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the magazine of the australasian sonographers association

soundeffects
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from the editor



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soundeffects news

Welcome to the December issue of your member magazine.

In this issue we provide a wrap up of the Special Interest Group Symposium held in Perth on 8–9 September, which also includes reports from the recipients of Rural and Remote Sonographer Support who attended the symposium.

For those looking ahead to 2019, we encourage you to consider submitting a conference abstract for ASA2019 Brisbane. Whether you're a first timer or experienced presenter, hopefully you will find our guidelines on page 10 helpful. You have until February to submit your abstract, giving you time to prepare following the Christmas rush!

Our *feature* article explores patient focus and shares insights from two sonographers and the difference you can make to a patient's experience.

We review the second pillar of the ASA *Strategic Intent 2018–2020* and in a follow-up to meeting the ASA team in our September issue, we meet the ASA Board in this issue. We also announce further inductees into the ASA Fellowship program.

Our *advocacy feature* looks at what is happening with sonographer regulation

and the ASA's ongoing process towards regulation.

In our *person profile*, the spotlight is on our 2018 Pru Pratten Sonographer of the Year. Anita Bowman talks about her commitment to volunteering and shares her passion for education and sonography.

Our *branch reports* for this issue are from your colleagues in regional areas. As always, a big shout out and thank you to all our branches and members who continuously support the ASA by volunteering their time to plan, organise and present at ASA educational activities each month, as well as those of you who attend these events.

wh&s matters explores sonographic stressors, potential issues and how to overcome them, whilst *research matters* looks at the question: you've got a research idea ... what next?

Don't forget we would love to hear from you to share your story. We're always interested in the journeys or pathways that sonography takes our members.

Happy scanning and reading and Merry Christmas!

Carol De La Haye, Editor
communications@sonographers.org

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EARLY BIRD REGISTRATION NOW OPEN

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 **ASA2019
BRISBANE**

THE 26TH ANNUAL CONFERENCE OF THE AUSTRALASIAN SONOGRAPHERS ASSOCIATION
Brisbane Convention & Exhibition Centre, 21–23 June 2019



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president's message



So much happens in the world of the ASA, in such a short time, it is difficult to keep up with the news.

SIGS2018 Perth was a huge success thanks to the dedicated convening committee, the team of generous and knowledgeable presenters and the ASA staff. I was fortunate to co-chair the first obstetric session with Glenda McLean and the room was full to bursting. The presenters were entertaining and engaging and I don't think anyone left the session not having learnt something. Throughout the two days, I popped in and out of various sessions and although my expertise is now primarily in the field of O&G, I felt the buzz from the delegates in both the MSK and for the first time, cardiac streams.

Spoiler alert, read more about SIGS2018 Perth from the CEO and the report from the recipients of the *Rural and Remote Sonographer Support* grant in this issue.

Workshops and branch meetings are going ahead at full steam. It is great to see case study evenings, as well as student and first presenter evenings across the branches. Branch meetings are the ideal place for student and first-time presenters to 'have a go' in a friendly and supportive environment. If you need points for the end of your

triennium, then look for educational events near you, and don't forget, if you present you earn extra points. **asawebinars** are also a great option for points if you are more isolated or have constraints on your time. Webinars are available in the ASA library for on-demand viewing and members can also earn points online through Intuto via the ASA website.

Your ASAR renewal is due in March 2019. Don't forget to renominate PD-**asa** as your default CPD management program and take advantage of this great member benefit and let PD-**asa** manage your points for you!

It is inevitable that the Australian people are heading for a federal election in 2019. The ASA is building relationships with the key health stakeholders in Canberra and in the various states and territories to advocate for sonographer registration and other important matters relating to the Medicare freeze and sonographer training positions.

How can you assist to raise the sonographer profile? Twitter and Instagram are great spaces, if you post, share, like, tweet and re-tweet comments by other sonographers; your friends and family will see the activity and if they also like and share, the word will spread. Try

this 'sonographers – are the experts in ultrasound'.

Recently I attended a social event with a few of my friends, and as many of them are sonographers, we were swapping 'injury stories'. It was a timely reminder to remember to look after your body and take breaks between scans, particularly long scans, and stretch, stretch, stretch!

As I finish the President's report and look ahead to 2019, our annual conference will be held in Brisbane on June 21–23. The call for abstracts is open and I encourage sonographers to consider submitting an abstract for a presentation or ePoster at the conference. This is a great opportunity to be an integral part of ASA2019 Brisbane and your involvement will further solidify the ASA as the peak body and leading voice for sonographers.

Have a Merry Christmas and a very Happy New Year.

Jennifer Alphonse
ASA President

Vale – Mr Terry DuBose

The ASA was saddened to hear of the passing of a great ultrasound educator, Terry DuBose. Terry was an ASA international keynote speaker and the Director of Diagnostic Medical Imaging at the University of Arkansas from 1996 until 2010.

Among his achievements, Terry was a pioneer in distinguishing a diagnostic sonographer from other professions and received the highest award of Distinguished Sonographer from the American Institute of Ultrasound in Medicine. Our thoughts are with Terry's family and colleagues.

It has been a year now since I first stepped into the CEO role and during that time I have seen so many volunteers dedicate their time to support their profession. This has been in the form of assisting to create amazing programs for our conference and symposium, to the presenters that speak at all our events, as well as our team of dedicated committee members. Thank you to all who have volunteered with the ASA over the past year and I hope you have all received your thank you card in the post. I look forward to seeing many new volunteer faces in 2019 after having expressed an interest in the recent volunteer drive.

The member survey has just closed. Thank you to all those who provided feedback on where you believe the ASA should be spending more or less of its time to support you. The ASA is for its members and your voices will be heard as the results are factored into the strategic planning board meeting held in February where they are used to direct the ASA in a way that truly benefits its members.

It has become very clear by listening to our members that the major challenges and issues facing sonographers are around raising the sonographer profile and gaining more recognition and I hope you all celebrated the Australasian

Sonographers Day on October 27 – a day for you to feel proud and to let others know of the important work you do as experts in ultrasound.

Many members have raised sonographer regulation as a very important next step for our profession, one that will help us achieve more recognition, especially within the healthcare industry. I encourage you to read the piece on sonographer regulation to gain an insight into what this may look like, what it means for you, and what the ASA is currently doing to achieve this goal.

The ASA2019 Brisbane conference early bird has opened – we have another wonderful program being created for you. The conference next year will be held 21–23 June and for those in the southern states – think about coming to Brisbane to thaw out and listen to some amazing speakers and socialise with your peers. This year we have introduced a dedicated student and clinical supervisor stream on Friday, and based on your feedback to have more workshops, we have introduced six workshop rooms on the Saturday.

Last issue, I outlined the first goal of the ASA's strategic intent and in this issue, I delve into the second goal of enhancing the quality and standards of ultrasound, which is important for sonography's professional standing.



In today's world there is so much information it is hard to keep up with everything that is going on, especially when you are time poor. Coming to your inbox in January for you to read whilst on holidays is a new initiative by the ASA called *Making Waves*. This will provide you with reviews of the latest research that has been appraised and summarised by our industry experts from our Special Interest Groups to highlight to you their clinical implications.

As 2018 closes and we look forward to 2019, I am excited to see where the sonography profession and the ASA can head and what we can achieve in the coming year, especially with respect to getting the message that sonographers are recognised as the experts in ultrasound across governments, the healthcare industry and the general public.

Wishing you all a safe festive season and a wonderful 2019.

Jodie Long
CEO@sonographers.org

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What is happening with sonographer regulation?

ASA members are telling us at every opportunity that advocating for professional regulation in Australia is a very important next step for our profession, one which will help us achieve more professional recognition, especially within the healthcare industry. Aren't sonographers already registered in Australia? What is 'professional regulation'? and is it really that important?

Aren't sonographers already registered in Australia?

Most sonographers practising in Australia will be recognised as Accredited Medical Sonographers through the Australian Sonographer Accreditation Registry (ASAR). If sonographers want to provide Medicare funded ultrasound services they need to be accredited with ASAR.

Accreditation with ASAR is basically a form of certification to practise. To be recorded on the ASAR register a sonographer needs to complete an accredited educational course and pay an annual fee, whilst maintaining continuing professional development requirements. However not all Australian sonographers provide services under Medicare, and where they don't there is no national requirement for them to be accredited by ASAR.

The reason this is not regulation is that the ASAR has no way of enforcing sonographers to uphold a minimum level of conduct or professional standards, they have no complaints handling processes, and they have no powers to restrict or suspend a sonographer's

James Brooks-Dowsett
ASA Policy and Advocacy Advisor

Comparing responsibilities	NZ	AU	
	MRTB	ASAR*	MRPBA^
Scope of practice/Competency standards	✓	✓	✓
Code of ethics/Professional conduct	✓	✗	✓
Complaints process	✓	✗	✓
Powers for profession sanctions or negative licensing	✓	✗	✓
Practitioner certification requirements	✓	✓	✓
Course accreditation	✓	✓	✓
Mandatory declarations	✓	✗	✓
Recency and resumption of practice process	✓	✓	✓
Continuing professional development requirements (60 points across three years)	✓	✓	✓
Professional indemnity insurance requirement	✓	✗	✓
Protected professional title	✓	✗	✓

*only applies to sonographers providing Medicare funded services
^ for all AU diagnostic imaging allied health professions except sonographers

practice if they are found to be professionally negligent or convicted of a serious crime.

In Australia, the most recognised system of regulation for the health professions is the National Registration and Accreditation Scheme (NRAS). This was implemented in 2010 to protect the public by having nationally consistent regulated systems, such as professional standards and complaints handling. The NRAS is governed by the Australian Health Practitioner Regulation Agency (AHPRA), which oversees 15 boards that regulate a range of health professions, such as physiotherapists and radiographers.

For example, almost all diagnostic imaging allied health professions are regulated under the NRAS by the Medical Radiation Practice Board of Australia (MRPBA). Unfortunately sonography is not included.

In New Zealand, the Medical Radiation Technologists Board (MRTB) is responsible for the regulation of sonography and other diagnostic imaging allied health professions. The New Zealand MRTB has very similar powers and responsibilities as the Australian MRPBA. The main difference between the two is that all New Zealand diagnostic imaging allied health professions, including sonographers, are regulated by the MRTB. The table above shows key similarities and differences in the regulatory responsibilities between the MRTB, ASAR and the MRPBA.

As can be seen from this table, there are glaring differences between ASAR and the MRTB/MRPBA. Significantly, almost all of the responsibilities not held by ASAR relate to quality controls specifically aimed at assuring patient safety, such as a protected professional title giving the profession exclusive

rights to use the title and perform certain roles under that title and protects the public from harm that could be caused by people practising a profession or role when they are not qualified. It is assurance that anyone using the title or performing the roles will be appropriately trained and up to date so that quality is assured.

