

ROYAL AUSTRALASIAN COLLEGE OF SURGEONS



Clarification of minimum qualifications for the provision of ultrasound services under Medicare

RACS Submission

31 May 2017

The Royal Australasian College of Surgeons (RACS) is the leading advocate for surgical standards, professionalism and surgical education in Australia and New Zealand. RACS represents more than 7000 surgeons and 1300 Surgical Trainees and International Medical Graduates (IMGs) across nine surgical specialties in Australia and New Zealand - Cardiothoracic surgery, General surgery, Neurosurgery, Orthopaedic surgery, Otolaryngology Head and Neck surgery, Paediatric surgery, Plastic and Reconstructive surgery, Urology and Vascular surgery.

RACS is pleased to provide feedback on the Department of Health's consultation on minimum qualifications for the provision of ultrasound services under Medicare. In responding to this request, we have consulted with several surgical speciality societies to seek their input, which are attached and we would encourage that these be read in conjunction with this submission.

In principle, RACS considers the current standards on the provision of ultrasound services under Medicare to be broadly sufficient and that there are adequate regulations in place governing practices surrounding ultrasound imaging through the Diagnostic Imaging Accreditation Scheme (DIAS) and Location Specific Provider Number (LSPN).

RACS requires that all Fellows be appropriately credentialed¹ at all hospitals in which they operate, taking into account experience, scope of practice, qualifications and facilities available. Fellows of RACS are also required to participate in on-going professional development activities through the RACS CPD Program, which requires participation in activities as relevant to their scope of practice. Fellows who may require re-training or re-skilling are supported by RACS through our Re-Skilling and Re-Entry Program.²

In response to the questions raised in this consultation, RACS provides the following comments.

Does the medical training syllabus for any surgeon specialities include training in the performance and reporting of ultrasound?

All Trainees must complete the Early Management of Severe Trauma (EMST) course, which includes a session on Focused Assessment with Sonography in Trauma (FAST).

Some surgical specialty training programs incorporate further ultrasound training into their syllabus. Urology has a dedicated uro-radiology module that includes training in the performance, interpretation and reporting of prostate ultrasound, bladder ultrasound and renal ultrasound including image guided renal access for urinary stone surgery. Trainees in vascular surgery are also required to undertake specific training in ultrasound. Post-Fellowship training also provides another opportunity for surgeons to gain further education in ultrasound as required. For example some General Surgeons may pursue subspecialisation in breast surgery which requires additional training to enhance their skills and knowledge required in the diagnosis and management of breast disease.

In other surgical specialities, ultrasound is less relevant to their practice and not a mandated requirement within the training syllabus. It may however be recommended for those surgeons undertaking specific procedures such as in Paediatric Surgery where intraoperative ultrasound is used in anatomy visualisation and guidance such as solid organ resection, percutaneous access (biopsy or insertion vascular access line) or the instillation of local anaesthesia.

Alternative specific ultrasound qualifications are appropriate for any surgeon specialities?

While minimum standards regarding the provision of ultrasound are appropriate, RACS does not support mandating a specific ultrasound qualification. Specialty societies with a specific need for ultrasound training (i.e. vascular, urology) already have this established within their syllabus, with this training being of greater applicability to surgeons and their practice setting than a more generalised training model.

¹ http://www.surgeons.org/media/348329/2014_02_25_pos_fes-pst-001_credentiaing_and_scope_of_practice_for_surgeons.pdf

² http://www.surgeons.org/media/312190/2016-08-17_pol_fes-pst-025_re-skilling_and_re-entry_program_guidelines.pdf

RACS recommends that any discussion about minimum standards be undertaken through a collaborative process with the surgical specialties due to the multi-disciplinary and diverse nature of surgical training. For example, due to the extensive scope in which ultrasound is used within vascular surgery, the Australian and New Zealand Association for Vascular Surgery (ANZSVS) consider their SET syllabus (FRACS Vasc) as having appropriate equivalency to The Royal Australian and New Zealand College of Radiologists qualification for medical practitioners.

Whether a Diploma in Diagnostic Ultrasound (DDU) limited to the specific service type is relevant?

While developing minimum standards would be beneficial, RACS does not consider that the DDU limited to specific service type is relevant. In particular there are concerns about whether the diploma is appropriately optimised for surgeons and that there are already other training programs (such as that provided by ANZSVS) that are more appropriate for specific surgical specialties.

Whether the inclusion of minimum qualifications for the provision of ultrasound services in regulation would have a detrimental regulatory impact on your discipline

While RACS supports minimum standards, it does not believe that a minimum qualification is required for the reasons outlined above. There is some concern that minimum qualifications for the provision of ultrasound services may have a detrimental impact on the provision of some surgical services (i.e. rural and remote areas) and RACS would request further engagement (particularly with specialty societies who administer training programs) if this were likely to occur.

An indication of the number of Fellows who would already have the DDU qualification or another qualification relating to the performance of ultrasound.

In terms of Fellows who hold the DDU qualification, our understanding is that only a small number hold the diploma noting that we do not hold a registry of this information.

RACS would like to thank the Department of Health for its invitation to provide a submission to its inquiry into clarification of minimum qualifications for the provision of ultrasound services under Medicare. We look forward to receiving a report on the outcome of this review and working with Commonwealth and State Governments to improve the sustainability of surgical services in the future.



20 March 2017

Mr Philip Truskett AM
President and Chair of Council and Executive
Royal College of Surgeons
Via email: college.president@surgeons.org

Dear Mr Truskett

Clarification of minimum qualifications for the provision of ultrasound services under Medicare

Transrectal ultrasound of the prostate and urinary tract ultrasound (ultrasound scan of bladder and kidney) are the commonest ultrasound scans performed by urological surgeons.

The SET syllabus/modular education program for urology has a dedicated uro-radiology module which includes training in the performance, interpretation and reporting of prostate ultrasound, bladder ultrasound, renal ultrasound including image guided renal access for urinary stone surgery. The Board of Urology considers that the training provided by SET is equivalent to the requirements of a CCPU module.

The Urological Society of Australia and New Zealand (USANZ) also notes that there are already robust regulations in place governing all practices that provide ultrasound imaging via the Diagnostic Imaging Accreditation Scheme and Location Specific Provider Number.

USANZ does *not* believe that a DDU is relevant or necessary for the general urologist performing (non-referred) bedside focussed ultrasound examination of the bladder or kidney to assist in the management of their patients or in performance of transrectal ultrasound of prostate and prostate biopsy.

USANZ recognises that a small number of urologists with subspecialty interests may wish to obtain further training and qualification in ultrasound as they provide referral subspecialty urology services (eg pelvic floor imaging or vascular imaging for sexual dysfunction) For these individuals, qualifications such as the CCPU or DDU may be appropriate. As such there are currently only 4 or 5 urologists who hold a DDU or equivalent qualification relating to performance of ultrasound.

The majority of urologists and likely nearly all surgical wards in Australia and New Zealand currently perform bladder ultrasound scans. The inclusion of minimum qualifications for these (self-referred) bedside examinations will have a detrimental regulatory impact on day to day patient care. More importantly such measures will negatively impact on timely care for urology patients and significantly *increase* cost to the health system (due to the need to refer patients to radiology practices for these focussed examinations)

Yours sincerely

Peter Heathcote

President

Urological Society of Australia and New Zealand



Australian and New Zealand Association of Paediatric Surgeons Inc

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24 March 2017

Assoc Prof David Hillis FRACS (HON)
Royal Australasian College of Surgeons
College of Surgeons' Garden
250-290 Spring Street
EAST MELBOURNE VIC 3002

Dear Assoc Prof Hillis

Ultrasound Services under Medicare

Thank you for the opportunity to provide feedback.

Presently the Paediatric Surgery syllabus does not include any specific training relating to the performance of ultrasound, and where used it would only be reported within the operative procedure where it is utilised.

Ultrasound services are used intraoperatively in a number of surgical procedures which could be broadly described as intraoperative, anatomy visualisation and guidance such as solid organ resection, percutaneous access (biopsy or insertion vascular access line) or the instillation of local anaesthesia.

I am aware of Paediatric Fellows having completed training in ultrasound services but am unaware of the extent of this or whether any qualifications have been obtained relating to the performance of ultrasound. There may be some Paediatric Fellows with the Diploma in Diagnostic Ultrasound (DDU).

Any inclusion of minimum qualifications for the provision of ultrasound services would depend on the criteria and therefore would reserve comment on these matters.

If you need any further information or seek clarification, please do not hesitate to contact me.

Yours sincerely

Mr Philip Morreau F.R.A.C.S.
President
Australian and New Zealand Association of Paediatric Surgeons (ANZAPS)

Australian and New Zealand Society for Vascular Surgery
Submission to
Commonwealth Department of Health to provide comment and
clarification of the minimum qualifications for the provision of
ultrasound services under Medicare

- **If the medical training syllabus for any surgeon specialities included training in the performance and reporting of ultrasound;**

Yes. In Vascular Surgery a clearly defined and rigorous training requirement is outlined in the RACS Vascular Surgery Training Syllabus [see below] which is in line with ASUM training requirements for the Vascular DDU, and requirements for FRANZCR. These include theory, conduct, and interpretation of ultrasound-based vascular investigations both within the context of clinical examination and as an isolated imaging modality for the purposes of reporting referred services. Vascular Ultrasound remains an important component of modern vascular surgical practice. Many, if not all, vascular surgeons have been trained to have both a practical and theoretical involvement in the use of ultrasound.

