Marie McInerney reported on the ASMIRT 2023 – Champions of Change Conference held in Sydney for the Croakey Conference News Service in April 2023.
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“Your everyday was my worst day”: conference puts patient-centred care in focus

Dr Ben Bravery. Photo supplied.

Introduction by Croakey: The importance of patient-centred care was highlighted at the Australian Society of Medical Imaging and Radiation Therapy (ASMIRT) conference, as keynote speaker Dr Ben Bravery told how his experience as a cancer patient led him into medicine and advocacy on better care for both patients and professionals.

The conference was staged amid critical issues for medical radiation practitioners, ranging from declining graduate numbers and issues around scope of practice and research to the potential and risks of artificial intelligence (AI).

#ASMIRT2023 ran from 27-30 April for radiographers, radiation therapists and the wider medical radiation sciences community, under the theme: Champions of change: honouring the past, embracing the present, shaping the future. See the full program here.

Marie McInerney covered the event for the Croakey Conference News Service. Bookmark our coverage here, follow the conference hashtag #ASMIRT2023, link to our conference Twitter List and follow @ASMIRTorg at our rotated Twitter account @WePublicHealth.

Marie McInerney writes:

Ben Bravery was a science writer and zoologist building a life and career in Beijing, when on a brief return to Australia in 2011 his mother talked him into having a colonoscopy to investigate some worrying symptoms.
At the time, he was just 28, fit and seemingly healthy. He had never had a serious illness, not even a broken bone, and there was no cancer history in his family. He thought he had haemorrhoids.

A diagnosis of stage three colorectal cancer launched him into 18 months of aggressive treatment that “quickly became my whole life”, undergoing radiation therapy, chemotherapy and surgery in a treatment regime that was riddled with all kinds of complications, he told Croakey.

At the end of it, Bravery was lucky: unlike many other young patients whose diagnosis does not come soon enough, he survived and has a good prognosis. But when he tried to go back to his old world, “things had shifted inside me,” he recalled.

Two things particularly left a mark.

Firstly, he was so grateful to be alive and to have benefited from Australia’s universal healthcare that he felt “a kind of compulsion to give back to healthcare”.

But he had also been shaken and disturbed by some of his experiences in the health and hospital systems, feeling scared, overwhelmed, sometimes invisible and often alone.

“While the technical care was outstanding, some of the human side of the care was often lacking,” he said. “It wasn’t necessarily bad individuals, it was a bad system.”

Those two reflections prompted a life-changing decision for Bravery to study medicine.

Doing so only served to confirm his sense of the “divide between patients and doctors” and the need for the doors to medical school to be opened in a much more comprehensive way to a more diverse student group, including Aboriginal and Torres Strait Islander people, those from lower socio-economic backgrounds, and people with direct experience of disease.

Seeing medicine through another lens

Now a trainee psychiatrist, he has had the chance to view the system through another lens, seeing the pressures on doctors themselves.

“It’s patient flow, it’s volume, it’s after-hours policy, it’s bullying and harassment…it’s all of these things,” he said. “The system isn’t designed for people.”
In 2022 Bravery published a book, *The Patient Doctor: How one man's cancer diagnosis led to a quest to put the heart back into healthcare*, promoted as both memoir and manifesto, in a bid to “help both of the sides of healthcare better understand each other”.

He is gratified the book seems to have tapped into an “appetite for change” in the community and in healthcare. It’s made the best seller lists, his experience and insights have been featured across the mainstream and medical media, and he’s been a guest speaker in multiple health settings.

Bravery was opening keynote speaker for the Australian Society of Medical Imaging and Radiation Therapy (ASMIRT) at its biennial conference, leading the charge for multiple sessions on patient-centred care featuring a number of international experts.

Bravery has a particular story for the ASMIRT delegates, one that still makes him emotional.

It comes from his first radiography appointment, which involved a CT scan and having radiographers make pin-point tattoo marks on his skin, so they could line him up into the same position every day for the next 39 days of his treatment course.

It’s a funny story, the way he tells it, describing in detail a hospital gown that didn’t fit or behave and the need to keep his genitalia out of the radiation’s way while contorting the rest of his body in various ways.

But behind the laughs is a story about fear, discomfort and lack of dignity. It also highlights the importance of forewarning; in a relentless treatment cycle, he was “really not prepared for the exposure and the vulnerability”.

Looking back, Bravery says he can’t fault the technical expertise of the care he received, nor the professionalism of the radiographers in the room.

“But I felt like a cog in a machine.” It struck him that the actual everyday routine of healthcare “is a barrier to empathy”.

His message to health professionals from that experience is: “Your everyday is my worst day.”

**Focus on patient journey**

It’s a message the ASMIRT membership is very keen to hear, says conference convenor Johnathan Hewis, a senior lecturer in medical imaging at Charles Sturt University in Port Macquarie and chair of ASMIRT’s Advanced Practice Reference Group.

ASMIRT’s members — radiographers, sonographers, radiation therapists and nuclear medicine technologists — work with “very high-end technology, cutting edge science”, he said, and related clinical and scientific issues, including the growth of artificial intelligence (AI) in the work of the profession, was on the agenda at the conference.

“It’s well recognised that some aspects of a journey into our space can be a bit mechanistic and dehumanising,” Hewis said, adding that this only got worse during the COVID-19 pandemic with staff robed in personal protective protective equipment (PPE) and having to be distanced, with loved ones unable to provide support.
Bravery’s opening address, and other sessions involving leading international practitioners and researchers on patient-centred care, are designed “to keep us focused on the person being at the centre of all we do”, he said.

UK researcher and diagnostic radiographer Dr Emma Hyde, who is Associate Professor of Diagnostic Imaging at the University of Derby and Clinical Director of the Personalised Care Institute, has been digging deeply into that patient journey in radiography and presented on her work at a number of #ASMIRT2023 sessions.

She recently co-led a large-scale national research project in the UK to define informed measures of patient-centred care in diagnostic radiography that included a revealing survey of clinicians, managers, and service users, testing application to a number of approaches to care — which could have served as a checklist for Ben Bravery’s experience.

They included:

- explanation of equipment, movement and noises
- exploring any difficulties the patient may have maintaining position
- action re any patient distress/anxiety before, during or after examination
- ensuring size and length of clothing appropriate (physical and cultural needs)
- providing dressing gown, blanket or other items to maintain comfort, privacy and dignity, and
- choice over lightings and other settings like music.

Hyde and her co-author reported frequent differences in the perceptions of care provided during an imaging examination among UK medical imaging technologists and managers versus service users.

“While all three groups saw technical skills as the fundamental foundation for patient-centred care, perspectives on other important factors differed,” they wrote.

“Service users prioritised information, care, privacy and dignity, and environment when describing care. In contrast, medical imaging technologists and managers prioritised examination efficiency as a core component of care, then information, care, and finally privacy and dignity.”

Hyde is now furthering this research, leading a large research program with colleagues from Queensland University of Technology, looking at perspectives about patient care in Australia, New Zealand and South Africa.

It’s the first study, she said, to compare perspectives on ‘good’ person-centred care in medical imaging between the Global North and Global South and, while data is still being analysed, she hoped to be able to share early findings at #ASMIRT2023.

She told Croakey she also seeked to get across three main points for patient-centred care:

1. Use ‘Hello my name is’ to introduce yourself to everyone you image/treat, and start the interaction as equals, with dignity and respect.
2. Consider ‘what matters to you’ – health professionals can be focussed on the systems/ processes and forget the individual’s needs – ask what matters!
3. Little things can make a big difference – an extra blanket or pillow, a pad under the knees, a reassuring touch on the shoulder, a conversation about the weather, can all make a huge difference to the person’s experience.

The conference heard on patient-centred care and a range of other topics, including AI and research, from plenary speaker Dr Christina Malamateniou, a former MRI radiographer, now senior researcher and Postgraduate Programme Director for Radiography at City, University of London.

She was hailed by her institution last year for pioneering an autism-friendly MRI scan, exploring the impact of the pandemic on radiography academics and practitioners, and leading research into creating ethical AI tools in radiology. (Croakey will report more on her work in upcoming coverage of the conference).

“Patient-centred care is a key clinical competency for radiographers and works seamlessly with the technical competencies; these two go hand in hand,” she told Croakey.

“As we are a caring profession, patient-centred care also massively contributes to our job satisfaction, and, therefore, to patient experience. A virtuous circle, if we get it right, a vicious one, if not.”

Perfect storm

#ASMIRT2023 took place amid a challenging professional landscape: increasing demand, growing waiting times, the need for more complex imaging, calls for a new stream of research, scope of practice issues, and worries about recruitment and retention, with graduate numbers down last year to 647 from 1,100 ten years ago.

“It’s like a perfect storm,” said radiation therapist Bronwyn Hilder, immediate past president of ASMIRT and a workforce expert for the profession, saying it is having to look for internal and external solutions to address “a great increase in the complexity of treatments that we deliver, increasingly sophisticated machinery, [and] an increasingly complex patient cohort”.

The conference had a strong focus on fundamental workforce and practice issues, including the relatively slow rollout of advanced practice in Australia compared with other places like the UK and Canada. It ended in a session looking at the medical radiation science practitioner for the future, which features some of the “rock stars” of the profession, Hilder said.

Professor Beverly Snaith, one of the first consultant radiographers in the UK and a trail-blazer in advanced practice, will also speak at a number of sessions. Snaith is also urging the profession to build its own research base, saying in a pre-conference interview that “we are still at the infancy in terms of confidence in using and generating our own evidence”.

The conference also had a big focus on diversity, among patients and in the workforce, and will feature Dr Amanda Bolderston, co-founder of Canada’s Queering Cancer, whose doctoral research investigated the experiences of lesbian and gay healthcare professionals in practice.
Improving cancer care for sexually and gender diverse people

Introduction by Croakey: An urgent need for medical radiation services to provide more inclusive care for sexually and gender diverse people was discussed at the Australian Society of Medical Imaging and Radiation Therapy (ASMIRT) conference.

The focus follows the publication earlier this year of LGBTQI+ People and Cancer: A guide for people with cancer, their families and friends, the first of its kind in Australia.

#ASMIRT2023, the national conference for radiographers, radiation therapists and the wider medical radiation sciences community, held in Sydney, included a four day program of workshops and conference sessions under the theme: Champions of Change: honouring the past, embracing the present, shaping the future.

See the full program here. It featured a host of international and national speakers who are leaders in advanced practice, research, artificial intelligence (AI) issues and more, with a big focus on patient-centred care, as well as critical workforce and clinical issues and advances for the profession.
Marie McInerney writes:

In a research article emerging from her doctorate, leading Canadian radiation therapist, educator and researcher Dr Amanda Bolderston describes meeting a gay patient who had late-stage lung cancer and “was in a bad way”.