In 2015, Australian health ministers agreed to implement the *National Code of Conduct for health care workers* (the National Code) to apply to all healthcare professions not regulated under the National Registration and Accreditation Scheme (NRAS). The intent is that the National Code would provide mechanisms to protect patients receiving health services from professions not regulated under the NRAS, such as dietitians and massage therapists.

Unfortunately this additional layer of 'red tape' only serves to compound the confusing and varied arrangements in place for handling complaints against sonographers. Especially if the sonographer also maintains registration in a profession under the NRAS, such as a radiographer, nurse or physiotherapist. This confusion has resulted in some cases where a complaint made against a sonographer has taken over a year to be resolved, which is a poor outcome for the patient and very stressful for the sonographer.

Why professional regulation

The value of sonography being a defined profession under the NRAS includes:

- improved patient safety, including simplified complaints handling/ resolution processes (consumer and professional) that are nationally consistent and better suited to the professional sonography context

- alignment, transparency and consistency of governance functions for the profession (e.g. course accreditation, assessment of overseas-trained professionals)
- national agreement on the role and scope of practice of a sonographer, which would facilitate discussions for consistent awards across states and territories (and other industrial relations discussions) and support workforce movement
- clearer professional pathways for sonographers, including workplace and formal further education options. This is particularly relevant for advanced practice and allows options for expanded scope of practice to be explored for sonographers in Australia
- protection of the professional title of sonographer in legislation, safeguarding it from being used by people without adequate training.

Is it really that difficult/why is it taking so long?

Adding a new profession to the NRAS is a lengthy and difficult process because it involves getting the agreement of all Australian governments to change their respective state, territory or federal law, referred to collectively as the Health Practitioner Regulation National Law (the National Law).

This National Law enacts the regulation of health professions under the National Registration and Accreditation Scheme (NRAS) because each health profession is named in the National Law. Changes to the National Law, including the addition of new professions, such as sonography to the NRAS, requires consensus agreement of all national and state and territory health ministers. This must occur through the COAG Health Council.

Therefore we need to gain government minister support for sonographers to be regulated through the NRAS, following which the work to scope and draft new legislation can begin.

What is the ASA doing?

The ASA has been working with ASUM and other industry stakeholders for over a year now to build the evidence and support for a case to the governments of Australia for the national regulation of sonographers.

We have documented full industry support for this, including from RANZCR, ASAR and ASMIRT.

In September 2018 the Australian Government finally released specific guidance on how professions should apply to be included under the NRAS. We have now established a working group of representatives from ASA, ASUM, ASAR and the profession to develop this application to government.

To complement this work, the ASA has been meeting with key representatives of government health departments to seek their support and their guidance on what we need to do to have the best chance of success in this work. The answer has resoundingly been that we need the support of state and federal health ministers.

In response to this the ASA has engaged political lobbyists for the next 12 months to assist the ASA with this. With multiple state and federal elections, we expect this to significantly enhance this work.

The ASA remains determined to achieve progress towards the regulation of Australian sonographers under National Law, supporting Australian sonographers to achieve more professional recognition as the experts in ultrasound.

meet the asa board

The ASA Board has a vital role to play by setting the objectives and overall direction of the ASA, guiding the organisation through its vision and purpose.

The ASA's Board of Directors consists of seven member directors who are accredited sonographers and elected by ASA ordinary members, as well as three non-executive directors with complementary skill sets who are appointed by the Board through an interview process. All ASA Board directors are volunteers and this is a major difference between our directors and directors of corporate or commercial boards. However there is no difference between not-for-profit board directors, such as the ASA's and corporate directors, in their responsibilities or liabilities as a director.

The Board of Directors appoints the President and Vice-President and is responsible for governance, essentially

ensuring that all accountability safeguards are in place. It is the Board that is ultimately responsible for the organisation and its activities and these include employing the CEO, adhering to the relevant government legislation, overseeing the management and reporting of the organisation's finances, and being accountable and reporting to its members.

Dr Jennifer Alphonse PhD

GradDipAppSc Medical Ultrasonography, BAppSc (Medical Radiation Science) Nuclear Medicine, AssocDip Nuclear Medicine Technology

Jennifer has been a member of the ASA Board of Directors since 2015 and has been the President since February 2017.

Special responsibilities President, Finance and Risk Committee, Governance Committee, Diagnostic Imaging Advisory Committee, Peak Imaging Coalition

2018 Highlight The last year has been a fusion of growth and milestones. The 25th anniversary of the ASA culminated in a most memorable annual conference in Sydney. In accordance with the constitution, the ASA appointed its third external director, bringing further diversity and skills to the ASA Board. The Strategic Intent was reviewed to support the purpose and vision of the ASA and a new CEO was appointed with experience, passion and leadership to continue to guide the ASA into the next chapter.

Erika Cavanagh

M Medical Sonography, GradDipAppSc Medical Ultrasound, GradCert Health Professional Education, BAppSc Medical Radiation Technology (Medical Imaging Technology)

Special responsibilities Vice President, Sonographer Policy and Advisory Committee (SPAC), ASAR SAC, NTUEMP

2018 Highlight The successful recruitment of a permanent CEO. The Board/CEO relationship is of vital importance in the smooth running of the organisation, and it is flourishing! Our new CEO has taken on the role with gusto, and has already shown great leadership, enthusiasm and initiative in her short time in the role. The ASA is in very capable hands.

Sarah Colley

Dip Medical Sonography, Cert Nuclear Medicine

Special responsibilities Finance and Risk Committee

2018 Highlight The highlight for me was the ASA2018 Sydney Conference: world-class education offered by a wide range of local and international speakers, and what a social buzz catching up with so many friends and colleagues. Fantastic effort by the organising committee and ASA staff to make this such a successful 25th!

Michele Dowling

GradDipAppSc Medical Ultrasound, BAppSc Diagnostic Radiography, Dip Radiography, Therapy

Special responsibilities Governance Committee, Sonographer Policy and Advisory Committee (SPAC)

2018 Highlight The breadth and scope of high quality education opportunities offered by the ASA for their members is truly impressive. Ranging from online webinars, branch meetings, travelling workshops, special interest groups and the annual conference, there is something for everyone at every level of experience. As sonographers, we should never stop learning, and the ASA provides the means to pass important knowledge on to others in the profession.

Kelly Griffiths

Australian legal practitioner, LLB Hons, BA, GradDip Intellectual Property Laws

Special responsibilities Governance Committee

2018 Highlight I joined the ASA Board this year. I have been impressed by the focus, commitment and collegiality of my fellow members of the Board and the executive. There is strong rapport and respect between the Board and the executive with a real focus on delivering outcomes for members. I look forward to continuing to work with this dedicated team.

Stephen Mackintosh

BAppSc (Medical Radiations), Dip Medical Ultrasound, PG Dip HlthSc (MRI), PG Cert HlthSc (Clinical Research)

Special responsibilities Finance and Risk Committee

2018 Highlight For me, the 25th anniversary celebrations in Sydney were a highlight. Hearing from people involved in the founding of the ASA clearly demonstrated how far we have come. We can all be grateful to those early members and volunteers for their vision. A low light of the year was Lars Schiphorst stepping down from the Board. As our first external director he provided invaluable value to the Board. Fortunately we have recruited two external directors from a number of suitable candidates. Kelly and Julie have a wealth of experience and diverse set of skills that are already contributing to the advancement of the ASA.

Silvano Paladino

BSc (Med Sc), Dip Mgt, MHlthMgt, Fellowship of the Australian Society for Microbiology, Fellowship of the Faculty of Science (Royal College of Pathologists of Australasia) GAICD

Special responsibilities Finance and Risk Committee – Chair

2018 Highlight The highlight for me has been the leadership and enthusiasm shown by all within the ASA to work together so that we are now in a great position to enhance and grow the association to achieve our strategic goals for the profession.

meet the asa board

Ian Schroen

BAppSc (Medical Radiations), Dip Vascular Ultrasound, M Medical Ultrasound

Special responsibilities Sonographer Policy and Advisory Committee (SPAC)

2018 Highlight The ASA's comprehensive activities for advocacy across many avenues have been outstanding. With the important stakeholder engagement by our President and CEO, along with many wide-ranging submissions by our Policy Officer, the role of sonographers continues to be validated, as is the tireless pursuit of sonographer registration. Tremendous work by the entire organisation.

Julie Toop

LLB, GradDip Notarial Studies

Special responsibilities Finance and Risk Committee

2018 Highlight I took up my Board role with the ASA only recently, and have been impressed by the Board's focus on what is important to the profession and the ASA's members, particularly the quest for sonographer registration. Having been through a myriad of 'inductions' in my career, I was also impressed by my induction briefing and the comprehensive set of documents provided by Carolyn Todhunter – it really assisted me in preparing for my first Board meeting.

Anthony Wald

B Tech Cardiac, GradDip Management

2018 Highlight I have been amazed at how much effort goes into running this organisation. The number of volunteer hours that are put in by the various organising committees and local branches is phenomenal – something every member of ASA should be aware of. I hope it will act as a stimulus to the new generation of ASA members to get involved and move our organisation to the next level.



From left: Anthony Wald, Sarah Colley, Michele Dowling, Stephen Mackintosh, Jennifer Alphonse, Erika Cavanagh, Ian Schroen, Kelly Griffiths, Silvano Paladino and Julie Toop

Submitting a conference abstract for ASA2019 Brisbane

Glenda McLean, FASA

Think submitting a conference abstract is daunting? It's not!

Submitting an abstract for presentation at the annual conference is a great opportunity to share your clinical experience, knowledge or research with your peers. At ASA conferences, accepted abstracts may be presented in the form of oral presentations or ePosters.

International and local keynote speakers will be invited to attend the conference by the ASA's Education Advisory Committee (EAC). As well as having invited speakers, there is opportunity for anyone to submit an abstract for presentation.

You may have heard the term 'to proffer a paper'. 'Proffering' is the term used when someone puts forward something for acceptance. In the case of a conference, it means that people are putting forward their presentation: perhaps an original research project, evidence-based case study, new or improved clinical technique, education overview or a presentation on sonographer health and wellbeing, for inclusion in the program. A *call for abstracts* is announced, generally about six months prior to the conference, and people can proffer the abstract for their proposed presentation. Proffered presentations can be either in the format of an oral presentation or an ePoster. You should indicate which format you would prefer, although the committee may ask you to present in the other format depending on how your presentation fits into the program. The deadline for all abstract submissions will be advertised (around February in the year of the conference) with all abstracts assessed by at least two peer reviewers.

