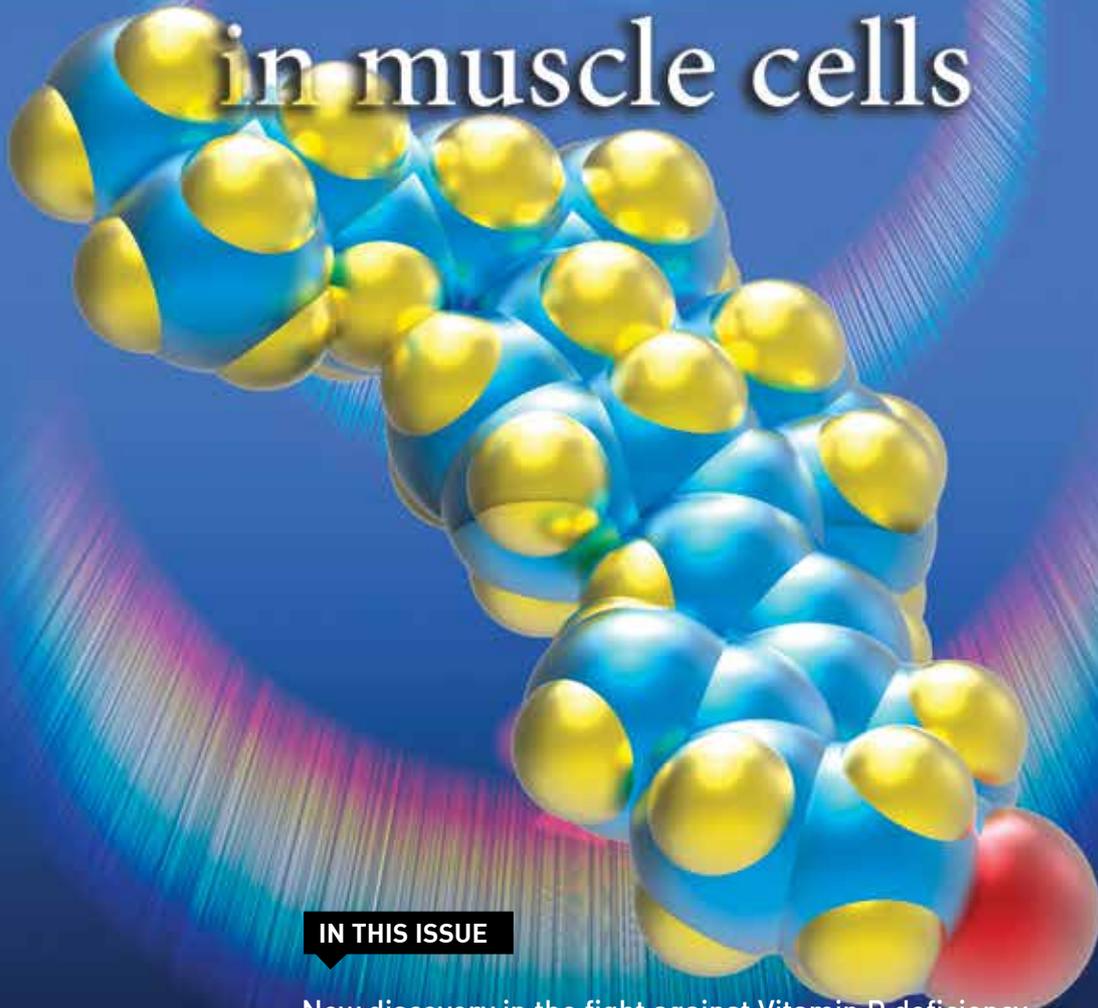


RACP Quarterly

September/October 2019

Shedding light on vitamin D in muscle cells



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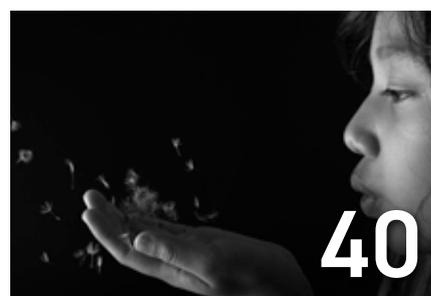
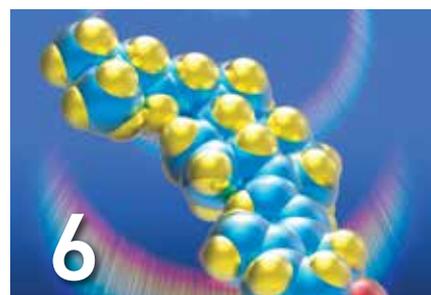
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A publication of © The Royal Australasian College of Physicians ACN 000 039 047 ISSN 2206-3242 (Print) ISSN 2206-3250 (Online) 145 Macquarie Street, Sydney NSW 2000. www.racp.edu.au

Editorial Board: Associate Professor Mark Lane, Professor Anne Cunningham, Dr Jeff Brown, Ms Robyn Burley, Mr Duane Findley and Mr Bob Kotic.

Advertising Officer: Fay Varvaritis

Circulation approximately 21,000 Fellows and trainees of The Royal Australasian College of Physicians, including the Faculties of Public

Health Medicine, Rehabilitation Medicine, and Occupational and Environmental Medicine and the Chapters of Palliative Medicine, Addiction Medicine and Sexual Health Medicine. Subscribers represent over 45 medical specialties. The magazine is distributed throughout Australia, New Zealand and 47 countries throughout the world.

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A message from The President

At any given moment, day or night, there are an estimated 1.2 million people airborne in a commercial aircraft around the world.

With those numbers, the odds are that, as a medical professional, sooner or later in our careers, most of us will hear that urgent question over a passenger announcement “Is there a doctor on board?” or even observe a medical episode taking place.

Two of our Advanced Trainees were confronted with their first inflight emergency recently. Turn to page 19 to read Dr Joanne Tan and Dr Rahul Barmanray recounting their story of diagnosis and treatment at 40 thousand feet.

Following the successful launch of the new Basic Training Curriculum, our Advanced Training Curricula renewal is now underway. With 38 curricula to be renewed, this is a significant piece of work. The College has now held a major consultative forum to validate peer feedback from online surveys about curricula content. You can read more about it and the modified Delphi method that was used in consultation on page 16.

When physicians speak, decision makers on both sides of the Tasman often listen, and you can become involved.

We should always remember that as physicians, we each have a tremendous opportunity to advocate and influence on behalf of our profession, our patients and our communities from a position of expert knowledge.

On page 24 we highlight some of our many recent successful advocacy campaigns, in New Zealand through campaigns such as MakeItTheNorm, advocating for a holistic approach to achieving positive health outcomes for New Zealanders, and in Australia our silicosis, medical transfer and alcohol pricing advocacy.

The therapeutic nature of visual art has long been recognised in medicine. Our article on the ArtMed Program on page 38 highlights an innovative collaboration between the ACT Physician Training Network and the National Gallery of Australia.

It uses a gallery setting to provide a unique environment for physician trainees to enhance observational, interpretative and communication skills. Looking at art, thinking about art and talking about art with colleagues can help trainees develop a more astute, considered and reflective practice, and we hear trainees impressions.

Lastly, on a more reflective note I'd like to acknowledge the life of former RACP President from 1992 to 1994, Professor Alex Cohen, AO, MD, FRACP, FRCP, FRCPE, FRCPI D.Litt (Hon) UWA, who passed away in September.

Alex was a pillar of medicine in Western Australia, an Emeritus Chancellor of The University of Western Australia and held many state and Commonwealth positions.

He was a past AMA President, an Emeritus Consultant Physician and Endocrinologist at Sir Charles Gairdner Hospital and Royal Perth Hospital, a Fellow of the Australian Medical Association and Wolfson College Oxford, and a past Research Fellow of Harvard University Medical School.

As part of his extraordinary career, practically every member in WA will have been trained by Alex at some point in theirs.

He will be missed by many.

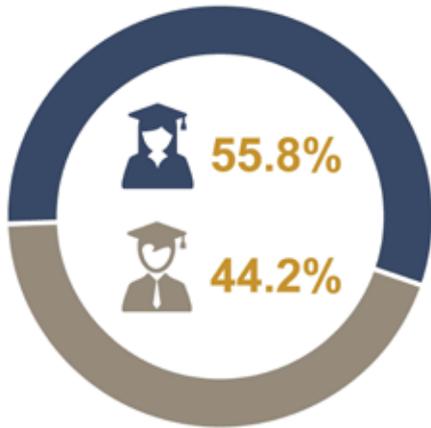
Kind regards,

**Associate Professor
Mark Lane
RACP President.**



NEWLY ADMITTED FELLOWS*

GENDER



DIVISIONS, FACULTIES & CHAPTERS

Adult Medicine Division

55%

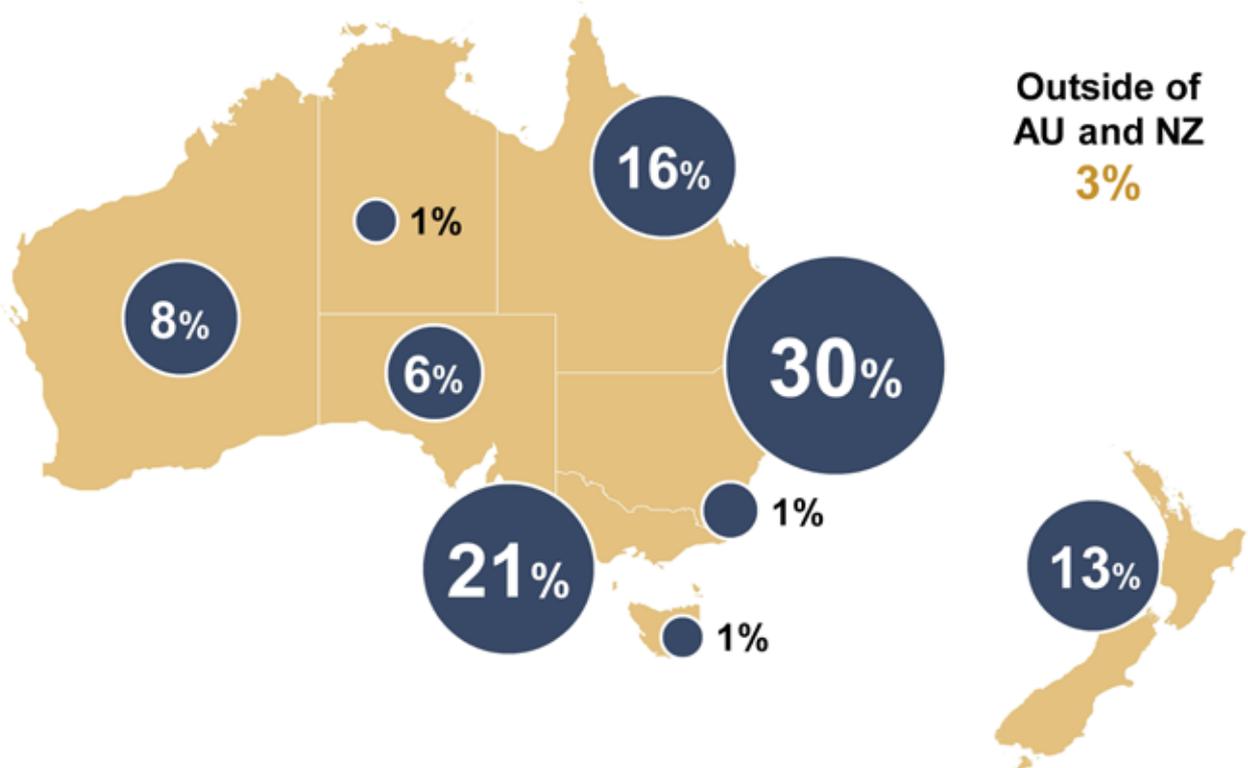
Paediatric and Child Health Division

28%

Faculties and Chapters

17%

Total 231 New Fellows



* 1st February 2019 to 31st July 2019



A message from **The Board**

Since the last edition of *RACP Quarterly* your Board met on 12 July 2019.

The Board is committed to improving the services our College offers to you, with a particular focus on communication.

Following each face-to-face Board meeting we will now issue an email to all Fellows and trainees, to summarise significant items we have discussed.

We also want to hear from you and receive feedback.

On 11 July, we held our most recent Meet the Board event at Westmead Hospital. Directors welcomed the valuable opportunity to hear from Fellows and trainees.

We took on board your suggestions and are implementing measures to address some of the issues you raised.

We have now had productive meetings with members at a number of training sites, with encouraging feedback received on various topics.

We held our most recent face-to-face Board meeting the following day in Sydney on 12 July.

Two ACNC representatives initially attended to discuss next steps following the Board's signing of the voluntary compliance agreement, and to answer questions from Directors.

We intend to release a full and comprehensive message to members once a Governance professional has been appointed as part of the compliance agreement.

We were briefed that the RACP's financial position at the end of May 2019 was strong with a year-to-date operating surplus of over \$4 million.

This is mainly due to the delay in timing of project expenditure scheduled for the second half of the year, including the significant workflow supporting our Education Renewal Program and other essential IT upgrades.

We have approved a working party on computer-based testing and Divisional Examinations will be paper-based for the foreseeable future.





Members may recall that the Board has established a College Governance Committee to review the College's Constitution and key By-laws, in collaboration with other College bodies.

The Board has now appointed the following members to that Committee which is chaired by an external independent appointee Mr Rob Ryan:

- Professor Maree O'Keefe, SA, FRACP, PCHD
- Dr Richard Russell, VIC, FAFOEM, FAFPHM
- Dr Steve Flecknoe-Brown, QLD, FRACP, AMD
- Dr John Wyeth, NZ, FRACP, AMD

We reviewed the operation of the Advanced Training Selection and Matching (ATSM) program supported by the College.

We consider ATSM to be a strategic service and will continue to offer and further refine it in 2019, in

collaboration with key stakeholders across Australia.

We approved the Physicians Health and Wellbeing Strategy 2019-2022 which has been under development for the past six months and was endorsed by the Physician Health and Wellbeing Reference Group in June 2019.

Rollout of this strategy will begin later this year.

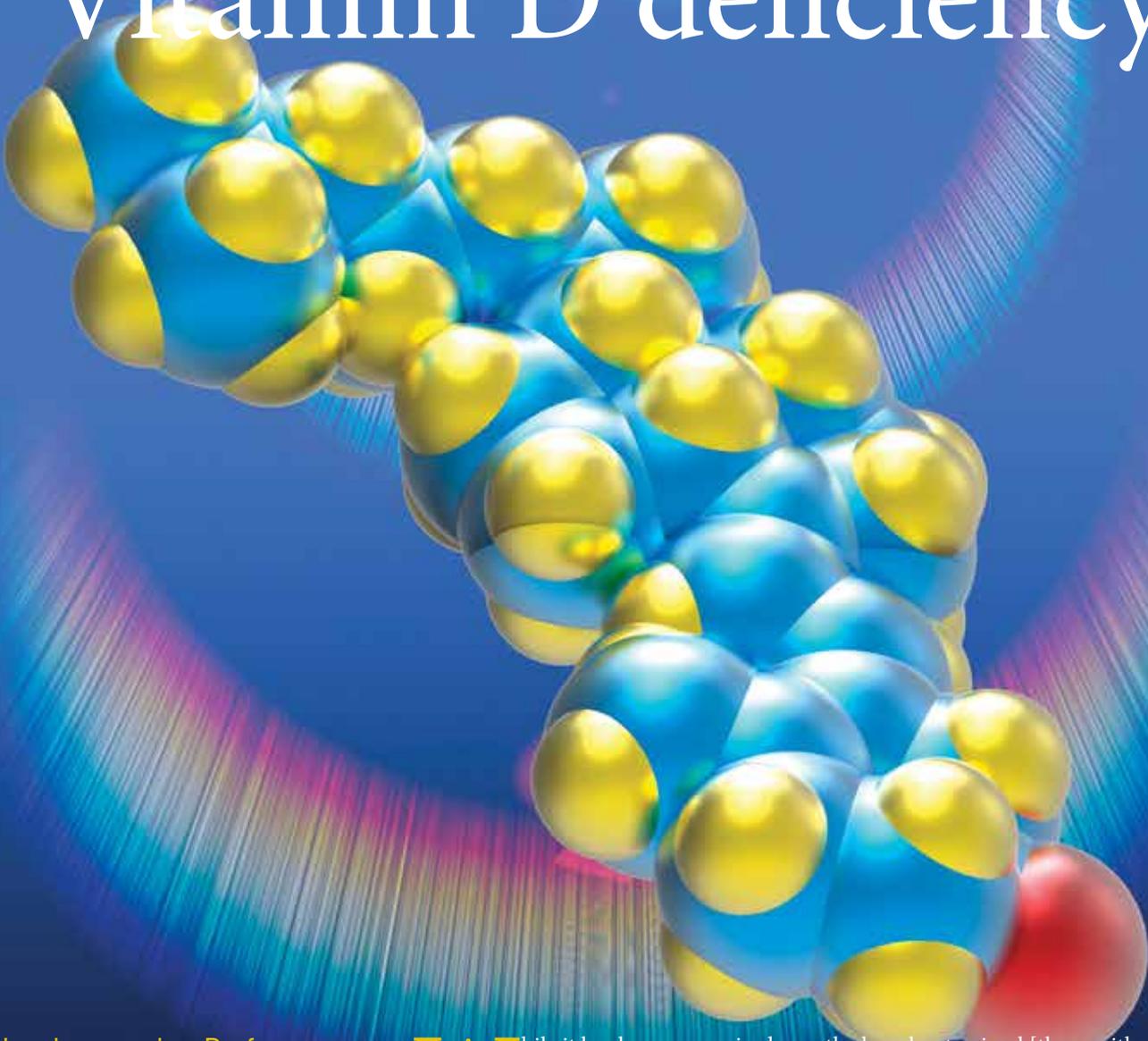
Finally, we invited the Aboriginal and Torres Strait Islander Health Committee (ATSIHC) and Māori Health Committee (MHC) to meet with us to discuss their priority objectives, including their Justice and Equity Statement of Principles.

We look forward to your continued feedback and suggestions on how to best serve our membership.

The Board's next scheduled Board meeting is in September.

Associate Professor Mark Lane
RACP President





New discovery in the fight against Vitamin D deficiency

Lead researcher Professor Jenny Gunton FRACP, PhD and her team at The Westmead Institute for Medical Research have made new discoveries about the role of vitamin D in muscle cells and the impact this could have towards treating vitamin D deficiencies.

While it has been recognised for centuries that children and adults with vitamin D deficiencies are often weak, the role of vitamin D in muscle still remains a controversial area.

“The whole field of vitamin D signaling and muscle got blown out of the water by a paper by Hector Deluca’s group a few years ago, where he published this paper showing all but one of the antibodies that had been published for vitamin D receptor showed bands in

the knockout animal [those without the receptor],” explains Professor Gunton.

“He concluded that vitamin D couldn’t do anything in muscle as there was no receptor there. We subsequently published a paper (authored by my PhD student, Christian Girgis), showing that in fact using the antibody that Hector Deluca proved worked well, there is some vitamin D receptor present in normal muscle. There wasn’t a lot but there was some.