The patient was with his radiation oncologist, who, as she left, hugged him and his partner, handed over her business card and told him to call her anytime.

In the Radiography article, Bolderston, who remained after the oncologist’s farewell, describes how their patient started crying, which she assumed was because of his poor prognosis.

“I pulled up a little stool on wheels and touched his hand. “That was a shock was it?” I said. “No”, he told me, “I knew what was coming”. Turned out, he was crying because Dr. B was the first doctor to treat him and his partner like a couple. They’d been mostly met with awkwardness and embarrassment, with a sprinkle of overt homophobia.

His partner leaned forward, “they’d have found this a lot sooner if they hadn’t assumed he had AIDS”. It had taken a number of negative blood tests, and lots of pushing to get them to look for other reasons for the weight loss and cough.

Did they tell me all this because of my pink triangle pin? I don’t know. I cried on the bus on the way home, I wasn’t sure if it was sadness or fury.”

Bolderston delivered two presentations emerging from her research at the conference of the Australian Society of Medical Imaging and Radiation Therapy (#ASMIRT2023), in sessions focused on diversity, equity and inclusivity in medical radiation sciences and patient centred care.

In those sessions, she showcased Queering Cancer, a website she co-founded for LGBTQ2S+ (Lesbian, Gay, Bisexual, Transgender, Queer or Questioning, and Two-Spirit) patients affected by cancer and their loved ones and will report on her findings about LGBTQ2S+ medical radiation professionals in a session titled, Coming out or staying in? Navigating diverse sexual and gender identities at work.

(Two-Spirit refers to a person in Canada who identifies as having both a masculine and a feminine spirit, and is used by some Indigenous people to describe their sexual, gender and/or spiritual identity.)

Bolderston was also part of a conference panel session on women in leadership in the progression, along with Dr Jessica Biles and Angela Damm who presented on the Deadly Aboriginal and Torres Strait Islander Nursing and Midwifery Mentoring (DANMM) Program. Also on the panel was UK radiography researcher and academic Dr Christina Malamateniou and Sydney radiation oncologist Dr Lucinda Morris, who also presented on “They Are Not That Smart!: Leadership Lessons from The Bunker”.

Speaking to Croakey ahead of the conference, Bolderston said she will be urging greater awareness and education in the medical radiation sciences about the issues faced by LGBTQ2S+ patients and colleagues, who so often have to rely on genuine interest and goodwill rather than mandated education and training, and truly inclusive systems and workplaces.
Building stronger connections

At the beginning of the Radiography article, Bolderston positions herself as a cisgender radiation therapist and a lesbian who had felt for some time in her clinical practice that her sexual orientation should be hidden.

“This concerned me,” she wrote, “because I felt it was (and is) an important part of who I am. I sometimes cared for patients who were gay or lesbian, and I felt a connection with them. I could see that occasionally they were treated differently, or they were also covering up who they were. The few times I did come out to patients, I felt that our connection helped them to cope a little better.”

Her declaration is important to the autoethnographic approach she takes to the research. But it also underlines her research findings that queer people have to ‘come out’ over and over again, in “a continuous and contextual process” over the course of their lives — while never being sure what the reception or impact will be.

That includes in their everyday working lives if they believe, as she does, that it improves their patient-centred care and their own satisfaction at work in not having to leave their identity at the door, “being able to be their authentic self”.

Bolderston said that what often gets in the way of coming out for health professionals, apart from institutional bias, is a misguided sense of professionalism, particularly in the medical environment where the idea of “a professional” is still a white cisgendered man who can do the “heteronormative small talk” that oils so many encounters.

“But people who are queer, quite often we hold ourselves back from that, because we’re not sure about the reaction from the patient, we don’t want to — quote unquote — offend anybody, or we don’t want a negative reaction,” she said, adding that often queer professionals will also think “‘well it’s not about me, it’s about the patient’, which it absolutely is”.

Findings

Coming out was contextual and continuous
- The “irrelevance narrative”
  - “it doesn’t make any difference at work, why should it?”
- Professionalism discourse:
  - “there’s a line, I don’t like to cross it”
  - “it would have been unprofessional NOT to have come out”
- Various degrees of “outness” and comfort with colleagues
  - “what can you say when somebody basically invalidates you as a human being?”
- Little evidence of coming out to patients
  - “sometimes we sort of recognize each other, just by little clues”

Everyone is not the same

Bolderston said discussions about better care for LGBTQ2S+ people often get stuck when mainstream health professionals insist on an objectivity narrative.

Often when she mentions her doctoral work, they will tell her “it doesn’t matter to me if my patient is gay, I treat everyone the same”.

But there’s the critical rub, she said, “because everyone isn’t the same and we’re not practising person-centred care if we act like they are”.

Improving cancer care for sexually and gender diverse people #ASMIRT2023
As the case of Bolderston’s lung cancer patient shows, there are multi-layered implications of non-inclusive health care for LGBTQ2S+ people, ranging from not feeling welcome or respected through to significant medical repercussions.

Bolderston highlights the work of the Out with Cancer study in Australia, which says LGBTQIA+ communities represent an “ignored epidemic” and a “growing and medically underserved population” in cancer care.

The Western Sydney University study was born from research showing that LGBTQIA+ communities experience a disproportionate cancer burden, and face unique psychosocial challenges, such as higher rates of cancer related distress and sexual concerns, lower levels of family support, difficulties in accessing general health care or cancer services, gaps in patient provider communication and lower satisfaction with cancer care.

Out with Cancer led earlier this year to the publication of a landmark 80-page publication by Cancer Council NSW, LGBTQI+ People and Cancer: A guide for people with cancer, their families and friends, the first of its kind in Australia.

It outlines unique challenges faced by LGBTQIA+ people including:

- health professionals making assumptions about your sexual orientation, gender and sex characteristics, which can make you feel invisible
- anxiety about coming out as LGBTQIA+ and fear of negative reactions from health professionals
- higher levels of depression and anxiety because of a history of marginalisation, violence, stigma, exclusion and discrimination
- difficulty having your partner/s or other significant people recognised as your family
- less or no support from your family of origin
- little or no LGBTQIA+ specific cancer information or support
- lack of knowledge among health professionals about issues specific to LGBTQIA+ people.
Medical repercussions

A cancer diagnosis is fraught with difficulties for anyone, Bolderston said, but for LGBTQ2S+ patients the “stakes are higher” when they come into an environment that is not welcoming or has no understanding of their lives or health needs. That can start with an intake form that “doesn’t recognise them or their partnership or their gender identity or their name”, that means they have to come out to the reception, and then in multiple other interactions as their journey progresses.

Queer patients are often diagnosed late because they may have had bad experiences in healthcare, “so they don’t necessarily trust the healthcare system or may just assume that they’re going to have a hard time, so they may delay seeking medical care”, she told Croakey.

They can also struggle with the way that cancer is often divided up as ‘men’s’ and ‘women’s’ diseases; for example, where breast cancer promotion and treatment is “aggressively pink”, with images of women everywhere in the mammogram spaces and, in some imaging services, women’s only changing rooms.

“So if you’re a trans man and you go for screening for breast cancer, you’re not going to feel welcome,” she said.

The medical repercussions can be significant, Bolderston said, citing her own example of asking her doctor once about cervical screening.

“She responded, ‘well you don’t need it because you’re a lesbian’, and I had to say, ‘I do need it because in the past I had sex with men so I can have HPV’,“ Bolderston said. “These are the sorts of thing where healthcare professionals might miss cues and screenings.”

She talks also about the experience of a colleague at Queering Cancer: a trans man with ovarian cancer who encountered major barriers accessing CA125 blood screening tests for recurrence.

Community lab staff assumed his physician made a mistake ordering the test. Once he explained his gender and cancer history, they proceeded with the lab draw. However, when he went to check test results online, he was met with an auto-generated announcement that the test was cancelled as it wasn’t available for males.

With the support of local lab managers he has recently been successful in having all gender restrictions lifted for CA125 tests in his Canadian province.

But Bolderston said “he shouldn’t have to advocate like that for himself”, adding that trans and non-binary people “tend to just get worse experiences across the board”. 

Queering Cancer website. Photo supplied
Address the deficit

Bolderston said her message at #ASMIRT23 will be for non-queer colleagues to educate themselves but also to advocate to make the system better in their own workplace or organisation.

“Learn what your processes are, do a scan and make sure that the place is physically welcoming and that your policies and processes are welcoming and accessible,” she said.

While Queering Cancer is designed for patients, she’s been buoyed by the interest from health professionals, who have made many requests for information, revealing a “huge deficit in education”.

That deficit can be seen in the lack of undergraduate education provided — she led a study on the Radiation Therapy Program (RADTH) she teaches at the University of Alberta, which found that LGBTQ2S+ and healthcare education amounted to a total of 3.5 hours in a three-year course.

But, as has been experienced by Indigenous peoples and people of colour across the world, the deficit is also in the way LGBTQ2S+ issues are taught, too often looking at problems rather than strengths, such as talking about gender dysphoria but not gender euphoria, she told Croakey.

As the editor of the international Journal of Medical Imaging and Radiation Sciences, Bolderston is also seeking to open up research to more diverse information and voices, including through narratives subject to a “much friendlier” process than double blinded peer review.

Under her leadership the journal has published “a ton of stuff in all different ways”, including photo essays and podcasts, and qualitative research that is too often “the Cinderella of the research world”, she said.

“That’s my soapbox: listening to people’s stories and using their words and qualitative research to reach hearts and minds.”

Further watching/reading:

Trans Dudes with Lady Cancer

Cancer’s Margins: Trans and Gender Nonconforming People’s Access to Knowledge, Experiences of Cancer Health, and Decision-Making
You can track Croakey's coverage of the conference here.

From Twitter

Dr. Amanda Bolderston Retweeted
Kim Meeking @kimbomeek · 10h
This #lesbianvisibilityweek is a great opportunity to learn a little about the challenges faced by lesbians in healthcare spaces. I'll start.

From Twitter

ASMIRT Retweeted
Hawk 🌈@DrKEHawk · Apr 25
I could not possibly be more excited to be flying out for @ASMIRTo! Looking forward to giving talks, seeing my dear colleagues and making new connections. Deeply grateful for my inspiring friend @DrGeoffCurrie and for all of our ongoing collaborations. See you all soon in... Show more
Dr Emma Hyde PhD, MEd, BSc, NTF, FH... @EmmaHydeTe... · 4h

Enjoying some sight seeing in Sydney with @MYradres before #ASMIRT2023 starts tomorrow 🎨 🌟

Dr Christina Malamateniou (she/her) @CMalamateniou · 20h

@ASMIRTorg I have travelled half the earth for you but know it will be totally worth it. #AI #personcentred care #MRI safety #evidence based practice #women in imaging, #ASMIRT2023 and Sydney have it all! @johnhewis @AmandaBoldersto @EmmaHydeTeach @MYradres can't wait to meet u

ASMIRT 2023
April 27th
1:30pm - 6pm

Croakey Services @CroakeyServices · Apr 24

#ASMIRT2023 runs from 27-30 April for radiographers, radiation therapists and the wider medical radiation sciences community, under the theme: ‘Champions of change: honouring the past, embracing the present, shaping the future’
Here is the program:
conference.asmirt.org/2023/wp-conten...
What does the future look like for medical radiation science and its workforce?