We are unable to comment definitively on the training syllabus for specialties outside Vascular Surgery, but we recognise that it is increasingly common for specialties in disciplines such as Breast and Endocrine Surgery to engage in bedside or clinic-based small parts ultrasound to supplement clinical examination or to perform minor procedures such as needle aspiration of breast and thyroid cysts. Endoanal ultrasound is increasingly being performed by Colorectal Surgeons, as is endobronchial ultrasound by thoracic surgeons. Intraoperative ultrasound for liver lesion localisation is also being performed by hepatobiliary surgeons, and similarly by urologists for intraoperative localisation of renal tumours. It is unclear to us what formal training is available for these tasks but in most cases they do not include reporting of referred imaging requests. In some cases this is learnt as part of the sub-specialty Post Fellowship Education and Training program and in others through non-RACS managed courses and qualifications such as the ASUM CCPU.

Below is the current assessment requirement for all vascular surgical trainees. In the Part 2 examination ultrasound imaging and interpretation forms a significant part of the examination.

- **Alternative specific ultrasound qualifications are appropriate for any surgeon specialities (if so, please specify)**

Vascular surgeons may also possess a DDU (vascular) however with the inclusion of a minimum requirement in the training it is felt that the DDU is redundant. Formal qualifications such as the ASUM DDU(Vasc) and the FRACS(Vasc) Ultrasound Syllabus is intended to provide equivalency to FRANZCR requirements for ultrasound practice as an imaging practitioner and supervising physician in order to provide referred reporting services for vascular investigations. Qualifications such as the ASUM CCPU and informal qualifications from other providers are intended to supplement clinical examination at the bedside and would not usually prepare practitioners for independent reporting for referred services.

➤ **Whether a Diploma in Diagnostic Ultrasound (DDU) limited to the specific service type is relevant**

It is relevant however see the above response. The DDU (Vasc), FRACS (Vasc) and FRANZCR programs are recognised as appropriate qualifications for an Ultrasound-based Vascular Imaging Practice. The FRACS (Vasc) training requirements for ultrasound is considered equivalent to DDU and reflective of current standards by ANZSVS.

➤ **Whether the inclusion of minimum qualifications for the provision of ultrasound services in regulation would have a detrimental regulatory impact on your discipline**

No. The ANZSVS would support a minimum standard. The ANZSVS contends that vascular surgeons should set the standards in the provision of vascular ultrasound. Minimum qualifications for the provision of ultrasound services would be acceptable to ANZSVS, as long as such qualifications included the ASUM DDU (Vasc), FRACS (Vasc) and FRANZCR, and appropriate grandfathering provisions were available for Fellows with accumulated experience in Vascular Imaging.

➤ **Give an indication of the number of Fellows who would already have the DDU qualification or another qualification relating to the performance of ultrasound.**

RACS and ANZSVS do not maintain a list of all Fellows with DDU qualifications. Nevertheless since 1998 all FRACS (Vasc) Fellows have met training requirements for vascular imaging (ie DDU equivalent). We do not have a record of the number of fellows with a DDU, however ultrasounds in the form of vascular laboratories are now associated with most if not all vascular surgical practices in both inpatient and outpatient settings. The vascular surgeons operate as the medical directors in these settings and all are now required to be accredited facilities

➤ **Continuing Professional Development And Advocacy As It Pertains To Vascular Ultrasound In Australia And New Zealand**

The ANZSVS decries and employs vascular ultrasound as an important component of its ongoing professional development activities and education. The ANZSVS has been represented on imaging committees associated with the development of the accreditation of practices providing diagnostic imaging under Medicare and in fact wrote some of the Standards. The ANZSVS was largely responsible for the Imaging Protocols Standard when these Standards were being developed by the Accreditation Working Party of which the ANZSVS was a member. Ironically at the same time the ANZSVS wrote a Qualifications Standard relating to qualifications required for imaging and vascular ultrasound in particular but it was not taken up by the working party at that time. The ANZSVS holds vascular imaging workshops/sub conferences at its scientific meetings (for example there was a full day workshop/conference attached to its 4 day Annual Scientific Conference held in Sydney in August last year (2016). The ANZSVS continues to be involved in government / department of health diagnostic imaging governance and has a seat on the Diagnostic Imaging Advisory Committee.

ADDITIONAL INFORMATION:

For further reference we have included the current training requirement for the trainees to complete their ultrasound requirements.

The objectives in the training of the DDU can be viewed at:

[http://www.asum.com.au/files/public/Education/DDU/Syllabus/DDU-\(Vascular\)-Syllabus.pdf](http://www.asum.com.au/files/public/Education/DDU/Syllabus/DDU-(Vascular)-Syllabus.pdf)

Ultrasound requirements for Fellowship in Vascular Surgery

Logbook

Candidates shall provide evidence of training in the form of a logbook. This training should include 100 hours of ultrasound scanning, and should cover a wide variety of ultrasound examinations.

Candidates should be able to perform the following scans:

- Carotid duplex
- Venous mapping (for conduit)
- Lower limb arterial duplex
- Treadmill test
- Bypass graft surveillance
- DVT scan
- Abdominal aorta scan for AAA

Candidates should have some experience in, but not necessarily be able to perform:

- Venous insufficiency duplex
- Renal/mesenteric artery duplex
- Aorto-iliac duplex

Casebook

Trainees are required to complete a casebook containing ten cases selected to illustrate the breadth and quality of the trainees' work. Cases involving an examination reported as normal should not be included.

In preparing the casebook, which is to be constructed and compiled by the trainees themselves, each case presentation should give details of the request, copies of a limited number of images in digital format, a copy of the report issued, and a short commentary, indicating how the examination has assisted in diagnosis and/or management, and mentioning any operative or pathology follow up.

Modules

One of the online learning modules for trainees is entitled 'Principles of Imaging'. A large component of this module is devoted to vascular ultrasound, and must be completed as part of ultrasound training.

Fellowship Examination

Vascular ultrasound is an integral part of the FRACS (Vasc) exit examination. It forms a significant part of the Imaging viva-voce examination. Candidates may also expect questions on vascular ultrasound in the written examination, in particular relating to:

- Ultrasound physics
- Biological effects
- Artefacts and their cause
- The clinical value and limitations of ultrasound



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4 April 2017

Ms Ashleigh Bouvet
Policy Officer, Professional Standards
Fellowship and Standards Division
Royal Australasian College of Surgeons
250 - 290 Spring Street
EAST MELBOURNE VIC 3002

Dear Ashleigh,

Re: Feedback on provision of ultrasound services under Medicare

Further to your email of 9 March and feedback previously provided by Professor David Fletcher, the GSA Board met on 28 March 2017 to discuss the provision of ultrasound services by General Surgeons.

It was noted at the Board meeting that Vascular Surgery requires 100 hours of scanning and an ultrasound case book including 10 cases, as part of the requirements of their SET Program. No such requirement exists in the SET Program in General Surgery, although the use of ultrasound is referenced throughout the General Surgery curriculum.

We recently surveyed the GSA membership with regards to the provision of ultrasound services, and asked whether the inclusion of minimum qualifications for the provision of ultrasound services under Medicare would alter the practice of our members.

I have attached for your reference the summary of results from 119 members who responded to the survey, which was open for 6 days, Also included are all open ended comments.

A brief overview of the survey results is as follows:

- 51% of all respondents perform diagnostic ultrasound as part of their practice
- only 12.6% of all respondents had a higher qualification in ultrasound provision
- less than 30% of respondents claim for ultrasounds performed under the MBS

Interestingly, of those respondents who do perform diagnostic ultrasound, 46% had a sub-specialty interest in Breast Surgery, and 48% in Endocrine Surgery. Of all those performing diagnostic ultrasound, 41% noted that the inclusion of minimum qualifications for the provision of ultrasound services under Medicare would indeed alter their practice.

Should you require any further information, please do not hesitate to contact me.