“ It might be that if you are vitamin D deficient you also feel less like exercising. We don’t have causal proof of that in humans. In mice though, the only thing we did to them was to delete the vitamin D receptor in muscle, so in mice we can say vitamin D signaling in muscle affects how much they choose to exercise.”

“From there we wanted to test if it did or didn’t do anything. Is that low level of vitamin D receptor sufficient to play a role in normal muscle function or not?”

To answer this, the team used Cre-lox technology which can make a tissue or cell type specific knock out of your gene of interest. They then used has-Cre which is only expressed in skeletal muscle. This enabled the team to delete the vitamin D receptor but only in muscle cells.

“The rest of the mouse is normal. It should absorb calcium from its diet normally, the kidney calcium handling should all be normal, but we have a mouse that can’t signal through the vitamin D receptor in muscle cells because it’s not there.”

The result was mice that were weaker, had abnormal looking muscle fibres and a lot fewer fibres compared to a normal mouse. They also ran both slower and shorter distances in their mouse wheel over a 24-hour period compared to mice with the receptor.

“Firstly, I think we’ve proven reasonably conclusively that vitamin D signaling is important and plays a direct role in muscle. Secondly, it may go some way towards explaining the confusing literature. There are some

studies which show a benefit with vitamin D and a lot of studies which don’t. If you’ve lost the muscle cells you have fewer muscle fibres, so treating someone with vitamin D for the short term or without an exercise program isn’t going to make a difference because the fibres aren’t there. I think that’s why a lot of the treatment studies in people are negative.”

Another finding from the study was that the mice without the vitamin D receptors not only had less muscle mass but had increased fat mass.

“I found a couple of interesting studies where they put pedometers or accelerometers (a fancier measure of activity) on people and it turns out that people with vitamin D deficiency also walk less per day like our mice did in the running wheels. It might be that if you are vitamin D deficient you also feel less like exercising. We don’t have causal proof of that in humans. In mice though, the only thing we did to them was to delete the vitamin D receptor in muscle, so in mice we can say vitamin D signaling in muscle affects how much they choose to exercise.”

Professor Gunton and her team are now planning more studies looking at vitamin D in muscles and its effect on energy and exercise in mice.

“It sounds really silly but one thing I’d like to do is give the mice some simple pain relief like a non-steroidal and see if they run more. Are they running less because they’re tired or because they’re sore? If I can treat the mouse with a simple pain relief agent, and then see if they run more, that would be interesting because a lot of people who have vitamin D deficiency complain about being sore.

“It will be funny trying to write an animal ethics application asking to give Nurofen or an equivalent to mice, but I think it will be an interesting study. Or maybe, my patients can tell me.” RQ

Members in the media

Can targeted lung cancer screening save thousands of Australian lives?

Screening Australians at high risk of lung cancer, the nation's biggest cancer killer, has the potential to prevent thousands of deaths, particularly among former smokers, experts say.

But more research is needed to ensure any future Australian lung cancer screening program is both feasible and cost-effective.

Thoracic physician Kwun Fong FRACP, based at The Prince Charles Hospital, is heading the Australian leg of an international trial that is hoped will be the forerunner of a targeted national lung cancer screening program, which would be a world first.

But he needs hundreds more smokers and ex-smokers aged 55-80, in general good health, to enrol in the research by the end of September to optimise the quality of the data. The study aims to recruit a total of 4000 people across Australia and Canada.

The Courier-Mail, 30 July 2019



Patients with chest pain could be assessed faster a new study shows

A better blood test and a quicker follow-up check means up to 70 per cent of chest pain patients could be discharged from emergency departments faster, an SA study has found.

The findings have the potential to significantly reduce waiting times, crowding, and rates of hospital admissions without compromising safety.

The world-first trial for patients with suspected acute coronary syndrome, which includes heart attacks, focused on a more sensitive cardiac blood test for a protein called Troponin T.

Under national protocols, patients are tested when they arrive at an ED, then retested three hours later to compare protein levels.

The trial involved follow-up tests after one hour with some

patients, and after three hours with others.

Patients in the one-hour follow-up group on average spent one hour less in the emergency room and were significantly less likely to be admitted to hospital — 33.2 per cent compared to 45.5 per cent.

Flinders University Professor Derek Chew FRACP, who led the study, said it showed the one-hour protocol was safe for patients.

“Currently there are around 30,000 emergency department presentations for chest pain each year in South Australia, so that represents a large number of people ... taking up a hospital bed,” he said.

The Daily Telegraph, 4 September 2019

Hormone replacement therapy linked to breast cancer risk that can persist for years, study finds

A major international review published in the *Lancet* has confirmed that breast cancer risk increases the longer hormone replacement therapy (HRT) is used, and risk is greater with combined oestrogen-progestogen therapy than oestrogen-only therapy.

But the study, which combined data from more than 100,000 women with breast cancer from 58 studies worldwide, also revealed something new.

For the first time, researchers have discovered that women are at increased risk of developing breast cancer even if they use HRT, also known as menopausal hormone therapy (MHT), for less than five years.

“Prior to this, a lot of doctors had a rule of thumb that up to five years of use was safe for breast cancer,” said Emily Banks FAFPHM, co-author and professor of epidemiology at Australian National University.

ABC Health & Wellbeing, 30 August 2019

Boost for Victorian bid to extend lung cancer patients' lives

World-leading Victorian researchers will share in a whopping \$440 million as they get closer to beating the quick death sentence faced by lung cancer patients.

It comes as there are growing concerns about the number of Australians who are diagnosed with lung cancer but have never smoked.

Health Minister Greg Hunt will on Thursday announce Victoria is to receive the lion's share – more than \$202 million – in National Health and Medical Research Council grants for 131 world-leading projects spearheaded in the state.

Peter MacCullum Cancer Centre medical oncologist Ben Solomon's (FRACP) ground-breaking research will receive \$2.6 million for clinical trials to deliver personalised treatment for patients with lung cancer.

Professor Solomon told the *Herald Sun* that one in five women and one in 10 men who were diagnosed with lung cancer had never smoked.

Herald Sun, 28 August 2019



Pharmacists overmedicating infants with gastrointestinal disorders, study shows

Pharmacists are overmedicating babies who suffer gastrointestinal problems and are almost twice as likely to recommend medication for colic than offer nutritional advice.

A concerning survey of 362 Australian pharmacists also revealed a quarter typically recommended medication for reflux, including powerful acid suppressants that can damage infants' gut flora.

“Such medications were typically recommended despite their efficacy having been shown to be poor and that they may be associated with the development of allergy and obesity,” researchers noted.

The study, published recently in the *Journal of Paediatrics and Child Health*, found many new parents rely on the advice of pharmacists for functional gastrointestinal disorders, which affect around a third of babies in their first year of life.

Lead author Dr Rupert Hinds FRACP said medications were being “over recommended” and “over prescribed” for many “self-limiting” disorders which babies grow out of.

Herald Sun, 2 August 2019

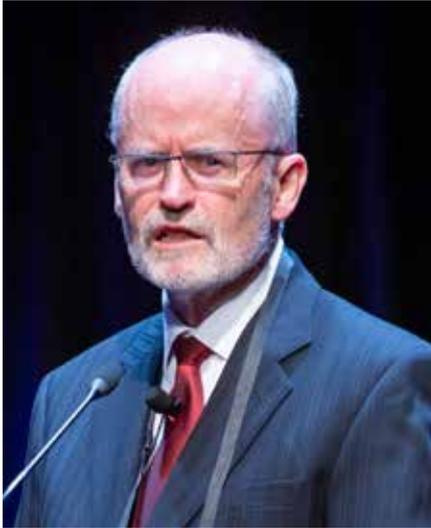


A career in neonatal research – really?

Esteemed Professor Lex Doyle AO is this year's recipient of RACP's Howard Williams Medal for his outstanding contribution to improving the health of children and young people in Australia and New Zealand. Professor Doyle has made major contributions to the basis of modern neo-natal intensive care, particularly through his study of the graduates of neo-natal intensive care, the impact through their life course, and the economic consequences. His leadership of the Victorian Infant Collaborative Study (VICS) Group, and more

recently the Victorian Infant Brain Studies (VIBeS) Group, has resulted in many papers over decades, generating attention in international top impact medical journals.

It was at RACP Congress 2019 in May where Professor Doyle received his honour and gave his oration. Following is an edited version of Professor Doyle's oration.



Professor Doyle was born in the period between the 1940s and the 1950s. He surmised that had he been born very pre-term, chances were the care for him would have been quite limited.

“I’d describe it as the ‘Spartan approach’. Back in the day the Spartans used to leave their babies on the mountain, and if they were still alive after a couple of days, these babies were considered tough and worthy of being reared. That’s basically what happened in neonatal care in the 1940s to 1950s. There was very little help for breathing. I would have been placed in an incubator at a fixed temperature, and my own body temperature would have been quite low, around 33 or 34 degrees. I also wouldn’t have been fed for a couple of days. That would have been the standard of care. ‘Pink’, ‘warm’ and ‘sweet’ comprise the ‘holy trinity’ for looking after babies. It took me 30 years to learn that, those three simple words,” said Professor Doyle.

Consequently, there were very few survivors who were very small or very immature. The long-term outcomes for those few survivors were very poor. Professor Doyle pointed out there are a series of papers written by Dr Cecil M Drillien from Edinburgh that described the outcomes for babies under three pounds (this was before the decimal system, equivalent to 1,361 grams today) as grim.

“The most common cause of death was respiratory distress caused by hyaline membrane disease or surfactant deficiency. There were some treatments available, namely oxygen, with ventilation and surfactant being introduced much later.

“So, what was the status of oxygen at that time? In 1947 a transport incubator was built in the garage of an engineer who worked at the Women’s Hospital. You place a baby in it and run oxygen into it. The incubator had a couple of design features you don’t see on transport incubators today. It has actual spring suspension and pneumatic tyres. The baby had a smooth ride, in contrast to the supermarket type trolleys that ambulance workers use today.”

According to Professor Doyle, oxygen therapy had been around since the 1930s in some parts of the world, but by the 1940s in America they had built special incubators where you could concentrate the oxygen of up to 60 to 70 per cent. The ‘routine’ for babies under 1,500 grams was to put them in oxygen around 50 per cent or more for at least the first 28 days of life. However, they started to see something strange, which was referred to sarcastically as the ‘Boston disease’. That’s where it was reported, as that was the part of the world where they first had oxygen.

“Children were coming back several months after they had been born with detached retinas, we call it retinopathy of prematurity (ROP) today. They gave oxygen because it made babies behave better, reducing what’s called ‘periodic breathing’. Pre-term babies tend to breathe quickly... stop... breathe quickly... stop. You can see the gaps in their breathing, but when you put them in oxygen, the pauses go away, hence they were perceived to be better behaved.

“In the late 1940s the National Health Service was introduced in Britain and it was also when they saw retrolental fibroplasia (RLF) for the first time. Mary Crosse in Birmingham speculated that oxygen might’ve been the cause. Which leads to Dame Kate Campbell, the first paediatrician at the Royal Women’s Hospital (RWH) in Melbourne. In

1951 she wrote an article in the *Medical Journal of Australia*, ‘Intensive oxygen therapy as a possible cause of retrolental fibroplasia: a clinical approach’, where she wrote: “I heard from colleagues returning from overseas, the suggestion that oxygen might be responsible for causing retrolental fibroplasia.”

“Dame Kate worked in three hospitals, the one that could afford oxygen had a rate of RLF at 19 per cent, the other two had to restrict oxygen, as they couldn’t afford it and could only give oxygen in dire need, their rate of RLF was only seven per cent. This was a suggestion that oxygen might be contributing to RLF.

“In the 1980s Dr Bill Silverman wrote a book, *Retrolental Fibroplasia – a Modern Parable*, where he shares a wonderful story of the early days of neonatal intensive care in New York. Dr Silverman was involved in a subsequent randomised controlled trial (RCT) of ‘routine’ versus ‘curtailed’ oxygen, where you would only give oxygen if needed, and keep it below 50 per cent, rather than the routine of more than 50 per cent for 28 days. They restricted this to babies up to 1,500 grams, but these babies had to live 48 hours or more to get into the trial.

“They wanted to investigate the competing risks of blindness versus death or brain injury, the sort of trial you might design today. They said they were wanting to know the long-term effects of the treatment rather than just short-term effects, and so they started in 1953 and over the first three months they randomly allocated in a 1:2 ratio. They wanted to limit the number of babies who got unlimited oxygen. After the first nine months, if there was no difference in mortality, everyone got the ‘curtailed’ group. So, they end up with a sample size that looks quite weird. If you were to design this trial today and ask for funding for it you would be laughed out of the room, but that’s what they did and of course the ratio is quite different between singletons and multiples.

“The rate of scarring RLF was much higher in the routine oxygen group. Everyone interpreted this to restrict

oxygen big time, and this ended the epidemic of RLF which had been running for about 10 years and caused at least 10,000 babies in America to go blind. One of whom was Stevie Wonder, who was born in 1951. This led to the era of oxygen restriction and you can probably guess what happened when they limited oxygen. The babies who really needed it, who were struggling to breathe from a lack of surfactant didn't get enough, and the mortality rate jumped up. They forgot that in the RCT all those babies were already dead, they never got into the trial because it generally kills you quickly.

"So, oxygen was limited and restricted, you can't give more oxygen because the baby will go blind, but the baby is also dying from lack of oxygen – it was a circular argument that was never resolved. It was estimated that there were at least 16 deaths from every case of blindness prevented. The other thing that happened was in those survivors who did make it, cerebral palsy rates rose. The Cooperative Trial was going to follow-up those babies, but it never happened. With technology we were able to start measuring arterial pO₂, but you had to get an arterial sample, that was the trick. From the 1970s you could measure transcutaneous pO₂ with a neat machine, but you had to move it around, or it would burn the skin after a couple of hours. Then the ubiquitous oximeter in the early 1980s came along, and by the 1990s every baby was on an oximeter forever. Arterial pO₂ and transcutaneous pO₂ were measured less frequently and the oximeter replaced all that. In 2004, Dr Silverman said "To put it bluntly, there has never been a shred of convincing evidence to guide limits for the rational use of supplemental oxygen in the care of extremely premature infants."¹

It was at this time that Professor Doyle and his colleagues felt they had to do something about this in Australia, and so they received funding from the National Health and Medical Research Council (NHMRC) to do a RCT of comparing

different oxygen targets, 85 to 89 per cent versus 91 to 95 per cent. There were four other similar trials around the world happening in New Zealand, Canada, the United States of America and the United Kingdom. This was a world-first for neonatology because all the trials got together and pooled the data to do a prospective individual participant data meta-analysis. The results of which were published in *The Journal of the American Medical Association* in 2018.

"Ultimately there were five RCTs involving 4,965 babies worldwide. The results showed that the restricted oxygen reduced ROP, but it did not have an effect on blindness when the children were followed. The mortality rate was higher in the lower oxygen group, with the major outcome of death or major disability at 18 to 24 months being not reduced, in fact it was slightly higher in the lower target group. It looks like death has trumped ROP. Most people have now gone back to monitoring the higher level, rather than the lower level," said Professor Doyle.

Fast forward to the here and now, Professor Doyle asked the audience if we really know how and when to give oxygen? How and when to monitor oxygen therapy and the correct saturation range to target? How to treat ROP? His answer was he didn't think so.

"What's happened is we've seen the introduction of a new drug Bevacizumab, an anti-cancer drug that stops blood vessels growing, because one of the features of ROP is aberrant blood vessel growth in the eye. The aberrant vessels clot and scar up, which causes detachment of the retina. You'd think this would be a good treatment. A randomised trial published in the *New England Journal* eight years ago in babies under 1,500 grams or less than 30 weeks with stage three ROP or worse. The primary outcome was recurrence of ROP requiring treatment. They were randomly allocated Bevacizumab which was injected into the eyeball, and the rate of the primary outcome was four per cent (6/140 eyes) and laser therapy, which was standard care, had a higher

rate of 22 per cent (32/146 eyes).

"The death rate was higher if you injected with Bevacizumab. The other that is long-term neurodevelopment has only been reported in 16 children. That's the total evidence on which we are injecting little babies' eyeballs today. This stuff gets out of the eyeball into the babies' circulation. Babies are characterised by growth, including growth in their blood vessels, and if you're going to not make blood vessels grow in other parts of the body, then other parts of the body aren't going to develop properly. Think of the brain here. History is being repeated," explained Professor Doyle.

"Now there's at least one observational study, an Observational Study from Canada, telling us that Bevacizumab babies are possibly worse off. As doctors caring for babies we need to be worried about this.

"Ventilation wouldn't have been available when I was born, with adult ventilators being introduced in the 1960s as a last resort for babies who are almost dead. The outcomes were dismal. One of my senior colleagues referred to them as the 'work of the devil'. In the 1970s, baby ventilators were developed, and they started to be used a little earlier during the disease, with survival rates rising just a little.

"The first baby ventilator was introduced in 1971 in the Royal Women's Hospital in Melbourne. Did the survival rate increase? There was just a slight increase. The survival rates started going up when we started to introduce other techniques including nasal CPAP and high frequency oscillatory ventilation (HFOV). However, there are a couple of other things happening in the background here, and one of these relates to surfactant."

Professor Doyle then brought up a New Zealand hero, Sir Graham 'Mont' Liggins, an obstetrician who was using corticosteroids to induce pre-term labour in sheep in the 1960s as he was interested in the onset of labour.

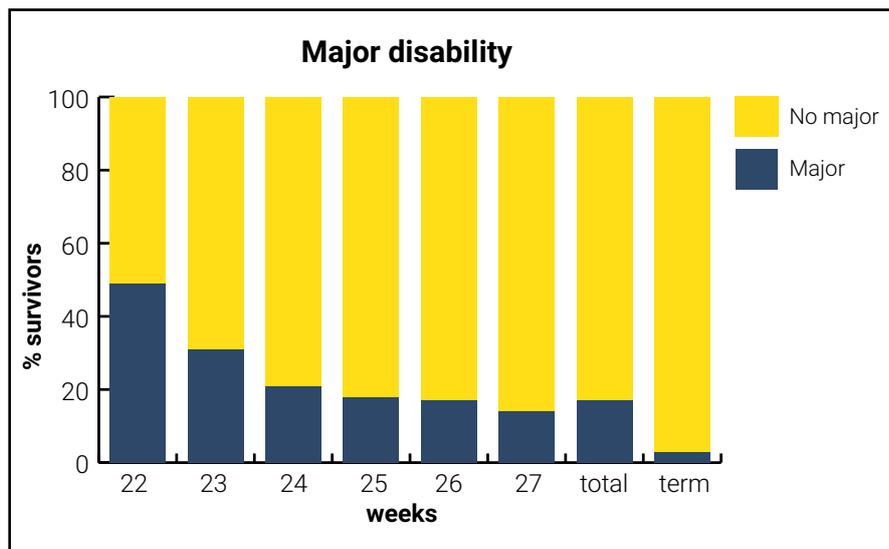
1. Paediatrics 2004; 113:394-396

“Sir Liggins noticed that the pre-term lambs delivered after their mothers were given corticosteroids had stable lungs and didn’t die from breathing difficulty. So, he thought ‘why don’t we try this in humans?’ With his paediatric colleague Dr Ross Howie, they designed the first randomised trial of antenatal corticosteroids, which was published in 1972, and ignored certainly by the northern hemisphere for 20 years beyond that date. However, it was picked earlier across the ditch. The forest plot from the Cochrane Library showed corticosteroids reduced mortality by a bit over 30 per cent.”