**Introduction by Croakey:** Excitement about the potential for new technology like artificial intelligence, which holds great promise in the medical radiation sciences, has to be balanced with responsibilities for the ethical, social and legal issues, as well as what it means at the very human level.

That is one of the key issues raised by multiple speakers at the #ASMIRT2023 conference, who shared their thoughts on future opportunities and challenges for the profession with Croakey editor Marie McInerney.

Below, the speakers discuss other challenges, including workforce shortages and ensuring equitable access to care. As with many discussions at #ASMIRT2023, they emphasise the importance of patient-centred and culturally safe care.

The closing session at #ASMIRT2023 conference – for the medical radiation sciences (MRS) – will included a panel session on ‘The MRS practitioner for the future’.

Featuring key international and national speakers, it explored what the future looks like in the profession, its evolving scope of practice in the profession, and a presentation on ‘next gen tech needs next gen techs’.
Care must be the moral compass

Dr Christina Malamateniou, Director of Postgraduate Radiography program at City, University of London, Chair of the AI Advisory Group, Society and College of Radiographers

What excites and/or worries you most about the future in MRS?

Artificial intelligence (AI) is exciting because of the possibilities to improve healthcare, both effectiveness and safety-wise. AI is also the thing that worries me most, because it can do a lot of damage if not used within appropriate governance frameworks and within appropriate regulation and standards.

What are the biggest opportunities facing the MRS practitioner in the future?

There are big opportunities on the interaction between AI and person-centred care, but we need to get the balance right.

What are the biggest challenges facing the MRS practitioner in the future?

The challenges are low staffing and low morale. Healthcare practitioners have worked hard during the pandemic and saved the lives of millions of people. They need to be properly compensated for their work, formally recognised and their wellbeing should be a priority to ensure quality of the clinical service.

What are the priorities in medical imaging and radiation therapy for ensuring culturally safe, patient-centred, sustainable healthcare?

Priorities include:

• Strong partnerships between clinical practitioners, academics, patients and industry and also multidisciplinary partnerships to address complex healthcare needs.

• Updated education with digital competencies and attention to patient needs and preferences.

• Evidence based clinical practice, grounded on high quality, funded research.

What do you hope attendees take away from your presentations?

Attendees should feel excited that our profession is leading the changes for a digital future. This is also a huge responsibility, to get things right, for everyone else.

Any other comments?

Our profession is a caring profession, one that serves and helps others and has patient benefit as its core value. This should continue to underlie all our efforts and practice, including the digitalisation of healthcare. This will be the moral compass that will help us safely navigate the digital future.
What does the future look like for medical radiation science and its workforce?

Diversity and AI are two unifying global challenges

Dr K Elizabeth Hawk, nuclear medicine physician and neuroradiologist, Stanford University School of Medicine and University of California, San Diego, USA

What excites and/or worries you most about the future in MRS?

MRS has been on the cutting edge of innovative patient-centred care since its inception. Even today, this field continues to lead the way in developing elegant strategies to treat a variety of diseases effectively and efficiently.

I am perhaps most excited about the continued growth of theranostics, and our ability to both image and treat disease at the same time.

The emergence of different artificial intelligence tools, and their integration into MRS is also something that particularly excites me. As we carefully examine the AI design process, and the careful integration of AI tools into our art of patient care, it is critical that we do so in a way that lessens global healthcare inequities and deepens the patient/physician relationship.

Opportunities

Opportunities are limitless in the field of MRS. Perhaps some of the biggest potential breakthroughs lie in developing disease-specific radiopharmaceuticals. While historically we have some fantastic radiotracers that can be used to image a variety of different disease processes, we are now seeing more and more diagnostic radiotracers and theranostic agents that are specifically designed for a certain cell type or disease process.
**Challenges**

While different countries experience different and unique challenges relative to their own socio-political landscapes, there are two main global challenges that unite us.

The first is ensuring that the field of MRS welcomes a diversity of practitioners. Women and other underrepresented minorities are an essential part of the healthcare team, and it is critical that we continue to find ways to foster more diversity across the different roles in MRS.

The second challenge we face globally is the adaptation of AI tools into our time-honoured art of patient care. During both the AI design process, as well as implementation into clinical care, there are number of different ethical issues that must be addressed.

I have been very fortunate to work with Dr Currie, a Professor in Nuclear Medicine at Charles Sturt University here in Australia, on these issues. The ethical standards outlined in our 2020 paper *Ethical principles for the application of artificial intelligence (AI) in nuclear medicine* were adopted by the European Association of Nuclear Medicine (EANM) in their position paper on the application of artificial intelligence in nuclear medicine.

**Priorities for ensuring culturally safe, patient-centred, sustainable healthcare**

I strongly believe that building a team of diverse providers is key to ensuring excellence in patient-centred care. Finding ways to support women and other underrepresented minorities to explore and excel in careers in MRS ensures a team of diverse mindsets that can understand and uniquely respond to different patient needs.

**What do you hope attendees take away from your presentations?**

I hope attendees walk away with a refreshed love of MRS. Conferences such as this are a great chance to reconnect with our own academic passions, meet colleagues to collaborate with and move ideas forward, and renew our sense of optimism and hope as we face the future challenges ahead.

I also hope that my discussions on AI inspire more people to consider the ethical challenges of implementation of this new technology, and critically evaluate new tools with an understanding on how they may impact healthcare inequities. As always, I also hope that my own path encourages other women and underrepresented minorities to pursue their careers in leadership in MRS.

**Additional comments**

MRS is truly a global community. I welcome ongoing discussion, collaboration and networking. I hope that we can all use this conference as only the beginning of a conversation, and that we all continue to connect in the months and years to come.

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**Unique stories, cultures and needs**

**Dr Amanda Bolderston**, Faculty Educator, Radiation Therapy Program, University of Alberta, Canada; Editor-in-Chief of the *Canadian Journal of Medical Imaging and Radiation Sciences*. See our earlier story and tweets on her presentations on LGBTIQ2S patients and professionals.

**What excites and/or worries you most about the future in MRS?**

My field is radiation therapy and what excites me are the leaps and bounds in hybrid imaging, especially medical radiation guided treatments that are increasingly becoming available. To be able to see and adapt our treatments in such exquisite detail is a huge advancement.
What worries me (as always!) is that we may continue to lose focus on caring for the whole patient, not just their tumour, in our excitement about new technology!

**Opportunities**

Our biggest opportunities are the boundless ways we can expand our practice, technically, in research and in all areas of patient care. I think that, as a unique profession, medical radiation technologists are coming into their own!

**Challenges**

The biggest challenges are the post pandemic shortage of healthcare professionals in general. It’s a tough time to sell the advantages of our profession and we’re looking at increasing health human resource issues as well as difficulty recruiting students.

**Priorities for ensuring culturally safe, patient-centred, sustainable healthcare**

I am always banging the same drum but I hope we can continue to see the whole patient, with their unique story, culture and needs. This means embedding person-centredness in our undergraduate curricula, our workplace policies and strategic planning and in the work of our professional organisations instead of empty rhetoric.

**What do you hope attendees take away from your presentations?**

That we can be professionals AND bring our whole selves to the clinical workplace, to research and education. We need a diverse and authentic healthcare workforce to care for our diverse patients.

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Dr Amanda Bolderston
Workforce shortages and shifting demarcations

Professor Geoff Currie, Professor in Nuclear Medicine, School of Dentistry and Medical Sciences, Charles Sturt University, Wagga Wagga; chair of the #ASMIRT2023 nuclear medicine program, and presenter at the conference on an important trial in prostate cancer, a session on AI and radiation dosimetry, and on next generation workforce.

See his editorial published last week in Radiography: Next Generation Technologists for Next Generation Technology

What excites and/or worries you most about the future in MRS?

What excites me is the advances in technology that improve our capabilities. These enhanced capabilities translate to better outcomes for patients. Technologies and advances like theranostics, hybrid scanners, artificial intelligence and targeted radiopharmacy all allow earlier detection, more accurate diagnosis, improved treatment planning, and early response to therapy.

Nuclear medicine is the heart of these advances with the capacity for both diagnosis and therapy; hence theranostics. Nuclear medicine these days includes hybrid imaging to combine the molecular insights of nuclear medicine imaging with the anatomy of CT or MRI.

My specific concern is that there is a chronic shortage of nuclear medicine technologists/scientists. We are graduating across the country less than half the number of students annually than required to fill job vacancies.

The issue largely lies in recruitment of students from high school, with most having had x-rays before they finish school and knowing what radiography is but few having any insight into what nuclear medicine is.

That is why we developed new student facing career material we hope will find its way into schools.

Opportunities

Across the specialisation of MRS (nuclear medicine, radiography and radiation therapy), we define training and professions the same way we have for decades. But the industry has changed and those demarcations may not be fit for purpose in the future. There is an opportunity to re-engineer our thinking.

Registration as a medical radiation practitioner requires capabilities in six domains (AHPRA/ MRPBBA) and five of those are common to everyone. So it is only one of six domains that makes a person a radiographer as opposed to a nuclear medicine scientist and, within that domain, CT is common to all. Departments are integrated, especially radiography and nuclear medicine. There is opportunity to consider the work functions of the future practitioner and maybe hybrid qualifications or specialist qualification will emerge.

The advances in nuclear medicine (AI, hybrid technology, radiopharmaceuticals, theranostics) are very exciting and create amazing career opportunities but also create the unique opportunity to genuinely create patient-centred care in a precision medicine environment.

Challenges

The biggest challenge is the work environment. A shortage in the workforce puts pressure and stress on the existing workforce; potential burnout. In nuclear medicine there has been a push to bring people out of retirement or attract international colleagues to fill voids in the local workforce in the short term.
There is so much attention focused on the future workforce demands associated with the AUKUS nuclear submarine project but our current workforce across the entire nuclear sector (including nuclear medicine) is short. Some Government attention to build that workforce would seem fitting.

**Priorities for ensuring culturally safe, patient-centred, sustainable healthcare**

A sustainable workforce is the first step. Shortages in the workforce reduce opportunities for training and continuing professional development. Culturally safe workplaces and patient environments, and patient-centred care require education and training, but also the time to allow workers to provide that care.