If you're considering submitting an abstract, it must be less than 250 words and should be structured into the following sections:

- Introduction
- Methods
- Results
- Conclusion
- Take home message

Program committees will aim to place all proffered oral presentations within themed sessions. Your work will therefore be presented to an audience of delegates interested in your topic and alongside some of Australasia's ultrasound experts. Sometimes it is necessary to have a session which is solely proffered presentations and these sessions will include a variety of topics.

Invited speakers are also asked to provide an abstract or synopsis of their presentation. A synopsis is up to 250 words and is an unstructured summary of a presentation. All abstracts and synopses will be published in the ASA's journal *Sonography* in the conference Supplement booklet. This special issue of the journal will also be available online through the *Sonography* web page on the Wiley Online Library.

Abstract template

Title: The abstract title should be in initial capital/lower case (i.e. sentence case) and not all leading capitals e.g. *Endometriosis in routine pelvic scans* NOT *Endometriosis in Routine Pelvic Scans*.

Authors: Authors' names should be supplied in the surname-last format and should be in initial capital/lower case – not all capitals (e.g. G McLean).

Institutional affiliations should be indicated with superscript numbers following the author name (e.g. G McLean¹).

Affiliation: All affiliations should contain institution, city and country (e.g. Hospital, Melbourne, Australia).

Tables: Tables can be included with abstracts and must be cited in the abstract text in numerical order (e.g. Table 1, etc.).

Figures: Figures can be included with abstracts and must be cited in numerical order in the text of the abstract (e.g. Figure 1, etc.).

References: References should not be included.

Proffered presentation abstracts must be submitted using the conference website and the supplied template. If your proffered presentation is accepted, you will be required to register for the conference, and will be provided a 20% discount on your registration. All of your other costs will be your responsibility (accommodation, travel, etc.). You may proffer more than one presentation (no further discount) and invited speakers may also choose to proffer a presentation in addition to their invited presentations.

Prizes

Prizes are awarded through adjudication of the proffered presentations at the conference. The \$500 prizes are kindly donated by our sponsors.

Four cash prizes will be awarded:

- Best oral presentation
- Best ePoster presentation
- Best first-time presentation
- Best research presentation

A Best Overall presentation trophy is also awarded. This will be decided from the four winning presentations.

The ASA encourages all sonographers to get involved by presenting at conferences. There is plenty of information available to assist you in submitting an abstract as well as presenting an ePoster or oral presentation. Visit www.sonographersconference.com or the *Resources* tab on the ASA website for more detail. If you are interested in presenting, and would like some support putting your abstract and presentation together, the ASA can put you in touch with a mentor to guide you through the process.

Catrina Panuccio, Graduate Diploma of Medical Sonography graduate and Managing Director at Specialist Imaging Partners.

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Going the extra wavelength

Self-reflection has become quite a buzzword over the last few years. We are asked in our workplace assessments to reflect on how we are going in our job; we are even asked to reflect on how we are doing as a parent or spouse.

Self-reflection can be quite confronting. 'Looking into a mirror' and asking yourself what you did well is easy, but recognising what you did not do well and highlighting what needs improvement is confronting and requires a level of emotional maturity. I recently had an interaction with a patient after which I did some self-reflection and was quite surprised by what I saw in the mirror; while it was in the context of doing an echo, it was more about being a person and putting my issues aside to help a patient.

My day started off as usual: navigated the school drop-off traffic into work, managed to find a great parking spot and missed the threatening rain clouds on the walk into the office. The imaging fellows were in their office having a chat about an effusion needing to be drained in CCU, but the ward team had not rounded yet. The overnight echo that was performed by the registrar showed the effusion, but was missing some info. I offered to go up to CCU and speak to the registrar to get a feel for what was going to happen and how it was going to impact the day's in-patient list.

The registrar showed me the images from 2.00 am and indeed it showed a large effusion with some 2D signs of RV and RA collapse. The big issue was the patient; we can call them H. H was threatening self-discharge and refusing a tap. It was evident there were significant social and health issues at play – from a rural town, young, IVDU and very angry at life.

I am not proud to admit this, but in the spirit of open reflection, my immediate thought was 'Great! ... another IVDU that we are going to throw huge resources at with no real good outcome. Just let H self-discharge.' I have found that as I have become 'older' in the workplace, I have become more cynical and a bit jaded. Some would argue I have become more of a realist; I would still say it is cynical and jaded.

H reluctantly consented to a full echo, so I grabbed a machine and entered the room, not before the nurse rolled her eyes at me saying, 'Good luck ...'

**Anthony Wald,
Sonographer & ASA Board Director**

I introduced myself as I would to any other patient and explained what I was going to do. I did not even get time to finish my script, and the F-bomb started to fly from the patient. I bit my tongue and just focused on getting the scan done as quickly as possible so that I could get out of this room.

I managed to position H for the scan and asked them to remain quiet, so I could concentrate and get the best images for their treatment. At least it stopped the F-bombs. About halfway through I noticed H looking at the monitor. I asked if H would like to know what I had found; I highlighted the heart and the large effusion and explained why this might be contributing to them not feeling well. This harsh and angry patient broke down and began to cry. 'No one would believe me that I was feeling sick. My GP laughed at me. No one believed me ...'

H was a scared and vulnerable person. I cannot comment on how the other health carers before me interacted with H, but I got the impression this was the first time someone had taken a moment to show H the issues. H continued to open up, shipped to the big smoke in the middle of the night, no change of clothes, no toothbrush – and no support mechanisms. We the healthcare workers needed to step up our game. No one recognised these issues – to us H was just a rude IVDU that was going to make our day difficult.

It was at that moment I had the 'look in the mirror' moment ... I told H that all the staff were there to help them get better. I would do everything in my power to make sure the medical and nursing team understand what H feels at that moment. However, in return the F-bombs needed to stop, and cooperation needs to start happening, and H has to work as hard as me to get better, as I will make sure H receives the fairest treatment. A pinky promise was even made!

Once the echo was finished, I found the NUM and H's nurse and told them both about the deal we had struck. I then went to see the ward team and informed them. While there was still some scepticism about H's future behaviour, there was a palpable change in the team's demeanour towards H. I was present when the tap was performed and H's conduct was exemplary.

I made a point of going to visit H twice a day, took the time to check with the nursing staff about their behaviour and asked H if there were issues. There was an occasion where H acted-up but let's get real – every patient has a moment when in hospital.

minor, others may be severe, but until we look into the mirror of reflection and challenge our prejudices, we cannot change them.

The point of this essay is not to punt on how I managed to calm an angry patient down, but more about how reflection led me to change my almost conscious but non-verbalised bias against this patient. Unfortunately we all have biases. Some may be

You may think that your ultrasound related interactions with patients have no significant impact on the outcomes of their course, but after this week, I have realised that by going the extra wavelength, I had a positive effect on H's stay at our hospital.

interesting cases

Do you have an interesting case that could be published in *soundeffects news*?

Have you scanned a patient with a rare pathology? Or perhaps you just managed to get images that you think ASA members would appreciate.

An Interesting Case in *soundeffects news* requires 1 or 2 images and a few sentences of text outlining the patient's presentation and the pathology demonstrated. You can also add some tips for scanning the region/condition. Send your case in to editor@sonographers.org

If you would like to write up your case report for publication in the *Sonography* journal, the author guidelines are as follows:

A case report of a single case may be an unusual presentation of a common condition or a rarely seen condition. The report should have an educational outcome for the reader. The case report should be structured into headed sections as follows: Introduction, Case description, Discussion and Conclusion. The report requires five elements: a statement of why the case is worth reading about; an account of the case, with all

relevant data; discussion of evidence that the case is unique or unexpected; possible alternative explanations for case features; conclusions with implications. The report should be 1000–2000 words and include 6–10 figures and up to 30 references.

A case series describes a number of cases where, retrospectively, an observation is made and commented on.

Please also check the submission instructions on the *Sonography* webpage, www.onlinelibrary.wiley.com/page/journal/120546750/homepage/forauthors.html.



FB in the GI tract, by Lino Piotto



Posterior retinopathy of the eye, by Lino Piotto



Ovary in canal of Nuck, by Allison Holley

A passion for patients

When Kathleen Biniakos embarked on a degree in nuclear medicine at the University of Sydney, little did she realise she would end up working in a completely different modality.

'I discovered sonography as a nuclear medicine student. One of the electives we had was ultrasound, and I knew immediately that it was the modality for me. Once I graduated, it wasn't until about seven years into my career that I was given the opportunity to study ultrasound.'

Kathleen now works as the chief technologist at I-MED's busy Woy Woy clinic. What she likes best about the job is the daily interaction she has with patients.

'It's really the only modality where you have a prolonged patient interaction, you get to meet them and they all have different uniqueness and stories to tell. Having rapport with the patient, and finding out their story in their own words, can help you as a sonographer. It's amazing seeing how your efforts and your skills can directly help a person.'

Coping with the demands of the job

Sonography is a demanding job, Kathleen concedes.

'You're faced with some life-changing outcomes for your patients, for example, miscarriages or cancer; it can be quite confronting and extremely emotional. You have to maintain that professionalism with patients, whilst dealing with those emotional situations ... it can be quite taxing.'

Dealing with patients all day long also means you have to be flexible, says Kathleen. 'Each day is so different; you never know who's going to walk through the door. You'll have patients who are handicapped or disabled – it will change the protocol and the way you handle the situation. It can be challenging to provide that care for every patient.'

Working with a supportive team

A typical day in Kathleen's busy practice involves not only a full list of booked-in patients, but also fitting in the urgent scan requests that come in; helping students who come in for training; answering questions from administration staff; and

Alexandra Arter
I-MED Radiology, NSW

sorting out work, health and safety issues at the clinic. She says the camaraderie at the practice is vital in coping with the stress.

'What's great about our clinic is the phrase "Are you ok?" Being a sonographer is quite a solitary job, and sometimes it can be quite overwhelming – you might have very complex studies, or difficulties with patients. Here, we function as a team. We always check in with one another throughout the day, because you never know what someone else is dealing with. That's one of the reasons why I love working here.'

Career progression

The support of her employers has been a big help to Kathleen in her career.

'I started working at I-MED two years ago, and my manager has been super-supportive and encouraging from day one. Whether you want to progress your career to follow a managerial path, upskill your lists as a sonographer, or venture into a different modality – I-MED sees you as an individual and tries to help you along that path.'

Completing the Advanced Program within I-MED has given Kathleen an insight into parts of the radiology business most sonographers would not know about.