When Professor Doyle was working at RWH in 1978, Professor Roger Pepperell, from obstetrics and gynaecology, did a randomised trial of antenatal corticosteroids. Professor Doyle collected all the neonatal data into a spreadsheet for a total of 500 women in the trial.

“Exogenous surfactant is a therapy that can be given prophylactically, straight after birth, or later after the baby develops breathing difficulty. It comes in biological and artificial variations. Basically, surfactant is good stuff. We have had it available since March 1991 in Australia. It wasn’t just ventilation that contributed to the increase in antenatal survival, by the late 1970s we were using corticosteroids. This was around the time Professor Pepperell was doing his trial, and when he completed it, we started to use it more routinely. Surfactant came along in 1991. So, all these things interwoven were responsible for improvements of the survival rate.

“What’s happened since the early 90s between 1991 and 1992 and 2005? We’ve had more and better surfactant. However, have the outcomes improved? Well, no they haven’t. What we’ve had is an increasing consumption of resources for both ventilation and oxygen, and increased oxygen dependency long-term at 36 weeks postmenstrual age, and worse respiratory airflow at eight years of age. For adult respiratory physicians, as you start seeing these kids as adults, they are going to present to you with symptoms of chronic obstructive pulmonary disease.



“We’ve had more non-invasive ventilation since 2005, including Nasal HiFlo, which everyone is using. Are babies any better off? Again, I don’t think so, but data is being collected today.

“What about other long-term outcomes? Dr WH (Bill) Kitchen was my mentor when I first started in neonatal paediatrics. He was the fifth Howard Williams Medal recipient. Dr Kitchen did the first ever trial of intensive care in Australia at the RWH from 1966 to 1970. Intensive care wasn’t ventilation, it was the ability to measure pO₂, infuse glucose to stop them from getting hypoglycaemic, and infuse HCO₃. He confined his trial to only the ‘bigger’ of the smallest babies, from 1,000 to 1,500 grams birth weight, because any baby under a kilogram was deemed not suitable for the treatment. Dr Kitchen’s results showed the extra survivors had what he called a higher rate of a ‘handicap’. Due to having a limited viewpoint of just working in one hospital, he had the wisdom to seek out his colleagues in Victoria, which led to the formation of the Victorian Infant Collaborative Study (VICS) Group. There’s been a number of cohorts from the late 1970s, but for the three cohorts born in the 1990s and then 2005, here’s the rate of survival for major disability (in relation to thinking, hearing, seeing, walking or talking) in these extremely pre-term infants.

“Major disability drops as gestation increases. So, we are keen to keep these babies in the uterus if we possibly can. The overall rate is about 17 per cent, which is about one in six babies. Now, you may look at this and think these people are crazy, they are producing heaps of disabled children. However, you must remember they are always compared with control groups. In this instance, the control groups have two to three per cent of babies with major problems relating to thinking, hearing, seeing, walking or talking. Based on that, are we flooding our resources with disabled children. In Victoria, 200 extremely pre-term live births occur each year, where 75 per cent survive (150 babies), and 17 per cent have a major disability (26 babies). Compare this to term children, there were 72,000 term livebirths in 2017, virtually all survived, that is 99.7 per cent (71,784 babies). Even if we took the lower rate of two per cent, that’s 1,437 babies, a ratio of more than 50:1 that have a major disability. So, who are all the disabled kids? They are born on time,” said Professor Doyle. (See graph above)

Professor Doyle went on to talk about other outcomes over time, such as academic progress, motor and executive function. According to him, these are all getting worse. He drew attention to a few publications over the last couple of years, such as:

- Academic progress – Cheong et al Paediatrics 2017; 139: e20164086
- Motor function – Spittle et al Paediatrics 2018;10.1542/peds.2017-3410
- Executive function – Burnett et al Paediatrics 2018; 141:e20171958

Professor Doyle then moved on from the scientific side of his talk to a more personal reflection.

“I trained at the Royal Children’s Hospital (RCH), which involved a rotation at the RWH on a couple of occasions. My neonatal exposures were firstly covering the neonatal unit on weekends at the RCH in 1975. That first weekend happened to coincide with the Annual Meeting of the Australian Cohorts of Paediatrics, which meant all the paediatricians were out of town except for one.

“My next rotation was four months at the RWH, and it was here where I was one of two RCH registrars on rotation along with a Fellow. I was responsible for 40 per cent of the public babies not ventilated. We had 100 babies in the nursery, where the babies stayed in hospital seven to eight days and the caesarean babies stayed nine to 10 days. They were nursed in a communal nursery, which led to a rotavirus epidemic. We didn’t know it was rotavirus then, but this rotavirus was very important. The rotavirus was discovered in the faeces of neonates from RWH and the original strain is currently used in a vaccine today which is responsible for reducing deaths worldwide,” explained Professor Doyle.

“At the time we had three ventilators called ‘Loosco’, these were little square boxes which had an on-off switch. There was one machine, the ‘Baby Bird’, that no one really knew how to use, and was invariably lethal if we used it. We found out later that the dial was about 10 centimetres of water too low. When we thought it was five centimetres, it was in fact 15 centimetres, so that’s why it caused problems. We thought square wave ventilation was good, but we ended up producing massive air leaks. The

air went into strange places including the neck, scrotum, pericardium and air embolisms, which is obviously fatal.

“I managed to pass the exam in 1976, I had a Level-2 rotation for six months, before Newborn Emergency Transport Service (NETS) was in place. I was in the back of the ambulance several times, ventilating babies by hand, tearing around corners and running through stoplights. Then I went to the RCH for four months, there were no ventilators, and I was advised not to do neonatology by a senior mentor, which I ignored.

“Dr Graeme Barnes, a gastroenterologist at RCH and the 19th Howard Williams Medal recipient, came to Dr Kitchen and I in 1978 and said, “I’ve just been reading this study in gnotobiotic lambs that oral gamma globulin prevents rotavirus diarrhoea”. Dr Barnes went on to set up a RCT in humans (published as Barnes et al Lancet in 1982). Sure enough, it does.

“I then went to McMaster University in Canada from 1979 to 1982. Different ventilators, and a different way of ventilation. I was taught by Dr John C Sinclair (Jack), the ‘father’ of Australian neonatology. He taught me by not teaching me. He had a philosophy of problem-based, self-directed learning. For my research at McMaster I worked on a machine to measure insensible water loss, which was all metal and all the data on insensible water were wrong because metal expands and contracts when you change the thermal environment. I also tried some positron emission tomography scanning of baby brains.

“I went back to Melbourne in 1983, where I’ve remained ever since. Dr Laurie Murton passed away in 1993, which then saw the appointment of Dr Colin Morley in 1998. He had ideas for different ventilators (patient-triggered, assist control and volume guaranteed).”

In 2006 Professor Doyle decided to go into fulltime research and teaching, thus ending his clinical career.

When he returned from Canada in the early 1980s he designed two large RCTs. The first was to assess fluid restriction to

prevent bronchopulmonary dysplasia.

“It couldn’t be completed because by the time I went back to do it, fluid restriction had become the norm. The second trial was of oral gamma globulin to prevent necrotising enterocolitis. This was in 1983, we had to withdraw it at our NHMRC interview as something in the blood was doing bad things, and that something turned out to be HIV. I’m glad we withdrew that application, because I believe we would have been funded, and it would have been a disaster if we used a multi-donor blood product in little babies, giving them HIV.”

After Professor Doyle came back from McMaster, Dr Kitchen saw he was struggling and started to feed him a few ‘crumbs’ of data.

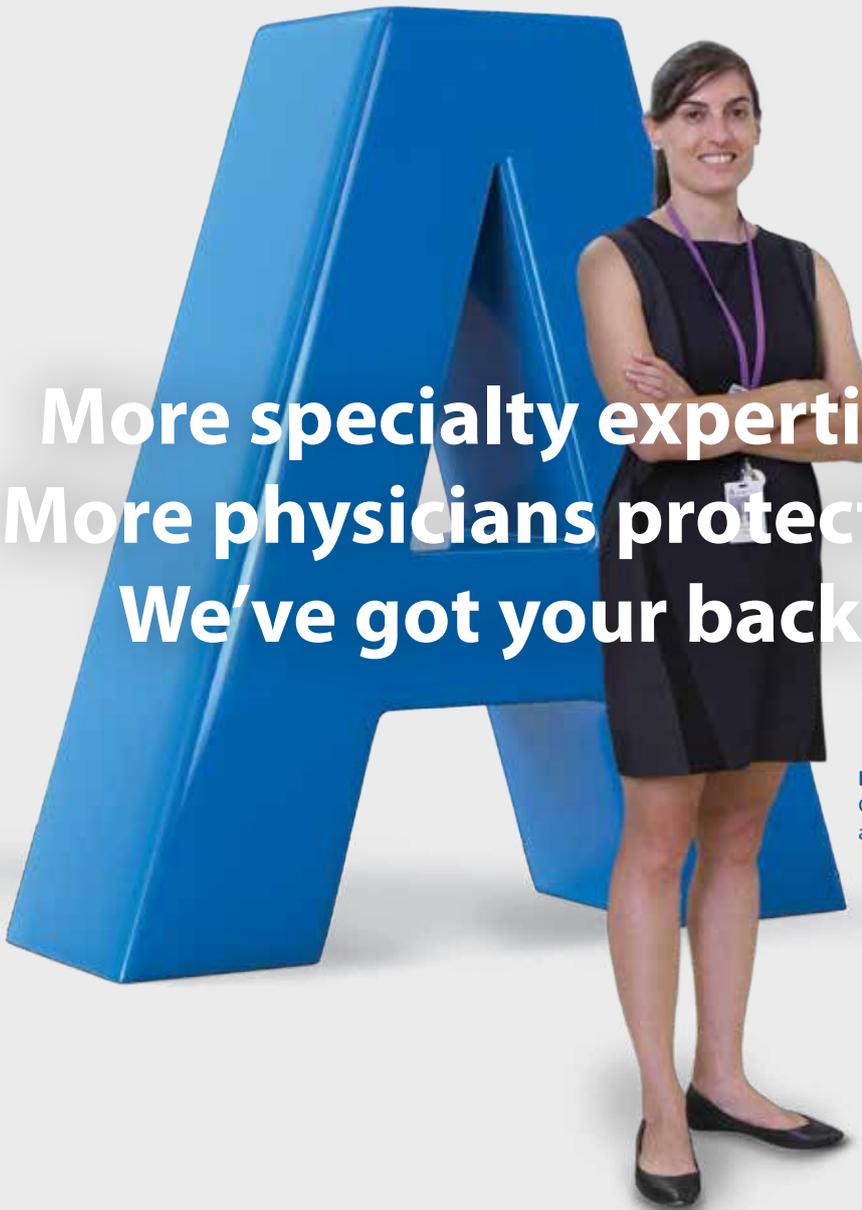
“I started to produce more publications. I also formed an alliance with Dr Caroline Crowther, an obstetrician. She was interested in antenatal interventions designed to improve long-term outcomes. And one of those was magnesium sulphate, which today we know reduces cerebral palsy.”

Professor Doyle ended his oration by highlighting the challenges for the next generation in his field.

“Remember history, oxygen is a mess, treatment of ROP is heading down the wrong path. What are we doing to the lungs of these tiny babies? We clearly need to improve long-term outcomes, but we are going the wrong way.

“You need to find time for research, and you need support from your administrators and learn how to say ‘no’. You will become unpopular, but you can’t do everything. Concentrate on what’s important.

“Finally, how do you do research? Ask answerable questions using a PICOT structure. You also need both persistence and patience. Without these two qualities, I wouldn’t be here. You also need plenty of friends, you can’t do it all by yourself. It took me a while to realise this. And remember, the research you do will help someone one day.” RQ



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Collaboration key to renewing AT

On Friday, 28 June 2019, representatives of all Advanced Training (AT) and education committees met with trainee representatives and RACP staff for the 2019 Advanced Training Forum, an annual event to discuss and improve aspects of AT.

This year's Forum focused on the renewal of AT curricula. This is one of the components of the College Education Renewal Program, which combines a number of projects including renewal of the Basic Training (BT) curricula and accreditation renewal. These projects will improve the experience of trainees and educators and provide support for our current and future physicians while reflecting the changing nature of the field of medicine.

“Knowledge doesn't stay still, the way people learn doesn't stay still, and the supervisors themselves who actually do the training actually all evolve as

well. So, it is a continuous process,” says Professor John Wilson, RACP President-Elect.

There are currently 38 different AT curricula. Each curriculum focuses on the medical knowledge and skills required in each specialty.

The aim of renewing the AT curricula is to:

- place more emphasis on competency in training
- align the training programs with the RACP curricula frameworks and models



“ Curriculum renewal is exciting, it’s innovative, it’s challenging, it’s the future.”



- update and rationalise existing curricula content and training requirements
- enhance the way our training programs are delivered and governed
- provide flexible curricula that meet the needs of our future professional medical workforce.

“I think the new curriculum will empower trainees. There is a big focus on trainees taking a little bit more ownership of their education and progression through training. I think that there will be a focus on how to incorporate training throughout usual workplace behaviour, so incorporating work-based assessments, regular meetings with the supervisor and I suppose seeking multi-modal/person feedback as part of training,” says Dr Raffaella Armiento, Trainee Representative, Curriculum Advisory Group.

The AT Committees are working together to make sure there are common standards across all 38 curricula, but each curriculum is still unique so trainees get the specialist medical knowledge needed for their

chosen career path. By finding a balance between common content and specialty-specific content, the College can streamline the development work for committees, benchmark content to show commonalities across training and better facilitate dual training arrangements for trainees.

To understand what content is relevant to each specialty, and what is common across the specialties, the Delphi method was used, a technique widely used in medical education.

The Delphi method enables researchers to measure and develop agreement from a group of individuals whose opinion is of great importance or if there's little definitive evidence to draw from. Individuals reach an agreement about an issue by participating in multiple iterative survey rounds. After each round, participants can review feedback from other participants, then refine their answers with the aim of establishing a unified expert opinion.

Before the Forum the College ran a two-round modified Delphi. The members of all 47 RACP committees that oversee Advanced Training programs were sent an online survey asking them to rate the relevance of each common standard to their specialty. Round one respondents were invited to complete the survey a second time, but they were given information about how everyone responded in round one, making the process cumulative.

On the day of the Forum two further rounds of this process were run using wall posters and the feedback from the online surveys. This gave participants a chance to see their peers' opinions in real time, providing the opportunity to take this into consideration as they gave their own input and qualitative feedback.

Through the four rounds of this process, the College found that the work tasks common to all physicians were around team leadership and teaching. The process also allowed validation of a set of competencies

(statements of professional behaviours, values and practices) that were likely to be common to all AT specialties.

Another highlight of the day was where attendees asked an expert panel questions about various education projects. The panel included RACP Curriculum Advisory Group member and former Dean of the Australian National University Medical School Professor Nicholas Glasgow; Interim Lead Physician, Medical Education at the College Dr Chloë-Maryse Baxter; Chair of the College Education Committee Professor John Wilson; Interim College Dean Professor Anne Cunningham and Director of Education, Learning and Assessment Ms Robyn Burley.

Attendees were also encouraged to discuss the barriers and enablers to renewal. This activity made it clear that the AT groups are committed to working consultatively with stakeholders, including specialty societies, and are invested in the continuous improvement of their training programs. The primary barriers identified were, not surprisingly, the time and resources needed for such a large and intricate project. The College will continue to work with all involved to overcome these issues and ensure the project is well supported.

From here, the Curriculum Advisory Group and staff will continue to work with relevant committees and key stakeholders to further refine the common standards and develop the unique material for each of the different AT curricula.

“Curriculum renewal is exciting, it's innovative, it's challenging, it's the future,” says Dr Eva Kippen, Curriculum Renewal Lead, Advanced Training Committee in Geriatric Medicine. [RQ](#)



IN-FLIGHT MEDICAL EMERGENCIES: Is there a doctor on board?



In-flight medical emergencies occur every day on commercial flights. It's estimated that one in every 604 flights has a medical emergency¹. But what do you do when you're caught off-guard, hours away from a hospital and have limited medical equipment?

RACP Quarterly spoke with Dr Joanne Tan and Dr Rahul Barmanray who shared their first-hand experience of the day they were asked the distressing question, "Is there a doctor on-board?"

Dr Joanne Tan and Dr Rahul Barmanray, two Advanced Trainees, were flying overseas. They were enjoying the in-house movies shortly after dinner was cleared when they noticed a group of distressed passengers sitting nearby. Dr Barmanray had a gut-feeling it was medical related, so he went to investigate.

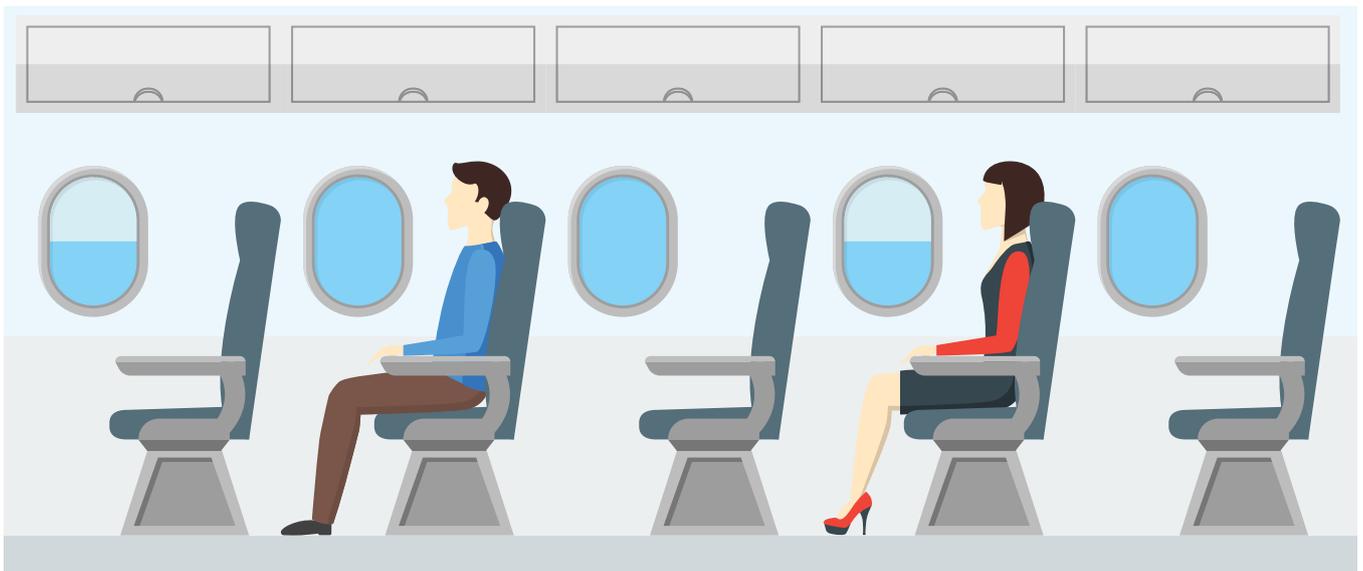
His suspicions were confirmed when he noticed “a young adult lost

Paramedics were on stand-by at the airport, so the patient could be quickly transported to local emergency care for further assessment upon landing. Dr Tan and Dr Barmanray were thanked by the airline for their assistance and given a bottle of wine and a set of pyjamas.