That is challenged when there are workforce shortages. But conferences and university courses provide cultural proficiency and patient-centred care programs, it is the core of the job and you will see those themes sprinkled through the ASMIRT program.

**What do you hope attendees take away from your presentations?**

A working understanding of patient reactions and deterioration, and the ability to recognise and respond to those patients so that our patients leave our care in no worse condition than they arrived.

An appreciation of the leadership we are playing in AI developments in the MRS domain (on the global stage) and focus not on “what is possible” with AI because much of that is of no value or benefit to our patients but rather “what is needed” to fill the gaps in existing capabilities.

My presentation on AI, digital twins and radiation dosimetry directly addresses a shortcoming in current capability and possible solutions to improve patient outcomes. This dovetails with my poster that extends this technology to more socially sustainable pre-clinical imaging.

PSMA theranostics in prostate cancer is revolutionary and combined with our research paper (presented with Peter Tually) and poster, we would like people to appreciate not all patients have access to state of the art PSMA theranostics but our research using 99mTc based PSMA could provide improved outcomes for those geographically isolated from state of the art theranostic centres.

The ‘next gen’ presentation (at the closing session) is more a think piece to challenge delegates to think about whether historic approaches to education, training and qualifications are fit for purpose in the evolving MRS space.

I have two posters that hopefully inspire delegates to explore how AI can support patient-centred care, and the importance of cultural competence in patient-centred care.

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**Maintain focus on patients, equity, and embrace Al**

Bronwyn Hilder is the immediate Past President of ASMIRT. She is Chief Radiation Therapist at the WP Holman Clinic at the Royal Hobart Hospital.

**What excites and/or worries you most about the future in MRS?**

Excites: advances in technology in all medical radiation practitioner fields; better imaging allowing for more precise diagnosis and targeting of tumours; this increase in technology will allow for treatments that we have not seen before, AI as part of these, to increase efficiencies and improve timeliness.
What does the future look like for medical radiation science and its workforce?

**Opportunities**
Radiation therapists and radiographers working to enhanced/expanded scope of practice – with a view to improving access, timeliness of care and quality of care. When this is done well, the patients benefit. There are many examples from overseas (UK, Ontario in Canada and Singapore) where medical radiation practitioners have taken on advanced roles, with appropriate education, training and mentorship, to provide high quality timely care to patients and I’m keen to see roles like these progress in Australia.

Embracing AI and all it has to offer — for example to enable adaptive radiation therapy.

**Challenges**
Increase in the number of patients (? effect of COVID over last few years). An increasing numbers of cancer patients survive their initial diagnosis but live with recurrent disease requiring ongoing treatment. Additional complexities arise from retreatment and in combination with other therapies.

Staff shortages — recruitment, retention, career pathways for medical radiation practitioners to keep them engaged.

Bigger picture: equitable access for all Australians and funding for care. Understanding from a health economics point of view that not every modality or treatment can be available at every local hospital – but ensuring that networks exist so that regional and rural patients are not disadvantaged.

There are some amazing technologies that can assist with this but again we need to ensure that medical radiation practitioners are providing education, training and care.

**Priorities for ensuring culturally safe, patient-centred, sustainable healthcare**
A summing up from a Medical Imaging Educator: that for every patient it is the best examination experience that they could have. For us, it is our everyday but for patients, it can be a scary and daunting time. Providing care and support to patients, building rapport, ensuring dignity and that explanations are provided every step of the way go a long way to helping our patients deal with what is happening to them.

Education to ensure that all practitioners have an understanding of what culturally safe, patient-centred care is and how to provide it, for example provision of resources such as ASMIRT Person Centred Care workshops.

Adding a focus on culturally safe care to our everyday work – not just a case of providing the “best care” for everyone but realising that what is best for one group of people may not be for another. Taking time to discover how you might best provide care to culturally and linguistically diverse patients so that their care is culturally safe and truly patient-centred.

With respect to sustainable care, ensuring that the right people are at the table when decisions are made to provide advice on how this could impact care – this could be at Commonwealth level (e.g. MBS item number review) or State (funding for equipment and location of services). MRPs work with other professions to provide multidisciplinary care and it is important that each of the groups have input into consultations.
What do you hope attendees take away from your presentations/the conference?

There are some very exciting things going on in the medical radiation space around Australia and the world. I hope that attendees take up opportunities to learn from their peers and from experts, to network and follow these insights up in their own departments and centres to improve patient care. Even if only one idea resonates as applicable in their own department, that one idea may also spark others.

Sometimes we can get very caught up in the technology, so it is important to maintain a focus on our patients.

Additional comments

I’m passionate about my job, the people I work with and the patients we provide care to. I am so proud of the work that we do to provide care to people at a time in their life that can be very difficult. The medical radiation professions have a blend of technology and patient interaction and when both of these come into play equally lead to positive patient outcomes.

Research boom and entry requirements

Associate Professor Andrew Kilgour, Assistant Associate Dean Medical Radiations, RMIT University; Chair, ASMIRT Professional Standards Committee

What excites and/or worries you most about the future in MRS?

What excites me the most is the boom in MRS professionals undertaking research. This needs to be fostered in students right from their first year of study, and at every stage of their training, they need to be taught its relevance and importance. I really enjoy being a part of this.

I am concerned about the entry requirements for students to enrol in MRS degrees. Having very high ATARs to get into the programs excludes a lot of students who would make excellent practitioners. Whilst the ability to study and learn is important, I am not sure that HSC/VCE etc reflects the kind of learning that is required to excel in the career. I would ideally like to see interviews to select the students who enter the programs, to guarantee the future direction of the profession is heading in the right direction.

Opportunities

Many people would answer this question in the context of advancing technology. However, I think the greatest opportunities are related to the advancing status of our professions in the pantheon of health professions.

The increasingly high standards of education, CPD, and research in our field are increasing our profile as professions. Also, a significant part of our research is heading in the direction of being interprofessional, rather than isolated to our professions. This indicates that what we have to contribute to healthcare research overall is being increasingly recognised as of value.

Integral to this is an increasing focus in the professions on patient-centred care. All the technology in the world is not going to be realised to its full potential unless we are at the forefront of caring for the patients for whom it is utilised.

Challenges

One of the biggest challenges has always been bringing the profession along with us. I graduated as a radiographer in 1985, and the profession had a very different landscape then. We were TAFE trained and had a very technical focus in our education.
Every change that has occurred in MRS education has met with resistance from some quarters of the profession. This is understandable, but I am confident that contemporary education is producing graduates more open and adaptable to change.

Another challenge, which is somewhat unique to New South Wales, is getting NSW Health to recognise the value of dedicated tutors in medical imaging. NSW is way behind Victoria and Queensland, who have had these roles in the public system for many years. NSW is many years behind in not appointing such positions.

Finally, a challenge I am hoping will gain traction is national radiation licensing for MRS. If we can have national registration, we also should be able to have national licensing. Having different rules and different administrative bodies in every state and territory is needlessly complex and produces inconsistent regulations.

**Priorities for ensuring culturally safe, patient-centred, sustainable healthcare**

The answer to this point is largely related to two points that I have previously mentioned – interprofessional research and interviewing potential students before they are permitted to enrol.

Interprofessional research leads to best practice in patient-centred care, which has been a focus of other healthcare professions for longer than it has been for MRS. Seeing ourselves as integral to patient care will encompass cultural sensitivity, putting the patient experience first, and ensure that our care is sustainable.

Accepting students into programs of study based on interview rather than ATAR alone will allow experienced academics and practitioners the opportunity to screen out unsuitable potential students, who do not have patient-centredness as their focus.

**What do you hope attendees take away from your presentations/the conference?**

My presentations are focused on the student experience on clinical placement. I have a passion for the education of the future of our profession, and I believe it is imperative that workplace supervisors understand what they’re actually assessing, why they’re doing it, and how to do it. They need to understand that they’re not just assessing technical competence, but actual capability.

Capability encompasses so much more than just knowing how to operate the equipment and position the patient. I hope that people attending my presentations come away with a renewed interest in and passion for the students under their care.

I hope conference attendees come away with a great sense of belonging to an amazing professional community, and a renewed enthusiasm for the best possible practice in their chosen fields. ASMIRT is the best networking opportunity on our calendar, and a great chance to catch up with friends past and present.

**Additional comments**

Thank you for this opportunity. We belong to a great professional community, and I am looking forward to ASMIRT very enthusiastically.
Expanding scope of practice

Alan Malbon, ASMIRT’s Diagnostic Imaging Project Officer, former ASMIRT president, who was previously Chief Medical Imaging Technologist at St Vincent’s Hospital in Melbourne. He will be presenting on the administration of scheduled medicines by MRS practitioners, in the wake of the tragic death of Melbourne mother Peta Hickey during a CT scan.

What excites and/or worries you most about the future in MRS?

Given my longevity in the profession, I have experienced medical imaging before the advent of computed tomography (CT) and magnetic resonance imaging (MRI), with ultrasound being in its infancy. To experience the technological changes between then and today, the possibility off what can be achieved technologically in the future does excite me. Conversely, resilience of the current national MRS workforce is an issue to be concerned about, like for all healthcare workers who have come out of the pandemic.

Opportunities

The biggest opportunity for medical radiation practitioners both today and in the future is the potential to expand their scope of practice. The evolutionary technology in tele-radiology, particularly in regional and rural Australia, has created changes in the way that medical imaging radiology reporting of images are performed. The traditional established process for having a reporting radiologist directly onsite is declining.

Consequently, medical radiation practitioners are being instructed by their employers to be trained and instructed to obtain skills to administer scheduled medicines which directly pertain to their medical radiation science procedures in order to maintain both high quality patient care and ensure service delivery productivity.
The question of whether medical radiation practitioners should be able to administer medications such as IM adrenaline in the cases of severe contrast reactions and anaphylaxis is also an issue that needs to be addressed in this climate of change.

It should be noted that both primary and secondary school teachers can inject IM adrenaline if one of their students has an anaphylactic reaction. While they adhere to strict departmental administrative protocols, they are not medically trained or working in healthcare and the teaching profession is not expressly mentioned in any of the Australian state and territory Drugs and Poisons Acts.

**Challenges**

The biggest challenge for the profession is to establish themselves within the national identity profile of the holistic approach to the diagnosis and treatment of disease nationally. Ranging from BreastScreen, elective surgery and including radiation treatment for cancer, these procedures are not possible or are severely hampered without the professional expertise of medical radiation practitioners.

**Priorities for ensuring culturally safe, patient-centred, sustainable healthcare**

The underlying priority is the commitment to the understanding of the evolutionary nature of the development of the equipment which the profession is required to use and have the commitment to use it to its full advantage. Add to this, a liberal dose of empathy for each and every patient that comes under our care. The responsibility of both acquiring images for diagnosis or radiation doses for treatment as well as the overall well-being of these individuals under your care is key.