'You learn how I-MED works as a business – it's not really a generalised course – it's specific to the business – it pushes you out of your comfort zone. It helps you develop people management skills, commercial management skills, financial and business acumen. And at the end of the course you're given the opportunity to present a project that could be implemented into the business – in front of the I-MED executive team.'

Sonography and the general public

Kathleen is supportive of the efforts of the ASA to raise the profile of the sonographer's role. 'I think a lot of people don't appreciate the amount of work and knowledge that goes into becoming a sonographer. We answer questions for patients, you know, whether it's a boy or a girl, but I don't think it's appreciated that it's an entire medical procedure that needs to be done. And the biggest thing with sonography over other modalities is that we can evaluate areas of the body dynamically.

So if someone has pain doing a certain motion then we can actually look at those areas whilst they're in motion, which is quite unique and I don't think a lot of people realise that.'

Future developments in sonography

Keeping up with developments in imaging is a priority for Kathleen.

'Ultrasound changes rapidly – the detail and the pathology that we can see now, as opposed to even five years ago, has dramatically improved. Keeping up to date involves constant education and revision, attending education events, ASA conferences, seminars, and reading articles.

'For the future, I think there are two emerging technologies that will become more popular. One is 3D/4D imaging, which allows complex procedures, like vertical tarp, to be carried out with a more cost-effective modality. The other is elastography – using external stimuli to see the mechanical properties of the tissue. It's a non-invasive, cost-effective and reliable procedure.'

Be patient

When asked what advice she gives to young sonographers, Kathleen sums it up in one word: patience.

'As a young sonographer you really want to try and learn everything at once, and that thirst for knowledge will make you a great sonographer. But there's a lot to learn, and you'll always see new things that you've never seen no matter how long you've been scanning. So it's quite important to have patience with yourself, and also patience with your patients. A lot of patients



Kathleen in the clinic

are worried about their results and they handle their emotions differently. Some are angry, and others are silent, but being able to understand that people are emotional and that their behaviour is driven mostly by fear ... having compassion for your patients is absolutely crucial to being successful as a sonographer.'

Kathleen Biniakos is a sonographer with I-MED Radiology Network, and spoke to Alexandra Arter about her passion for patients.



Strategic Intent goal – Enhance the quality and standards of ultrasound

It is important for sonography's professional standing that we continue to enhance the quality and standards of ultrasound. This involves developing and maintaining documented standards, guidelines and practice updates. The ASA's Sonographer Policy and Advisory Committee is currently working on resources to be released next year on topics such as the ASA's position on non-medical usage of ultrasound; professional advice on sex-determination in the first trimester; ultrasound appointment scheduling considerations; and the policy parameters regarding patients' use of recording devices in a clinical setting. In addition, international standards released are evaluated and endorsed by the ASA for members to utilise.

Promoting advances in best practice sonography is extremely important and our Special Interest Groups with members with specialist expertise are continually working towards bringing you the most up-to-date clinically relevant trends and techniques within their stream. Many are working on instructional posters, as well as our new initiative *Making Waves*, which will be released to members in January. This is a document that will be released every six months, keeping our members up to date on the latest research with our industry experts reviewing and providing insights and clinical implications on recently published articles.

Jodie Long, CEO

In addition we are also advocating for minimum qualifications to be held for anyone wishing to perform a diagnostic ultrasound. This will assist in debunking the myth that 'anyone can do ultrasound' and assist in sonographers getting the recognition they deserve in being the experts in ultrasound. The ASA works very closely with the industry, including the ASAR, education providers and employers, to ensure across the industry we are maintaining a high level of quality.

The ASA recognises best practice and encourages this by providing student awards for academic excellence, as well as for clinical excellence. In addition we are encouraging and supporting sonographers to transfer their knowledge and skill by presenting at the annual conference or writing for our *Sonography* journal.

The Awards of Excellence is also another way the ASA promotes high standards and quality within the profession by acknowledging and rewarding those who are shining lights of our profession for others to look up to and hopefully what future sonographers will aspire to.

As members it is also important that you continually strive for excellence by keeping up to date and ensuring the work you perform is of an extremely high standard where the patient has received the very best of care. This will ensure our profession is recognised as the experts in ultrasound.



Who will you nominate? Nominations are opening soon



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Aplio's i-series 22MHz Hockey Stick provides the ultra-high frequency needed for the most demanding small parts examinations. Very high resolution, ergonomic design with small 8mm footprint and slim cable and SMI-capable.



Another great Special Interest Group Symposium, SIGS2018 Perth, was held at the Pan Pacific Perth last September. The ASA SIG Symposium is all about live scanning and expertise, and this year 300 people advanced their knowledge in the areas of cardiac, MSK and obstetrics/ gynaecology.

A big thank you to the organising committee who volunteered their time to create the fantastic program we had across the weekend. Cardiac – Scott O'Connor, O&G – Kathryn Adams, Kirstin MacLennan and Miranda Kho and MSK – Janet Mulholland and Natalie Colley.

Over the two days, we heard from a number of amazing speakers, such as Rebecca Perry who presented on *3D echocardiography and strain imaging* and Jill Fawcett who presented *adult congenital echocardiography* in the cardiac stream. Lisa Hackett covered the difficult area of *post-operative shoulder*, with Greg Lammers and Daniel Walkley

providing a great insight into scanning *feet and ankles*. *Fertility* is often not well understood and Dr Kristy Milward shared her extensive knowledge in this area. It is vital for patients' wellbeing that sonographers can diagnose *placental abnormalities* and Jan Dickinson imparted some great words of wisdom.

All the speakers were phenomenal and we are grateful to them giving up not only their weekend but all the hours beforehand preparing for the workshops and presentations. The passion and dedication of the speakers to transfer their knowledge to other sonographers shone across the weekend and that is why the profession of sonography continues to excel.




Thank you also to our gold sponsors – GE Healthcare, Philips Healthcare and Siemens Healthineers – who provided their latest machines in the workshops. This year we introduced for the first time support for two rural and remote

sonographers to attend the symposium by covering the cost of the registration. This was achieved through the support of Guild Insurance and we will continue to offer this to support our rural and remote members.

Be sure to place in your diaries next year's SIG Symposium that will be held in Canberra on 26-27 October 2019.

Special acknowledgement and thank you

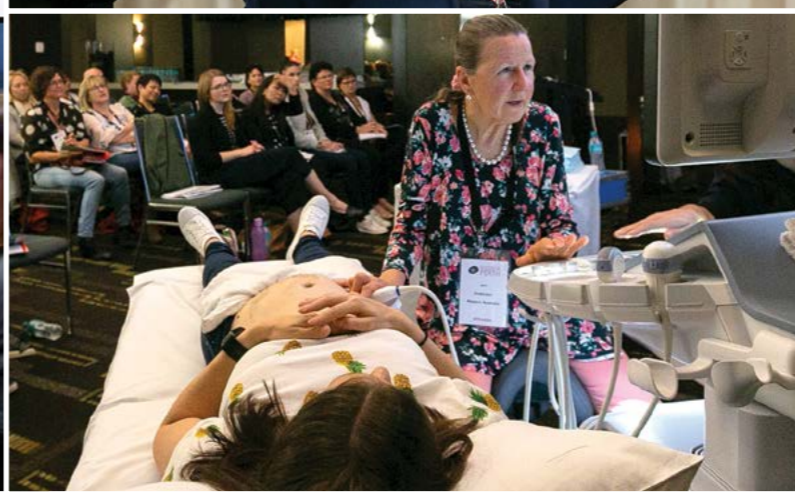
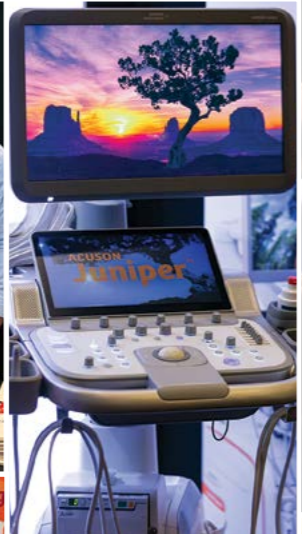
To the SIGS2018 Perth Program Committee, these volunteers have given their time and expertise to ensure that the symposium's educational program is interesting and informative:

-  Cardiac – Scott O'Connor
-  O&G – Kathryn Adams, Kirstin MacLennan and Miranda Kho
-  MSK – Janet Mulholland and Natalie Colley



From left: Jan Mulholland, Natalie Colley, Kirstin MacLennan, Jodie Long ASA CEO, Kathryn Adams, Miranda Kho and Scott O'Connor

asa SIGS2018 PERTH



rural and remote sonographer

Symposium reports

Deb Foster

I am very grateful to be a recipient of a Rural and Remote Sonographer Support grant for SIGS2018.

I have worked remotely for 25 years and as a sole MIT/sonographer for the last 4½ years, with all my images being sent by teleradiology to a radiologist. Often the local doctor is waiting on a verbal report before deciding whether to transfer a patient by RFDS to a tertiary hospital.

SIGS2018 provided me with an opportunity to validate my own level of knowledge and to learn how I can extend several of my scans in order to provide further information, in particular whilst scanning for endometriosis and in assessing the placenta for accreta and percreta.

It can be just as important to attend these sessions and realise that you are

up to date in learning, especially when you don't have peers to discuss cases with other than by telephone.

Being able to interact with my peers and speakers of such a high standard is invaluable and very much appreciated.

Deb Foster
Exmouth Hospital

Tristan Hunt

As a recipient of the Rural and Remote Sonographer Support grant, I was fortunate to be able to attend this year's Special Interest Group Symposium held in Perth. It was a great turnout for the two days, with delegates attending from around the country, allowing an opportunity for networking and catching up with former colleagues and friends.

Working in rural and remote medical imaging practices has the inherent

challenge of professional isolation. This professional isolation makes it necessary to actively pursue professional development opportunities in order to maintain currency of ultrasound scanning practice and departmental protocols. The need to maintain currency of practice is of relevance in ultrasound, which is ever-evolving.

The SIGS2018 Perth showcased many interesting presentations and workshops by presenters who had an obvious passion for their work. Of particular relevance to my site and patient demographic were the obstetric and musculoskeletal presentations and workshops. Already there has been occasion to incorporate some of the things learned into my scanning technique and protocol for the ultimate benefit of the community.



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The Program Committee is working hard to create an even bigger conference than ASA2018 Sydney. Based on your feedback, in 2019 you'll see:

- six workshop rooms running on Saturday
- new streams on Friday catering for clinical supervisors and students
- more ways for you to interact with the experts.