Although medical emergencies are not common, Dr Tan advises “the most common presentations are pre-syncope (37.4 per cent), respiratory

Dr Tan also outlined the importance of crew members, who are trained in first aid and basic life support. She explained that the crew members are responsible for managing medical emergencies on the aircraft and being the link between the pilot and what’s happening on the plane.

Interestingly, in most jurisdictions a doctor is not legally obligated to step forward when called to help, explained



consciousness with multiple episodes of witnessed tonic-clonic activity,” said Dr Tan. “The passenger had a history of juvenile epilepsy and was sleep deprived due to cancelled flights. His heart rate, blood pressure and blood glucose were obtained with great difficulty in the dark, noisy, confined cabin and were in the normal range. He regained consciousness and was able to follow commands very soon after the episodes,” Dr Barmanray added.

The passenger was then moved to an area with more room, where a limited neurological examination took place. “The staff communicated our assessment of the patient’s condition with the ground-based medical service and due to no further seizure activity, they agreed we didn’t need to give midazolam, the parenteral benzodiazepine that was available,” explained Dr Tan.

symptoms (12.1 per cent) and nausea and vomiting (9.5 per cent). About half of in-flight emergencies are attended by doctors and one third by nurses. Thankfully, major complications are rare, with 8.6 per cent requiring hospital admission and a death rate of 0.1 to 1 per million passengers.”

Looking after an ill patient during a flight involves several people and Dr Tan notes it’s important to establish the roles of various members on board. “Ultimately the pilot and co-pilot have overall responsibility for the safety of the passengers, crew and aircraft,” she says.

“They make overarching decisions on the management of a situation such as diversion of an aircraft or contacting ground-based medical support.”

Dr Tan. However, a doctor “has an ethical and humanitarian obligation to do so. It is important to note that once the doctor steps forward, duty of care and legal obligation is established². Actions undertaken in this context are usually covered by relevant ‘good Samaritan’ laws.”

During an in-flight medical episode, the cabin crew make the first assessment and report back to the pilot. Dr Tan explained the next step is to ask if there’s a medical professional on-board who can assist. The passenger is then assessed in a private area (if there’s one available), or in their seat.

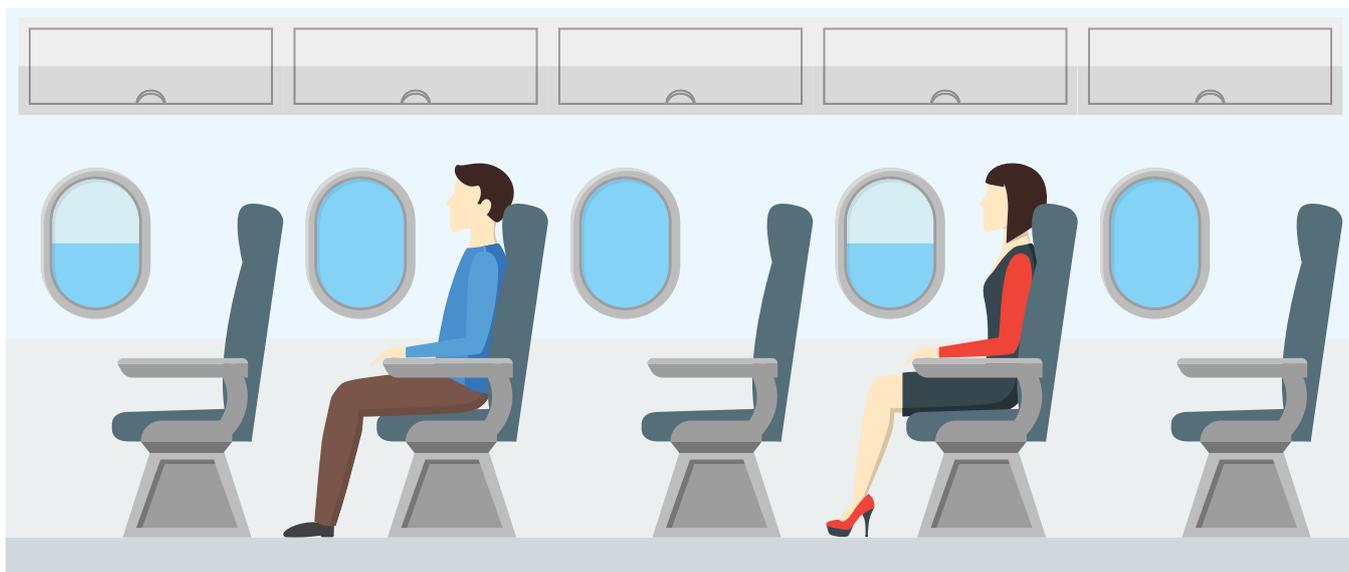
“In Australia there is no recommended standard for medical or first aid kits under the Civil Aviation Safety Regulations 1988. There are usually three types of medical kits on board: a First aid Kit, Emergency Medical Kit

(EMK), and a Universal Precaution Kit (which contains personal protective gear)³,” said Dr Tan.

The EMK contains medical equipment and drugs that can be used for the clinical assessment and treatment of the ill passenger⁴. “It usually contains a basic stethoscope, manual/automatic sphygmomanometer, pulse oximeter, glucometer, intravenous insertion kit, intramuscular needles and syringes,

a combined medical decision for the patient,” shared Dr Tan.

“In extreme circumstances, the aircraft may be diverted. This decision is made in conjunction with the GBMS but ultimately lies with the pilot. Diverting a full aircraft has far-reaching consequences, including cost, flight delays, re-routing/stranding of other passengers, and most importantly may result in stranding of the ill passenger



cardiopulmonary resuscitation masks and an indwelling urinary catheter.

“There is also a list of medications stocked on board, which includes but is not limited to cardiovascular drugs (aspirin, lignocaine, adrenaline but not amiodarone), diuretics, non-narcotic analgesia, antihistamines, bronchodilators, sedatives/anti-epileptics and intravenous saline solutions.”

Each patient experiencing a medical emergency has varying needs.

“Depending on the seriousness, the pilot may order the crew to contact ground-based medical support (GBMS) for further assistance. Communication with GBMS is made by the crew and not by the volunteering doctor. The GBMS in conjunction with the on-board doctor will formulate

in a different region for an undefined period, with or without support.”

RACP Quarterly would like to thank Dr Tan and Dr Barmanray for sharing their experience in the hope others will feel more prepared if they find themselves in a similar situation. ^{RQ}

1. Peterson DC, Martin-Gill C, Guyette FX, Tobias AZ, McCarthy CE, Harrington ST, Delbridge TR, Yealy DM. Outcomes of medical emergencies on commercial airline flights. *N Engl J Med*. 2013 May 30;368(22):2075-83.
2. Ho SF, Thirumoorthy T, Ng BBL. (2017). What to do during inflight medical emergencies? Practice pointers from a medical ethicist and an aviation medicine specialist. *Singapore Medical Journal*, 58(1), 14–17.
3. MD A. In-Flight Medical Emergencies - The Role of the Flight Crew and the Medical Professional [Internet]. docsopinion.com. 2018 [cited 22 October 2018].
4. MD A. In-Flight Medical Emergencies - The Role of the Flight Crew and the Medical Professional [Internet]. docsopinion.com. 2018 [cited 22 July 2019].

Balancing medical science with humanity



RACP Congress 2020 4 – 6 May 2020 Melbourne

In this rapidly changing world, RACP Congress 2020 will equip you to deliver healthcare, provide leadership and respond to need.

Congress 2020 Lead Fellow, Professor Don Campbell, encourages Fellows, trainees and stakeholders to attend Congress 2020. “Be a part of something bigger, contribute to the conversation. Congress 2020 will broaden your horizons, challenge your thinking and inform your practise.”

With the theme of ‘Balancing medical science with humanity’, RACP Congress 2020 will look at a range of topics, exploring how the profession is transforming.

How do we respond to society’s biggest challenges? How will we work with our Indigenous communities to improve their health outcomes? Our climate is changing: how can we respond and help mitigate the risks? Our community is ageing and living longer with chronic disease, how will we address gender equity in medicine? Artificial intelligence is rapidly developing: how will our profession

prepare for the future? Doctors are people too – what can we do to look after ourselves? Can we learn from our patients? Our patients are more knowledgeable – how do we respond to the empowered patient?

These are just some of the things to discover at Congress 2020.

On the theme of Indigenous health Professor Campbell believes physicians have an important role to play.

“As physicians, as a College of Physicians we have a very important role to play in improving health outcomes for our Indigenous Australians and the way that we can do that firstly is by working with our Indigenous Australians and taking our lead from them. It’s very important we work with the communities, whether they’re rural, remote, provincial or urban. We need to learn a new way that’s respectful and based on deep listening, so we can hear what Indigenous communities need and we are able to respond.”

But it’s not just our Indigenous communities that physicians need

to partner with and listen to, it’s all patients and communities.

“One of the important considerations for us to take into Congress is an awareness that we have a role to play as citizens and part of our role is advocacy and part of our role is listening to the community, we always have to listen to our patients,” says Professor Campbell.

A key consideration to be explored at RACP Congress 2020 is integrated care and the opportunity that multidisciplinary teams present for physicians.

“We as physicians have a huge responsibility as we move forward, as nations, into the foreseeable future. The big responsibility that we have is how do we respond to the emerging issue of complexity, the world is more complex, our roles are more complex, the systems of care that we live and work in are more complex. There’s a huge opportunity here for us to contribute to the design of those systems, one example of that opportunity is the opportunity that



integrated care presents to us. If we don't contribute to the design, if we don't have an understanding of the systemic nature of what we do, somebody else is going to come along and design the systems that we then have to respond and fit into."

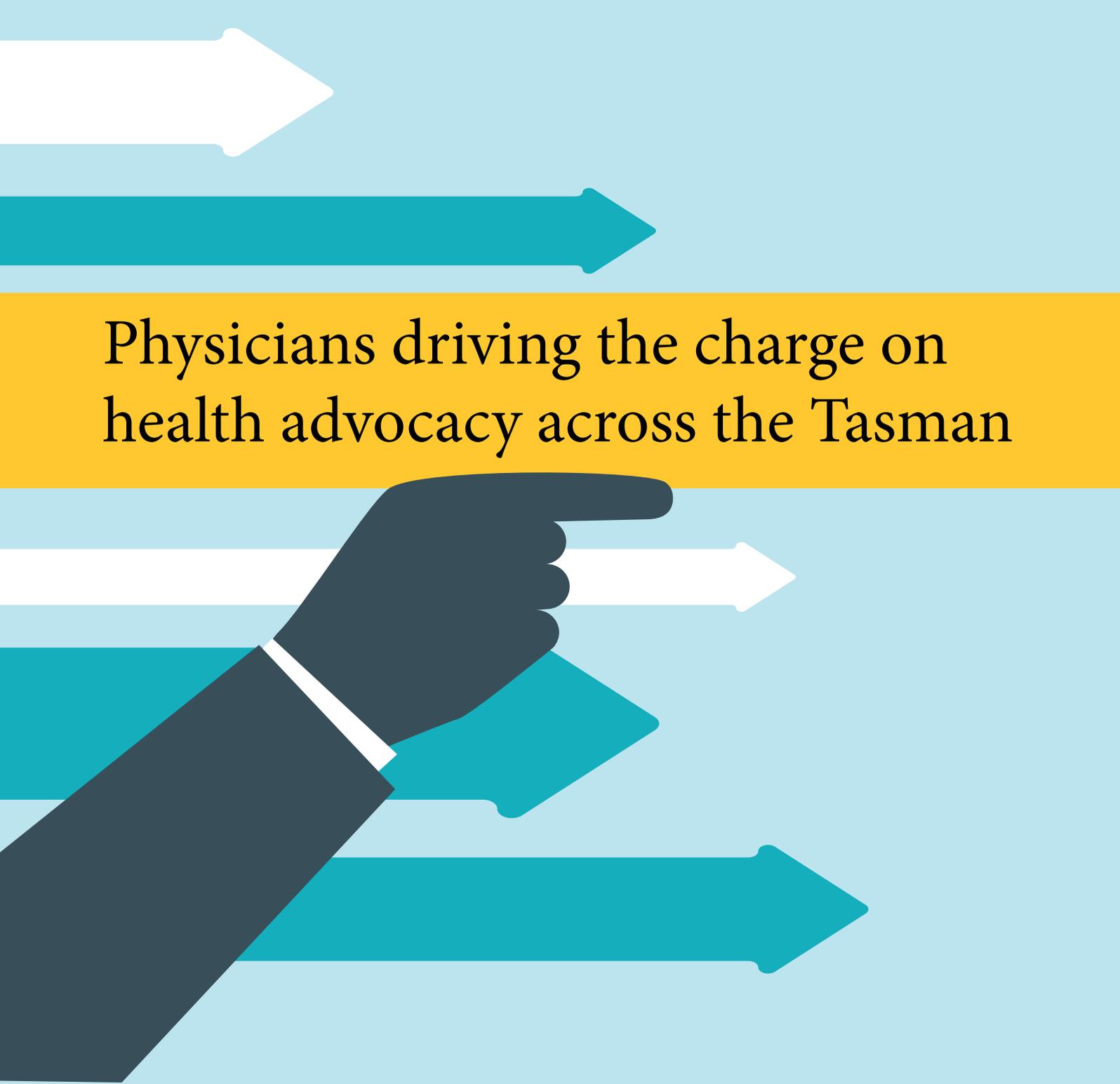
Being held in Melbourne, RACP Congress 2020 also offers attendees an opportunity to engage directly with the powerhouse of medical research coming out of Melbourne. Research that is being brought into productive application, to improve health outcomes within Australia and internationally.

As the premier annual event on the RACP calendar, Congress 2020 will again offer a diverse program with topics that span the breadth of the medical industry.

RACP Congress 2020 is being held at the Melbourne Convention and Exhibition Centre from Monday, 4 May to Wednesday, 6 May.

Register your interest and find out more about RACP Congress 2020 at www.racpcongress.com.au





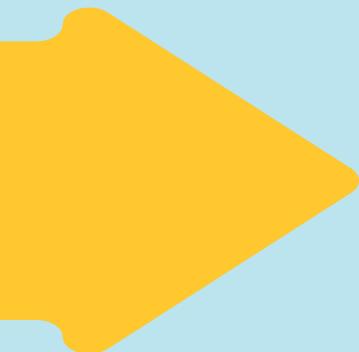
Physicians driving the charge on health advocacy across the Tasman

The difference our physicians are making in improving health outcomes for patients transcends the walls of the clinic.

Our Fellows have been playing a vital role in progressing significant public policy shifts across Australia and New Zealand through speaking up on policy issues that impact the health of their patients.

As one of the largest medical colleges in Australia, and one of the largest in New Zealand, the RACP is in an incredible position to provide expert advice and testimony to decision makers and the general public. Our College not only has an opportunity to be at the forefront of shaping the future of health policies and outcomes – but also a duty to ensure the voices of frontline physicians are heard by Governments, the media and other stakeholders in order to achieve just health outcomes for the general public.

Our RACP Policy and Advocacy Executive Committee, made up of Fellows from across various specialties, gathers regularly to discuss the latest issues arising in their field, and how well Government policies are aligned with the latest research and evidence. Whether it's writing a letter to a Minister, developing a public campaign or speaking to media about the issues in their field – our physicians are driving the charge to provide solutions to public policy gaps which are impacting the health and wellbeing of their patients and the wider population.



You don't have to look far to see some of the outstanding policy achievements our physicians have driven.

An example of our life-saving advocacy success was demonstrated in 2016 when our physicians paved the way for the introduction of speed limits in the Northern Territory. In a state with unrestricted speed zones and a road death toll more than three times the national average, we knew something had to be done. Dr Christine Connors was one of our key advocates in the Northern Territory driving this change, alongside Fellows at the Royal Australasian College of Surgeons and the Australasian College for Emergency Medicine. As a result of the RACP and fellow colleges insisting on a change to reduce the death toll, the Northern Territory Government took the expert advice and subsequently scrapped all unrestricted speed zones. This was an incredible win – and it demonstrates the value our physicians contribute to the public policy domain.

The following year our physicians again played a critical role in securing a ban on alcohol advertising before 6pm on weekends and on public holidays

in New South Wales. Prior to this, alcohol advertising was only banned on weeknights before 8.30pm, however the RACP believed there was still a large loophole in the ban, as children would still watch games on weekends and were exposed to large amounts of advertising from the alcohol industry. In one year, AFL, NRL and Cricket broadcasts would draw a cumulative viewing audience of 26.9 million children. During this time, children were exposed to 50.9 million instances of alcohol advertising. Through public media advocacy and the representation of senior Fellows at the NSW inquiry on the Alcoholic Beverages Advertising Prohibition Bill, the RACP was able to contribute towards a positive policy outcome for children and families across NSW.

Similarly, the RACP was instrumental in tackling the opioid epidemic in

Australia by supporting the Australian Therapeutic Goods Association's decision on the upscheduling of codeine. Between 2011 and 2015, twice as many people died from overdoses associated with a prescribed opioid medicine compared to heroin overdoses, highlighting the serious risks associated with the misuse of the medication. Greg Hunt quoted the RACP's support when announcing the Government's policy to make codeine a prescription-only drug in Australia – demonstrating the great value our leaders place on our expertise. The RACP will continue to advocate for a similar policy shift in New Zealand, where the over the counter availability of codeine continues to be problematic. [RQ](#)

TACKLING THE SILICOSIS EPIDEMIC

In October 2018, the RACP generated nation-wide media coverage when we declared that Silicosis was becoming the next occupational lung disease crisis to hit Australia and New Zealand since the asbestos disaster. Silicosis is a disease caused by the inhalation of a silica dust – found in materials such as concrete, stone, sandstone and granite.

Dr Graeme Edwards, an occupational health expert from the College has been a central figure in driving progress at state, federal and international levels to raise awareness about the disease which, until October 2018 when the RACP sounded alarm bells, was relatively unknown. The RACP's intense advocacy around Silicosis has generated a National Dust Disease Task Force where Dr Graeme Edwards will give expert advice and recommendations. The RACP will monitor the outcomes of the Taskforce and continue to take the issue to state and federal counterparts to ensure we tackle the epidemic before it takes more lives.



WHAT'S NEXT?

Physicians across the College continue to drive a range of advocacy campaigns across New Zealand and Australia.

ENCOURAGING MINIMUM ALCOHOL PRICES

This year our physician experts in alcohol policy, Professor Paul Haber, Dr Martyn Loyd Jones and Professor Paul Colditz have been busy speaking to radio and TV stations across NSW and QLD to raise awareness about the benefits of a minimum floor price on alcohol as a way of reducing alcohol related harm in the community. The issue has been particularly topical in these two states as both Governments are reviewing their alcohol policies.

The RACP's advocacy in QLD and NSW comes off the back of the RACP's success in securing a minimum floor price for alcohol in the Northern Territory last year.

We know the rates of alcohol consumption in Australia and New Zealand are contributing to a significant disease burden for individuals and our health services. Alcohol use contributes to the burden of 30 diseases and injuries including alcohol use disorders, eight types of cancer, chronic liver disease and 12 types of injury, road traffic injuries, suicide and self-inflicted injuries. The evidence shows that setting a floor price on alcohol reduces the availability of cheap alcohol, decreasing alcohol consumption and problematic drinking patterns.