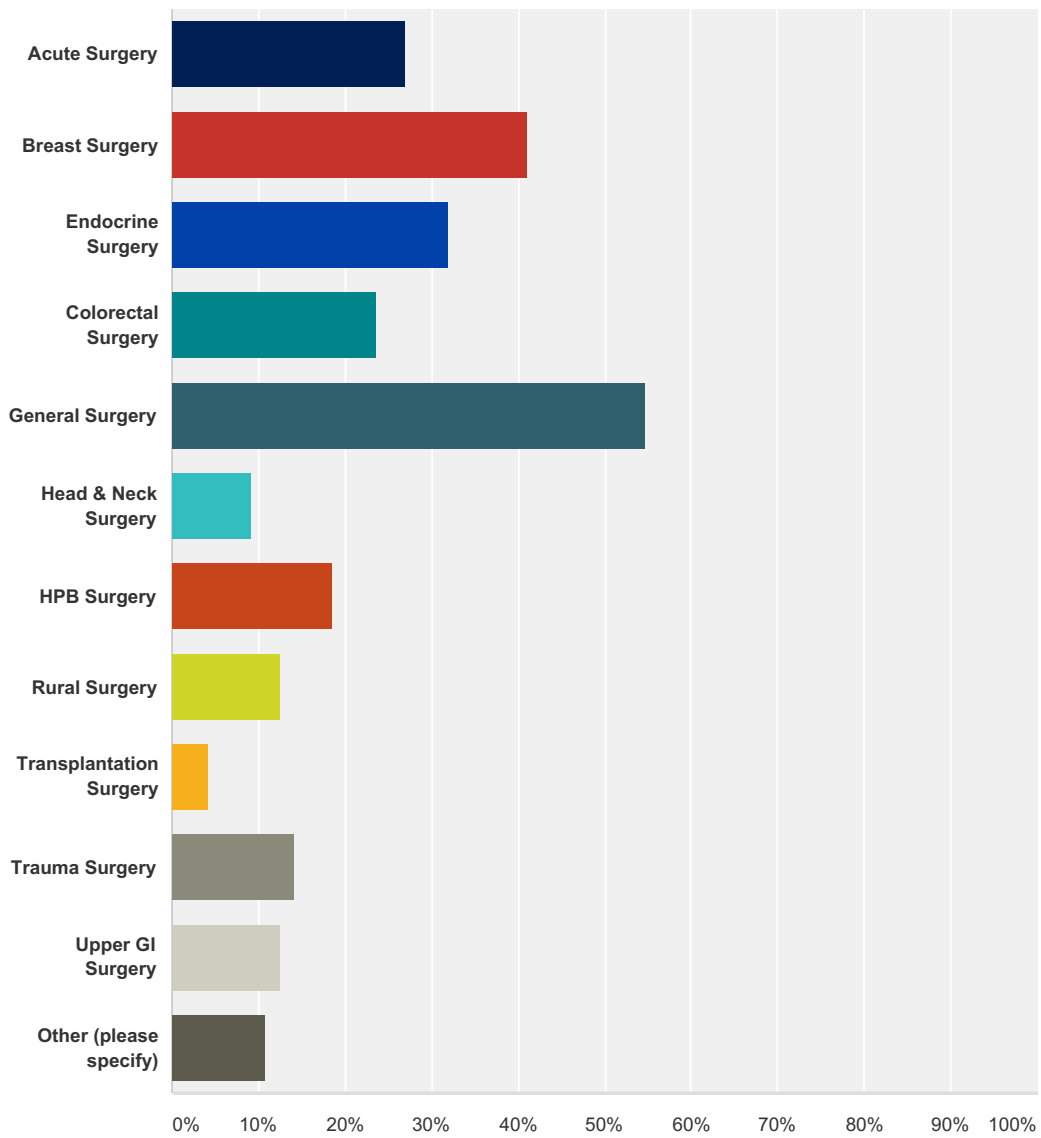
Kind regards,

Sarah Benson
Executive General Manager

cc Mr Michael Donovan, FRACS President
Prof David Fletcher FRACS RACS Specialty Elected Councillor, General Surgery

Q1 What are your sub-specialty interests?

Answered: 119 Skipped: 0



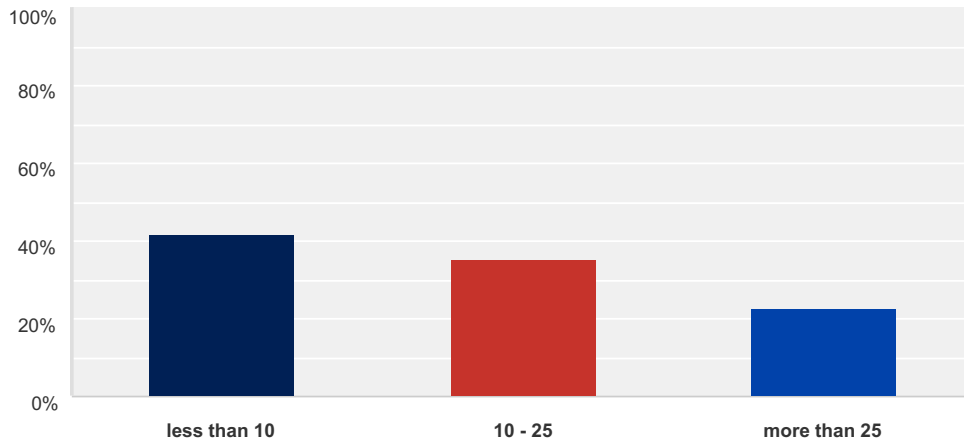
Answer Choices	Responses
Acute Surgery	26.89% 32
Breast Surgery	41.18% 49
Endocrine Surgery	31.93% 38
Colorectal Surgery	23.53% 28
General Surgery	54.62% 65
Head & Neck Surgery	9.24% 11
HPB Surgery	18.49% 22
Rural Surgery	12.61% 15
Transplantation Surgery	4.20% 5
Trauma Surgery	14.29% 17

Upper GI Surgery	12.61%	15
Other (please specify)	10.92%	13
Total Respondents: 119		

#	Other (please specify)	Date
1	Bariatric surgery	4/1/2017 3:29 PM
2	Bariatric Surgery	3/31/2017 10:10 AM
3	Sports Med	3/30/2017 8:20 PM
4	Bariatric	3/30/2017 9:59 AM
5	Bariatric surgery	3/29/2017 9:51 PM
6	Hernia surgery	3/29/2017 9:36 PM
7	Bariatric, melanoma	3/29/2017 8:43 PM
8	Abdominal Wall	3/29/2017 7:10 PM
9	Thoracic	3/29/2017 2:29 PM
10	surgical oncology	3/29/2017 1:39 PM
11	Surgical oncology	3/29/2017 11:49 AM
12	Sarcoma and melanoma	3/29/2017 11:42 AM
13	Surgical oncology	3/29/2017 11:25 AM

Q2 How many years post-FRACS are you?

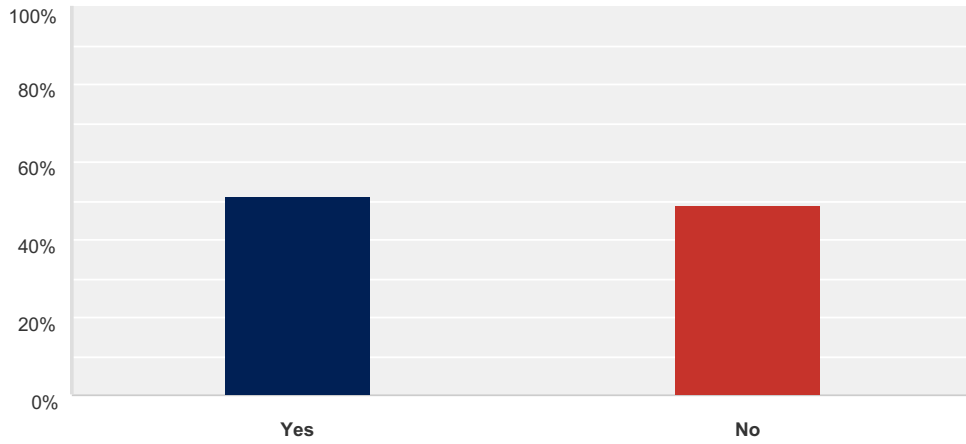
Answered: 119 Skipped: 0



Answer Choices	Responses
less than 10	42.02% 50
10 - 25	35.29% 42
more than 25	22.69% 27
Total	119

Q3 Do you perform diagnostic ultrasound as part of your practice?

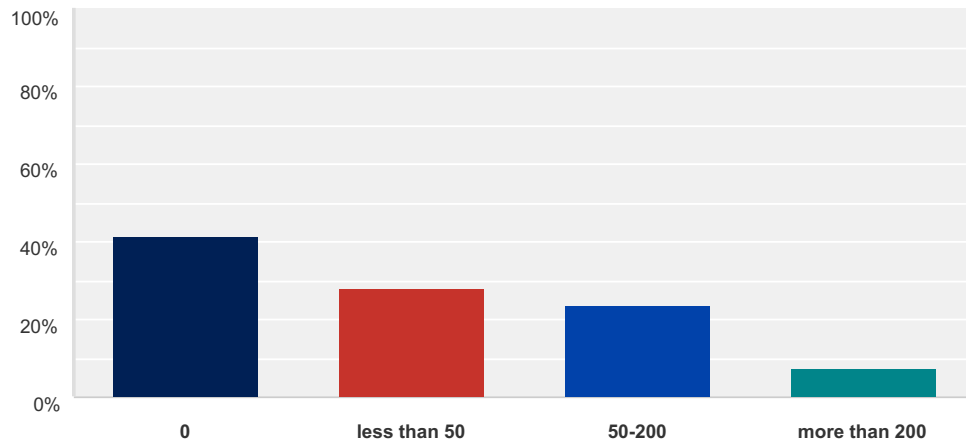
Answered: 119 Skipped: 0



Answer Choices	Responses	
Yes	51.26%	61
No	48.74%	58
Total		119

Q4 How many ultrasounds would you perform per year?

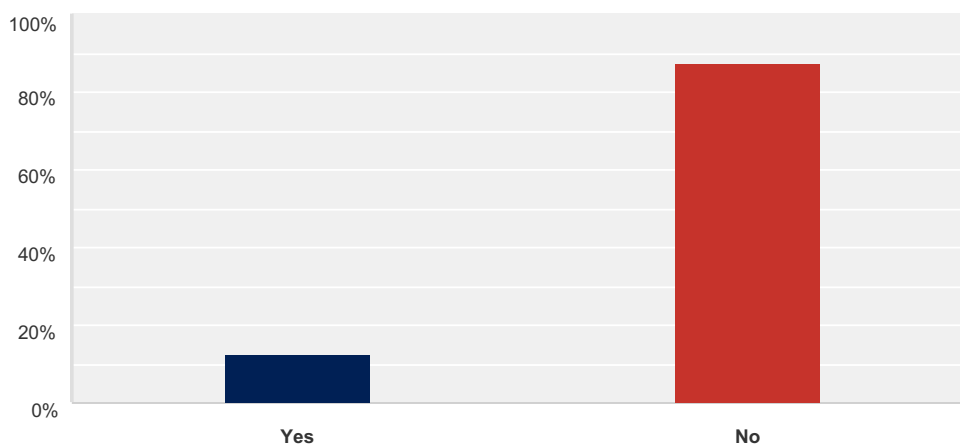
Answered: 119 Skipped: 0



Answer Choices	Responses	
0	41.18%	49
less than 50	27.73%	33
50-200	23.53%	28
more than 200	7.56%	9
Total		119