Today’s Australia is a culturally diverse country. There is an obligation on the profession to understanding this cultural diversity to the best of their ability. The profession has an opportunity to engage with diverse ethnic groups to showcase what the profession has to offer in Australian healthcare. It should not be left to happen by osmosis.

**What do you hope attendees take away from your presentations?**

Primarily, to have the belief in yourself to be the best possible professional medical radiation practitioner you can be. This leads to the best possible outcome for both patient needs and health service delivery demanded by Australian society.

**Additional comment**

The only thing that is constant, is change.
Artificial Intelligence in healthcare must focus on diversity and equity

Introduction by Croakey: A new Australian study has examined safety problems with health technology assisted by artificial intelligence (AI), raising concerns about what could happen if regulators, hospitals and patients “don’t take safety seriously in the rapidly evolving field”, according to a report in The Age.

The report came amid a number of keynote presentations and a plenary panel discussion on the opportunities and risks of AI in medical radiation sciences at the Australian Society of Medical Imaging and Radiation Therapy (ASMIRT) national conference.

While acknowledging major concerns about safety and patient-centred care, AI leaders told Croakey that a critical need is for AI in healthcare to prioritise equity and reflect diversity, and for AI to be led by health professionals.
Marie McInerney writes:

Scientists and healthcare professionals need to play a leading role in the design of artificial intelligence (AI) in healthcare, to make sure it is creating tools that are “ethical, empowering and that lessen inequities and disparities” across the globe, a national healthcare conference has been told.

Dr K Elizabeth Hawk, a nuclear medicine physician and neuroradiologist who is Interim Chief of Nuclear Medicine at University of California San Diego, told #ASMIRT2023 delegates that clinicians hold a special responsibility to take the lead on the design and advance of AI in healthcare and to ensure that diversity of the patient population and the health workforce is at its heart.

Hawk told the conference that AI applications have the potential to produce “more meaningful human interactions and to lessen healthcare inequity”.

However, she said, while it currently represents a powerful toolkit, “the transformative potential of AI is constrained by its design process”, which currently does not ensure that the voice and views of clinicians are heard “throughout the whole process”.

Physicians, scientists and healthcare providers need to make sure AI tools are designed in a way that “betters our art of medicine,” Hawk told Croakey during the conference, where she delivered a keynote address on ethical and healthcare equity aspects of AI in medical imaging and was part of plenary panel discussion on AI issues.

Al cannot be “left purely to the hands of a business world” that does not have a health lens and does not know the nuances of “the sacred patient-physician relationship or how the care that we deliver impacts patients’ lives”, she said.

Hawk told #ASMIRT2023 attendees that questions they and others in health need to consider about AI advances or proposal include:

Who designed the concept? Who is the concept designed for? Who is making the funding decisions? Who is at the problem-solving table? Who did the team seek for input? Who did the experimental design? What does the experimental patient population look like? Who is analysing the data and what are they looking for? Who is the product designed for? How is it going to integrate into workflow? And what does your regulator approver look like?
Diversity key to addressing inequity

Hawk said one the biggest challenges that AI needs to address is to ensure it reflects diversity, both in the patient community and in the health workforce.

Most global AI datasets, particularly in the United States, are created at large academic centres where the data is “very homogenous” and from a single patient population, she said.

“Creating a tool from a design process that fundamentally lacks diversity could ultimately result in an AI solution that deepens healthcare inequities in clinical practice,” Hawk warned.

She raised, as an example, AI in radiography and nuclear medicine that can help find a pulmonary micronodule in a lung CT that could be missed or misinterpreted by the human eye.

“When you take an algorithm and you train it on a large data set that’s very homogeneous, it’s going to perform very well with that type of data,” she said.

“But when you take that algorithm and you deploy it to an underserved area that has, for example, a lack of medical services or is rural or has a lot of underrepresented minorities, and you ask it to find the lung cancer or find the pulmonary nodules, then it underperforms because it’s not trained on that kind of data.”

The risks are that it either doesn’t find a nodule that’s there and needs treatment, or — often just as harmful — it finds something that it wrongly interprets as a micronodule, and patient may go on to have an unnecessary biopsy and possible complications.
“So you’ve basically created a tool that performs really well and finds cancer really well in one patient population, but it underperforms in an underrepresented minority population and that ultimately actually deepens healthcare inequities and disparities across the way we deliver healthcare,” she said.

AI also has to take into account diversity in the workforce or it can add to, rather than reduce, workplace pressures, inequity in employment, and burnout, she said.

A simple example is a dictation tool for patient records that may respond best to the sound of an English speaking male practitioner’s voice, or one without an accent.

But there are many other risks, from tools that may not be designed for someone who is working part-time, or don’t integrate with home/work systems, or may not apply to a regional setting.

“When you have tools that are designed by a single homogeneous group of people, and then they’re given, say, to a rural radiographer, or a female radiographer, and it underperforms for that person, then you are not levelling the playing field,” she said.

“You’re making it even worse, and you’re making it even harder for these people to excel in a profession that is already difficult for them to excel in.”

**Ethical challenges**

Hawk has collaborated in research and writing on AI with Geoff Currie, Professor in Nuclear Medicine at Charles Sturt University in Wagga Wagga and Professor Eric Rohren, nuclear medicine physician and radiologist at the Baylor College of Medicine in Texas, who were both also speakers at #ASMIRT2023.

They have written together on the ethical and legal challenges of AI in nuclear medicine, where they have urged beneficence, nonmaleficence, fairness and justice, safety, reliability, data security, privacy and confidentiality, mitigation of bias, transparency, explainability, and autonomy as critical features.
Artificial Intelligence in healthcare must focus on diversity and equity #ASMIRT2023

These standards have also been adopted by the European Association of Nuclear Medicine (EANM) in its position paper on the application of artificial intelligence in nuclear medicine. (See the table below).

| 1 | Beneficence, i.e. common good |
| 2 | Non-maleficence, i.e. do no harm |
| 3 | Fairness and justice, i.e. equal opportunity and access |
| 4 | Safety, i.e. for the patient |
| 5 | Reliability, i.e. accuracy and reproducibility in clinical practice |
| 6 | Security, i.e. for the data |
| 7 | Privacy and confidentiality of data |
| 8 | Mitigation of bias, i.e. fair and evidence-based clinical validation |
| 9 | Transparency and visibility, i.e. to the patients and community |
| 10 | Explainability and comprehensibility |
| 11 | Human values, human-in-the-loop process incorporated |
| 12 | Autonomy, judgement, and decision-making, human-in-the-loop process |
| 13 | Collaboration, i.e. interdisciplinaty involvement and commitment |
| 14 | Accountability, i.e. among stakeholders |
| 15 | Governance, i.e. framework to ensure compliance |
| 16 | Inclusiveness, i.e. empowerment of all stakeholders |

Hawk told the conference that the standards also inform a set of critical questions on new AI technology or devices for healthcare professionals to grapple with, such as:

- **Does this tool benefit all populations of patients equally?** Does it potentially harm some patients? Were unique perspectives considered? Does this tool harness the power of a diverse team? Does implementation of this tool result in increased risk of burnout? Does this tool impact our performance in a biased manner? Does this tool help to improve diversity in my field?

Adorning one of Hawk’s presentation slides is a drawing of “an old, tattered scroll”, the Hippocratic Oath, which she said can and needs to guide AI as much as it has the profession in every new technology.

The ethical challenge is “nothing new to us”, she said, noting that medical radiation sciences, as a subspecialty, “have been the leaders in adopting new technologies since its inception, and been challenged to find out how to apply it, to push our field further in such a way that it still maintains our Hippocratic Oath,” she said.
Caution

In March 2023 a group of global tech specialists including Apple co-founder Steve Wozniak called for a pause in an “out-of-control race” in advanced AI, warning about “profound risks to society and humanity”.

Artificial intelligence pioneer Geoffrey Hinton announced he had quit his role at Google, to be able to speak freely about the technology’s dangers, worried about AI’s capacity to create a world where people will “not be able to know what is true anymore”.

On a different front, The Age and The Sydney Morning Herald raised concerns about the safety of AI in healthcare that were outlined in an Australian review of 266 safety events involving AI-assisted technology reported to the United States Food and Drug Administration.

Researchers from Macquarie University’s Australian Institute of Health Innovation said their study, published in the Journal of the American Medical Informatics Association, highlighted the need for a whole-of-system approach to safe implementation with a special focus on how users interact with devices.

#ASMIRT2023 participants heard warnings from Dr Christina Malamateniou, Director of Postgraduate Radiography program at City University of London and chair of the AI Advisory Group for the Society and College of Radiographers, about the critical need to get the balance right with AI.
“AI is only as clever and equitable as the data we feed it with; because of the way it works, it has massive scalability and the potential to revolutionise medicine and radiography,” she told Croakey. “It can also create massive problems if we fail to use it right.”

See her co-authored article on ten priorities to be addressed to ensure AI benefits are maximised and risks mitigated in radiography.

However, Hawk counselled against fear about AI, quoting one of her idols, pioneering physicist Marie Curie, as saying: “Nothing in life is to be feared, it is only to be understood. Now is the time to understand more, so that we may fear less.”

“With AI, the cat is out of the bag, it’s already launched, it’s already an available tool,” Hawk said, adding that things are only scary when we don’t understand them, don’t have the ability to control them, or the perceived ability to be part of how they’re designed and implemented.

She said the Macquarie University study reinforces that “AI is far from perfect and it’s essential that healthcare providers not only understand this technology, but rise to become leaders”.

“We are the people who best understand the impact of an error on a patient and we must learn to safely implement and monitor this technology,” she said. “AI should never be left unchecked. Medicine should always, at its heart, be one person caring for another.”

What’s needed now in healthcare is to have conversations like those being had at #ASMIRT2023, to address the issues, “and then be part of designing tools that are ethical, empowering, and that lessen inequities and disparities across the globe”, she said.

Professor Geoff Currie told Croakey that AI was not responsible for the mistakes outlined in the article in the same way that a driver could not blame a GPS system if they were to drive into a lake that they could clearly see.

“AI suggesting a drug dose is a suggestion,” he said. “It is not prescribing the dose, nor insisting it be given. There is a human that makes a decision to follow the advice or not.”

“Almost every AI tragedy across the world is because a human has decided to rely on AI beyond the capability of that AI,” he said.

Echoing Hawk’s concerns on diversity, Currie said the real issue in healthcare is that AI “can be trained on biased data and cause harm without us knowing: redirecting resources away from those most in need, denying access to those most in need due to pathology or cultural bias etc”.