WORKING TO #MAKEITTHENORM

The Make It The Norm campaign, launched in New Zealand last year, continues to be a high profile platform to advocate for a holistic approach to achieving positive health outcomes for New Zealanders. The three focuses of the campaign are access to housing, provision of good, safe work and Whānau (family) wellbeing.

The Make It The Norm campaign began because our physicians were seeing far too many sick children and adults turning up with preventable illnesses as a result of living in poverty. Illnesses such as respiratory diseases were on the rise from living in cold conditions without heating, as well as illnesses forming from families living out of cars. These circumstances were driven by skyrocketing numbers of New Zealanders unable to afford electricity, or unable to afford rent at all. To date, one of the successes of the campaign is the New Zealand Government's announcement of a Winter Energy Payment – where singles or couples on benefits receive a \$400 to \$700 payment over the winter months so they can afford to turn on the heater. The second phase of the campaign is around the corner, so keep an eye out for what's next.

ADVOCATING FOR MEDICAL TRANSFERS

The RACP played a vital role in supporting the Medical Evacuation Bill (Medevac) in March this year to ensure asylum seekers under Australia's responsibility have access to basic healthcare, some of which is not available on Manus Island or Nauru. Under Medevac, critically ill asylum seekers from Manus Island and Nauru can come to Australia for treatment of serious medical issues as determined and assessed by an independent panel of doctors and health experts.

As a leading voice in the health industry, the Government sought the RACP's advice to nominate one of our physicians to be an expert on the panel. The RACP will continue to advocate for all people living under Australia's watch to have access to a basic level of healthcare.

WANT TO BE INVOLVED?

If there is a public policy issue impacting health outcomes that you want to speak up about, contact the RACP Policy and Advocacy Committee to get involved: CPAC@racp.edu.au

Obesity: Rising to the challenge



Unhealthy diets are major contributors to obesity, diabetes, dental caries, cardiovascular diseases, mental health conditions and many cancers – the very diseases which fill our hospital beds, general practice clinics and swamp the health budget. At RACP Congress 2019, tackling the issue of obesity was explored from both healthcare and patient perspectives.

Ditching the word 'diet'

Dr Robyn Toomath is an endocrinologist, previous President of the New Zealand Society for the Study of Diabetes and author of *Fat Science, Exercise and Diets Don't Work – And What Does*.

"I've been working with people with weight related problems for 35 years. At the beginning I did what everybody in a diabetes clinic did then and asked people to lose weight as the solution to not progressing onto insulin therapy or improving their glycaemic control."

Dr Toomath stopped prescribing diets about a decade ago when it occurred to her that if we congratulated people on weight loss, were we inherently scolding people for weight gain?

"Eighty-five per cent of people who embark on a weight loss program will not have sustained meaningful weight loss at five years. When we prescribe this useless treatment, who do they blame? They don't blame us, they blame themselves."

The question is what to do instead?

"The bariatric surgery discussion is interesting, for some people the idea is abhorrent so I mention it, it gets stored away and we move on. Some people are just desperate to be given permission to ask for surgery and quite often, people have never before had the option of surgery raised, which I find astonishing."

"The trouble is, many people will not opt for surgery or surgery will not be available to them as they are no longer fit for the operation," explains Dr Toomath.

Her recommendation is to not get fixated on weight and focus on the medical problems that overweight people are more prone to.

"Our patients need perfect blood pressure and lipid management. We need to make sure that like everybody else, people are vaccinated, that people are screened for cancer and diabetes

and we need to be alert that some of our very overweight patients present with very subtle signs of dangerous conditions like sepsis and probably ischaemic heart disease.

"We've got to remember the weight loss treatments available are pretty hopeless and this means that public health responses are still the most important things to push for. We need an environment where it's easy for people to eat healthily and to get as much exercise as they possibly can."

Leading by example

David "the Brown Buttbean" Letele has not only been through his own fight against obesity, but now supports others through their journey.

"I played rugby all over the world. I also ended up owning my own supermarkets, but I lost everything over in Australia, all of my material things, more importantly I put a massive strain on my family. I started living a really bad life, started piling on the weight."

At his heaviest, David weighed 210kg. He describes himself then as being in a bad way physically but even worse emotionally. After losing everything he moved back to New Zealand and started a career as a boxer.

"When I first came out I jumped on the scales at a press conference and it said 'error'. I thought the batteries were flat."

"The whole time [boxing] I was depressed and hated my life, but I kept fighting through and I kept losing weight."

He started Brown Buttbean Motivation, a bootcamp program for people to regain control of their lives, after his father-in-law asked if he could help a friend lose weight. That first bootcamp had only five people. The program has now grown to 21 free bootcamps with over 1,000 people coming each week.

End the fat-shaming

Fifth-year medical student Isabelle Lomax-Sawyers' 2017 blog on being a fat medical student at the start of their metabolism module went viral and highlighted the damage weight stigmatisation can cause.

"I was in primary school the first time I was teased about my weight, I was 11 the first time I went on a diet, 14 when I experimented with making myself vomit to control my weight."

"I've been on more diets than I care to count. Lost and gained a substantial amount of weight, many times before ending up back where I started."

Isabelle recognises that for every person who's felt hurt by the treatment of their weight, there's a health practitioner who has more than likely caused that pain unintentionally.

"I think everyone of us can relate to the experience of having said something well intentioned that came out totally wrong."

She recommends health professionals take stock of their own biases, make 'fat phobia' unacceptable by using respectful language and speaking to others when they do.

"I think we need to approach this work of unlearning bias from a place of self-compassion. We're all products of our training and more broadly, products of a society where weight stigma is the norm."

Most importantly, get to know patients and how weight stigma has affected them.

"It can be powerful to have a practitioner acknowledge that the world is not always kind to fat people."

Finding solutions locally

Ms Leonie Matoe has worked alongside Māori health professionals designing and delivering community health and the Māori public health workforce development initiatives for over 10 years.

Leonie believes the solution to health and wellbeing is founded on an understanding of the local population, their heritage and culture.

“Evidence highlights that we do have a major lack of sustainable and sustaining health solutions particularly for Māori in Aotearoa. Much of this I believe has come from ineffective mainstream models being delivered to us as communities and as a people and within that a deficit framing of Māori in Aotearoa and of Māori health here.”

In order to rise to the challenge of obesity in Aotearoa, initiatives need to be codesigned with Māori communities. As former CEO of the national health agency Toi Tangata, she developed and delivered innovative approaches to health, movement and nutrition grounded in Māori values and knowledge.

Many of these initiatives have seen great success including the Iron Māori event that was so popular registrations were full within seven minutes of opening online.

“At the outset it’s a triathlon but age and ability is no barrier. In the preparation for the event communities all over the country are developing physical capabilities. They’re connecting with wai (water) and whenua (land) spaces that are significant to where they live. Iron Māori celebrated 10 years just recently and that’s seen thousands of individuals and families competing, laughing, developing and connecting.”

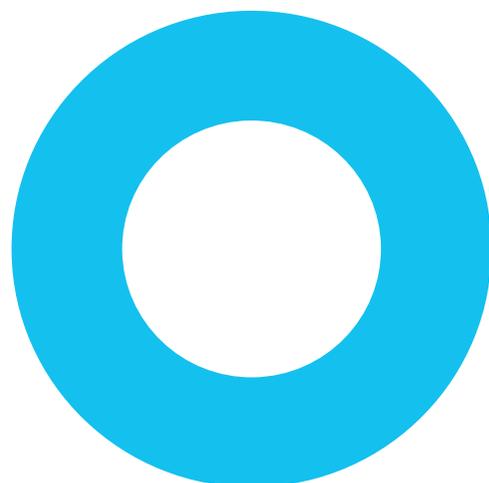
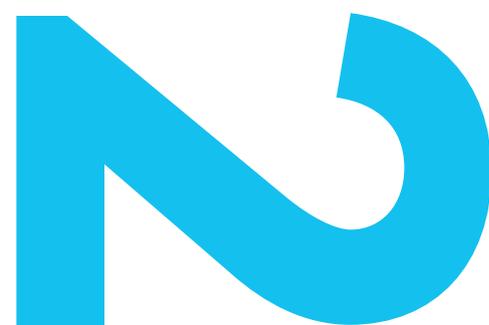
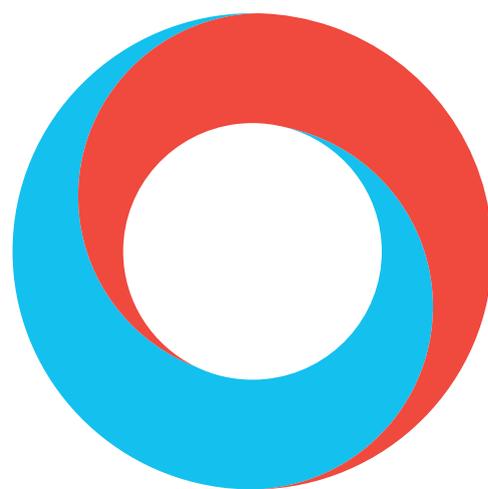
Leonie is now leading an Indigenous food enterprise for her iwi organisation.

“Our model seeks to develop business opportunities where people and nature matter. Kaitahi transforms native plant foods into healthy food and beverage products that are all natural and super convenient. It’s an example of Māori knowledge influencing across the food industry and seeks to actively revitalise Indigenous food ingredients into contemporary food forms.” **RQ**



INTERNATIONAL MEDICAL SYMPOSIUM

Providing care to underserved populations



Planning is well underway for the Tri-Nations Alliance International Medical Symposium (IMS) to be held in March 2020, in Sydney. IMS brings leaders from the medical profession, educators, regulators and policy makers together to address big-picture subjects from across the sector.

Now in its ninth year IMS is an annual event that reinforces the strong historical relationship between medical professions from Canada, New Zealand and Australia. Cementing these ties, a formal agreement between the Royal College of Physicians and Surgeons of Canada, The Royal Australasian College of Physicians, The Royal Australasian College of Surgeons, The Australian and New Zealand College of Anaesthetists and the Royal Australasian College of Psychiatrists created the Tri-Nations Alliance.

The IMS 2020 theme, Providing care to underserved populations, is relevant to health professionals from all member countries. With a focus on higher medical education, delegates will explore how specialist training can support and enhance access to healthcare for critical populations experiencing difficulties in accessing healthcare, potentially due to location or isolation, social determinants or other specific issues.

Dr Anne Cunningham FRACP, Interim Dean at the Royal Australasian College of Physicians is leading the working group of

“ I expect it to be an informative and engaging day that will provide us with new ideas that we can take back to our organisations,”

representatives from all member colleges as they bring the program to life. “IMS is a great opportunity for us to come together from around the world to share the latest insights in medical education,” she says.

“We all face similar challenges in meeting the educational needs of our members, whether it’s specialist training or continuing professional development. We can learn from the experience of other colleges to help us provide the best outcomes for our trainees and Fellows as well as the patient populations they serve.”

Expert global speakers are being invited to share their knowledge with delegates through plenaries, workshops and Q&A sessions. “I expect it to be an informative and engaging day that will provide us with new ideas that we can take back to our organisations,” added Dr Cunningham.

Anyone who has an interest in this area is invited to attend and registrations will open soon.

Friday, 20 March 2020

Amora Hotel, Jamison Street, Sydney, NSW, Australia



Register at www.internationalmedicalsymposium.com.au

RACP Fellow awarded prestigious award for his pivotal work in cancer survivorship

In April 2019, the Clinical Oncology Society of Australia (COSA) awarded RACP Fellow Professor Richard Cohn the prestigious Ashleigh Moore Award.

The award recognises Professor Cohn's outstanding contribution to the care of paediatric and adolescent cancer patients in Australia, and his national and international contribution to care of cancer survivors.

"It is very humbling and a great honour to have been nominated by my colleagues at Sydney Children's Hospital and selected by the COSA Survivorship Committee," says Professor Cohn.

As Professor Cohn trained as a paediatrician, he was drawn to the early advances being achieved in oncology.

"I felt oncology was likely to be an area of rapid growth, allowing innovative research, while allowing a career with hands-on involvement with children and families as well. It has been very rewarding to be part of a specialty that during my career has seen a cure rate of over 80 per cent for children with acute lymphoblastic leukaemia and for many other childhood cancers," reflects Professor Cohn.

According to Professor Cohn, the early cancer survivors taught oncologists more than the oncologists assisted the survivors. By documenting what they were observing and relating the observations to the treatment they received, oncologists learnt about late effects.

"We started Survivorship Clinics

for patients five years or more from diagnosis. We had no guidelines and no interventions to improve outcomes. As we learnt, we were able to modify cancer treatment protocols to attempt to avoid the next generation of childhood cancer survivors experiencing the same life threatening and life altering late complications, which contributed to poorer quality of life, compared to their siblings," says Professor Cohn.

Just like the namesake of his award, the late Ashleigh Moore OAM, a tireless campaigner on national and international stages to improve the quality of life of survivors, Professor Cohn has been dedicated to successful collaborations on cancer survivorship.

He is part of a highly successful collaboration with the Molecular Epidemiology Group at the Children's Cancer Institute, which led to the establishment of the Sydney Children's Hospital Survivor Cohort. The cohort comprises patients who are now, in some cases, 40 years after completion of therapy.

"The cohort is being investigated clinically for identification of adverse events and, using DNA from a biobank that we have established for the cohort, having molecular advances applied to better understand cancer initiation and risk factors for adverse events and how early preventative interventions

can decrease subsequent morbidity and mortality,” says Professor Cohn.

Early cross-campus collaboration has ensured patients’ needs are met.

“We have adopted international guidelines and embedded research into clinical practice. I am indebted to my colleagues at the Sydney Children’s Hospital who have participated and contributed to this work. It is gratifying to see adult units providing survivorship care to adult survivors and COSA publishing a model of care to further improve services to adult survivors.

“In collaboration with colleagues from the School of Medical Sciences, University of New South Wales, we are investigating the molecular events that result in insulin resistance in survivors. Under the auspices of the Australian and New Zealand Childhood Haematology and Oncology Group Late-effects Committee, which I chair, a number of collaborative studies have further enhanced our understanding of the issues facing survivors.

“I have also worked very closely with colleagues in the Behavioural Sciences Unit at the Kids Cancer Centre at Sydney Children’s Hospital. Studies in the program are looking at preventive strategies in at-risk individuals to reduce long-term morbidity by reinforcing healthy lifestyles, motivating positive behaviour changes, helping to target preventive therapy and aiding in better focused surveillance studies, including the risk of second malignant neoplasms. Programs designed to promote healthy lifestyles in survivors, including improved nutrition and physical activity interventions are now being shared internationally.”

Professor Cohn feels very fortunate to have been able to collaborate closely with national and international colleagues working in the field, as well as scientists working today at the cutting-edge of molecular and genomic frontiers.

“To address the loss to follow-up of survivors, we are exploring innovative models of care for survivors that overcome the barriers to attendance that we have documented. We are also developing interventions looking at increasing interactions with primary care physicians and nurse-led clinics and using digital approaches to overcome the tyranny of distance, to avoid rural families having to travel to tertiary care,” says Professor Cohn.

“Cure is not enough” – Giulio D’Angio

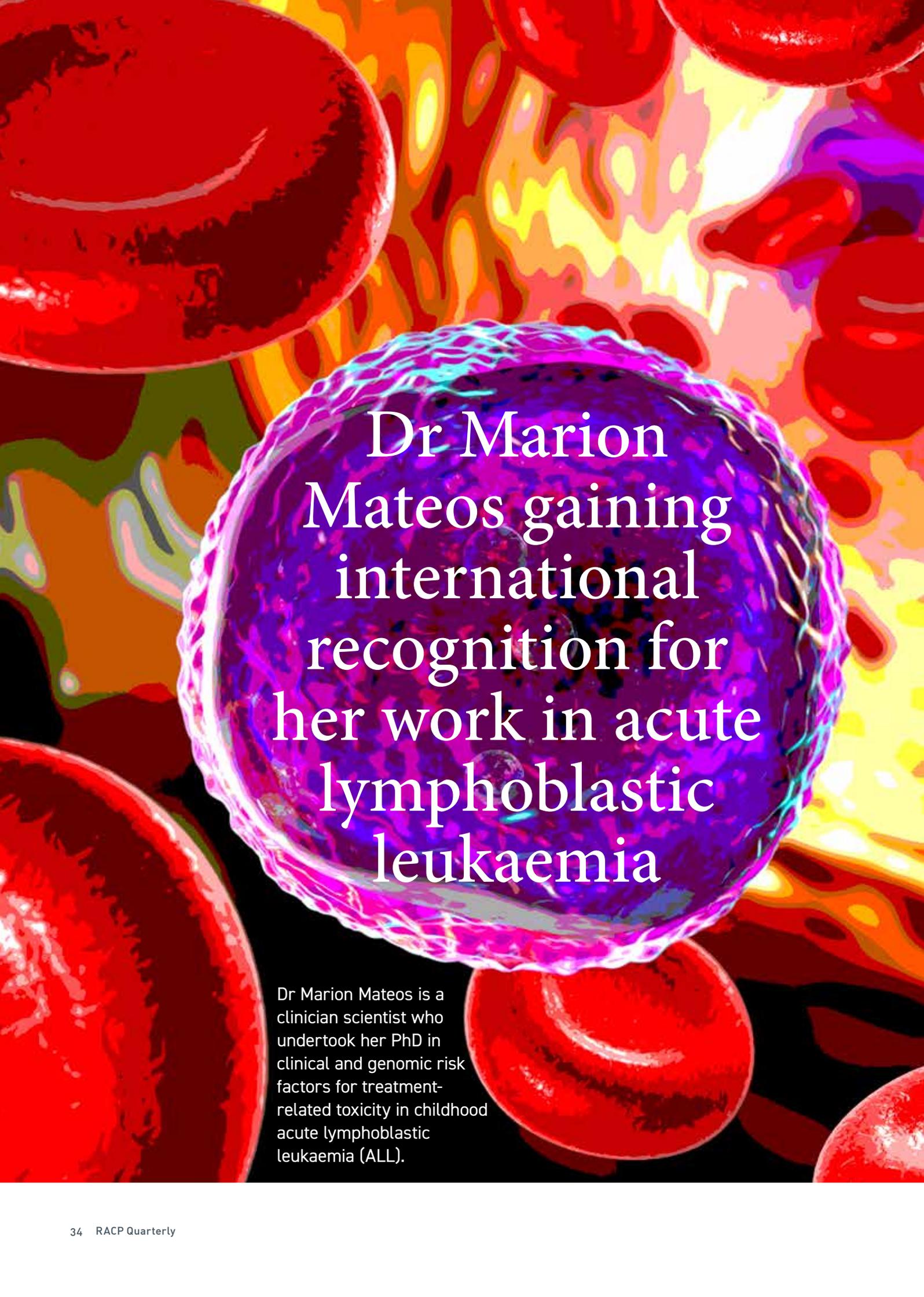
Today, Professor Cohn and his fellow oncologists aim to have survivors who

are free of handicaps, caused either by their disease or its treatment, survivors who can keep up and compete with their peers, who are employable, insurable and able to take their rightful place in society.