International keynote speakers include:

- Jennie Durant (USA) – multi-credentialed
- Timothy Hartshorne (UK) – vascular
- Dr Ligita Jokubkiene (Sweden) – obstetrics & gynaecology

National keynote speakers include:

- Cain Brockley, AFASA – paediatrics
- Greg Lammers, FASA – MSK
- Dr Martin Necas – vascular
- Dr Bo Remenyi – cardiac
- Marilyn Zelesco – abdominal

ASA2019 Brisbane key dates	
Call for abstracts open	3 Dec 2018
Early bird registrations open	3 Dec 2018
Rural and Remote Sonographer Support applications open	10 Dec 2018
Call for abstracts close	21 Feb 2019
Workshop selection open	16 Apr 2019
ASA2019 Brisbane 26th Annual Conference	21–23 June 2019

ASA2019 Brisbane Early Bird registrations open – don't miss out on discounted registration rates!
www.sonographersconference.com

asa fellowships



The ASA congratulates the newest candidate to be awarded Fellowship. The generous contribution of time, knowledge and experience by ASA Fellows is vital to the success of our association. The fellowship program is a clear indicator that the ASA has a solid foundation of members dedicated to the profession of sonography.



Sandra O'Hara

contributes to the Editorial Review Panel for *Sonography*, she has presented at SIG2018 Perth on *Assessing the cervix in pregnancy*

and ASA2017 Brisbane on *A comparison of shear wave elastography to transient*

elastography on 29 participants and Assessment of the reliability of a new technique – Shear wave elastography. Sandra has also published two articles in the *Sonography* journal on *Pitfalls and sources of variability in two-dimensional shear wave elastography of the liver: An overview in 2018* and *Concordance of transient elastography and shear wave elastography for measurement of liver stiffness in 2017*. Sandra is currently enrolled in Doctoral Thesis – Medical Imaging Science.

Fellowship is a significant professional achievement and the ASA would like to say thank you to Sandra for all she has done for our association and profession; it is greatly appreciated.

All members are encouraged to undertake the process of Fellowship, enabling you to develop additional professional skills that will be recognised by your colleagues.

2018 Associate Fellows (AFASA)

Congratulations to the following members who were recently conferred as Associate Fellows of the ASA.

Michelle Fenech	Ann Quinton
Anna-Maria Galea	Francis Ryan
Cara Miller	Quanson Sirlly
Rob McGregor	Faye Temple
Donna Napier	

The complete AFASA list can be viewed on the ASA website.

ruralandremote sonographer support for ASA2019

Supporting rural and remote members to attend ASA2019 Brisbane, the ASA's 26th Annual Conference

Anita Bowman

Anita Bowman is the Head of the Department of Medical and Imaging Sciences at CQUniversity, Australia.

Short bio

Anita is an Accredited Medical Sonographer with a Graduate Diploma in General Sonography, a Master of Medical Ultrasound, a Graduate Certificate in Education and a Bachelor of Biomedical Science and Pathology (Hons). As a medical sonographer, she has held senior positions with Sonic and I-MED in South Australia, New South Wales and Queensland.

What does your current job involve?

As a university academic, I have worked in various roles, including Head of Course, Head of Programs and Head of the Department of Medical and Imaging Sciences at CQUniversity. During the last two years, the Department of Medical and Imaging Sciences has grown to include a research cluster; vocational courses such as hairdressing, remedial massage and beauty; and higher education courses including medical sonography, echocardiography, medical imaging, nutrition, medical laboratory science, clinical measurement, biotechnology, pathology, and the foundation clinical sciences. In this role, I lead a team of ninety-one academics delivering courses across Australia to hundreds of students.

What aspect of sonography has been most rewarding?

My great love in sonography academia is designing innovative education models. In 2010, I worked with colleagues to establish a four-year nested

Undergraduate Degree – Graduate Diploma in Medical Sonography. This course enables students with diverse backgrounds to study four years of medical sonography and graduate able to register as entry-level sonographers. Students acquire basic scanning skills and professional attributes in simulated skill training prior to clinical placement sourced by CQUniversity. Over 180 students have graduated so far. I am completing my PhD studies into the underpinning rationale, design and outcomes of this landmark course in medical sonography.

More recently, I worked with industry and academics to create a coursework 'top up' Master of Medical Ultrasound. This enables post-qualification sonographers and echocardiographers to study advanced level units in clinical practice and communication, foundation management studies and research design principles. Alongside this we designed a Graduate Certificate in Clinical Ultrasound for allied health professionals wishing to include basic ultrasound amongst their diagnostic tools.

My most recent project was to work with fellow echocardiographers to establish a four-year nested Undergraduate Degree – Graduate Diploma in Echocardiography. This course combines the knowledge and practice of the cardiac physiologist with the knowledge, skill and professional attributes of the echocardiographer.

Why is being a volunteer at the ASA, and elsewhere, important to you?

I place great value on giving back to advance the sonographer profession.



Such activities range from contributing to government workforce working parties, representing sonography education providers on committees, editing journal articles for the ASA and ensuring university activities include close liaison with the ASA.

I also enjoy working with communities overseas to advance ultrasound practice and patient care. This has included work with sonographers, doctors and patients in Fiji and Nepal. Being part of a group of health students and staff delivering a remote health clinic high in the mountains of Nepal was incredibly rewarding.

What is your greatest achievement?

My career achievements are based on teamwork and collaboration. My greatest personal achievements are marrying my teenage love Scott, emigrating to Australia, bringing up two beautiful children, Aneka and Adam, who have made us very proud and have given us four grandchildren that we treasure (Isabelle, Owen, Luka and Theodore).

What do you enjoy doing outside work?

I love travelling. We backpack, cruise, hire RVs, take guided tours, camp and caravan. We recently bought an Earth Cruiser designed for 4-wheel drive expeditions with water/diesel tanks and self-contained lithium-stored power. It is very comfortable and we plan to travel with it overseas in our retirement. We

hope to travel 'on and off' for ten years across the Americas, Europe, Africa and Asia.

Who do you admire and why?

I admire my husband, Scott Bowman. Brought up in a poor but loving family, he studied as an adult to achieve his career aspirations, on top of a full-time job and a young family. From radiography, he joined the university sector becoming an accomplished academic manager. As Vice Chancellor of CQUniversity, he turned an institute from the brink of financial ruin into a financially sound

organisation with over 3500 employees, 35,000 students and 27 campuses Australia-wide.

Your favourite movie?

My favourite movie is *Tarzan, Legend of Greystoke*. It has the perfect combination of romance, adventure, travel and culture.

Place you would like to travel to?

I would like to sail to the Galapagos Islands to touch the giant tortoises, and other animals, mentioned in Darwin's Theory of Evolution.

Do you have any musical talent?

I love singing and used to be in the school choir. Unfortunately I was excluded for chatting to my friends when I should have been listening!

Favourite place you have travelled to?

I love India. It is such a vibrant country full of activity, contrast and fun. The wealth of culture, history and geography and the kindness of the people makes for a wonderful holiday adventure and provides countless volunteering opportunities.

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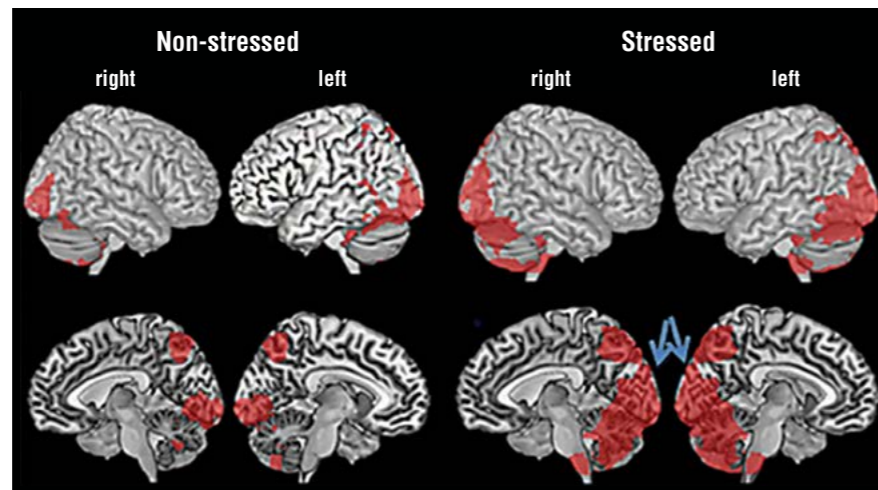
Be still my beating heart: sonographic stressors, potential issues and how to overcome them

Ann Carrigan,
ASA SIG Sonographer Health
and Wellbeing

Challenging situations frequently arise each day from the moment we open our eyes in the morning. Stress occurs as a natural response to many pressures and demands, both in our environment and internally: www.lifeline.org.au/static/uploads/files/what-is-stress-wfvgiurqqawx.pdf. Stress is a multifaceted construct and is comprised of physiological, emotional, psychosocial, and occupational varieties. The positive aspects of pressure and stress enable us to function optimally, keeping us alert and motivated in challenging situations such as exams and presentations. For information about the positive aspects of stress, please see this excellent TED talk by psychologist Kelly McGonigal: www.ted.com/talks/kelly_mcgonigal_how_to_make_stress_your_friend?language=en.

While small amounts of stress are normal, many people underestimate the potential long-term effects that chronic stress can have on their wellbeing.

Chronic stress causes changes to brain chemistry. The rise in cortisol levels interferes with cognitive ability that ultimately reduces productivity and increases errors. Recent neuroscience evidence suggests that psychological stress induces negative emotion.¹ One study measured the changes in brain activation using fMRI on perceived non-stressed and chronic stress groups of women managers who were performing a cognitively demanding attention task



From Portes et al, 2018; note the blue arrows depict high levels of activation

(Stroop). Performance on the task was similar across both groups. However, the stressed group showed increased activation in the occipital cortex during the task.²

From time to time it is normal to feel stressed, anxious, and/or depressed. However, when these emotions interfere with your day-to-day living, it is time to seek help. Many of us are familiar with the negative aspects of stress: the rapid heartbeat, lack of sleep, rumination ('why didn't I remember to write that on the worksheet?'). However, the insidious nature of chronic stress can not only have a negative impact on wellbeing, it can indirectly affect your performance in the workplace.

Stress in the workplace is becoming more commonplace and mental health

issues are on the rise, especially in high-stakes environments, such as medicine. According to the World Health Organisation: www.who.int/occupational_health/topics/stressatwp/en/, occupational stress may occur as a result of work pressures and responsibilities, often when these do not align with the worker's skills, knowledge or expectations. This type of stress can increase when there is a perceived lack of support and control. Over the past 10 years the demands on and expectations of sonographers have increased. There is the increasing human-computer interaction, rising public expectations, and more cases per day. What is more concerning is the introduction of sonographers' pay/case, which adds another level of pressure.