Q5 Do you have a higher qualification in ultrasound provision? e.g. ASUM Diploma of Diagnostic Ultrasound

Answered: 119 Skipped: 0

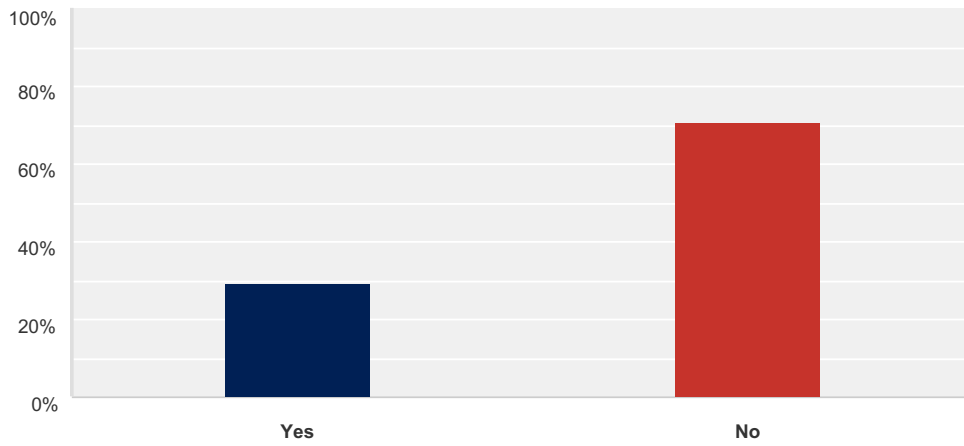


Answer Choices	Responses	
Yes	12.61%	15
No	87.39%	104
Total		119

#	If yes, please specify:	Date
1	CCPU (ASUM)	4/4/2017 3:20 PM
2	Australian Institute of Ultrasound Course on Vascular Access	4/2/2017 11:53 AM
3	CCPU	3/30/2017 8:00 PM
4	Conjoint Committee certification for EUS	3/29/2017 9:32 PM
5	CCPU breast and CCPU thyroid	3/29/2017 9:22 PM
6	CCPU	3/29/2017 8:52 PM
7	Completed U/Sound course in Brussels during World Congress of Surgery	3/29/2017 5:57 PM
8	CCPU	3/29/2017 5:15 PM
9	DDU Vascular	3/29/2017 4:11 PM
10	I think I have ASUM but not 100% sure. I teach an annual Us course.	3/29/2017 3:08 PM
11	German board qualification	3/29/2017 2:18 PM
12	CCPU; Approved for Diagnostic Imaging Accreditation Scheme (DOHA)	3/29/2017 2:07 PM
13	In process of obtaining one	3/29/2017 1:37 PM
14	DDU	3/29/2017 11:46 AM
15	I have done the ASUM courses and did US on all my patients for 2 years of post grad fellowship in high volume centres	3/29/2017 11:28 AM

Q6 Do you claim ultrasounds performed under the Medicare Benefits Schedule?

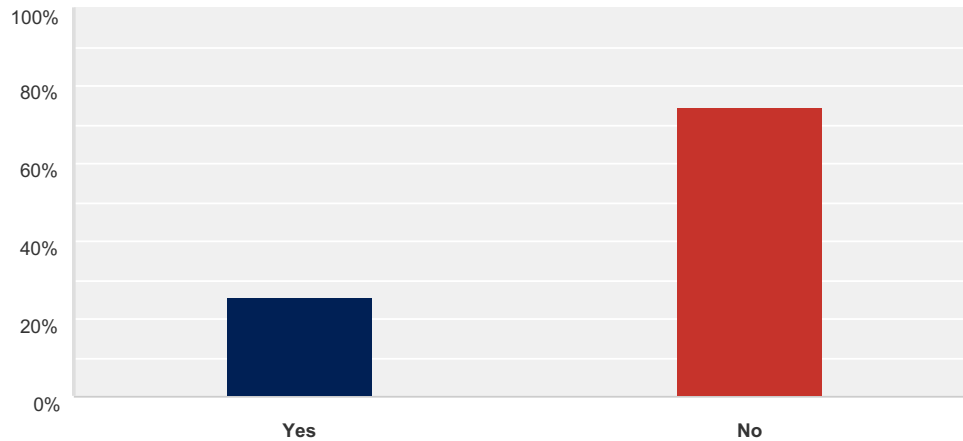
Answered: 119 Skipped: 0



Answer Choices	Responses	
Yes	29.41%	35
No	70.59%	84
Total		119

Q7 Would the inclusion of minimum qualifications for the provision of ultrasound services under Medicare alter your practice?

Answered: 118 Skipped: 1



Answer Choices	Responses
Yes	25.42% 30
No	74.58% 88
Total	118

#	If yes, please specify:	Date
1	I would need to finish my asum training	4/2/2017 1:21 PM
2	I will have to stop doing intraoperative ultrasounds on the liver	4/2/2017 11:53 AM
3	i don't charge now as i am providing the service in a public hospital. but if i had a private practice it may very well stop me from providing the service.	4/1/2017 12:49 PM
4	I would then be unable to perform endoanal ultrasound, a key part of the management of functional colorectal patients. Colorectal surgeons manage all the patients in our functional colorectal unit, seeing about 300 patients per year. This would not be possible if higher qualifications are required.	4/1/2017 11:34 AM
5	DO MORE TRAINING COURSES USE MORE US	4/1/2017 12:01 AM
6	I don't have any diploma and wouldn't be able to offer this service to my patients	3/31/2017 6:42 PM
7	I would have to obtain those Qualificatins	3/30/2017 8:20 PM
8	I perform intra-operative ultrasound which is important for localising tumours and relationship to structures. Without this many procedures would be less safe. An example was the discovery of a clot in the left portal vein after removing the right liver. If left the patient would have gone into liver failure and died	3/30/2017 11:55 AM
9	I woul continue to use, but would need to gain extra qualification	3/29/2017 9:52 PM
10	I would have to get the qualifications	3/29/2017 8:43 PM
11	i am thinking of starting USS scans in my practice.	3/29/2017 8:16 PM
12	I may need to obtain a qualification to be able to claim from medicare	3/29/2017 7:23 PM
13	It would depend upon what qualification is recognised	3/29/2017 5:57 PM
14	I perform 3D endoanal ultrasound under general anaesthetic as part of my specialist colorectal practice	3/29/2017 3:59 PM
15	I am unsure. Would have to check if I have ASUM certificate.	3/29/2017 3:08 PM
16	I would be forced to do a qualification which would be no bad thing	3/29/2017 2:29 PM
17	However it would depend on what those minimum requirements were.	3/29/2017 2:07 PM

18	Potential to charge a reasonable fee	3/29/2017 1:23 PM
19	I would have to stop doing endoscopic ultrasound for oesophageal cancer, and this would lead to this service being closed in my State	3/29/2017 12:24 PM
20	I do intra operative ultrasound prior to liver resection...could not operate if I was prevented from doing this.	3/29/2017 11:59 AM
21	Same number of investigations. Increase cost for compliance	3/29/2017 11:33 AM
22	I would still need to do pre,peri and post op ultrasounds to provide the level of care for my patients.	3/29/2017 11:28 AM

Q8 Please provide any other comments or feedback you may have:

Answered: 43 Skipped: 76

#	Responses	Date
1	While I do not usually bill for US, I have done this on occasion. I think that some kind of qualification provides evidence of experience and ability should there be a patient complaint. I think that surgeons need to be careful about the term "diagnostic" US, I prefer to use my US for screening a lesion/aiding clinical diagnosis/performing aspiration of lesions or seromas/follow up. "Diagnostic" may imply a level of expertise or quality of equipment that most surgeons do not have.	4/4/2017 3:20 PM
2	I use intraoperative ultrasound on the liver for diagnosing liver secondaries during surgery. I also use the ultrasound to guide vascular access to place an internal jugular portacath. I have done a course for the second. There is no course for the first.	4/2/2017 11:53 AM
3	All the colorectal surgeons practising endoanal ultrasound have performed ultrasound during their post-fellowship training and have attended a course on endoanal ultrasound as well. I do not feel that a formal higher qualification will add anything to the quality of the ultrasound performed - it will simply be detrimental as it will make it more difficult for these patients to be evaluated in our functional clinics, where we already perform manometry/sensation testing/pudendal nerve testing/EMG etc.	4/1/2017 11:34 AM
4	I have 15 years of experience with clinician performed ultrasound, having done 2 all day workshops prior to commencing ultrasound. I did this with the knowledge and support of my local radiologists. Any cases I am not sure about I send to the radiology practice. Ensuring adequate training and auditing of practice is important, but forcing specialists to obtain one particular diploma is not the preferred option in my opinion.	3/31/2017 6:42 PM
5	I have taught U/S to my students for ten years, I have drained gall adders - empyemas because no radiologist is available to us for intervention in our hospital. I use U/S for venous/ arterial access, it is a matter of necessity when the nearest radiologist after hours is 3 hours away and they always say no to transfer. U/S has become part of my armaterium bot 1. I don't charge for it and if I can get a radiologist to review the patient for formal study then that is the report we use. I find it disturbing the FACEMS in our CAS do a bedside study and it is regarded as truth when I watch these " trained U / S practitioners and they have no idea of surgical pathology. Mind you if they stuck to FAST and access the patients would be safer I would use the U /S on an acute on take round on at least 20% of the new patients just to assist our diagnosis.mas always U/S is very much in the eye of the operator	3/30/2017 8:20 PM
6	US is integral to breast and endocrine practice, to a lesser extent general surgery. proper training and guidance is important to uphold the standard of practice.	3/30/2017 8:00 PM
7	I do not perform ultrasound in non-operative patients.	3/30/2017 11:55 AM
8	I believe that U/S practice in General Surgery should left for a qualified radiologists to do. We are lucky in Australia to have a high standard radiology practice in both the public and the private sectors and I see no need for the surgeons starting performing U/s practice!	3/29/2017 11:19 PM
9	I believe ultrasounds should be done by qualified sonographers	3/29/2017 10:36 PM
10	While I do not have a formal qualification I have attended ever so ultrasound workshops in breast and Endocrine ultrasound	3/29/2017 9:52 PM
11	I would love to get formal training in US and have access to bedside US in my hospital	3/29/2017 9:51 PM
12	I don't charge extra. I use it for adjuncts, nerve blocks post op, wound TAP blocks, looking at hernias,FAST scans	3/29/2017 9:23 PM
13	Surgeons practising Ultrasound should be trained and have a suitable qualifications before claiming Medicare benefits.	3/29/2017 9:22 PM
14	Need to have grandfather clause for those surgeons already performing ultrasound for many years if there is a push for external qualification,	3/29/2017 9:16 PM
15	The ultrasound is used during staging operations.	3/29/2017 8:53 PM
16	Qualifications for surgeons are not very specific and hence not very helpful to clinical practice. There is no designated CPD or update for CCPU available that is appropriate to my practice.	3/29/2017 8:52 PM
17	Chance for people claiming \$\$ without evidence that it will benefit patients in certain settings...no formal on-going audit and credential review by an independent third party to ensure that it will benefit patients' care and not the "operators'" pockets.	3/29/2017 7:00 PM
18	I used to use U/S introperatively for liver and pancreatic resections. I got by but additional training would have been helpful.	3/29/2017 6:20 PM
19	I would advocate for formal courses in USS with appropriate certification	3/29/2017 5:38 PM