“As an oncologist, we rejoice in the fact that survivorship issues are now recognised as a core activity of paediatric and adult oncology, and not an afterthought. Seeing patients treated in the more recent era, who have been spared the complications experienced by patients treated earlier because of what we have learned by studying survivors, is very rewarding,” says Professor Cohn. [RQ](#)

“ It is very humbling and a great honour to have been nominated by my colleagues at Sydney Children’s Hospital and selected by the COSA Survivorship Committee.”





Dr Marion
Mateos gaining
international
recognition for
her work in acute
lymphoblastic
leukaemia

Dr Marion Mateos is a clinician scientist who undertook her PhD in clinical and genomic risk factors for treatment-related toxicity in childhood acute lymphoblastic leukaemia (ALL).

“The scholarship gave me my first foot in the door to allow me to do my PhD.”



Dr Mateos was the recipient of the Kids' Cancer Project Research Entry Scholarship (2013–2016) offered through the RACP Foundation and has used this funding to help deliver her mission of helping children through her ALL research.

“ALL is the most common childhood cancer, with an incidence of over 150 children per year in Australia. Cure rates are close to 90 per cent for most children. However, the cost of cure means many of these children will experience short-term or long-term side effects from chemotherapy,” says Dr Mateos.

“Currently we are unable to predict which children are likely to have these severe side effects, which can impact on quality-of-life and lead to unexpected hospital admissions. If we can predict which children are at highest risk of severe side effects, we could explore methods to reduce or prevent them.”

Dr Mateos' broad research interest is personalised medicine in paediatric oncology. Her research focuses on clinical risk prediction algorithms, the application to biomarker discovery in childhood brain tumours, as well as toxicity prediction and minimisation in ALL. Dr Mateos also co-leads an international study in severe and symptomatic thromboembolism in paediatric ALL through the Ponte di Legno Toxicity Working Group.

She divides her time between the Kids Cancer Centre at Sydney Children's Hospital as a paediatric oncologist and as a clinical research Fellow in the Personalised Medicine Program at the Children's Cancer Institute, Lowy Cancer Research Centre at UNSW.

Prior to this, Dr Mateos lived in the United Kingdom where she completed a two-year postdoctoral Fellowship in paediatric neuro-oncology at the Northern Institute for Cancer Research and the Great North Children's Hospital. She received competitive funding through the JGW Patterson Foundation to undertake biomarker research using RNA-sequencing data generated from a large cohort of children treated for medulloblastoma.

Using an RACP scholarship to progress your career

Research Entry Scholarships provide financial support to assist members who are at the start of their research careers and enrolled in a Masters, PhD or equivalent research degree.

“The scholarship gave me my first foot in the door to allow me to do my PhD,” says Dr Mateos.

“Getting funding can be achieved without a track record, but it's hard to find an audience who believes in you as an individual, as well as the research project itself.”

Dr Mateos' advice to others looking for research funding is to be persistent.

“Keep trying, even if you apply for a scholarship and don't get it. An opportunity will come up.”

She encourages those looking for funding to be strategic and to utilise their network. “Get mentors to help you through the process. I have been very fortunate to have a great support network, which includes my PhD supervisors.”

Dr Mateos' persistence paid off, as her research has gained international recognition. “This funding allowed me to build key national and international collaborations. I was supported as I developed clinical research skills including wet lab techniques, statistical analysis and interpretation of genome-wide association study findings. These collaborations resulted in high impact publications, including in *Nature Reviews Cancer* and *The Lancet Oncology*.”

Overall, Dr Mateos has attracted more than AUD900,000 in research funding since commencing her PhD, with her most recent award being a three-year Cancer Institute New South Wales Early Career Fellowship from 2019 to 2022. [RQ](#)

www.racp.edu.au/foundation

A rural rotation in East Arnhem Land

With close to one third of Australia's population living in rural or remote areas¹, it's important for trainees to understand the differences in healthcare for these 8.8 million people. *RACP Quarterly* met with Dr Ellie Woodward, a Basic Trainee, to learn about her experience on rotation at Gove District Hospital (GDH) in the Northern Territory.

People in regional and remote areas of Australia are familiar with the challenges they face due to geography and isolation. They also understand their healthcare system has similar challenges. Long travel times, difficulties recruiting skilled health professionals and an ageing population place significant pressures on healthcare services.

"I was fortunate to have been placed at GDH, a 30-bed acute care facility in Nhulunbuy, East Arnhem Land," shared Dr Woodward. "It was an extremely enriching rotation, both medically and culturally. It gave me the opportunity to experience day-to-day remote life in our breathtakingly beautiful country."

One of the biggest hurdles trainees face during rotations is the distance. Dr Woodward explained the distance from specialists, medical services and the facilities was challenging. "This presents a unique set of challenges. Working to overcome these challenges has been invaluable for the development of my practice," she said.

Each hospital has its unique way of operating to deliver excellent healthcare in its unique environment. Dr Woodward explained that the visiting specialists at GDH are generally only able to see patients during their community outreach trips, which happen twice a year.

"Although the specialists are available for advice over the phone, this leaves the team at GDH to diagnose and manage complex conditions in the absence of face-to-face specialist review. Comprehensive assessments must be conducted to gather enough

information for off-site specialists to make diagnoses and offer management advice via telephone."

Another challenge of hospitals in regional or remote areas is limited resources. "The lack of on-site facilities such as a CT scanner or full pathology service means you must place extra confidence in your clinical judgement and assessment," says Dr Woodward.

Challenges such as limited resources in rural hospitals can help trainees think outside-the-box in ways they may not be used to in urban environments. Another positive aspect is the experience of working with a diverse range of specialties and health professionals.

"I really enjoyed the hands-on exposure to a wide range of specialties. I worked as a general registrar in both the emergency department and the hospital wards. This placement presented me with a rare opportunity during the physician-training pathway to re-expand my general skills in medicine. There were endless opportunities to build competencies in general practice, obstetrics and gynaecology, paediatrics, mental health and surgery."

Experiencing a new culture was one of the aspects of Dr Woodward's rotations she loved most.

"It was a privilege to live and work in Yolngu country while in Nhulunbuy. I feel extremely fortunate to have been able to learn about and engage with the culture of northeast Arnhem Land during my time here. Navigating the cross-cultural challenges encountered with healthcare

1. 'What is regional Australia', Regional Australia Institute: <http://www.regionalaustralia.org.au/home/what-is-regional-australia/>

“ My term at GDH has given me a far greater appreciation of the challenges faced by remote doctors, and the critical role of rural generalists in these settings. I would certainly recommend this rotation, or any similar remote placement, to fellow trainees with an interest in rural and Aboriginal health.”

delivered in a predominantly Balanda (non-aboriginal) setting was a daily occurrence, and this has been invaluable for my development as a culturally safe clinician.”

Problem-solving is a necessary skill when experiencing a new culture. “One challenge was the language barrier, which is present in many interactions with patients at GDH. I soon came to understand the importance of appropriately using interpreter services and making an effort to learn local dialect to foster an effective patient-doctor relationship.”

Providing a positive healthcare experience isn't only a result of education and training. During

her rotation, Dr Woodward learnt the significance of understanding cultural norms.

“I quickly realised the differing worldview and strong kinship systems of Yolngu had to be considered. For example, the great unease felt by many Yolngu in leaving country and family means the decision to send patients to Darwin for tests or management is not as straight-forward as it might be for Balanda patients.”

Rotation in a new area often exposes trainees to experience new opportunities during life outside of the hospital too. Dr Woodward enjoyed her weekends in East Arnhem Land camping, fishing, four-wheel driving,

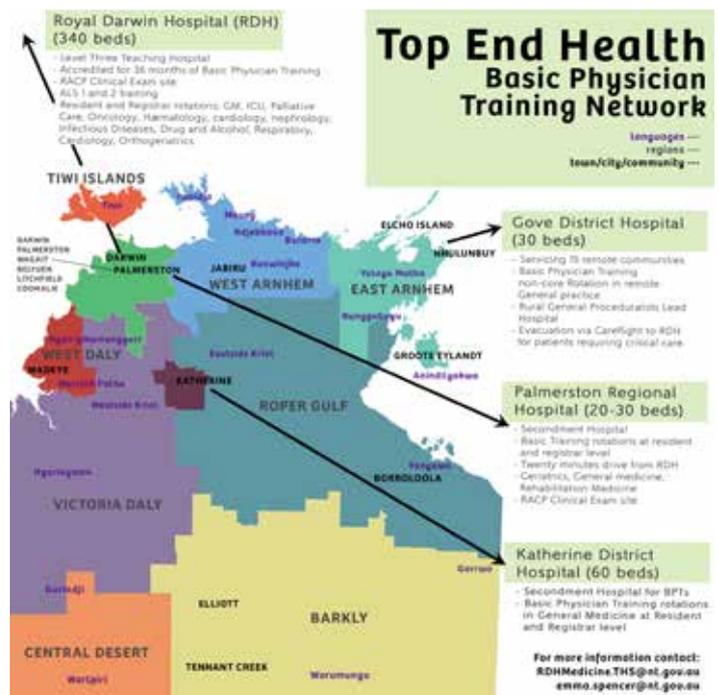
swimming in waterholes and visiting local art centres. Weeknights were spent at the local aquatic centre, squash club, running club or watching the sunset with a beer at the surf club.

“My term at GDH has given me a far greater appreciation of the challenges faced by remote doctors, and the critical role of rural generalists in these settings. I would certainly recommend this rotation, or any similar remote placement, to fellow trainees with an interest in rural and Aboriginal health.” ^{RQ}

This article has been approved by the GDH East Arnhem Cultural Advisory group.



Gove District Hospital



ARTMED:

helping our trainees see the bigger picture

Since 2015, Basic Trainees (BTs) in Canberra are getting creative and cultured and are extending their critical thinking skills through participation in the ArtMed program.

The ArtMed program for physician trainees is a collaboration between the ACT Physician Training Network and the National Gallery of Australia (NGA). The program comprises nine sessions tailored to the BT year one, two and three cohorts.

The program involves BTs visiting the NGA in small groups and accompanied by a physician, discuss works of art that have relevance to each cohort's learning focus. NGA educators facilitate a comprehensive discussion during the visit, carefully choosing works of art that help expand the BTs' conceptual abilities. The Artmed session not only provides an opportunity for trainees to consider the human condition in all its complexity, but also encourages the development of visual literacy for a group of doctors whose observational skills are essential to their medical careers.¹

"We are fortunate to have access to a world-class gallery to host the ArtMed program that allows our physician trainees to enhance their observational, interpretive and communication skills in a stimulating and relaxing non-hospital setting," says Dr Ashwin Swaminathan, RACP Fellow and ACT Network Director of Physician Education.

"Works of art stimulate philosophical and ethical discussions translatable to the clinical setting and the many challenges of contemporary medical practice such as end-of-life care. Looking at art, thinking about art and talking about art with colleagues can help trainees develop a more astute, considered and reflective practice," says Frances Wild, NGA ArtMed Program Director.

In the four and a half years the program has been running,

approximately 80 physician trainees have participated. The collaboration is the only established program for physician trainees in Australia. There are, however, similar programs overseas for hospital resident doctors, particularly in the United States of America, and the NGA ArtMed educators are in regular communication with peer galleries internationally that run similar programs.

The response to the program by trainees has been overwhelmingly positive.

While both Dr Rosanna Olsen and Dr Mani Berghout, RACP Basic Trainees, were unsure at first, they were soon converted.

"I have to admit I was a little uncertain about it before hand, but I went along to the first session and was pleasantly



1. www.nga.gov.au/artmed

surprised by the experience. I was a keen attendee after that,” says Dr Olsen.

“Going to the gallery was like a breath of fresh air amongst hospital shifts. The themes and approaches we explored with the artwork were remarkably translatable to the clinical sphere and I came away with new insights into my practice. It was also a good way to get to know other new registrars and I think the shared experience strengthened the sense of community and connectedness of our cohort.”

“I was initially very skeptical as to how looking at some artworks could improve my medical practice,” says Dr Berghout. “The penny dropped for me when I was forced to refrain from just emotionally reacting to the artwork as a whole. Our ArtMed educators led us to focus on its elements and the clues they gave us as to what was going on.

“In medicine, one could just react subconsciously to the presentation before us. But there’s so much more to be gained by systematically observing the elements. Not only does this aid diagnosis, but it helps to recognise bias that could otherwise mislead us. A lightbulb moment for

me. As well as an utterly delightful way to spend a few hours.”

The program builds on the Australian National University Medical School (ANUMS)/ NGA ArtMed program which has been offered to first and second year medical students for

over ten years². There are plans of expanding the program to allow Fellows to also take part in ArtMed sessions as “the benefits of this unique learning experience resonate throughout one’s clinical career,” says Dr Swaminathan. [RQ](#)

2. <https://press-files.anu.edu.au/downloads/press/n1682/pdf/book.pdf>



NGA/ACT HEALTH PHYSICIANS IN TRAINING PROGRAM LEARNING OBJECTIVES

- Develop visual language skills through close observation, description and interpretation of works of art.
- Refine communication skills by engaging in active listening, group discussion, workshop activities and individual presentations focusing on a work of art.
- Gain an understanding of the benefits of collaborative observation and discussion to inform interpretation.
- Explore the human condition and enrich empathic skills by engaging with the NGA's diverse collection.
- Engage in philosophical discussions and personal reflection stimulated by works of art.
- Increase awareness of emotional reactions to ethical issues and enhance capacity to consider the moral dimensions of clinical experiences.
- Feel more comfortable with ambiguity and accept that there may be multiple interpretations of a work of art, clinical interaction or human experience.
- Enhance cultural and social awareness by viewing works of art from diverse creative backgrounds.
- Provide opportunities to boost resilience skills by learning and practising mindfulness techniques.
- Foster the trainees' sense of **collegiality** by building rapport with one another through listening, considering and respecting a variety of individual responses to works of art.
- Create an environment of **psychological safety** that encourages creativity and innovation to flourish.

The program learning objectives were crafted by NGA Educators in collaboration with RACP Fellows.



Medical needs of adolescent refugees resettling in Western Australia

Adolescent refugees who have been resettled to Western Australia are a vulnerable population with complex healthcare needs. Many have experienced traumatic stressors and are therefore at a higher risk of developing mental health problems¹.

RACP Fellow Dr Kajal Hirani felt dedicated research to better understand the needs of these adolescents was scarce. She consequently investigated the medical and psychosocial health of adolescent refugees resettling in Western Australia.

Passionate about improving the health and wellbeing of disadvantaged young people, Dr Hirani focuses her career towards achieving this goal. She is the 2016 recipient of the RACP Trainee Research Award in the field of paediatric medicine, as well as the 2018 recipient of the RACP Vincent Fairfax Family Foundation Research Entry Scholarship. *RACP Quarterly* spoke with Dr Hirani to learn more about her award-winning research.

Dr Hirani is a paediatrician with sub-specialty training in general paediatrics and adolescent and young adult medicine. She completed her undergraduate medical degree with an intercalated Bachelor of Science at Imperial College London. She subsequently moved to Perth where she achieved her dual postgraduate

specialist training while working at Princess Margaret Hospital for Children. She is currently doing global child and adolescent health work in Africa with Baylor College of Medicine (USA).

As part of her PhD, at the University of Western Australia, she undertook a study which analysed the comprehensive medical and socioeconomic health data of resettling adolescent refugees aged 12 years and above attending the Refugee Health Service at Princess Margaret Hospital over a one-year period.

“There are multiple complexities which may deter health professionals from conducting research with adolescent refugees who have resettled in Western Australia. Healthcare system barriers, such as lack of adolescent and refugee specific healthcare

services, complicate comprehensive data collection,” says Dr Hirani.

She identified that limited English proficiency or a history of trauma could impact adolescent participation and retention in research studies, but culturally appropriate research designs could overcome these barriers.

“Additional ethical and legal issues relating to adolescent consent and confidentiality, which include suicidality and physical or sexual abuse, can arise during research and cause potential harm to adolescents if not managed appropriately,” says Dr Hirani.

Her research reviewed medical records of 122 adolescents with a median age of 14 years. The socioeconomic vulnerabilities results indicated 50 per cent of participants were dependent on government financial support, 27 per cent experienced housing issues and 11 per cent experienced child protection service involvement².

The reported medical concerns included 85 per cent with non-communicable disorders, 81 per cent

with infectious diseases, 71 per cent experienced nutrition/growth problems, and physical symptoms of non-organic origin affected 43 per cent³.

Dr Hirani’s research showed one quarter of female adolescents had sexual/reproductive health issues. A median of five health concerns were identified for each adolescent, with almost half requiring referral to sub-specialty services³.

“Just like any teenager, sexual and reproductive health is a big issue for young refugees. Many have missed out on sexual health education because their schooling has been interrupted and cultural stigma can make conversations with parents very difficult,” says Dr Hirani.

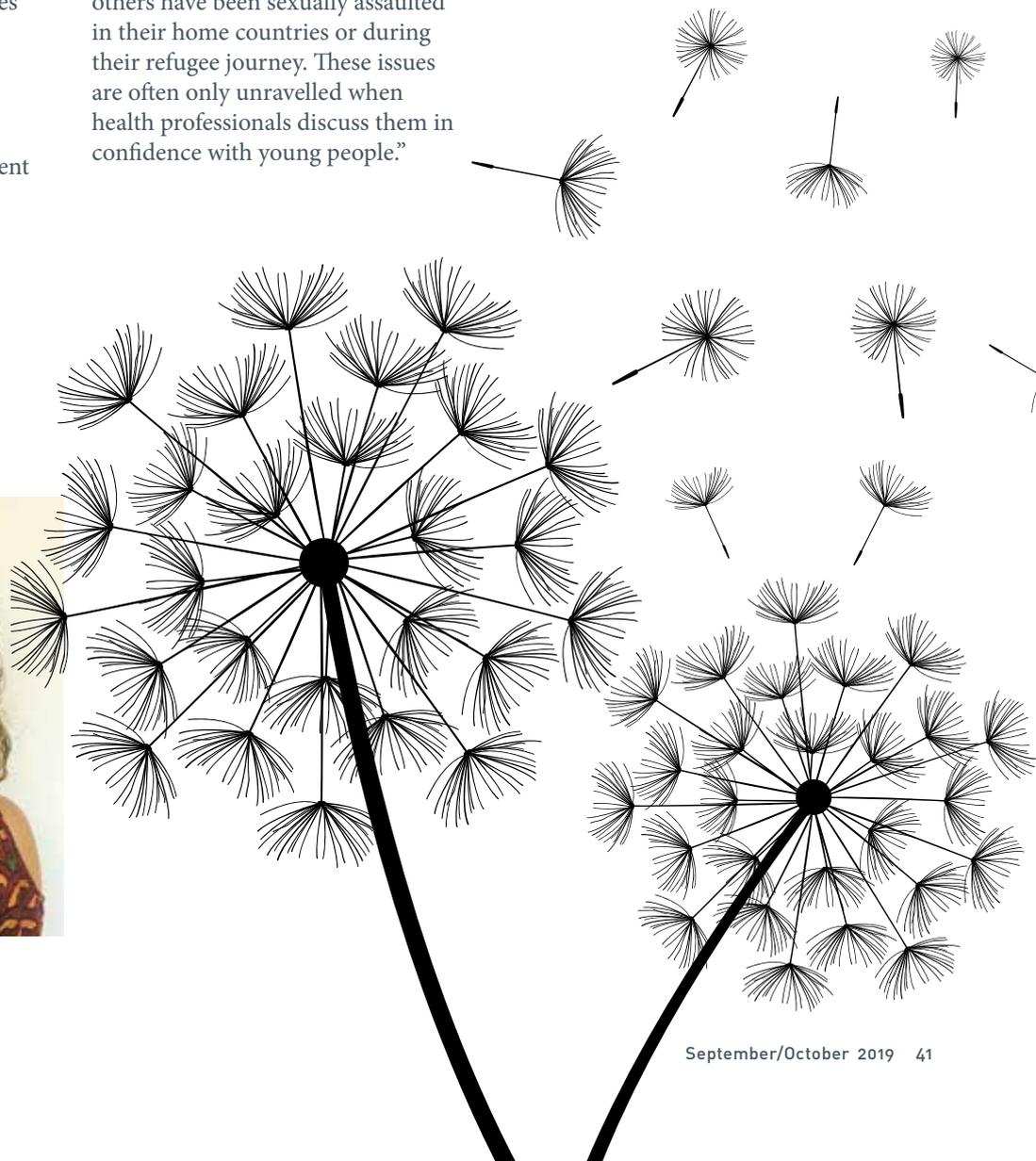
“Some young women have suffered female circumcision/cutting, while others have been sexually assaulted in their home countries or during their refugee journey. These issues are often only unravelled when health professionals discuss them in confidence with young people.”