A day in the life of a sonographer often involves many stress-inducing scenarios:

time pressures, shorter appointment times than required, low confidence in a particular case, patient demands, extra cases fitted in, inadequate breaks and supervision, and in some cases, a lack of radiological and nursing support. The cumulative effect of physical stress and strain also increases cognitive stress levels. The role performed by sonographers is perceptually and cognitively demanding, and coupled with stress the potential for error is high. Errors can potentially occur during visual search, image acquisition and documentation of findings. The diagnostic 'system' can break down, which impacts accuracy and ultimately patient safety.

Often sonographers are interrupted and distracted, which means an error can occur at any stage of the diagnostic process, for example, questions by concerned patients and their well-meaning relatives during a scan. Staying on the sonographic task while engaging with others is not possible, as the human brain simply cannot successfully switch tasks, attend and retain all the necessary information. One study on radiologists showed that distraction resulted in a significant increase in task completion time due to impaired memory for previously searched areas.³

From a cognitive perspective, the attentional demands and processes activated during sonography are similar to driving a motor vehicle, where approximately 25% of reported crashes are from driver inattention.⁴ In the driving literature there have been many studies that have relevance to sonographers that provide evidence that inattention and distraction are detrimental to performance. For example, a person who drives while talking on a mobile phone is a worse driver than a person at the legal limit of alcohol consumption

(BAC: 0.08%)⁵; conversations impair explicit recognition memory for roadside billboards (even though eye tracking data recorded fixation); disruptive effects of mobile phone conversations on driving are due to diversion of attention from driving to the phone conversation.⁶ Finally, the ever-increasing use of technology in vehicle information systems (IVIS) can result in conflicts between vehicle tasks and driving demands.⁷ In sonography, it is highly likely that these effects are also present, and repetitive distractions will increase stress levels as cognitive resources are depleted whilst attempting to 'stay on task'. Chronic stress is also fatiguing and the negative effects of fatigue are well documented in the medical perception literature. For example, accuracy and oculomotor focus significantly reduces between the start and end of the working day.⁸

It is a common myth that once trained, and competency is reached, that a level of mastery has been achieved and 'expertise' is well in sight. This transition period is possibly the most stressful and dangerous time to be a practicing sonographer with regard to diagnostic errors. Research on motor vehicle accidents show that the highest rates of death occur when drivers transition from learner to provisional licences. This is the period when a driver has lost their 'checker' and has supposedly mastered safe driving. As the demands on the visual attention system and cognitive process are similar for sonographers, recent graduates may benefit from ongoing supervisory support via a graded process similar to the NSW driving system.

One of the many challenges that sonographers face is that the event or abnormality that is being searched for is often rare. A robust phenomenon

reported in both the vision science and medical literature is the effect of prevalence, where low target prevalence (i.e. rare targets, few cases are truly abnormal) results in elevated miss rates.^{9,10,11} Given that much of the sonographic search is within a screening environment, where the prevalence of an abnormality is very low, the effect of rare prevalence is likely to contribute to high rates of miss errors. Sonographers must remain vigilant while carefully scanning, which becomes more challenging when the abnormality is rare. Research suggests that humans are prone to a vigilance decrement, or a decrease in performance over time.¹² To overcome the errors caused by low prevalence, each shift could begin with a 'warm-up' session where rare pathology and abnormalities can be presented with feedback. This model has been successfully trialled and implemented in US airport security systems where weaponry in luggage is also a rare event.

There are many stressful factors throughout a sonographer's day that can have a negative impact on work performance. Remember that small levels of stress are normal but if these emotions escalate, first consider how you respond and react to situations with the view to taking control. Internalising stress can feed negative emotions, so sharing your experiences with a trusted colleague or supervisor is beneficial. A balanced diet, adequate sleep and regular exercise are crucial to maintaining a healthy life. Scientific research has also shown that mindfulness (see smilingmind.com.au; mindfulnessspace.com.au) reduces cortisol levels and stress. If you feel that stress is overwhelming you, there are many free resources available for help (see www.lifeline.org.au/get-help/topics/stress; www.beyondblue.org.au/get-support/staying-well/reducing-stress). On a final note, given the

research in the radiology and driving domains, it is plausible that similar cognitive and attentional issues occur in sonography. Targeted research and ongoing support, in particular for new graduates, is recommended.

References

1. Wang J, Rao H, Wetmore GS, Furlan PM, Korczykowski M, Dinges DF & Detre JA. Perfusion functional MRI reveals cerebral blood flow pattern under psychological stress. *Proceedings of the National Academy of Sciences*. 2005;102(49):17804–9.
2. Portes B, Balardin JB, Lacerda S, Pires F, Tobo P, Barrichello C & Kozasa EH. The effects of perceived chronic stress on the fMRI correlates of attentional control in women managers. *Archives of women's mental health*. 2018;1–7.
3. Williams LH & Drew T. Distraction in diagnostic radiology: how is search through

volumetric medical images affected by interruptions? *Cognitive research: principles and implications*. 2017;2(1):12.

4. Stutts JC, Reinfurt DW, Staplin L & Rodgman EA. *The role of driver distraction in traffic crashes*. 2001.
5. Strayer DL, Drews FA & Crouch DJ. A comparison of the cell phone driver and the drunk driver. *Human factors*. 2006;48(2):381–91.
6. Strayer DL, Drews FA & Johnston WA. Cell phone-induced failures of visual attention during simulated driving. *Journal of experimental psychology: Applied*; 9(1):23.
7. Donmez B, Boyle LN & Lee JD. Mitigating driver distraction with retrospective and concurrent feedback. *Accident Analysis & Prevention*. 2008;40(2):776–86.
8. Krupinski EA, Berbaum KS, Caldwell RT, Scharz KM & Kim J. Long radiology workdays reduce detection and accommodation accuracy. *Journal of the American College of Radiology*. 2010;7(9):698–704.

9. Evans KK, Birdwell RL & Wolfe JM. If you don't find it often, you often don't find it: Why some cancers are missed in breast cancer screening. *PLoS one*. 2013;8(5): e64366.
10. Mitroff SR & Biggs AT. The ultra-rare-item effect: Visual search for exceedingly rare items is highly susceptible to error. *Psychological Science*. 2014;25(1):284–9.
11. Wolfe JM, Horowitz TS & Kenner NM. Cognitive psychology: rare items often missed in visual searches. *Nature*. 2005;435(7041):439.
12. Parasuraman R. Memory load and event rate control sensitivity decrements in sustained attention. *Science*. 1979;205(4409):924–7.

Dr Ann Carrigan has a PhD in Cognitive Science, is a Medical Sonographer, and a Postdoctoral researcher at the Department of Psychology, Macquarie University, Sydney.

As a sonographer Amber Bee has been an employee, a business owner and many roles in-between. A few of the feature articles in this year's *soundeffects news* on sonographer workforce shortages, the Medicare rebate freeze, isolation and sonographer burnout resonated with Amber who shared her thoughts with us. We are pleased to publish Amber's reflections as part of the ASA's ongoing discussion on sonographer health and wellbeing.

Sonographer mental health discussion

A baby's first heartbeat, breast cancer, the anxious patient, fetal abnormality, and then the fertility patient whose baby has no heartbeat ... all this and you are still hanging out for your morning coffee. This is the emotional roller coaster we ride every day as a medical sonographer. With a typical morning full of such varied emotion, how are we coping?

Our profession is currently considered a workforce of 'critical shortage'. Medicare has not increased the rebates for medical imaging since 1998 and our role is becoming more involved as new technology and techniques are constantly

emerging. The 2017 sonographer employment and salary survey shows workplace satisfaction is low, with 44% reporting higher stress levels and 47% lower morale.

“ In a healthcare industry such as ours, how can we provide an empathetic, caring and nurturing environment for our patients, if we too feel stressed and depressed? ”

Although mental health has in the past been a taboo subject, worldwide we are becoming more aware of these issues and their lasting impact. In a healthcare industry such as ours, how can we provide an empathetic, caring and nurturing environment for our patients, if we too feel stressed and depressed? It is common sense that in order to provide for our patients, we first need to be in a healthy fit state ourselves. Yet our industry is barely allowing us to do so.

Bernie Mason touched on this subject in the March edition of *soundeffects news* when she discussed sonographer isolation. 'Sonographers are often so busy completing their list that they get

to the end of their day without speaking to another person' (page 24). This is a scenario that is all too familiar to me, and as suggested, it can and did lead to 'feelings of isolation and depression'.

After struggling along for many months, I finally realised I needed to talk about how I was feeling. For me the biggest issue was exactly the question Catherine posed in the June *soundeffects news* issue, 'Was I living up to expectations?' I wasn't living up to my own expectations. I have high standards and I felt I wasn't meeting them. I felt this was for several reasons, including lack of experience, time constraints and lack of preparation for some of the more mentally taxing and difficult parts of our job.

The September issue of *soundeffects news* begins to explore something big that is going on in our industry. The fact is that many of us are not coping. We are burning out and we are walking away from a profession that we have spent years and many thousands of dollars training towards.

Having started and run my own radiology practice with my husband for 5 years, I can appreciate the economics of the Medicare rebate situation and the consequences for sonographers. Put simply, the private practices are faced with a choice. They either forgo quality and wholeness of scan to reduce ultrasound appointment times, or they remain at current times and standards and charge a higher rate.

Either way, patients lose. Option 1: they run the risk of misdiagnosis when a sonographer is rushed and under pressure, or Option 2: they simply find the cost too prohibitive and opt not to have a scan done at all. Not a choice we should be forced to make.

I believe the issue in ultrasound is different to the other radiology modalities. Whilst the Medicare freeze is across the board, ultrasound is really the only modality that over the last 20 years has not seen a relative increase in productivity. Due to technology advances, such as DR and multi-slice CT, radiographers are now able to perform examinations quicker and therefore increase their throughput, with little impact on themselves from a physical and mental perspective.

This, however, is simply not the case in ultrasound due to the largely human component of the examination.

“ Advances in technology have improved our image quality, but not the way in which an image is obtained. We cannot get faster without cutting corners. ”

Advances in technology have improved our image quality, but not the way in which an image is obtained. We cannot get faster without cutting corners. This does not sit comfortably with any of the sonographers I know.

None of this even takes into account how departments are meant to train sonographers. Having experienced first-hand the difficulties of recruiting sonographers, my husband and I (both radiographers at the time), decided that I would return to university and train in ultrasound.

The financial impact on the business was huge. It involved reducing our current

sonographer's productivity in order to spend time with me, as well as going out of town and paying a trainer to gain scanning hours. When I completed the course, I was still limited in what I could actually scan.