20	Claim lowest fee. Usually around 35 dollars	3/29/2017 5:15 PM
21	I have attended ultrasound courses but no official diploma	3/29/2017 5:14 PM
22	While I don't use it I think it could be regarded as an extension of the physical exam by surgeons. In thyroid practice I'm often concerned that ultrasound causes more harm than good.	3/29/2017 5:05 PM
23	The interpretation of endo anal ultrasound is a colorectal specialist skill and I was trained in this as part of my colorectal training board requirements	3/29/2017 3:59 PM
24	Don't object to minimum qualifications for new credentialling, but experienced practitioners should be grandfathered in.	3/29/2017 3:08 PM
25	I charge for interventional US eg biopsies but not for diagnostic	3/29/2017 2:29 PM
26	I believe strongly USS is an extension of surgeons hands and should be used for abdominal and soft tissue diagnostic reasons in the acute setting. If diagnostic USS are not covered many surgeons would not do them anymore.	3/29/2017 2:18 PM
27	The DOHA already accredit ultrasound user through the Diagnostic Imaging Accreditation Scheme which requires ultrasound operators to meet certain standards in their practice in order to claim the medicare rebate. I do not see the need to add any additional standards part from the ASUM CCPU and the DOHA DIAS .	3/29/2017 2:07 PM
28	for surgeons to be able to bill for ultrasounds they need to demonstrate that their ability to pick up lesions is comparable to a radiologist - ie they have no need for the patient to have a more formal ultrasound by the radiologist.	3/29/2017 2:02 PM
29	I am currently an instructor for RACS US in trauma surgery , St George Hospital. Majority of my diagnostic US is FAST at trauma bay . I have attended FAST course in 2003. I have been practicing bed side , point of care US for 13 years .	3/29/2017 1:49 PM
30	I only perform intraoperative ultrasound of the biliary tract and for staging of HPB cancers (MBS codes 30439 and 30441)	3/29/2017 1:25 PM
31	Many surgeons only practice ultrasound within their own speciality. This would need to be accommodated.	3/29/2017 1:23 PM
32	We have an excellent service provided by our radiologists, However, have been considering getting my own ultrasound scan machine for the bedside at the private rooms	3/29/2017 12:40 PM
33	Radiologists don't do endorectal or endoanal u/s as part of an eua	3/29/2017 12:34 PM
34	I do endoscopic ultrasound for oesophageal cancer. This is skill set that is quite different to other ultrasound examinations. Oesophageal cancer is not high volume, and the people doing it in my State are surgeons. If this is caught up in any changes, then it is likely the service will cease as there won't be anyone else who can do it and provide the information needed for surgical planning.	3/29/2017 12:24 PM
35	I use radiology services to provide diagnostic ultrasound but occasionally use US in clinical practice to plan surgery.	3/29/2017 12:18 PM
36	I only perform inteoperative liver ultrasound.	3/29/2017 12:09 PM
37	Nil	3/29/2017 12:09 PM
38	I use intra operative ultrasound to assist in liver and pancreatic surgery, as well as tumour ablation. I would still perform ultrasound if non MBS, as it is a part of the surgical procedure.	3/29/2017 12:00 PM
39	I think U/S can be performed by surgeons in very limited, specific, circumstances with appropriate training (e.g U/S Thyroid) but knowing how operator dependant the technique is and the seeing variation in quality of ultrasonography even amongst Radiologists I think some sort of qualification is required.	3/29/2017 11:42 AM
40	I strongly believe that General Surgery Training should provide competency in the use of abdominal, neck and breast US as well as its used for surface lesions. The FRACS should be acceptable as a minimum competency for the practical use of US (although it does not achieve that at present) If not GSA should establish an US training course with simulations included that can be accredited. We should not abrogate our responsibility in teaching our trainees and surgeons in the use of this much valued but under utilised technology.	3/29/2017 11:34 AM
41	Usually perform ultrasound in theatre, especially when no radiologist or sonographer is available to do specimen ultrasound.	3/29/2017 11:31 AM
42	Having to jump through yet another hoop, to provide a complete level of service for my patients that I have already been doing for some time, is frustrating.	3/29/2017 11:28 AM
43	Only use in public practice to confirm breast lesions or occasional lymph node assessments.	3/29/2017 11:25 AM

The Australian and New Zealand Society of Cardiac and Thoracic Surgeons

ABN 44 503 186 462



30 March 2017

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ANZSCTS / RACS response to Diagnostic Imaging Advisory Committee to MBS

Dear David

Thank you for the opportunity to contribute to the RACS response. This is a most important matter for RACS for the future of surgical services. Please provide our full response to the Primary Care and Diagnostics Branch, Medical Benefits Division.

Please find our response:

Summary

- a.) All surgical specialties are encouraging training in ultrasound; but none mandate ultrasound training, or provide a compulsory training curriculum, or formal assessment or credentialing as part of surgical training at present. The same lack of formal credentialing applies to cardiology and radiology specialties. Subspecialisation in ultrasound practice is usually by completing specific fellowship training experience. It is very likely that ultrasound training will be incorporated into surgical training in the foreseeable future.
- b.) *Threshold level of qualification:* A university Postgraduate Certificate, Diploma or Masters of clinical ultrasound (or equivalent) is an appropriate training path for medical practitioners and is already approved in many colleges of specialty medicine. Shorter practical skills based courses are also appropriate from the University of Melbourne or other providers for the acquisition of practical skill in performing an ultrasound examination. Specifically, the DDU (diploma of diagnostic ultrasound from the Australian Society of Medicine (ASUM)), is not considered the ideal for medical practitioners; rather it is primarily designed for non-medical sonographers, who staff diagnostic laboratories performing standardized ultrasound examinations as their sole practice. **Clinical ultrasound examinations** are medical practitioner performed ultrasound examinations as part of their clinical assessment of their patient in order to improve the diagnostic fidelity, and base decision and management on the integration of their clinical and ultrasound assessment. We consider the level of a university **postgraduate Certificate** to be appropriate for MBS reimbursement. For the smaller cohort of specialists that take responsibility for and report on a **laboratory diagnostic ultrasound service**, where the express purpose of the laboratory is to provide the highest level diagnostic fidelity, then we consider a much higher level of training being required at a **postgraduate Masters** level to be appropriate for MBS reimbursement.
- c.) *DDU:* We do not believe that the DDU (as provided by ASUM) as being the most appropriate for medical practitioners. This is because this program does not deliver the core knowledge in a teaching format; rather provides an outline curriculum; with practical skill of ultrasound examination and knowledge acquisition being the responsibility of the student. It also relies on external student self-referred supervisors for large number of clinical studies. For cardiac DDU this requires 840 supervised scans including 600 transthoracic, 100 transoesophageal, 100 stress echocardiography and 20 intraoperative studies with no variation according to actual practice conditions. For vascular DDU 600

clinical scans are required in abdomen, lower limb, renal, mesenteric, DVT, venous insufficiency and ultrasound guided vascular access. This commitment may require a break in the surgical training program entirely of about a year and thus add to the overall length of surgical training (.e.g cardiothoracic 7 years vs. 6 years), and would effectively prevent many trainees and most consultant surgeons from gaining access to MBS reimbursements.

This is distinct from the provision of high level expert diagnostic ultrasound as would be the case for a purpose diagnostic laboratory – where the professional technician (non-medical) sonographers have generally completed the DDU from ASUM. For the doctor who is overseeing the work of the sonographers and taking clinical responsibility for the images, diagnoses and quality of that diagnostic fidelity should have qualifications at a higher level of training. We consider that such doctors should have a university postgraduate Masters level of qualification in order to attract MBS reimbursement.