“It’s important for health professionals to develop a better understanding of these health issues, so they can identify and address them appropriately. This can enable us to positively impact the lives of these young people and give them the ability to grow into happy, healthy adults.” RQ

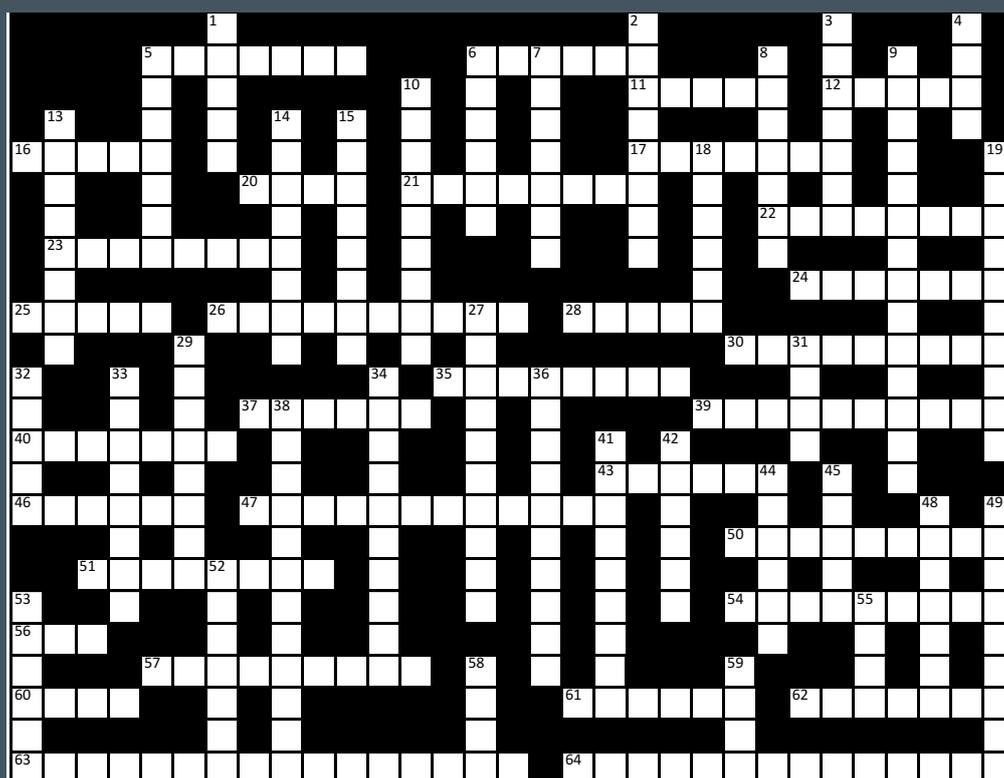
1. Hirani K, Payne D, Mutch R, et al ‘Health of adolescent refugees resettling in high-income countries’ *Archives of Disease in Childhood* 2016;101:670-676.
2. Hirani K, Payne DN, Mutch R, et al ‘Medical needs of adolescent refugees resettling in Western Australia’ *Archives of Disease in Childhood* 2019;104:880-883.
3. Hirani K, Mutch R, Payne D et. al. Complexities of conducting research in adolescent refugees in Australia. *Journal of Paediatrics and Child Health*. 2019;55:890-894.



RACP Fellow Dr Kajal Hirani



The medical cryptic crossword



Crossword created by RACP trainee Dr Matthew Loft, MBBS, B Pharm (Hons)

Across

- 5 Granulomas are said to contain Roman Catholic oxygen (7)
- 6 TV shows the fourth state of matter (6)
- 11 Run backwards to the middle of a sea to take care of! (5)
- 12 The external helix in the hairpin napkin (5)
- 16 In the messenger RNA chain, fish on! (5)
- 17 Relating to a part of the eye, can be in existent (7)
- 20 The best provincial artwork contains the axilla (4)
- 21 Protein A metabolised to cause tachycardia (8)
- 22 Misuse, mistreat an abnormal form (8)
- 23 Don Greco used a biological stain (5,3)
- 24 Wake up with a rub from the crazy rentals (7)
- 25 A most devitalising waste outlet (5)
- 26 Revamp Venice and restore flow (10)
- 28 Snare a new schnoz! (5)
- 30 A tessellated doctrine of different genotypes in one individual (9)
- 35 A shiver from Spain in Homer's Iliad (8)
- 37 Angola is in havoc and distressed! (6)
- 39 Racing once erratically causes cancer (10)
- 40 Bathes as the toilet gets older (7)
- 43 A stopper, I hear, for a day (6)
- 46 Concerning an abscess, I hear, withstand! (6)
- 47 4 plus half of 9 in bike fixes acne (12)
- 50 No fingers but there's clay at aid to mould (9)
- 51 Take me in, roll me and put me under (8)
- 54 Untuck into a booth with a projecting peg (9)
- 56 A liver enzyme Pacino initially took (1,1,1)
- 57 Form points for a bearing image of you delayed perhaps (9)
- 60 Groping groper! (1,1,1,1)
- 61 Traits I inherit from a French name in an expression of surprise (6)
- 62 An aggregate of molecules where I live in jail I hear (7)
- 63 Claptrap abnormality terminates chain (8,8)
- 64 AV node signallers soiled ripe junk briefs (8,6)

Down

- 1 Don loses his tail but protects the field (5)
- 2 Controls BSLs for cooking a superbug with aortic stenosis (8)
- 3 Antipodal to bear, I hear (7)
- 4 A jelly-like substance from a saga retold (4)
- 5 Tissue flap when skating out of control (4,3)
- 6 Lauper reinvigorated the membrane (6)
- 7 What you win when you waste away (7)
- 8 Small baby starred in the Matrix with a bearing on finished food (7)
- 9 Finish the painting, destroy the cytomere and remove the plaque (14)
- 10 Secrete insulin and approximate the arrival time of carbon in chimes (4,5)
- 13 Know and see why, I hear, in a small particle or white blood cell (8)
- 14 Club diet forms a hateful passage (4,4)
- 15 Phone rim vexed and alleviates pain (8)
- 18 Discordant guitars I lost at the fleshy prominence (6)
- 19 A cascade of flattery I hear (10)
- 27 Decreased elasticity from an unwell French chamber (6,4)
- 29 Half dead guys have a small stroke but can't remember! (8)
- 31 Rotten green (4)
- 32 Bad moral on Grinder (5)
- 33 CGG repeats the flimsy unknown (7,1)
- 34 Giraffe spots a latte (4,2,4)
- 36 I am going to the press but one copy is silenced (10)
- 38 Guru bum clean ridiculously aids descent (12)
- 41 Observable traits of vile python pee (9)
- 42 Not hilly states the wind (6)
- 44 Iodine stuck in groovy America border (6)
- 45 A hole in one in Hong Kong causes endocarditis (5)
- 48 Most of the cohort in its entirety had a tipple (7)
- 49 Is the core of providing food to drain fluid? (9)
- 52 Doctors sim code for doctors (7)
- 53 Tall and thin, spoil the admirer (6)
- 55 Finished eating out of lactate and chewed powder (4)
- 58 Parrot testing under stress (4)
- 59 In love, in lust, in character (4)

Solution is available on page 52

AOTEAROA NEW ZEALAND TRAINEES' DAY 2020

If you are an RACP trainee, this event is for you. Whether you are a Basic or Advanced Trainee, adult medicine or paediatrics, the Trainees' Day will be inspiring and relevant for wherever you are in your training journey.

Saturday, 4 April 2020
The Heritage Hotel,
Queenstown

Developed by trainees for trainees

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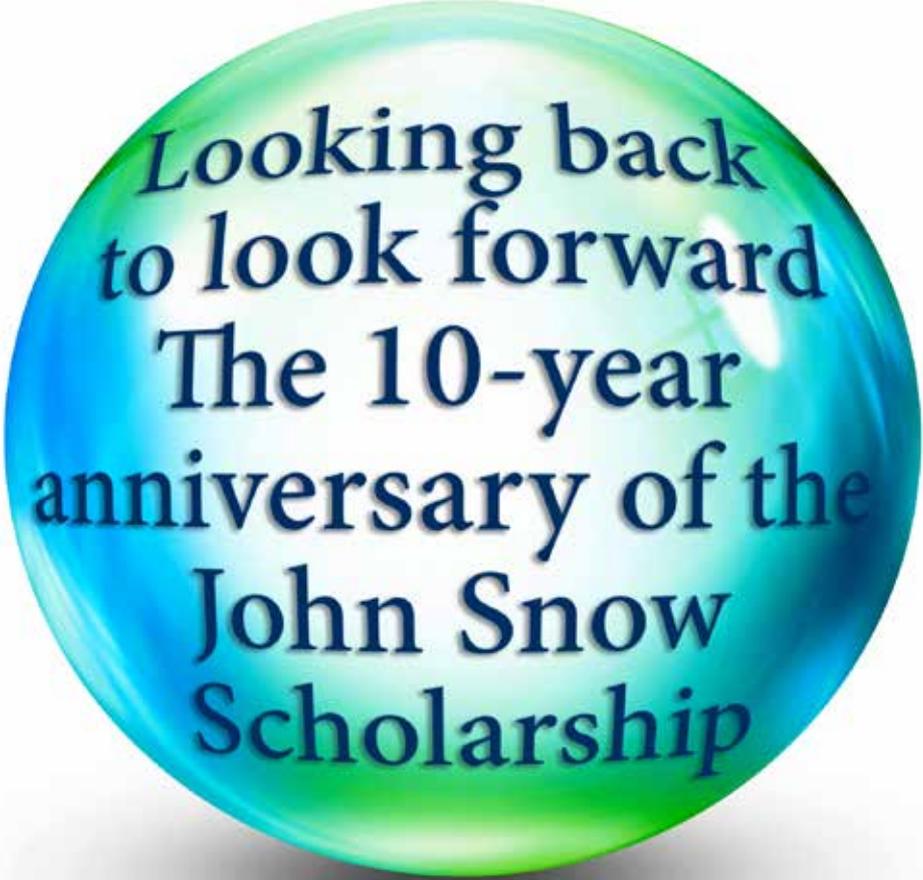
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Looking back
to look forward
The 10-year
anniversary of the
John Snow
Scholarship

2019 marks the 10th anniversary of the RACP Foundation's John Snow Scholarship. The scholarship was established by the Australasian Faculty of Public Health Medicine (AFPHEM) in 2009 to increase medical students' awareness of public health medicine as a specialty and potential career path. *RACP Quarterly* met with the first national recipient, Dr Nancy Merridew, to learn about how this opportunity helped launch her career.

1. Merridew N, Wilkinson D Expanded partnerships between medical faculty and medical students: Developing a Global Health curriculum as an example of "student-led learning" at the University of Queensland, Australia. *Medical Teacher*. 2010;32(11):919-25.

Dr Merridew is an RACP Advanced Trainee in infectious diseases and general medicine, with additional interests in public health and medical education. She has a Diploma of Tropical Medicine and Hygiene from the University of Liverpool in England and is an honorary Senior Clinical Lecturer at the University of Tasmania. After completing her medical degree in Queensland, Nancy worked in Victoria, New South Wales and Tasmania. She plans to complete Advanced Training in Darwin in 2021.

"The inaugural national John Snow Scholarship for 2009 was presented to me at the World Congress of Internal Medicine 2010 for my work on a large global health project at the University of Queensland's School of Medicine. The project focused on teaching the Millennium Development Goals and Australian Indigenous health and achieved wide-ranging success¹."

As the project's inaugural convenor, Dr Merridew said the project helped her learn more about project management, design, teamwork, collaboration, leadership, advocacy and facilitating change. She also enjoyed the chance to develop her skills in clinical, academic, and public health medicine.

"The John Snow Scholarship's reflective process enhanced what I'd learned through the project. It helped me appreciate the intrinsic and exceptional value of public health. Importantly, through engaging with the AFPHEM members and curriculum, the scholarship opened my mind to the tangible options to pursue a career in public health combined with clinical medicine."

Reflecting on what the John Snow Scholarship meant for her work, Dr Merridew says "it recognised the huge efforts and achievements of the project team and its hundreds of contributors, as well as my personal influence.

“The John Snow Scholarship’s reflective process enhanced what I’d learned through the project. It helped me appreciate the intrinsic and exceptional value of public health. Importantly, through engaging with the AFPHM members and curriculum, the scholarship opened my mind to the tangible options to pursue a career in public health combined with clinical medicine.”



“The Scholarship gave the project further credibility and momentum, which enhanced longevity and its impacts – real and potential – on local and global health endeavours.”

Dr Merridew’s next career goal is to attain Fellowship in her clinical specialties, while enjoying the chance to work and travel around Australia. Long term she and her husband hope to return to Tasmania, where she will seek to incorporate public health and medical education roles alongside her clinical appointments.

Who is John Snow?

John Snow was an English physician who is widely considered to be one of the founding fathers of epidemiology and public health. In 1854, when miasma (bad air) was thought to be the cause of illness, he mapped the geographic location of cases during a cholera outbreak in London. Dr Snow then conducted case-control and cohort studies, which identified the Broad Street pump as the source of illness.

On this basis, he organised the pump handle to be removed, which controlled the outbreak. This is a classic example of

public health intervention. This initiative is commemorated in the AFPHM logo, which includes a water pump with no handle.

Putting public health medicine and training on the radar

An evaluation of the John Snow Scholarship found most recipients considered the opportunity as an important avenue to discover public health medicine, which was a specialty they reported to have limited exposure to in medical school.

Recipients valued the opportunity to attend and present at a conference, as well as the opportunity to network with Fellows and Advanced Trainees alongside like-minded colleagues. Some recipients described how the John Snow Scholarship impacted their work by providing a more holistic socioeconomic perspective during clinical work with patients, while for others it put public health training on the radar.

Applying for an RACP scholarship or award

We asked Dr Merridew what advice she would give to others thinking about applying for an RACP scholarship or award.

“Overall, use the opportunity of award applications to:

- reflect on achievements of other people in the field as a source of inspiration
- learn more about the topic and your personal values by going through the award process
- articulate your project/research work and priorities
- recognise personal and team achievements
- broaden networks by meeting other applicants and award organisers
- engage with mentors and supervisors
- advance professionally – whether or not you win the award, the application process is invaluable.”

To learn more about scholarships and prizes, visit www.racp.edu.au/foundation. [RQ](#)

Professor Rachelle Buchbinder to present the keynote at the 2019 Preventing Overdiagnosis Conference

In December 2019, RACP Fellow and Australian National Health and Medical Research Council Senior Principal Research Fellow Professor Rachelle Buchbinder will be a keynote speaker at the 2019 Preventing Overdiagnosis Conference being held in Sydney.



Professor Buchbinder in 'Women' by Sam Burke and Rebecca Umlauf, part of Stonnington Art Exhibition during 2019 International Women's Day.

As a rheumatologist and clinical epidemiologist, Professor Buchbinder combines clinical practice with research in a wide range of multidisciplinary projects relating to arthritis and musculoskeletal conditions. It's only fitting that Professor Buchbinder will be presenting on 'The dangers of overdiagnosis and unnecessary care in the world of musculoskeletal conditions' at this year's conference.

As a champion of evidence-informed decision-making, her career has seen her lead a series of three papers published in the Lancet last year on overmedicalisation of back pain and how overtesting, overdiagnosis and overtreatment are core problems in that field. Professor Buchbinder has also been involved in overcoming overtesting in other musculoskeletal conditions, which has helped inform initiatives such as the Australian Rheumatology Association's Evolve 'Top-Five' list of investigations and interventions doctors and patients should question.

On what she hopes this year's audience will take away from her keynote, Professor Buchbinder says "Overdiagnosis occurs when you get a diagnosis that ends up causing you

more harm than good. The harms can include psychological impact from having a label and worrying about the future, as well as receiving treatment that is unnecessary and might lead to adverse outcomes. Importantly, treating people unnecessarily, although usually well intentioned, also means less time caring for people who truly need care. In the field of musculoskeletal healthcare, harms most commonly arise from overmedicalisation of common problems such as back pain, misinterpretation of imaging findings normal for age and overtreatment which results in no net benefit and may have a net harm.

"These problems are well entrenched and the drivers are multifactorial. There is a need to shift societal expectations, address policies that reward the wrong care, improve science literacy of clinicians and consumers and address vested interests," says Professor Buchbinder.

"The keynote will focus on the potential solutions to addressing overdiagnosis in the field of musculoskeletal conditions. It will highlight the progress we have made in characterising the problem, identifying its causes and testing strategies to address it."

Professor Buchbinder will be joined in her session by two internationally acclaimed researchers – physiotherapist Professor Chris Maher, based at the University of Sydney, who is the most cited expert on low back pain in the world, and orthopaedic surgeon Professor Teppo Järvinen, a leader in the scientific debate about unnecessary operations and too much medicine, based at the University of Helsinki, Finland.

Professor Buchbinder is also a member of the Wiser Healthcare collaboration (www.wiserhealthcare.org.au) which is hosting this year's Conference, and she is also on this year's Scientific Organising Committee, which is responsible for developing the international conference's scientific program.

“As well as overdiagnosis in musculoskeletal conditions, other themes this year include commercial drivers of overdiagnosis and commercial determinants of health, genomics, precision medicine and artificial intelligence, overdiagnosis and the media and screening and overdiagnosis in the Asia Pacific region,” says Professor Buchbinder.

A new award at this year's conference is the Lisa Schwartz Prize, honouring the life and work of Dr Lisa Schwartz, a founding member of the conference. Lisa was a physician and researcher whose career was dedicated to ensuring that patients, journalists, policy-makers and the public understood the benefits, risks and limitations of medicine, enabling them to make wiser health decisions. The recipient of the award will be an early career professional whose presentation is relevant to Lisa's work and interests and is consistent with her vision and values.