“That, and equitable access to the benefits AI might bring, are the bigger issues,” he said.
Artificial Intelligence in healthcare must focus on diversity and equity 

#ASMIRT2023

You can track Croakey's coverage of the conference here.

Alison Barrett
@AlisonSBBarrett

AI and new tech were reported as being some of the most exciting aspects of the future of MRS...but caution was also advised in getting the balance right between new tech and patient-centred care.

#ASMIRT2023

The benefits and power of working with AI for patient care. Artificial Intelligence is changing radiography: What should we do? Christina Malamatieniou #ASMIRT2023

AI can help cater patient care that meets the needs of the non-traditional patient. ie people who are not middle class, educated white men #ASMIRT2023

AI can be an invaluable tool in education. There is a rite of passage between FOMO and FOBR (fear of being replaced). It is our responsibility to put patients first and utilise the tools available to us. AI is here now. #ASMIRT2023
Artificial Intelligence in healthcare must focus on diversity and equity #ASMIRT2023
"So we have to be careful, follow robust governance & appropriate training for all to ensure safe and effective adoption.

AI will not replace people; those who know and learn about AI will replace those that don’t.

So AI education is key." @CMalamateniou #ASMIRT2023

Thank you so much for featuring our work and sharing the very important messaging around ethical challenges in AI adaptation #ASMIRT2023

Published on Wednesday, May 3, 2023
“Wars don’t stop cancer”: Australian health and medical sector urged to support Ukraine

Introduction by Croakey: A team of oncology practitioners from Ukraine, Australia, Canada and the United States has formed the Help Ukraine Group (HUG) to provide ongoing support to cancer care in Ukraine during the war with Russia and to help rebuild its health system afterwards.

The Australian Society of Medical Imaging and Radiation Therapy (ASMIRT) conference heard their passionate call for medical radiation science services, organisations and vendors to donate money, equipment and expertise, as Croakey editor Marie McInerney reports.

Marie McInerney writes:

One of the earliest Zoom calls that Sydney medical physicist Natalka Suchowerska had with cancer colleagues in Ukraine is still vivid in her mind.

As they spoke in the first weeks after the 2022 Russian invasion, the Ukrainian clinicians told her a tank was firing off a rise not far from their centre.
“They were saying that their walls were shaking and they could really feel the rumble every time the tank boomed,” remembered Suchowerska, an Associate Professor in the School of Physics at Sydney University, who until recently led medical physics research at the Chris O’Brien Lifehouse cancer centre.

Yet, she told Croakey, “they stayed calm and looked after their patients”.

It was one of many displays of courage and dedication she has witnessed during the war from Ukrainian health professionals — people she describes as “ethical and extremely self-sacrificing” and for whom she is appealing for help from Australian colleagues.

“War goes on but cancers don’t stop and you can’t say wait until the end of the war for us treat you,” she told the Australian Society of Medical Imaging and Radiation Therapy (ASMIRT) conference in Sydney that prompted ASMIRT to hold an impromptu board meeting that launched an appeal among members for funds, equipment and expertise.

Suchowerska said other nations had a lot to learn from Ukraine’s “heroic” health workers and how they have adapted and continued to care for the most vulnerable in society, including “people fighting the dual battle against cancer and invaders”.

She was joined on stage via Zoom by two of her Ukrainian HUG colleagues – radiotherapy technologist Bohdana Bachynska and medical physicist Dr Serhii Brovchuk, who described their efforts to continue treatment when patients were having to sleep in their clinics because their homes had been occupied, while others had fled to western Ukraine or beyond to Europe.

Bachynska told the conference she was one of three radiation therapists at her Kyiv clinic when the war began. Since then, one had joined the army and another was evacuated with her children to western Europe, leaving Bachynska to deliver treatment solo for months before she was joined by a colleague evacuated from besieged Mariupol.

“I think that brings it home to you,” Suchowerska told delegates, urging them to encourage their organisations, services, institutions and vendors to donate money, equipment, training and expertise to Ukrainian cancer care.
Desperate efforts

Suchowerska is of Ukrainian descent – her parents fled the country in World War Two. Fluent in Ukrainian, she is a founding member of the Help Ukraine Group (HUG), formed in early 2022 by oncology practitioners from Ukraine, Australia, Canada and the United States to support cancer centres in Ukraine through the war.

Its members hold fortnightly Zoom meetings, led by Associate Professor Nataliya Kovalchuk from Stanford University, to address clinical issues and provide ongoing education and training support in cancer treatments.

They discuss not only the urgent need now, amid massive dislocation of patients and staff, destruction of facilities, ageing equipment, and disrupted access to medications and care, but also plan for what happens after the war, whenever that comes, and the rising demand for cancer treatment that will follow.

Suchowerska told Croakey she had worked in the oncology profession for more than 40 years, and had “attracted big research grants, invented impressive stuff and mentored hundreds of professionals for Australia”.

But this work with HUG in Ukraine “is without doubt the most important thing I will do as a health professional and human being”, she said.

As well as providing clinical and training support, HUG members also try to get word out globally about the issues facing Ukraine’s cancer patients and specialists.

An article she and her colleagues published in the Advanced Radiation journal in July 2022 documented the desperate efforts by those working in Mariupol Oncological Dispensary to care for their patients as the eastern Ukrainian city was besieged.

It quotes Dr Andrii Hanych, chief of the Radiation Oncology Department, as saying eventually the clinic had to stop treating its patients, to save their fuel to melt snow for water, and use its generator for cooking and feeding patients and staff:

“To hide from the missiles, we decided to house our patients in the corridors and vault of the Co-60 (radiation therapy) machine,” he said.
One night, “as the fighting was approaching and becoming more intense”, Hanych asked the Ukrainian military to start evacuating their patients. A missile hit the facility two hours after the evacuation bus had left.

**Damage to infrastructure**

Suchowerska said that prior to Ukraine’s extended conflict with Russia it had 55 functional cancer care centres, 52 of which provided radiotherapy with 106 radiation treatment units, many of which still involved old Soviet technology.

When Russia annexed part of Ukraine in 2014, control of 10 radiotherapy centres with 17 external beam radiation therapy machines was lost, she said. Through 2022, arterial and aerial bombing of hospital sites affected electricity supply, internet connection and caused vibration and structural movement, all factors which significantly impact imaging and treatment delivery, she said.

Radiotherapy has suffered the most disruption, she said, reporting a decrease of close to 40 percent in treatment. While many cancer patients, particularly children, have been able to flee to safety in the West, that can bring its own longer-term risks, with delayed and disrupted care.

A **snapshot** by UK not-for profit E-Cancer cancer charity detailed the early impact on cancer care in the war, with less urgent procedures abandoned as surgical oncology teams focused on malignant tumours, while some advanced techniques, such as laparoscopic surgery, were constrained by shortages of surgical supplies.

Clinical trials had to be abandoned and people living with cancer were thrown into a state of great anxiety, separated from their clinical teams and even their medical records, it reported.
On top of that, the destruction of health facilities and capacity has been massive.

According to a February 2023 report in the BMJ, more than 700 attacks on hospitals, health workers, and other medical infrastructure in Ukraine had been reported in the year since the Russian invasion began.

“Over that period, there were 292 attacks that damaged or destroyed 218 hospitals and clinics, 181 attacks on other health infrastructure (such as pharmacies, blood centres, and dental clinics), and 65 attacks on ambulances. There were also 86 attacks on healthcare workers, with 62 killed and 52 injured,” it said.

It’s what’s called the ‘killing twice effect’, Suchowerska told #ASMIRT2023, a term given in disaster medicine to the increased deaths that follow the wreckage of healthcare services and loss of medical professionals.

Suchowerska and her HUG colleagues have written that Ukraine’s ability to reconstruct after the war will be affected for years, possibly decades, as a direct consequence of the abrupt interruption of education and livelihood of medical professionals, particularly those who are in training.

In response, it has set up training positions for Ukraine oncology professionals, usually female clinicians who are able to leave Ukraine to train overseas, because they are not required to fight. So far they have been placed in US facilities, including Stanford University, Harvard Medical School and the Mayo Clinic, with two in Australia with the ICON Group Cancer Centres.

Suchowerska is awaiting news on an application through the Department of Foreign Affairs and Trade to bring another six clinicians to Australia, where they will be supported to develop cancer treatment training programs for Ukraine.

But she is urging greater involvement from the Australian cancer care sector, saying it is well placed to play a significant role in education and training in radiation oncology, medical physics and radiation therapy, by offering remote courses and fellowships. As an example of what can be done, she said one Australian university is currently translating its radiation therapy course into Ukrainian.

The need to build up capacity for the future is clear from a paper published last year in JCO Global Oncology on armed conflict and the impact on patients with cancer in Ukraine that warned bluntly: “war breeds cancer”.

"Wars don’t stop cancer": Australian health and medical sector urged to support Ukraine

#ASMIRT2023
Its authors wrote:

“War increases the risk of cancer. War interrupts and prevents effective treatment for cancer. War exposes vulnerable patients with cancer to infections and threatening conditions. War diverts resources from cancer care. War leads to delays in diagnosis – as those involved seek shelter and safety, ignoring concerning signs and symptoms, and the very hospitals and clinics are overrun, damaged, or destroyed.”

Suchowerska has been buoyed by the response to her #ASMIRT2023 presentation. As well as ASMIRT’s appeal launch, universities have reached out to her, as have a number of clinicians wanting to go to Ukraine to assist with training.

But with the task ahead both acute and long-term, she is urging the wider sector to reflect on what being a health professional means and to think about the broader meaning of collegiality, the need to “make sure your team is okay”.

“At a time like this for Ukraine, we are their team.”

Watch this video by Stanford Medicine.
"Wars don’t stop cancer": Australian health and medical sector urged to support Ukraine

"Wars don’t stop cancer": Australian health and medical sector urged to support Ukraine

Via Twitter

Many thanks to Nataliia Suchowerska for organizing the session on Ukraine at #ASMIRT2023. Serhii Brovchuk and Bohdana Bachymska shared the challenges in radiation therapy during the full-scale Russian invasion.

Joshua Herden • 2nd Clinical Data Collection Systems Support Manager at Cancer Institute...