- d.) For RACS Fellows, there would be very few that have the DDU from ASUM; and vascular surgery no longer requiring trainees to complete this program. Consequently, were the Medical Benefits Division to impose the ASUM DDU level as the minimum threshold, almost all surgeons would be excluded. Further the time taken to complete this program post Fellowship, would eliminate almost all surgeons as it would require an interruption to their surgical practice for an extended period of time. RACS does not consider that their membership should be required to undertake the DDU in order to obtain MBS reimbursement and hence would result in substantial disadvantage to Fellows.
- e.) The ASUM DDU is not optimized for clinicians. A significant part of the curriculum is not necessary for the adequate conduct of clinical ultrasound for doctors who have an advanced knowledge of specialty medicine; as distinct from a science graduate pursuing a sonographer career in a defined area of interest where it would be relevant.
- f.) *Conclusion:* The introduction of an imaging based tool to be used in conjunction and in real time as clinical assessment will substantially advance medicine and RACS Fellows should be included to the same extent as other medical specialties in access to and utilization of, clinical ultrasound – and be appropriately reimbursed for it. We suggest a university postgraduate Certificate level of training for this minimum threshold. However, for those reporting high end diagnostic laboratory based ultrasound services, we consider that those medical practitioners should have a minimum level of a university Masters level, being higher than the technician sonographers for whom they take overall and clinical responsibility.

Detailed review and recommendations

There are two key issues facing RACS and MBS in regards to the use of ultrasound services in medicine, which is changing the face of medicine radically and substantially enhancing the quality of medical decision making. The two categories of use are:-

1. **Clinical ultrasound usage** (euphemisms include bedside ultrasound, clinician performed ultrasound, point of care (POC) ultrasound, practitioner ultrasound, ultrasound assisted clinical assessment, integrated medical ultrasound, ultrasound guided vascular access, nerve blocks or other invasive procedures such as intercostal catheter insertion. It also includes intraoperative ultrasound use such as epiaortic echocardiography, liver or lymph node ultrasound or transesophageal ultrasound for cardiac surgery).
2. **Laboratory diagnostic service** (relating to the traditional reference diagnostic services such as radiology, echocardiography, vascular laboratory)

Fifteen years ago, clinical ultrasound hardly existed; yet the data that we and others have published (*review of literature at end*) reveal that in the areas of ICU, anaesthesia, Emergency Department, Orthopaedic hip and knee surgery that the impact of using ultrasound by the clinical doctors at the time of clinical assessment and treatment at the bed side leads to:-

1. Clinically important changes in diagnosis of 25-50% compared to traditional clinical assessment alone (even in the presence of all invasive pressure monitoring and radiology studies)
2. This greater diagnostic fidelity leads to clinically important changes in management of some kind in 20-40% of patients
3. Repeat monitoring ultrasound interrogation will lead to better optimization of some therapies by repetitively measuring the short-term response to those therapies

The related and important question is – If ultrasound interrogation in the hands of the treating doctor can have such a profound impact on the quality of clinical assessment and therefore influence treatment adjustment in roughly a third of patients, should not all practitioners be encouraged to benefit from such technologies? If so, why should this be limited to only practitioners of a particular seniority or medical specialty?

Indeed, we envisage that all people involved in health care may be able to utilize ultrasound to the benefit of all patients over time. To this end, we and others are implementing routine ultrasound training into the medical school curriculum such that medical students will graduate with a basic training in clinical ultrasound.

Thus, we expect an exponential growth of basic clinical ultrasound. Any entity including MBS that seeks to prevent uptake of clinical ultrasound *would lead directly to poorer diagnostic and treatment outcomes* for patients. Equally, use of an imaging modality to guide procedures in real time (such as central venous cannulation) substantially enhances *safety* compared to a “blind” technique based on knowledge of anatomy or surface anatomy landmarks.

RECOMMENDATION 1

That no entity within the Australian healthcare sector seek to limit the uptake of ultrasound technologies.

RECOMMENDATION 2

That the Australian healthcare sector seek to mandate the use of ultrasound imaging in conjunction with invasive procedures such as large vessel cannulation in substitution for a conventional “blind” technique.

MBS descriptors - current and future

The current MBS descriptors for ultrasound refer to specific details of the scan itself, rather than to the individual or level of training that the interpreting medical practitioner holds. Presumably the current MBS review is considering alternative descriptors, which is welcomed. However, in a practical sense, is there a “threshold” in the qualification of practitioners to perform the examinations, that should discriminate between MBS reimbursement or not? i.e. is there a scan or level of training whereby use of ultrasound is considered to be part of “routine competent clinical care” and not a separate procedure?

We propose:-

1. We agree that the focus of MBS should change from the description of the scan, to the level of training of the individual practitioner making the MBS claim for reimbursement
2. The training requirements should be generic and be applied uniformly to all medical practitioners without specific craft groups being given privileged rights
3. The MBS rebates should be generic and applied uniformly to all medical practitioners without specific craft groups being given privileged rights
4. All practitioners may use ultrasound technologies in their routine clinical care without sanction but that this should not always receive MBS reimbursement
5. The minimum qualification for a medical practitioner to receive MBS reimbursement for a physician-performed clinical ultrasound examination should be a *university postgraduate Certificate level or equivalent*.
6. The minimum qualification for a medical practitioner to receive MBS reimbursement for a diagnostic laboratory (e.g. echocardiography, radiology or vascular imaging lab) where the express purpose is to provide a standardized high level diagnostic service should be at one level higher in their training than the sonographer technicians that perform the scans. It is recommended that the qualification should be at a university Masters level or equivalent.
7. The remuneration for clinical ultrasound should be equivalent to diagnostic ultrasound as the time taken by the physician to perform the ultrasound examination is much longer than the time taken to review and check the report of an examination performed by a technician.
8. Training may be provided within a College training program provided if it meets the same level as the equivalent university qualification. The colleges may elect to partner with a University to provide an appropriate university qualification.

Should all ultrasound services attract a MBS rebate?

Basic use of clinical ultrasound will become a part of clinical examination, and reflects substitution of current clinical assessment such as the stethoscope, invasive pressure monitoring etc. It is likely that all medical students will graduate in the future with multiple uses of clinical ultrasound at a basic level as core examination skills. Clinical ultrasound examination that reflects basic training *and would be considered as part of routine clinical practice* and as such – not attract MBS reimbursement.

What should determine eligibility for MBS reimbursement?

The principle to discriminate reimbursement should relate to the qualification of the medical practitioner providing the service, rather than the service itself. For the purpose of MBS reimbursement, this discussion will relate *only to medical practitioners*. Such training should ideally be generic rather than craft group or specialty specific. It would be reasonable that subcategories of clinical ultrasound would naturally lend themselves to align with the clinical practice of the individual specialist. For example, all medical practitioners should have a basic skill set in relation to cardiac, lung and vascular access ultrasound. But perhaps only general surgeons may be expected to have high level knowledge of breast and thyroid ultrasound; whereas orthopaedic surgeons or rheumatologists should have advanced knowledge of soft tissue and joint ultrasound.

We recommend against highly specific credentialing for sub-specialty disciplines, as this would be counterproductive to the principle of encouraging wider and more diverse use of clinical ultrasound by doctors.

What constitutes an “advanced user”?

In all areas of ultrasound, the technical (practical / hand) skills of acquiring the ultrasound imaging is not particularly difficult. Although there is an initial steep learning curve, the basic acquisition of images becomes routine. Thus, an intermediate level sonographer will normally have achieved a high level of technical skill in use of the probe and ultrasound equipment. What differentiates the advanced user or “expert” is knowledge - related to the pathology, image interpretation and being able to integrate that with general medical knowledge. Thus what differentiates the novice and intermediate practitioner from the expert is knowledge rather than practical / hand skills.

For the purposes of this discussion, all RACS members that achieve a university postgraduate Certificate level of training (within or outside of the RACS training program) should have:-

1. Competence in the practical skill of acquiring the ultrasound images
2. Advanced knowledge of ultrasound interpretation in their field of clinical expertise
3. Intermediate knowledge of other areas of clinical ultrasound important to the general clinical assessment of patients

Two tiered MBS reimbursement model

We propose a 2 tiered MBS reimbursement program. We will not consider what the actual value of reimbursement would be, other than to consider the time spent by the medical practitioner in performing the service. For example, a physician performed ultrasound requires time to perform the ultrasound examination and integrate the findings into the management plan. This is a different scenario to a diagnostic ultrasound lab where a non-medical technician performs the examination and the medical practitioner reviews the archived study and checks the draft. For every physician performed ultrasound examination, the diagnostic laboratory medical practitioner may report 5 or more studies. *We therefore recommend that all reimbursements be similar in value.*

1. Clinical ultrasound
2. Laboratory ultrasound diagnostic service

RECOMMENDATION 3

That ultrasound use be divided into clinical ultrasound use where the medical practitioner is performing the scan as part of a comprehensive clinical assessment; and a laboratory ultrasound diagnostic service, where the express purpose is the provision of comprehensive diagnostic information

Physician performed Clinical Ultrasound

For clinical ultrasound, the benefit to the community in terms of diagnostic fidelity and treatment improvements related to an intermediate or advanced level of interpretive knowledge. All forms of clinical ultrasound other than for cardiac ultrasound (full diagnostic level of echocardiography) can be completed by the equivalent of a university postgraduate Certificate program. Similarly, the safety benefit to the community is achieved within a postgraduate Certificate program as it should include knowledge on ultrasound guided procedures (such as central venous cannulation).