Two years down the track, and back to being an employee, I am still on a continual learning curve as I endeavour to increase the number and types of scans I perform. Each time I add something new, I run behind taking extra time to ensure I am completing the scan to a high standard. It is a continual cycle of stress and pressure.

It will most likely be a full 10 years of scanning before I feel competent and comfortable in ultrasound. In all honesty, there are many days when I simply wish I had never started on this road. I believe sonographers all around Australia are crying out for support: support from Medicare and support in dealing with some of the mentally exhausting things we attend to daily.

In some cases, employers are sandwiched in the middle, trying their best to support their sonographers but being forced to make sure the numbers add up. They are becoming less and less likely to train sonographers and are often unable to provide adequate time for training and reflection. No matter how much they want to help, there is always the bottom line to contend with.

Inherently, those of us who choose this profession want to do their best for the patient, to help and provide a high quality service. However they also need to be able to go home in a mental and physical state that allows them to enjoy their life outside work. I don't know what the answer is, but I do believe it is becoming more and more difficult for the majority of Australian sonographers to do so.

You've got a research idea ... what next?

Motivation to undertake research can come from various places. Perhaps a number of unusual presentations might inspire you to undertake a literature review and clinical audit, or an idea you have for a new technique or measurement that could improve practice might become a prospective study. Having a framework in place to manage your research journey can often make the path clearer and less intimidating: it might be through clear articulation of a process, having mentors steer you away from obstacles, and rules you can and often must follow in order to abide by accepted ethical standards. This article will hopefully provide you with some ideas and demystify some of the research challenges you might encounter should you wish to embark on your own study.

Sonographers are often busy performing examinations and find it difficult to step back to identify opportunities to conduct or engage in research. The only exposure to research many sonographers have is conducting certain examinations for other clinician's studies or clinical trials. If you have relatively little research experience, you can look to other professions for advice (medical officers and physiotherapists, for example, whose research cultures are more established). Partnerships with universities are also great opportunities to seek guidance and identify mentors or potential higher degree research (HDR) supervisors. Experts in your preferred topic can also be of assistance; you might approach them at a conference, recognise them as authors in our journal *Sonography*, your local branch event, or on social media

where Twitter can be an excellent way to reach out to people all over the world – check out #FOAMUS (free open access medical ultrasound). The ASA also has some information on how they support sonographer research, like the annual research grant round.¹

Most large hospitals will have a local Human Research and Ethics Committee (HREC) that evaluates applications to conduct research in the organisation and provide advice on issues such as consent, and a Research Governance Office (RGO) that ensures that there are appropriate processes incorporated in the research study, such as data storage/security and legal requirements. Most of these applications are through respective online submission portals. The principles that underpin the ethical conduct of research in Australia are underpinned by the National Statement on Ethical Conduct in Human Research (2007) – Updated 2015.² The conduct of these bodies is governed by the National Health and Medical Research Council (NHMRC) in Australia, and in New Zealand by the Health Research Council³, where there are Health and Disability Ethics Committees (HDECs) and Institutional Ethics Committees (IECs).⁴

If you work in a site that doesn't have an HREC, you can find details on the NHMRC site about HRECs at other institutions that are willing to process external applications, sometimes at a cost.⁵ Universities usually have their own ethics bodies and are often able to provide advice and guidance if your proposed research is part of an HDR qualification like a Masters or PhD. If your study is a clinical trial it is good practice to register it with the Australian

Tristan Reddan and Kerry Thoires, ASA Research Special Interest Group



Photo by Maksym Kaharlytskyi on Unsplash

New Zealand Clinical Trials Registry⁶, which can let other researchers know about your study and prevent duplication of projects. Navigating through ethics submissions can seem a barrier but these are important processes that will help you ensure you have considered important issues before accessing records or performing examinations as part of your study.

In order to apply for ethical approval, and in some cases potential funding for your project, it's common to frame your research in a research protocol. A research protocol has a reasonably standardised format and will clearly articulate most of the issues that require consideration for the conduct of a research study.⁷ Things like inclusion/exclusion criteria, consent, research methodology, data management, timelines, safety, finances, and research dissemination, are included. More information about protocols can also be

obtained from mentors, supervisors or your relevant ethics committee.

Having negotiated these barriers and processes without much support in the past, I hope that by sharing some tips you might be able to translate your research idea into a viable project. We are fortunate to have some excellent sonographer researchers who can help share their knowledge and experience. It's important for our profession that sonographer-led research continues to grow and influence the direction of our practice and profession.

References

1. *Australasian Sonographers Association. Research Grant* [Internet]. [cited 2018 Oct 14]. Available from: www.sonographers.org/advocacy/research
2. *National Statement on Ethical Conduct in Human Research 2007* (Updated May 2015). The National Health and Medical Research Council, the Australian Research Council and the Australian Vice-Chancellors' Committee. Commonwealth of Australia, Canberra.
3. *Health Research Council of New Zealand. Ethics and Regulatory* [Internet]. [cited 2018 Oct 14]. Available from: www.hrc.govt.nz/ethics-and-regulatory
4. *Health and Disability Ethics Committees* [Internet]. [cited 2018 Oct 14]. Available from: www.ethics.health.govt.nz
5. *National Health and Medical Research Council. Human Research Ethics Committees* [Internet]. [cited 2018 Oct 14]. Available from: www.nhmrc.gov.au/research-policy/ethics/human-research-ethics-committees
6. *Australian and New Zealand Clinical Trials Registry* [Internet]. [cited 2018 Oct 14]. Available from: <http://www.anzctr.org.au>
7. *Government of Western Australia – Department of Health. Research Governance Service – Document Templates* [Internet]. [cited 2018 Oct 14]. Available from: www.rgs.health.wa.gov.au/Pages/Document-Templates.aspx

Tristan Reddan,
ASA Research Special Interest Group, Qld

Statistical significance revisited. How is it different to clinical significance?

The March issue of *soundeffects news* contained an outline of the p-value and statistical significance. In research papers, you will also see the term 'clinical significance'. The following explains how this is different to 'statistical significance'.

A recap of 'statistical significance'

Statistical significance tells us how much the results of statistical testing are due to chance. For instance, if a statistically significant p-value of 0.05 is reported, this means there is a 5% chance that the results were due to luck. Similarly, if a statistically significant p-value of 0.1 is reported, then there is a 10% chance that the results were due to luck. In health and medical research, a p-value of 0.05 or lower is generally accepted to be statistically significant.

Clinical significance

Statistical significance refers to the statistical testing and does not tell us if the results are significant enough to make a change in clinical practice. To answer this question, the health or medical clinician needs to decide if the statistically significant change/difference/effect/relationship is large enough to be of practical value to the patient. To make this judgement the clinician needs to understand what the smallest change/

difference/effect/relationship is that would be clinically worthwhile.

The two following hypothetical ultrasound examples help illustrate this.

1. The results of a study demonstrate that a serial ultrasound measurement can detect a 20% increase in magnitude ($p < 0.05$). However, clinicians are looking for a measurement that can detect a 5% increase so that they can apply an early intervention. Therefore the measurement will not change clinicians' behaviour in treating their patients, and the measurement is not clinically significant.
2. An ultrasound measurement has been found in a study that differentiates between a normal state and pathologic condition. In a two-group study, there was a significant difference ($p < 0.05$) between the measurement made on a group with the condition and on a group without the condition. However, when reliability testing of the measurement was undertaken, the measurement error was greater than the measurement differences between the groups. Therefore a clinician would be wary of using these measurements as they could not be sure a measurement indicating pathology was due to the pathologic condition or measurement error. This measurement is therefore clinically not significant.

Kerry Thoires,
ASA Research Special Interest Group, SA



Looking for cpd points?

There are plenty of ways to earn your points, based on your education needs and your preferred learning method. As an ASA member, you will no doubt be aware of the face-to-face meetings and workshops, plus the online learning library. But did you know that there are other ways for you to earn points, alongside developing extra professional skills?

If you're not as confident at presenting as you'd like to be, why not practise in front of a smaller, friendly group at a local branch

meeting? Or, if you've already presented an interesting case at a branch meeting, don't stop there! Consider submitting the work you prepared for the branch meeting as an abstract for the annual conference. Our feature article in this issue gives you tips on how to submit an abstract.

There are lots of ways to earn CPD points. Following is a summary of CPD activities and the number of associated credits that you can earn.

Activity	CPD credits (range)
Publishing/presenting	
Scientific or professional publication	15–50 points
Presenting at the annual conference or SIGS	25–40 points
Presenting an interesting case at a branch meeting	10 points
Presenting at a branch meeting – oral or case study	10–15 points
Presenting at your workplace	10–15 points
Educational	
Self-directed professional development (e.g. research, reading journal articles, journal club)	1 point per hour (maximum of 40 points per triennium)
Peer review of a journal article (scientific or publication)	1 point per hour (maximum of 5 points per article)
Preceptorships – attendance on-site	2 points per day (maximum of 15 points per triennium)
Volunteering (an example of the points you can claim per triennium)	
Branch committee role	1–30 points per triennium
SIG committee role	1–30 points per triennium
Annual conference program committee role	1–30 points per triennium
Annual conference convener	1–30 points per triennium
SIGS Program committee role	1–30 points per triennium



call for papers: Safety and wellbeing for sonographers



We are now seeking papers on safety and wellbeing for a special issue of the *Sonography* journal in 2019

As medical imaging professionals, we work in an environment that is physically and mentally challenging. MSK injury has been an alarming feature for sonographers for many years, and pressure of increasing workloads adds to not only the physical demands, but also puts mental health stresses upon us.

Articles could address (but should not be restricted to):

- original research articles to determine causes for sonographer injury
- workplace initiatives to improve sonographer health
- review articles on health professionals mental and physical health
- case reports where sonographer health and wellbeing were a feature
- protocols which include specific criteria addressing sonographer health and wellbeing
- the impact of new technology on sonographer health and wellbeing (e.g. imaging software, equipment features).

This special issue will assist all sonographers to stay healthy and productive for hopefully long careers in the profession. Don't miss the opportunity to publish your research and experiences in an edition focused on this important subject.

Submissions should be made following the author guidelines and submitted via the ScholarOne online manuscript submission system by 4 June 2019. Any queries can be directed to the Editor-in-Chief at editor@sonographers.org

The ASA publishes the *Sonography* journal as part of our commitment to facilitate and promote research to support evidence-based practice. It is an international peer reviewed journal that publishes articles on all aspects of sonography and medical ultrasound from authors around the world. Author guidelines are available on the Wiley Online Library.