#ASMIRT2023 The affect of Ukraine War on Cancer patients treatments. Incredible address by Natalka Suchowerska and colleagues direct in Ukraine bringing awareness to challenges being faced by Ukraine. Wars don’t stop cancers! Inspirational health workers (Physicists, Radiation Therapist & Drs) keeping patients treatments going under such duress!! #inspirational #thankyou

Sobering words from Nataliia Suchowerska about the impact of war on radiation therapy services in the Ukraine. How can we support our colleagues in this situation? #ASMIRT2023 #SupportUkraine
"Wars don’t stop cancer": Australian health and medical sector urged to support Ukraine

#ASMIRT2023
Together, a team of oncology practitioners across US & Australia formed Help Ukraine Group (HUG) to connect with cancer providers in Ukraine to create a constant feedback loop on needs and support for Ukrainian cancer centres – Suchowerska

"Wars don't stop cancer": Australian health and medical sector urged to support Ukraine

Health workers in Ukraine are heroic. As tensions over the world escalate, we all have a lot to learn from Ukraine in how to adapt & continue caring for the most vulnerable in society – people fighting the dual battle against cancer and invaders – Suchowerska

As health professionals, we should hear the call to show leadership and support our fellow health professions in Ukraine, Suchowerska said.
Medical radiation sciences: addressing workforce pressures, cultural safety and quality of care

Introduction by Croakey: Workforce pressures amid a global shortage in medical radiation sciences were among big issues discussed at the Australian Society of Medical Imaging and Radiation Therapy (ASMIRT) conference in Sydney.

In the final #ASMIRT2023 article for Croakey’s Conference News Service, Marie McInerney reports on those concerns, amid reports that many people want to leave the profession, particularly in Victoria where pay rates are much lower than jurisdictions like Queensland.

This long-read also wraps a number of presentations, looking at the need for better care for autistic and older people, for remote cancer patients, and to recruit more Aboriginal and Torres Strait Islander people into the medical radiation sciences.

Marie McInerney writes:

Workforce shortages in the medical radiation sciences in Australia and globally have put the profession in a “state of stress” which risks further depleting numbers and is pitting jurisdictions against each other, clinical and union leaders in the sector have recently reported.

Delegates at the Australian Society of Medical Imaging and Radiation Therapy (ASMIRT) Conference heard that an existing global shortage of radiation therapists and nuclear medical technologists had been exacerbated by the COVID-19 pandemic, which brought additional stress and moral injury and disrupted student placements and capability.
The concerns have been underscored by a recent survey of 319 radiation therapists (RTs) in Victoria, where government wage ceilings have been particularly tough compared to other states and territories, only lifted last month to three percent from a 1.5 percent cap.

The survey, conducted by the Victorian Allied Health Professionals Association (VAHPA) and released to Croakey, revealed that more than 60 percent of the RTs surveyed wanted at least a 50 percent pay rise, and barely any (3.2 percent) felt their wages and entitlements reflected their roles and responsibilities compared to other health professions.

Worryingly, between 50 and 60 percent of 258 RTs reported having considered leaving the public healthcare sector, leaving the state to work elsewhere, and/or leaving the profession entirely.

"These are big numbers," said John Ryan, Assistant Secretary of the Victorian Allied Health Professionals Association (VAHPA). Victorian public sector employers and the State Government would have to act early to address the issue, he added.

"They can’t say ‘wait till the next EBA’ (enterprise bargaining agreement), which is not until 2026,” he told Croakey.

Ryan pointed to much higher levels of renumeration in other states, particularly in Queensland which announced further incentives for interstate and overseas medical practitioners to move there.

He said that a base grade radiation therapist in Queensland currently receives $145,130 a year (wages plus allowances) compared with $84,984 in Victoria, a difference of around $60,000. A similar difference applies to the earnings of the higher level charge radiation therapists in Queensland vs Victoria, he said.

"We’re seeing from the survey that people are thinking of getting out now," Ryan said of the Victorian sector, warning that the state will struggle to attract others from interstate and internationally to “fill the void”.

Among comments in the survey from respondents were concerns at the disparity in Victorian pay rates particularly with Queensland, saying it was unfair there was not a national rate.
“I know that the majority of long-term staff at my centre are considering leaving the profession. Myself included,” said one participant.

ASMIRT president Carolyn Heyes, who is a paediatric radiographer at The Royal Children’s Hospital in Melbourne, said she was “not at all” surprised by the survey results, characterising the medical radiation sciences in Australia as being “in a state of stress” due to continual shortages.

“People are stretched,” she said, talking about one major service, which she could not identify, that currently had 20 vacancies in a team of 60.

Shortages meant people were having to work to capacity at all time. “You don’t get any downtime, because patients don’t stop getting sick because you’ve got someone missing,” she told Croakey.

This also disrupts efforts to advance careers or skills, she said, including contributing to the need for more medical radiation sciences research, also a focus of the conference.

Heyes said ASMIRT has met with universities to try to boost graduate numbers, with numbers down last year to 647 from 1,100 ten years ago. The universities reported that courses were now fuller but are struggling to set up enough student placements, she said.

“If you’re 20 staff down, you don’t have the people to supervise (students),” she said. “It’s a vicious circle.”

The extent of that problem was highlighted in a presentation at the conference on the ongoing impact of COVID-19 on the clinical education of Australian medical radiation science students, which reported on a national survey last year of 55 clinical educators in medical imaging and radiation therapy.

The respondents reported that 65 percent of first year students and 61 percent of second year students had lost more than a quarter of their clinical placements during COVID. Nearly one in six educators (58 percent) reported that their students were “underprepared to enter the workforce”.
In an earlier article, Professor Geoff Currie, Professor in Nuclear Medicine at Charles Sturt University in Wagga Wagga, told Croakey there was also a “chronic shortage” of nuclear medicine technologists/scientists in Australia.

“We are graduating across the country less than half the number of students annually than required to fill job vacancies,” he said, adding there has been a push to bring people out of retirement or recruit internationally to fill local “voids”.

Global workforce issues

Dr Christina Malamateniou, Director of Postgraduate Radiography program at City, University of London, Chair of the AI Advisory Group, Society and College of Radiographers, told the conference that workforce issues were a major problem in Europe.

Describing medical radiation sciences as “the eyes of medicine”, she said it is a new profession with increasing complexity of patients and technology, where occupational burnout had been accentuated by COVID-19, leading to “moral injury” where practitioners were often forced to perform their roles in ways that were “against our nature and values”.

“We are seeing many people exiting the profession in Europe, seeing many bright minds leave, which is really a threat,” she told the conference. “There is low staff morale, low job satisfaction and this ultimately impacts on patient experience,” she said, also referring to it being “a vicious circle”.

Also during COVID-10, many radiography clinical researchers and academics chose to return to full-time clinical roles to support the frontline workforce, Malamateniou has written, with colleagues.

Many research projects were terminated due to COVID-19-related data collection or funding restrictions, they said, adding that the only type of research that was prioritised and funded during the peak of the pandemic was COVID-19 related.

“For the remainder of the projects, timelines were largely disrupted, the process of recruiting participants became more challenging and, in many cases, resulted in less representative samples,” they said, though adding researchers often found innovative and creative ways to continue their work.

See also this Twitter thread on workforce issues from the conference.
Building cultural safety

Researchers hope that early lessons from a mentoring project in New South Wales seeking to build greater numbers of Aboriginal and Torres Strait Islander nurses and midwives in a rural area will be taken up in other health regions and by other health disciplines, #ASMIRT2023 was told.

Angela Damm, a Ngunnawal woman and clinical nurse specialist at Murrumbidgee Local Health District (MLHD), and Dr Jessica Biles, a senior lecturer in nursing at Charles Sturt University, spoke to the conference about the Deadly Aboriginal and Torres Strait Islander Nursing and Midwifery Mentoring (DANMM) program. (Damm is the co-lead of the project and Biles is co-Chief Investigator).

They told the conference Aboriginal and Torres Strait Islander nurses and midwives were fundamental to providing culturally safe care but that nationally they make up only 2.1 percent of the nursing and midwifery workforce versus the target of 4.5 percent based on population parity.

The DANMM research cites several reasons why Aboriginal and Torres Strait Islander people don’t enter nursing and midwifery, including lack of cultural safety within tertiary education organisations and health services, limited access to tertiary education centres, conflicting obligations to family and community and financial barriers.

These systemic barriers then continue to manifest in the workplace leading to low retention rates, according to Damm and Biles.

They told the conference that the program showed that mentoring can be an avenue for providing appropriate clinical and cultural support and a safe space for Aboriginal and Torres Strait Islander nurses and midwives, and can also be a “catalyst for organisational cultural change”.

Damm said she would have benefited from such a program in her earlier days in nursing in response to racism in the workplace, “the elephant in the room”, where she would feel unsupported and not able to talk about the impact.

The DANMM pilot was founded on work by the Congress of Aboriginal and Torres Strait Islander Nurses and Midwives (CATSINaM) and has now evolved to an online program.
The research is premised on the **Ngaa-bi-nya evaluation framework** developed by Wiradjuri academic Professor Megan Williams, Damm told Croakey. Half of the research team identifies as Aboriginal and the project has already employed four Aboriginal nurses, she said.

Terms of Reference for the program were co-created with local Elders to ensure the research benefited both Aboriginal nurses and midwives within the MLHD footprint and community members more widely. Meetings were held at each key stage of the research, such as ethics approval and data analysis to ensure feedback from Elders could be applied.

Damm and Biles were invited to present at #ASMIRT2023 because Aboriginal and Torres Strait Islander people were also under-represented across all of the medical radiation science professions, conference convenor Johnathan Hewis told Croakey.

The mentoring project is a “novel workforce intervention that tries to address this critical issue” and was “potentially transferrable” to medical radiation sciences, he said.

Damm told Croakey that each discipline needs to consider its own unique needs, however she also believed some of the projects early lessons could apply more broadly.

Biles encouraged non-Indigenous health professionals, like herself, to “be brave”, to “sit in the discomfort” of exploring cultural safety, to investigate their own biases, and to “listen and learn”.

They have invited any services or professionals working in the Sydney, Western Sydney, Mid-North Coast, Western NSW and Murrumbidgee LHDs that want to be part of the project to email **NSWH-DANMMproject@health.nsw.gov.au** for further information.

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**When emergency responses fail**

The tragic death of a Melbourne woman who had an allergic reaction to the contrast dye used during a CT scan and died from multiple organ failure in May 2019 has raised big questions about healthcare operations that put “**profits over patients**”.

The coronial inquest into Peta Hickey’s death – its findings were delivered in November 2021 – will also have “profound ramifications for all medical radiation science practitioners”, particularly around radiographers’ scope of practice, former ASMIRT president Alan Malbon told the conference.

Malbon, formerly Chief Medical Imaging Technologist at St Vincent’s Hospital in Melbourne, is leading ASMIRT’s response to the coronial inquiry. It has formed a Working Group, which held its first meeting in February and will survey Australian/New Zealand medical radiation practitioners about their priorities (see slide below).

The Victorian Coroner found two main issues arose from Peta Hickey’s death: whether she should have undergone the scan at all and whether staff at the clinic she attended should have been able to better manage her anaphylactic reaction to prevent her death.