The important points in this consideration, is that the ultrasound use that will attract a MBS rebate should be:-

1. Performed by the clinician treating the patient
2. No additional reference to another practitioner to “report” the study is required
3. It is performed as part of clinical assessment or management specifically outside of the laboratory diagnostic service pertinent to that type of ultrasound interrogation
4. All intraoperative interrogations performed in conjunction with a surgical procedure would involve the specific interrogation (sterile or otherwise) by a suitably qualified medical practitioner – e.g. surgeon performing intraoperative scanning of the aorta, liver, lymph nodes, or anaesthetist performing cardiac ultrasound, or a combination of practitioners such as with the placement of an intra-aortic balloon pump with ultrasound guided cannulation of the femoral artery and transoesophageal guidance of the positioning of the tip in the proximal descending aorta)

(Note: ultrasound use could occur in a diagnostic laboratory for other purposes – e.g. in a cardiology cath lab, ultrasound could be used to cannulate the artery or if the patient were to suddenly deteriorate, echocardiography could be performed to assess for cardiac tamponade or left ventricular dysfunction). In a diagnostic laboratory, therefore, physician performed clinical ultrasound may occur – but it is not performed by a technician.

A typical university postgraduate Certificate for medical practitioners involves 4 subjects, with tutorials, case studies and assessments, and an overall learning / activities of around 400 hours of learning. The reinforcement component may typically include 100 de-identified “case studies” which are a clinical scenario, de-identified ultrasound images, questions, responses and reattempt of failed questions, summary discussion and model “tutor” answer or report. There are also 4 summative examinations. Importantly graduation also includes a formal testamur from a university. Most colleges of specialty medicine already recognize the University of Melbourne qualification, for example, for their credentialing processes and procedures.

A university Diploma, is a further 4 subjects of learning and a total of 800 hours, about 200 case studies and 8 summative examinations. Currently the only branch of ultrasound of sufficient complexity to warrant a single topic expansion is cardiac ultrasound (echocardiography). Thus, all other specialty ultrasound interrogations will be comprehensively covered by the postgraduate Certificate level of training. However, it is important to understand that the vast majority of clinical decision making for cardiac diagnosis and management is adequate with the postgraduate Certificate level of knowledge. *For the purposes of cardiac clinical ultrasound, the minimum of a postgraduate Certificate level is sufficient.*

RECOMMENDATION 4

That the minimum level of training for reimbursement of clinical ultrasound studies should be a university postgraduate Certificate or equivalent level of training.

Ultrasound Laboratory service

An ultrasound laboratory is a referral service where the ultrasound is performed and a report issued by a third party provider – ie not the physician managing the patient. The typical radiology, vascular or cardiology ultrasound service fits this definition. Uniformly, such services employ professional “technician” sonographers to actually conduct the studies; whereas the medical practitioner taking responsibility for the report, reviews the archived images and draft report that the sonographer prepared. The emphasis is on standardized, comprehensive report for specific scans (e.g. echocardiography, liver scan, DVT scan). The study is rarely performed in real time, almost never at the bed side and the report is usually provided after a time delay. Thus, the role of a diagnostic laboratory service is quite different and distinct from that of the “Clinical Ultrasound” described above.

The “Diploma of Diagnostic Ultrasound - DDU” referred to in the letter from the Medical Benefits Division refers to a self named “Diploma” from a private society (Australian Society of Ultrasound Medicine – ASUM). This entity is not a recognized tertiary university or a College of specialty medicine. Its primary focus is training non-medical (technician) sonographers for employment in diagnostic laboratories. Whilst ASUM provide a framework for sonographer training using a case based apprentice model, this model is not optimized for medical practitioners. This program does not provide the teaching materials but rather a curriculum guide to the areas of knowledge required. The mainstay of training is the conduct of large numbers of supervised cases mostly performed in diagnostic laboratories, and the supervisor is arranged by the candidate themselves. The DDU is not a scalable solution for surgeons, especially those who have completed their training, and already in practice. For a practicing surgeon, the requirement to perform supervised studies in a radiology or cardiology lab just does not fit in with the surgeon’s workflow. Further, it is not a scalable solution as the number of supervisors required to verify the large number of cases are just not available. The number of studies is excessive to the requirements of surgeons who already have advanced anatomical, physiological, pathology, examination, interpretive and treatment knowledge in the field of their specialty. Thus, this training model of the DDU is a major roadblock to surgeons wishing to uptake training in clinical ultrasound. This has been demonstrated already, with the vascular surgeons abandoning the DDU as a suitable qualification.

The specialty groups that are encouraged to do the DDU are radiologists and cardiologists. Their access to caseload and potential supervisors is much greater than for other craft groups as most current diagnostic ultrasound laboratories are either radiology or cardiology. It would therefore not be surprising if these craft groups would prefer the DDU model. It is our expectation that were this model applied to RACS, then very few surgeons (perhaps < 5%) would become eligible for MBS reimbursement. This would result in a detriment to the diagnostic fidelity of surgical specialties in comparison to an appropriate education model in which the majority of surgeons from RACS and their trainees can fully participate. *Hence the Medical Benefits Division should be insisting on clinically relevant training programs.*

RECOMMENDATION 5

The Medical Benefits Division should insist on clinically relevant training programs to the specified University level or equivalent.

Minimum training standard for doctors reporting diagnostic laboratory services

A general maxim of all training standards is the practitioner taking final responsibility for a clinical report should be at least one level of training above those in the service performing the tasks. Such examples are ubiquitous. A “consultant” (specialist) surgeon or physician takes responsibility for the works undertaken by their registrar or resident. Moreover, one registrar does not take responsibility for another registrar’s work unless they are demonstrably senior and been formally authorized to take such responsibility.

Since all diagnostic laboratories employ professional “technician sonographers”, and since the technicians are trained to a level that is somewhere between a university Certificate and Diploma, it should follow that the doctor taking responsibility for their work and diagnostic interpretation should *be one level higher in their training*. Thus, we recommend that in order to attract MBS reimbursement, all medical practitioners that report diagnostic laboratory ultrasound studies should have a university Masters level of certification in order to attract MBS reimbursement. This level of training equates to 1,200 hours of education, reinforcement and assessment. The majority of knowledge acquisition reflects the area of specialty interest being reported (e.g. echocardiography for a diagnostic echocardiography laboratory). With prior expert knowledge, experience or credentials, up to 50% of a course can be recognized under the provisions of prior learning (RPL) at most universities.

Presumably the Medical Benefits Division would phase in change over a year or so, to allow for credentialing requirements to be met in a timely manner. Reporting within a diagnostic laboratory should *not be restricted by specialty craft group*; but rather the completion of training relevant to that area of ultrasound.

RECOMMENDATION 6

That a medical practitioner reporting ultrasound studies from a diagnostic laboratory should have a university Masters level of training or equivalent from a specialty college of medicine.

Should completion of training in a medical specialty be considered sufficient for MBS rebate?

The ubiquitous usage of ultrasound technologies is likely to lead to something of a revolution in the quality of healthcare. This is because of much better rates of diagnostic fidelity and hence likely to result in large

improvements in treatments based on better diagnosis. So, *nothing should impede the uptake of ultrasound technologies across the healthcare sector.*

However, the explosion of the use of clinical ultrasound has paralleled the training of “early adopters” and “enthusiasts”. Now there are many doctors with access to ultrasound technology but without the related training; or middle aged or older clinicians who have refused to learn these new technologies. Further, colleges of specialty medicine have implemented training guidelines or policy documents relating to ultrasound training but have not yet incorporated a fully mandated or comprehensive training package within their training and examination program. Any training in these technologies typically or commonly dependent principally on the enthusiasm and program of the respective site where clinical training occurs; and there is no separate or specific examination or certification. Thus, as of 2017, it cannot be assumed that any college of specialty medicine fully or comprehensively trains their trainees sufficient to reach the minimum standard of a postgraduate Certificate of clinical ultrasound. Neither do any of the medical schools, although within 5 years it is expected that many medical students will graduate with a basic level of ultrasound training (equivalent to completing half a postgraduate Certificate).

It is reasonable to expect that all colleges of specialty medicine will implement formalized training for clinical ultrasound either in conjunction with a university or in isolation within 5-10 years. The primary consideration of these colleges would be to balance the remarkable improvements in diagnostic fidelity, treatment implications of this as well as the flexibility to examine multiple different organs or systems with the same ultrasound machine using minor variations in the technology and training vs. an exhaustive or excessive devotion of time to achieve advanced diagnostic level of knowledge. All training programs will probably provide an optimized training experience to maximize benefit and minimize the impact on the rest of the training in that discipline. This level of training is likely to be at the level of university postgraduate Certificate. Since a specific testamur of training could be important for attracting MBS reimbursement, it is more likely than not that specialty colleges of medicine will wish to collaborate with universities so that their trainee graduates could potentially complete their training with an additional formal qualification in clinical ultrasound.

RECOMMENDATION 7

That Medical Benefits Division examine mechanism to easily verify the level and quality of training.

Should there be a specific sub category descriptor?

Should the medical practitioner be restricted to ultrasound scans only in the clinical area of the primary focus of their postgraduate Certificate? We do not believe that there is benefit to this approach as it would be very difficult to verify and police. Additionally, it may negatively impact on the uptake of ultrasound technologies which may otherwise provide improved diagnostic fidelity and hence improved outcome for the patient.

It may be argued that all “procedure” related ultrasound may require a different descriptor (e.g. ultrasound guided vascular access, intercostal catheter, abscess drainage, breast cyst biopsy, intraoperative epiaortic ultrasound, intraoperative liver ultrasound etc.). Were MBS to consider this appropriate, we would recommend a common item number for all ultrasound guided procedures.

RECOMMENDATION 8

It is recommended that only the two categories of “Clinical ultrasound” and “Laboratory diagnostic ultrasound” be used as descriptors. A possible third descriptor may be “Ultrasound guided procedures and intraoperative use”

Should all “blind” needle procedures no longer attract MBS reimbursement?