Further information can be obtained from:

Glenda McLean – Editor-in-Chief
 E: editor@sonographers.org P: +61 3 9552 0000
 For author guidelines on writing and referencing visit
<https://onlinelibrary.wiley.com/journal/20546750>

VOLUME 3, ISSUE 3, SEPTEMBER 2017

asa
australasian sonographers association

Safety of ultrasound exposure: knowledge, attitudes and practices of Australasian Sonographers
 Using Kirkpatrick Four Level Evaluation model to assess a 12-week accelerated ultrasound intensive course
 Takayasu arteritis in a 40-year-old male: demonstrated during ultrasound investigation of carotid bruits
 Ultrasound of a prepubertal Leydig cell tumour of the testis
 Ectopic thymus: Diagnosis by ultrasound
 Continuing professional development (CPD) test

SONOGRAPHY
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WILEY



Alice Springs, NT

This year has been very different from most for the Alice Springs Branch. Many of the sonographers that make up our small branch have been, have gone or are going on maternity leave. Despite this we have still seen quite a good turnout for all of our events throughout the year. We have also managed to attract some great locum sonographers to the area who have all been fantastic and eager to support both official and in-house events.

Through the year a couple of the members were given the rare opportunity to head down to Adelaide for a week of up-skilling in paediatrics and obstetrics. This proved to be extremely beneficial for all of the sonographers, as those that went brought back considerable knowledge and up-to-date information that they were able to share. Given the branch's remote location, it is easy for all of our members to become quite complacent in our scanning routines, so this brought quite a breath of fresh air to the branch.

On 15 March our branch meeting included a group viewing of the *Fetal heterotaxy* as a **webinar** at the Red Centre video conference room at Alice Springs Hospital, followed by our next branch meeting on 11 April for a group viewing of the *Paediatric MSK* as a **webinar** at John Hawkins Lecture Theatre, Liebig Building at Alice Springs Hospital.

Of significant note this year has been our involvement with the visiting vascular surgeon, Dr Mark Hamilton. Dr Hamilton has graciously given up his valuable time on numerous occasions to educate and support the local sonographers. He presented a *Vascular question and answer evening* on 17 April at the Red Centre Building, Alice Springs Hospital and we are working towards organising an *Arteriovenous fistula* session.

The Alice Springs Hospital catchment provides care to a large number of haemodialysis patients so all members are eagerly awaiting the information this session will provide.

We hope all the other branches have had a great year and we look forward to what 2019 brings.

Emily Vargo
Alice Springs Branch Committee

Far North Queensland

Hi from the FNQ Branch!

We gathered to view an **asawebinar** evening of Wednesday 18 April at the Cairns Hospital, titled *Tips and traps in ultrasound of chronic liver disease*, presented by Prof. Robert Gibson. It was a detailed presentation and informative for both the younger and older generation of sonographers attending.

Next meeting, on the evening of 24 September, saw us at the Cairns Hospital again. Senior Sonographer Ms Lee Williams presented a detailed review of the American College of Radiology TI-RADS classification for thyroid nodules to 16 attendees. It was great afterwards to discuss the experiences some of our attendees have had using the system and how sonographers will be able to assist in the uniformity of thyroid nodule reporting in our region by implementing the system.

Our recent meeting on 10 October was held at Cairns Radiology and was kindly sponsored by Aussie Locums. Chief Sonographer Ms Sameet Memon presented on the *Importance of the 12-week scan*. She discussed with us the detection of neural tube defects at the 12–16 week mark and the importance of the 12-week scan with the advent of NIPT. Another great evening for networking amongst FNQ sonographers was had.

Kath Deed
Far North Queensland Branch Committee



Moreton Bay, Qld

The Moreton Bay Branch educational event in the first half of 2018 was held in March with an excellent IOTA presentation held at the Redcliffe Hospital Education Centre, featuring Senior Staff Specialist Obstetrician and Gynaecologist Dr Alka Kothari. Dr Kothari's presentation outlined the IOTA principles and ultrasound rules for ovarian masses for classification as benign, malignant or inconclusive. Many interesting case studies were discussed and the evening was very interactive with input from registrants. The evening was well attended and was very well received by approximately 30 registrants.

A big thank you to Gabe and Canon Medical Systems for sponsorship of the evening and Dr Kothari for her time and contribution to this informative educational event.

We are excited about our next educational event in the coming months on MSK ultrasound.

Gail Petersen
Moreton Bay Branch Committee

Newcastle, NSW

Fifty people attended our *Multidisciplinary Workshop* at John Hunter Hospital in August. Sue Drinic presented some interesting O&G fertility cases and Nathan Gallagher showed us the essentials of AAA assessment and the correct AP measurements. Sonographer Courtney Byfield included some audience interaction – *guess the pathology in fetal heart cases*. It was fun and stimulated lighthearted, interesting discussion about pulmonary stenosis, Tetralogy of Fallot, and Epstein's anomaly and other classifications.

Illawarra, NSW

On the 21 June the Illawarra Branch ran an interesting cases evening at the Wollongong Hospital. We had five interesting cases presented. Jaye Marchiori presented an interesting case on a soleal muscle mass. Rose Beatie demonstrated the amazing capability of ultrasound to detect stress fractures in bone. Narelle Woods and Deanna Gorham presented two interesting cases of patients presenting with acute pelvic pain. We were all creeped out by Breanna Hayes' presentation of a patient with upper limb thrombus that was originally thought to be the result of an insect bite. The meeting was sponsored by Mediquip, who brought along some VIMEDIX ultrasound simulators. We had lots of fun trying out the simulators and also sparked the interest of the emergency, intensive care and wider medical community.

Our last branch meeting for the year was held on the 10 October. We met at the Wollongong Hospital for another case study meeting. What can I say ... we love our interesting cases! Jill Files, a vascular sonography student, made her debut presentation on the different appearances of the carotid artery bulb following carotid endarterectomy. It's great to see trainees getting involved within the profession and the support our community provides for them. Kyra Goodwin presented an interesting case of undifferentiated pleomorphic sarcoma. Peter Sharman presented some interesting unusual locations of arterial aneurysms. Lee Turner demonstrated the importance of thinking outside the square with his case of arcuate ligament compression of the coeliac axis in a patient presenting with abdominal pain. For the first time at our meetings we were given the opportunity of a prize from the ASA for the best presenter. The



Attendees at the 21 June Illawarra Interesting cases night try out the ultrasound simulator award went to Manette Kearin for her unique presentation 'Stranger things', showcasing some unusual obstetrics and gynaecology cases. We would like to thank Mindray for sponsoring this meeting and bringing along their newest addition, the Resona 7.

On behalf of myself, and the Illawarra Branch Committee, I would like to thank all the local members and sonographers who present and attend these meetings. Your support is greatly appreciated. Last but not least I would like to thank Saheeda Zotter, Simon Otis and Tony Chapman, our committee, for all the effort that they go to for these meetings to happen.

We look forward to sharing with you what our community gets up to in 2019.

Lauren Dwight, Illawarra Branch Committee



May 2018 Newcastle Branch Vascular sonography workshop

Cardiac sonographer Edward Crendal presented on Blood Speckle Imaging (BSI) vortex formation, which is a new technology for imaging left ventricular function.

Sonographer Jessica Sinclair's talk on eye ultrasound covered many pathologies, encouraging us to visualise the posterior part of the globe that the ophthalmoscope is unable to assess due to haemorrhage or cataract.

Greg O'Connor then demonstrated live ultrasound scanning of the eye with

Jessica as his patient, using Philips' EPIQ 7G and the new eL18-4 PureWave linear transducer.

On 5 May our vascular education workshop attracted 32 attendees and was presented by six experienced vascular sonographers. We were very grateful to the Hunter New England Health Imaging Department for allowing us to use their imaging conference room. Warren Lewis organised and chaired the meeting. Adam Tolfree talked about inflow, outflow and swing segment of AV fistula ultrasound.

David Wroblewski presented AAA case from assessment to complications post op with an occluded left limb. Wendy Brown showed us images of an infected carotid Dacron patch with a fluid collection evident. It was replaced with a GSV patch. Also a carotid body tumour in a 10-year-old that was more likely a neuroblastoma that is radiosensitive.

Ben Micallef showed an atypical carotid ultrasound in a 6-year-old with dense hemiplegia, an occluded right MCA due to malignancy causing a midline shift and was non responsive after emergency decompressive craniotomy.

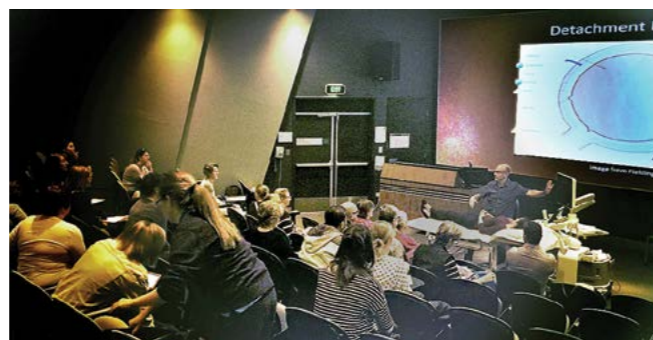
Kate Mungoven presented *Are we missing the most important renal artery disease* (due to FMD in the mid to distal renal arteries that may not be visible on angiogram and only on IVUS). A different criteria is best to ensure these patients are treated to avoid uncontrolled hypertension and possible flash pulmonary oedema.

We really do appreciate all our sponsors, attendees and wonderful presenters. Thank you all!

Jill Wilcock
Newcastle Branch Committee



Warren Lewis chairs the *Vascular sonography workshop* May 2018



Live scan of the eye at Newcastle Branch workshop meeting 25 Aug 2018

soundbite

Q. Can any ASA sonographer go to any ASA Branch meeting?

A. ASA members can register to attend any ASA branch meeting. Attending educational events focusing on different areas of practice or in different geographical areas (perhaps on vacation) helps broaden your understanding of the application of ultrasound, and provides opportunities for networking.

Attendance at branch meetings is free for non-members. However if you require a Certificate of Attendance, you will need to register and a \$25 administration fee will apply.

“THE BEST WAY TO FIND YOURSELF IS TO LOSE YOURSELF IN THE SERVICE OF OTHERS”
~ MAHATMA GANDHI



A heartfelt thank you to all our volunteers for the contribution you have made to the ASA and the sonography community in 2018

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ASA VOLUNTEERS 2018

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Joining an ASA Special Interest Group (SIG) Committee is a great way to advance your professional development and share your expertise and experience. It is also an excellent way to expand your skills and knowledge and exchange ideas with other highly experienced sonographers from diverse backgrounds who are working in the same discipline or who have the same special interest.

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Our purpose is to:

- promote and advance the sonography profession
- enhance the quality and standards of ultrasound
- provide and support the highest quality professional development and research
- deliver exceptional member value and organisational excellence.

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