The Junior Researcher Group in Preventing Overdiagnosis will

host ‘The beginner's guide to overdiagnosis’ seminar on Wednesday, 4 December. This aims to give a broad introduction to overdiagnosis for those new to the concept. Following directly on, all students will have the opportunity to participate in a workshop called ‘The Student Challenge’, run by the local organising committee of the Conference.

“The challenge will be to develop an elevator pitch to communicate possible solutions to the problem of overdiagnosis. Five participating students will be selected to present their pitch at the Conference.”

Professor Buchbinder says it's great to see increased recognition of the conference.

“By moving the conference to different countries, it helps to raise awareness of the problem of overdiagnosis around the world. We already have an initial statement to underpin the development of a National Action Plan to prevent overdiagnosis and overtreatment in Australia. Many organisations including the RACP have endorsed the statement but now we need to do more.”

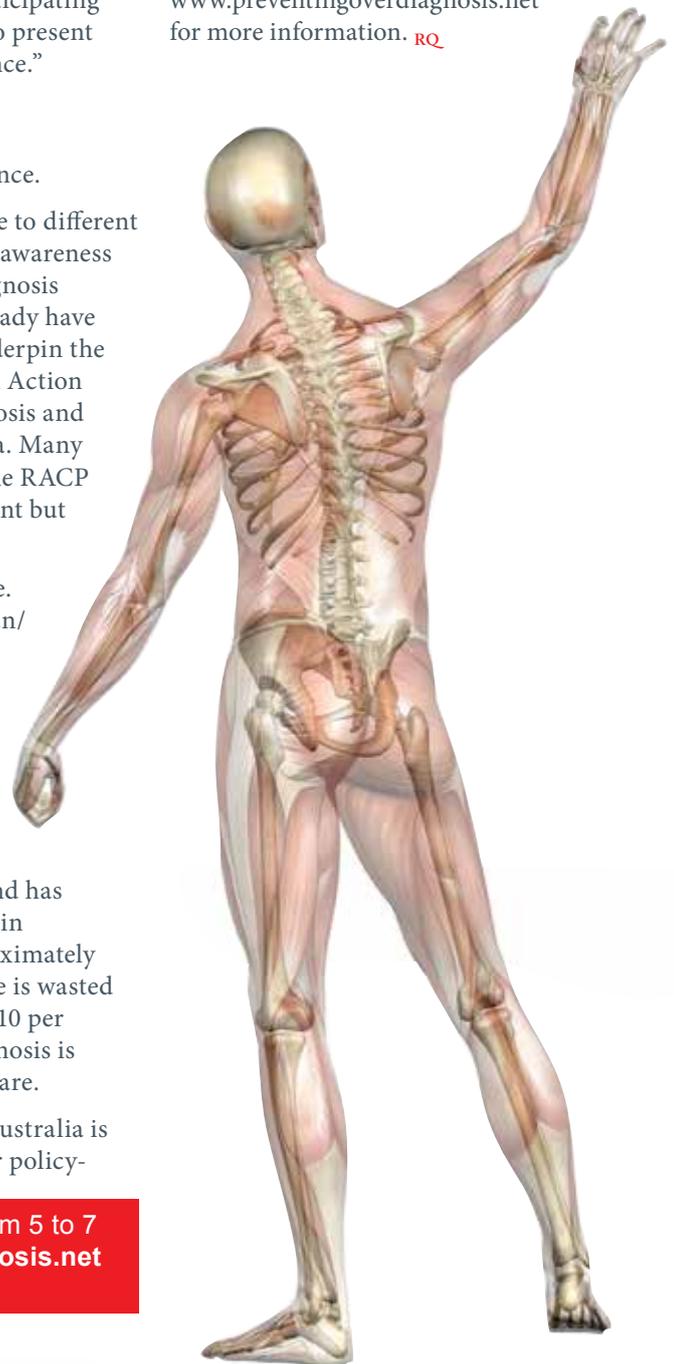
Visit www.wiserhealthcare.org.au/national-action-plan/ to read the statement.

“Overdiagnosis has also gained visibility in terms of the World Health Organization (WHO). The WHO endorsed last year's conference in Denmark and has again endorsed this year's in Australia. We know approximately 30 per cent of medical care is wasted or unhelpful and another 10 per cent is harmful. Overdiagnosis is a key driver of low-value care.

“The 2019 conference in Australia is a fantastic opportunity for policy-

makers, healthcare managers, clinicians, the media and the public to hear from leading international and national experts on the topic of overdiagnosis. Urgent action is needed to address this problem and this conference provides the perfect forum to better understand the issues and the solutions that are needed,” says Professor Buchbinder.

The Preventing Overdiagnosis Conference will take place from 5 to 7 December 2019 in Sydney. Visit www.preventingoverdiagnosis.net for more information. **RQ**



The Preventing Overdiagnosis Conference will take place from 5 to 7 December 2019 in Sydney. Visit www.preventingoverdiagnosis.net for more information.

Some remarkable anatomical atlases

Jules Cloquet (1790-1883)

Manuel d'anatomie descriptive du corps humain, représentée en planches lithographiées

Paris: chez Bechet jeune, 1825 - 3 volume

Jean-Baptiste Marc Bourgery (1797-1849)

Traité complet de l'anatomie de l'homme, comprenant la médecine opératoire

Paris: Delaunay, 1831 - 2 volumes

Jones Quain (1790-1865) and Erasmus Wilson (1809-1884)

A series of anatomical plates: in lithography, with references and physiological comments, illustrating the structure of the different parts of the human body.

London: Printed for Taylor and Walton, 1842 - 2 volumes

Joseph Maclise (c.1815-c.1880)

Surgical anatomy

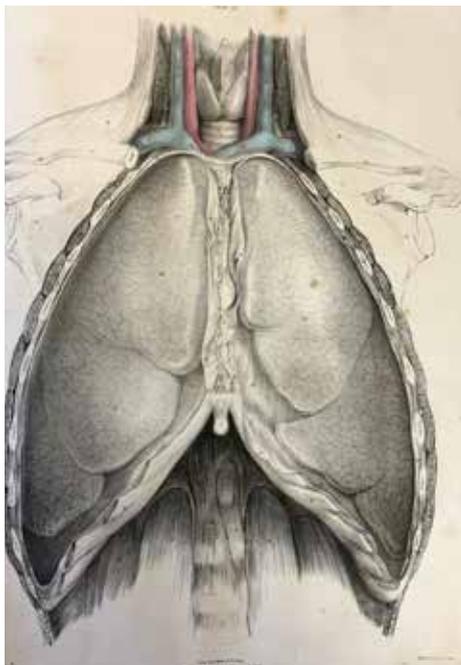
London: John Churchill, 1851 - 35 plates, partly hand coloured

George Viner Ellis (1812-1900)

Illustrated by George Henry Ford (1809-1876)

Illustrations of dissections: in a series of original coloured plates: the size of life, representing the human body

London: James Walton, 1867



Quain & Wilson: Vol. 1 part 3 Viscera Plate 14 Anatomy of the organs of the respiration – the lungs



Ellis, illustrated by Ford: Plate 1 – The superficial muscles of the thorax and the Axilla with its contents

The History of Medicine Library of the RACP is looking very smart and is poised to re-open. For many years the acquisition policy of the library has been one of encouraging the collection of material that relates to the history of Australian and New Zealand health services. There are, however, many exceptional items which pre-date the policy. Here are some of the most extraordinary, but potentially overlooked old anatomical atlases, whose artistic value is outstanding.

In the late 18th century, German playwright Alois Senefelder developed the technique of lithography, which allowed printers to produce multiple copies at a lower cost than available methods. Anatomists quickly adapted this system to produce large, elegantly illustrated atlases. The first two are from anatomists based in Paris in the early 19th century. Jules Cloquet studied art in his father's studio before entering the Paris Medical School. Over a ten-year period he produced a

five volume set. In 1825 he published this abridged version – a *Manual* with over 300 illustrations. Jean-Baptiste Bourguery, also a Paris physician/anatomist began his *Traite* in 1830. He worked on this monumental work until his death in 1849, with the final volume published in 1871. The whole project consisted of 726 hand-coloured lithographs.

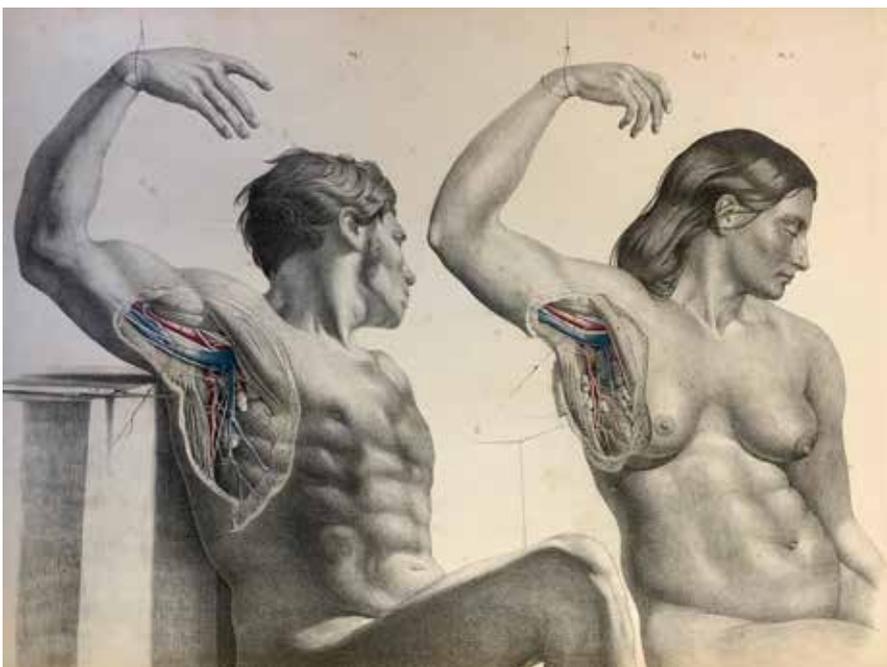
In London, at the newly established London University (now University College London) the anatomists had a prodigious output of anatomy texts and atlases. Jones Quain, an Irish anatomist, published a small anatomy text in 1828, and although it lacked illustrations, this became very popular with medical students; a serious rival to Henry Gray's *Anatomy*, published in 1858. Between 1836 and 1842, Quain produced the first volume of his monumental lithographic atlas. Four additional large folios followed in collaboration with his London colleague Erasmus Wilson.

Maclise and his artist brother Daniel produced a disquieting atlas *Surgical Anatomy* in 1851, aimed at the expanding surgical practice.

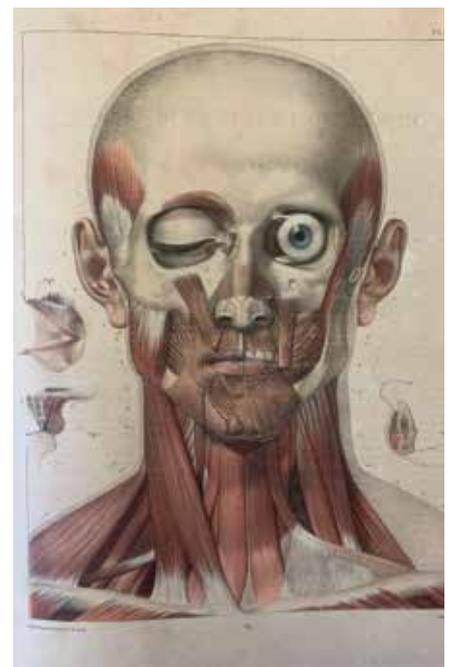
George Viner Ellis, a successor of Quain at University College London, brought anatomy back to the dissecting room with his stunning *Illustrations of Anatomy* of 1867, in which he demonstrated the power of the visual image in his series of early colour lithographs.

These are all richly illustrated works, which remind us of a previous era of medical education before computer generated images. For their artistry alone, we should not forget them.

**Catherine E Storey OAM
MB BS MSc FRACP
Clinical Associate Professor
University of Sydney**



Maclise: Plate VII : Surgical form of the male and female axilla compared.



Bourguery: Tome 1, Planche 94 :
Muscles de la tête et du cou

RACP

upcoming events

For more comprehensive information on the latest events visit
www.racp.edu.au/news-and-events/all-events

26
OCT
2019

Preparing for your PhD or research project

Are you in the process of, or considering starting a PhD or research project? Feeling unsure which direction to take, or where to start? From supervisors to multiple PhD candidates, our speakers will guide you in the right direction. This event is held in conjunction with the Trainee Research Awards.



26 October 2019



RACP Melbourne, Level 2, 417 St Kilda Road, Melbourne VIC



Complimentary for registered RACP members



www.racp.edu.au/news-and-events/all-events

26
OCT
2019

New Fellow and Advanced Trainee Workshop

Come along to a free workshop that will assist you during the transition from trainee to Fellow.



Date: 26 October 2019



Venue: RACP Melbourne, Level 2, 417 St Kilda Road, Melbourne VIC



Cost: Complimentary for registered RACP members



www.racp.edu.au/news-and-events/all-events

28
OCT
2019

AFOEM/ANZSOM Annual Scientific Meeting 2019

The Australian and New Zealand Society of Occupational Medicine (ANZSOM), together with the Australasian Faculty of Occupational and Environmental Medicine (AFOEM) as scientific partner, invite you to the Occupational Medicine Conference of 2019.

The theme for the event is 'Making it Work' and will deliver an exciting educational event. In 'Making it Work' the event offers networking, collaboration and education, with a focus on practical aspects of occupational medicine.



28 to 30 October 2019



The Playford Hotel, 120 North Terrace, Adelaide SA



Complimentary for registered RACP members



www.racp.edu.au/news-and-events/all-events

8
NOV
2019

Tasmanian Physicians' Conference 2019

Physicians and trainees are invited to come together for an update on the latest research in Tasmania. Held under the theme 'physician vulnerability: are you at risk?' the conference explores online communications and medico-legal risk. With constant changes in these areas, it's challenging for physicians to remain informed, confident and protected in their practice.



8 November 2019



Lecture Theatre, Launceston General Hospital, 274-280 Charles Street, Launceston TAS



Complimentary for registered RACP members



www.TasPhysiciansConf.com.au

23 NOV 2019 WA Rural Physicians' Workshop 2019

Join us for our eighth annual RACP WA Rural Physicians' Workshop to talk about issues important to physicians and paediatricians working in rural areas in Western Australia.

The program will cover topics such as respiratory medicine and diabetes, and provide updates based on important articles from 2019.



23 November 2019



St Catherine's College, 2 Park Road, Crawley WA



Cost: Complimentary for registered RACP members



www.racp.edu.au/news-and-events/all-events

30 NOV 2019 2019 South Australian Annual Scientific Meeting

The South Australian Regional Committee are delighted to invite you to the 2019 South Australian Annual Scientific Meeting (ASM).

This year, 'Specialists. Together.' is the focus of the ASM. The event will provide networking opportunities, engaging speakers and educational experiences. Trainees will also be presenting their research as part of the RACP Trainee Research Awards.



30 November 2019



Adelaide Convention Centre, North Terrace, Adelaide SA



Various costs apply



www.saasm.com.au

20 MAR 2020 International Medical Symposium - Providing care to underserved populations



Friday, 20 March 2020



Amora Hotel Jamison Sydney, 11 Jamison Street, Sydney NSW



Various costs apply



www.internationalmedicalsymposium.com.au

4 APR 2020 Aotearoa New Zealand Trainees' Day 2020

If you are a RACP trainee, this event is for you. Whether you are a Basic or Advanced Trainee, adult medicine or paediatrics, the Aotearoa New Zealand Trainees' Day will be inspiring and relevant for wherever you are in your training journey.

Saturday, 4 April 2020



The Heritage Hotel, 91 Fernhill Road, Queenstown, NZ



Various costs apply



www.racptraineeday.org.nz



4 MAY 2020 RACP Congress 2020 - Balancing medical science with humanity

As the premier annual event on the RACP calendar, Congress delivers a diverse program with topics that span the breadth of the medical industry.



Monday, 4 to Wednesday, 6 May 2020



Melbourne Convention and Exhibition Centre, VIC

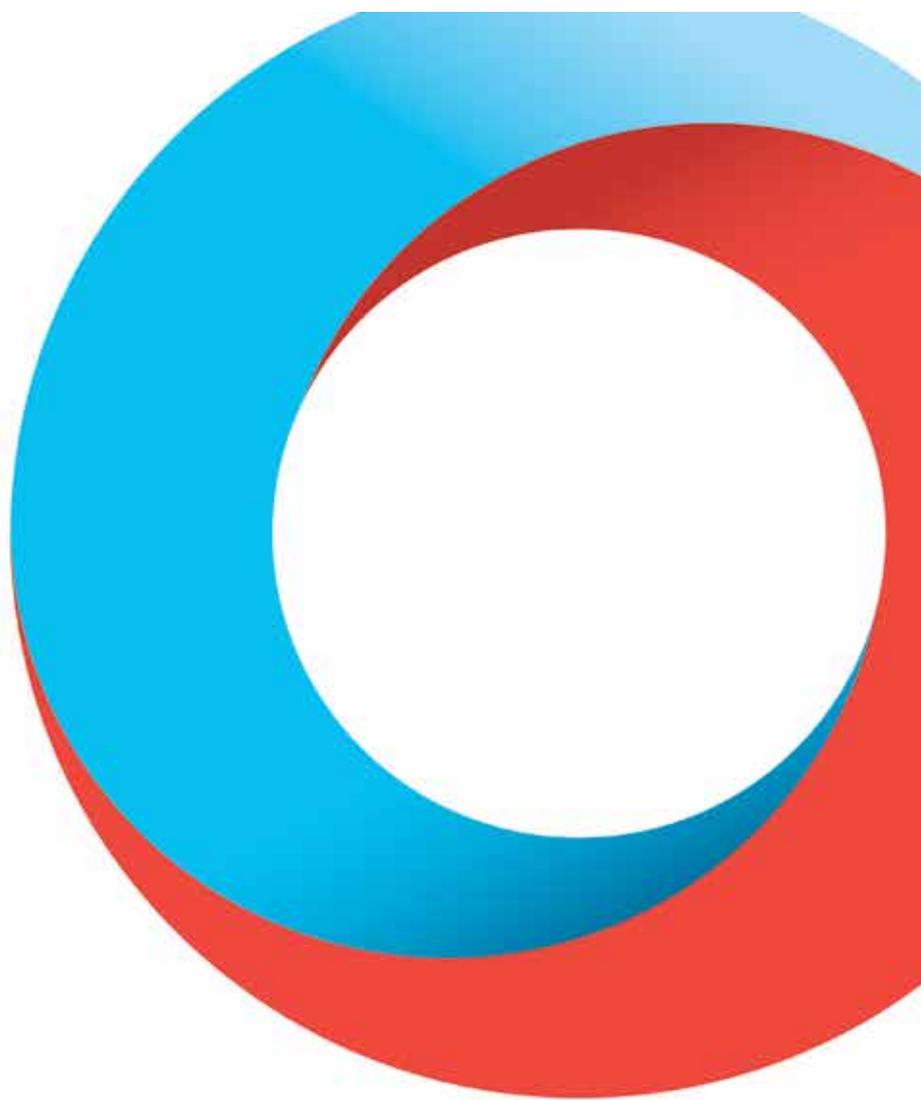


Various costs apply



www.racpcongress.com.au

Sydney
20 March



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