There is good evidence that the addition of real time ultrasound imaging during the conduct of a needle placement into any structure as real time visual feedback improves safety. This is because:-

1. The target and needle are visualized simultaneously
2. The needle trajectory may be adjusted in real time according to movement
3. Confirmation of placement of the needle / injectable agent into the target
4. Confirmation of wire placement into the target
5. Detection of anatomical variation prior to needle placement (20% of central venous structures)
6. Confirmation of effect (e.g. drainage of an abscess)

In the UK, ultrasound guided central venous access is mandated and blind puncture is “banned”. We recommend that MBS reimburse ultrasound guided needle procedures and provide a negative incentive for “blind” techniques by not reimbursing them.

RECOMMENDATION 9

That all needle related procedures only receive reimbursement if ultrasound guidance is used in real time with the needle procedure.

Background referenced discussion on the utility and efficacy of clinical ultrasound

Clinical ultrasound changing medicine

Advances in engineering and digital miniaturisation has resulted in availability of ultrasound at the patient’s bedside allowing the opportunity for the physician improve efficiency and safety of clinical diagnosis and percutaneous procedures, which has led to substantial and rapid change in clinical care and education^[1]. The realisation that only a limited number of views may be required to diagnose important pathology, this has resulted in the rapidly expanding use of ultrasound in the acute care specialties of anesthesiology, intensive care, emergency medicine, and surgery where it has evolved from discrete, office- based echocardiographic examinations to the real-time or point-of-care clinical assessment and interventions. Whilst conventional (‘quantitative’) transthoracic echocardiography (TTE) performed by an echocardiography laboratory remains a useful diagnostic tool for non-invasive cardiac assessment, limited availability, cost, and a time-delay between request and result restrict its use^[2,3]. Treating physicians are increasingly performing their own ‘focused ultrasound’ as an aid to initial clinical assessment at the ‘point-of-care’ when required, albeit at a more basic level than the standard conventional ‘comprehensive’ ultrasound (eg. TTE and TOE, abdominal, PICC line insertion).

Transthoracic echocardiography (TTE)

The use of focused TTE at a more basic level by non-cardiology specialties has recently been endorsed by the American Society of Echocardiography^[4] who defined the term focused cardiac ultrasound (FCU). The essential elements of FCU described in this position statement were: performed by the treating physician at the time:- performed in real time during clinical assessment at the bed-side, may be limited in scope and being confined to an assessment relevant to the clinical situation rather than a full or comprehensive examination as would be expected from a diagnostic laboratory. This was ratified earlier by the Cardiac Society of Australia and New Zealand in 2009^[5], where it was stated “The importance of these guidelines will increase with the inevitable migration of echocardiography from the province of cardiology and radiology to emergency medicine, intensive care and anaesthesia”. Since then, FCU has become a necessary skill for a growing number of medical specialties. It has been incorporated into training syllabus of intensive care^[6], emergency medicine^[7] and anaesthesia^[8], all at a focused (not comprehensive) level, but in Australia is currently only mandatory for ICU (FCU); but is likely to follow in other specialties.

Cardiologists initially reported the point-of-care utility of FCU with the introduction of the ‘hand carried ultrasound’ machine, where it improved efficiency of clinical management in both outpatients^[9] and inpatients^[10]. Subsequently clinical utility of FCU to enhance conventional diagnosis has been demonstrated and recommended in assessment of shock in the emergency department^[11] and critical care^[12] settings. An abbreviated ‘qualitative’ study enables convenient separation of significant from non-significant cardiac pathology and helps identify the causes for persistent hypotension, such as altered preload, afterload, pump or valve failure, tamponade or pulmonary hypertension. As FCU is non-invasive, it does not emit radiation, does not require percutaneous insertion of a vascular device or an oesophageal ultrasound probe, it has many advantages over current advanced monitors and diagnostic investigations. It has been reported to have advantages over current technology as an intermittent haemodynamic monitor^[13].

Anaesthetists are increasingly using FCU for perioperative cardiac assessment. Identification of previously unknown cardiac disease alerts the anaesthetist to increased perioperative risk, prompting an escalation in preoperative work-up, perioperative haemodynamic monitoring and management and increased use of postoperative intensive or high dependency care. Conversely, a reassuring FCU enables a step-down in care, preventing unnecessary surgical delay for investigations or referral, and circumventing the need for invasive monitoring during or after surgery^[14]. FCU may assist anaesthetists assess and manage the increasing number of patients presenting to surgery with increased age and increasingly complex co-morbidities When incorporated into routine initial patient assessment of patients at increased cardiac risk in both the elective^[15] and emergency setting. FCU lead to a change in diagnosis and management in approximately 50 % of patients.

Routine preoperative use of FCU in high-risk patients may improve patient outcome. In a retrospective study of 64 hip fracture patients, FCU use was independently associated with a 66% reduction in mortality at 1 month and 50 % reduction in mortality at 12 months compared with controls ^[16]. In a recent pilot study we have conducted, examining the feasibility of a definitive trial and group separation (unpublished data) in 100 hip fracture; patients were randomised to receive or not receive FCU preoperatively. The 30-day composite of death, non-fatal myocardial infarction, stroke, pulmonary embolism or cardiac arrest was 40% less in patients receiving FCU compared with controls. This should be tested in an adequately powered trial. In a recent systematic review ^[17], 18 full text publications on FCU were identified in the anaesthesia or intensive care setting, which consistently reported that FCU was useful in identifying or excluding previously unrecognised or suspected cardiac abnormalities, resulting in frequent important changes to patient management. However, the studies were all observational and prospective randomised controlled trials were lacking.

A common but unwarranted concern is that the increasing use of FCU may cause significant harm by missing or misdiagnosis of important cardiac pathology. In three observational studies FCU was compared with a conventional comprehensive (cardiology) service and there were no such cases ^[18-21]. Concordance of observations was 90% - 95%, which is a similar rate that exists between experts, and the differences in all series were considered not clinically significant. Furthermore, the consistent trend was for FCU to over-estimate (rather than under estimate) the degree of severity of cardiac pathology. A study published by Decara et al. in 2003, demonstrated equivalent diagnosis of cardiac disease by novices to comprehensive TTE in 300 patients in a hospital setting ^[22].

Transoesophageal echocardiography (TOE)

The initial use of TOE intraoperatively to assist the cardiac surgeon (diagnostic level) is well documented in 10 observational studies where TOE changes the diagnosis in around 12±5% and changes surgical management in 10±4% ^[23] and is routine in most centres. TOE is also recommended at a focused level for intraoperative haemodynamic monitoring for non-cardiac surgery ^[24]. Although more invasive than TTE, TOE (focused rather than comprehensive) has a similar role as TTE in diagnosis of the cause of shock in critical care and during anaesthesia and non-cardiac surgery ^[25], also supported by a recent systematic review ^[26]. This has been justified by 29 observational studies ^[23], where the change in diagnosis due to TOE over conventional assessment averages 52±21%, with a consequent change in medical management of 33±19% and surgical management in 16±8%.

Lung Ultrasound

Lung ultrasound (respiratory or thoracic ultrasound) has traditionally been used for evaluation and guidance of drainage of pleural effusion, where it has been shown to reduce iatrogenic injuries from intercostal catheter insertion into adjacent organs ^[27] and societal recommendations are to use ultrasound wherever possible ^[28]. Only recently has its use in bedside diagnosis of respiratory disease become popular, where its popularity has actually exceeded TTE in Australasian ICUs ^[29]. Lung ultrasound is more accurate than chest radiography and approaches the accuracy of conventional CT in the diagnosis of pleural effusion, pneumothorax, pulmonary oedema, consolidation and collapse, abscess, emphysema, and even pulmonary embolus^[30]. Improved accuracy and speed of diagnosis may also reduce the need for chest radiography and CT, reducing exposure of patients and staff to ionising radiation, and reducing the requirement to transport the critically ill ^[31].

Ultrasound guided procedures

Doctors in most specialties commonly perform invasive percutaneous procedures such as central (and PICC) line insertion, lumbar puncture, epidural, chest drain and nerve blocks. Traditional methods rely blind insertion of needles, expert tuition and practice on patients, carrying significant complication rates, morbidity and even mortality. Ultrasound enables the doctor to see and guide the needle, increasing success and avoiding damage. This technique is proven, is becoming standard of care, and increasingly used for many other procedures, even simple IV cannula insertion when veins cannot be seen. The use of ultrasound has been most reported in guidance of intravascular catheters. Over 30 randomised controlled trials consistently have shown that the use of ultrasound improves both efficiency and safety of insertion of central venous and peripheral arterial catheters compared with the conventional 'landmark' technique ^[32]. This has led to several societal position statements recommending the use of ultrasound 'wherever possible' for these procedures ^[33]. There has been much research published on ultrasound-guided nerve anaesthesia (23 randomised controlled trials and two meta-analyses) also demonstrating better efficiency and fewer complications with the use of ultrasound, however superior analgesia compared with conventional methods (landmark and nerve stimulation) is not yet demonstrated ^[23]. From these meta-analyses data, one may conclude that the OR of

bleeding complications for blind radial artery cannulation compared to blind femoral artery cannulation approximates 0.5 (i.e. 50% reduction) in cardiology practice. Whereas ultrasound guided femoral artery cannulation compared to blind femoral artery cannulation has an OR of complications approximating 0.5 (i.e. about the same reduction in bleeding as with blind radial artery cannulation).

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We regard this issue of the utmost importance and would appreciate a response as soon as possible. The Society would greatly appreciate further discussion on this matter, or if offered to be a representative on the Diagnostic Imaging Advisory Committee (DIAC).

Yours faithfully,



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