The case and inquiry raise scope of practice issues for radiographers, who are not permitted to administer or required to act under the direction of radiologists in the administering of scheduled medicines, Malbon told Croakey.
But what happens, he said, if a radiologist is not on site, or cannot/does not make that direction?

“In those times the radiographer needs to be ‘able’ to inject IM adrenaline,” Malbon said, noting that teachers are trained to do so for their students who experience reactions to nuts and egg compounds as an example, with training and administration of IM adrenaline done under strict educational departmental protocols.

“Teachers are not trained allied health practitioners, and the legislation in state and territory Scheduled Medicines Acts do not mention them as a specific group being able to perform this function. The key question then is why can’t radiographers do so?” Malbon said.

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**Trauma informed care critical, particularly for children**

The need for trauma informed care in radiography, particularly for at risk children – those who are being abused and those living in out-of-home care – was raised in a number of presentations.

Edel Doyle is a radiographer who is currently enrolled in a PhD at Monash University investigating if one low-dose CT can replace the Skeletal Survey X-ray series in the detection of non-accidental injury or suspected physical abuse in children.

Asked what led her to the research, Doyle told Croakey: “X-raying young children and feeling like I was adding to their trauma.”

Doyle said many children who need to be examined for abuse are under three years, so are not able to hold themselves in position for the 28 X-rays involved in detecting non-accidental injury.

“It might even be their abuser that we are asking to help hold them in position while we take the X-rays,” she said of the trauma involved.

“So if we can replace those 28 X-rays, which can take us 1-2 hours, with one CT scan that will take less than five minutes, it’s a lot less traumatic for the child.”

Doyle said having trained forensic radiographers is also important in relieving trauma for children in such circumstances, many of whom are being screened for legal rather than medical reasons.
They need to understand the law and where their images fit in the chain of evidence, “because the last thing we want is for our images to be inadmissible in court and the child gets put back into an unsafe environment”.

“But you also need to be a good paediatric radiographer, in order to get the child to cooperate as much as you can, so that it’s less stressful for them,” she said.

See this Twitter thread on Doyle’s presentation on non-accidental injuries and another that includes her work as the Disaster Victim Identification Coordinator for the Aust/NZ branch of International Association of Forensic Radiographers, as well as presentations on scope of practice issues for radiation therapists.

See also, via this Twitter thread, the work of Hunter New England Health radiographer Gary Denham on how modern neuroimaging is revealing the effects of childhood maltreatment, and his call, with wife Sharon Denham, a social worker, on the need for medical radiation practitioners to provide trauma-informed care to young people in out of home care.

**Many patients at greater risk**

Continuing a focus across the conference on patient centred care, the conference also heard calls for better experiences for patients who are elderly, particularly those with dementia, as well as for autistic people, those from CALD backgrounds, and for greater access to cancer care in remote areas.

Providing better care for older people in a rapidly ageing population, and particularly those with dementia, is a “huge challenge” for medical radiation science professionals, according to Dr Lucinda Morris, a consultant radiation oncologist at St George and The Sutherland Hospital in Sydney.

Morris, who is a Scientific Committee Member of the International Society of Geriatric Oncology (SIOG), told Croakey that older adults are a very diverse and growing patient group with unique needs and significant variability in terms of frailty, comorbidities, cognition, personal preferences and carer support.

Morris highlighted the unique needs for older patients with dementia in medical radiation environments, where the “unfamiliar, often loud, bustling radiation therapy or radiology department and multiple interactions with various staff can present a significant sensory challenge to a person with dementia, causing distress, disorientation, and delirium.”

She said it is the responsibility of the workforce to minimise these factors wherever practically possible, but there currently is very little training or education available. That makes for a real need, globally, to develop role-specific, tailored training for clinical medical radiation staff on caring for people with dementia.

Morris is also the founding Chair of Targeting Cancer, an internationally recognised public awareness campaign which aims to raise the profile of radiation therapy in the community and to increase patient access to radiation therapy globally. She addressed #ASMIRT2023 on leadership: see our Twitter thread which includes her address.
Professor Christina Malamateniou raised similar issues in radiotherapy for autistic people in a presentation on work that is pioneering an **autism-friendly MRI scan**.

She described her involvement in the work as “an act of peaceful, evidence-based activism”, to provide healthcare equity and inclusion for medical imaging and to help put an end to stigma for autistic people.

(See also this [Twitter thread](https://twitter.com) and watch [this video](https://www.youtube.com))

Freshta Mohammad, from the Peter MacCallum Cancer Centre in Melbourne, raised issues for people from culturally and linguistically diverse backgrounds in cancer care.

She highlighted the distressing case of a 57-year-old female refugee from Venezuela who was diagnosed with early-stage breast cancer in a refugee camp in the Dominican Republic but received no follow up “due to her refugee status and lack of health insurance” and then presented in Australia with a more advanced recurrence.
Language barriers meant she struggled with care, including a recommended skincare regime which resulted in her experience a severe skin reaction and difficulty maintaining treatment.

Mohammad said Peter Mac has sought to address language barriers as part of a study with Monash University to develop an instant translation device.

Where you live should not determine outcomes

In another presentation, Marissa Morey, from the Western Cancer Centre in the remote New South Wales town of Dubbo, on Wiradjuri country, told delegates that her workplace was “one of the most geographically isolated radiotherapy departments in the world”.

As a result, people in the health district, which covered 250,000 square kilometres, face greater challenges when it comes to their health, including with cancer care and particularly with access to highly focused radiation treatment.

Morey said that usually in Australia a radiation oncologist would be present during stereotactic ablative body radiotherapy and stereotactic radiosurgery treatments.

“Unfortunately, in regional Australia many facilities do not have the luxury of having an oncologist on site,” she said. That meant, for example, that a patient might have to drive eight hours to Sydney and be away from family and work for more than a week.

To overcome this, a relationship has been built with metropolitan radiation oncologists who visit Dubbo once a fortnight, but work via video with radiation therapists at the centre to provide treatments, meaning patients themselves do not have to leave family and other commitments to get treatment in the city.

She talked about what that meant for one patient who was the sole carer of his wife, who had advanced dementia. The town they lived in had no respite services she could use, “so travelling to Sydney was not an option”.

“Providing this alternative enables him and patients like him better access to health care without significant strain on his daily life,” she said. “Where you live should not determine the type of cancer care you receive or the expected outcomes.”
Medical radiation sciences: addressing workforce pressures, cultural safety and quality of care

You can track Croakey's coverage of the conference here.

Our approach

- Providing hypo-fractionated and short course treatment
- Improve access to specialised treatments
- Increase treatment compliance and completion
- Reduced time away from home, work and family

Thoughts from oncologist and therapist

- Worthwhile in improving local control and reducing morbidity
- Beneficial in regional area, no need to relocate
- Having access to that treatment locally is beneficial for patients with metastatic cancer
- Training staff in all areas of Radiation Therapy improves staff retention
- Hypo-fractionation has the potential to improve access for patients travelling long distances
- Staff in regional units need to be agile with strong QA pathways and protocols
- Many of our patients can travel several hours to see us so cutting treatment times down from 4 to 3.5 weeks can make treatment much more feasible
#ASMIRT2023 Twitter threads

See also these additional #ASMIRT2023 Twitter threads from Croakey’s Alison Barrett and Marie McInerney:

- Introductions and pre-conference workshops: [here](#)
- Opening plenary, with Welcome to Country and sessions on on patient-centred care and research: [here](#)
- Image interpretation, improving the patient experience, advancing RT practice, medical imaging education and advances in imaging: [here](#)
- Patient centred care, LGBTIQ2S+ patients and professionals: [here](#)
- Concurrent session on: radiography ‘commenting’, disaster identification, student papers: [here](#)
- Key takeaways, Day 1: [here](#)
- Sessions on advancing planar radiography and on nuclear medicine: [here](#)
- Treating cancer in Ukraine: [here](#)
- Diversity, equity, inclusion and women in leadership: [here](#)
- Evidence based research and practice: [here](#)
- Champions of change: person centred care: [here](#)
- Artificial intelligence: [here](#)

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More from Twitter

Over the next few days, we will be hearing and learning from professionals of all backgrounds working in medical imaging and radiation therapy, with a focus on the future of radiation sciences, Inc. patient-centered care, how to increase student numbers, inclusivity, and new tech.

Today is all about workshops! Including a radiography escape room, site visits, and other group activities. twitter.com/wepublishhealth...
You can track Croakey's coverage of the conference here.

Medical radiation sciences: addressing workforce pressures, cultural safety and quality of care

#ASMIRT2023

MRS is a new, caring and agile profession. We have improved patient outcomes, increased research capacity and outputs, increasing visibility, building evidence base #ASMIRT2023

We are also facing occupational burnout accentuated by increasing workload, staffing issues, and the pandemic. We have not been able to fulfil the requirements of our role in MRS. As a result, many bright minds are leaving the profession. #ASMIRT2023

If we want to expand our roles, it has to be underpinned by research and evaluation. Clinical and academic partners need to collaborate and inquire - what difference do we want to be making to our patients? #ASMIRT2023

JMRS Panel discussing how to find a mentor to help further your research. It can be hard! How do we open up collaboration and find people to match our passions. Research isn't a solo pursuit.

Adaptive RT is fast approaching and is very exciting - the role of the radiation therapist will only become more crucial.

We must to invest in staff wellbeing for better patient care. You can't have one without the other. #ASMIRT2023
You can track Croakey’s coverage of the conference here.

#ASMIRT2023 #Medical radiation sciences: addressing workforce pressures, cultural safety and quality of care

Our annual Brainlab Run and Yoga sessions this morning were the perfect way to start the day. While we are focusing on patient-centred care at #ASMIRT2023, it is also important to prioritise our own care and wellbeing as practitioners.

ShepMee

#ASMIRT2023 what an amazing time 🙌 Thanks @johnhewis 🙏
Highlights: hosting AI workshop @DanielSapkaros1 @kenton_thompson feat. @CMalamanieni @MikeVeles, presenting & supporting NSCC research, connecting with @AmandaBooldersto @hilderbillies @DungogGay the list goes on!

Chris Parsons

Great job @ASMIRTorg on organising an inspiring conference! It was an absolute privilege to present our research team’s findings with @ralslace & co-chair a session with @TomsteffTom, I truly enjoyed catching up with everyone, thank you for such a valuable experience! #ASMIRT2023

The ongoing impact of COVID-19 on the clinical education of Australian MRS students
You can track Croakey's coverage of the conference [here](#).

Medical radiation sciences: addressing workforce pressures, cultural safety and quality of care

#ASMIRT2023

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Twitter Analytics

As well as publishing the series of articles at Croakey.org, the #ASMIRT2023 coverage involved a sustained presence across social media platforms, especially Twitter.

See the full Tweetbinder report here.