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June 2021 | Issue 05



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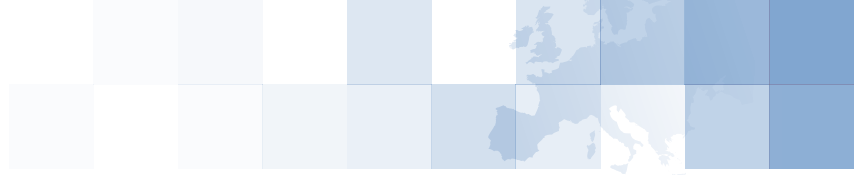
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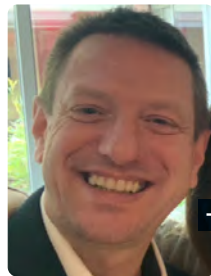


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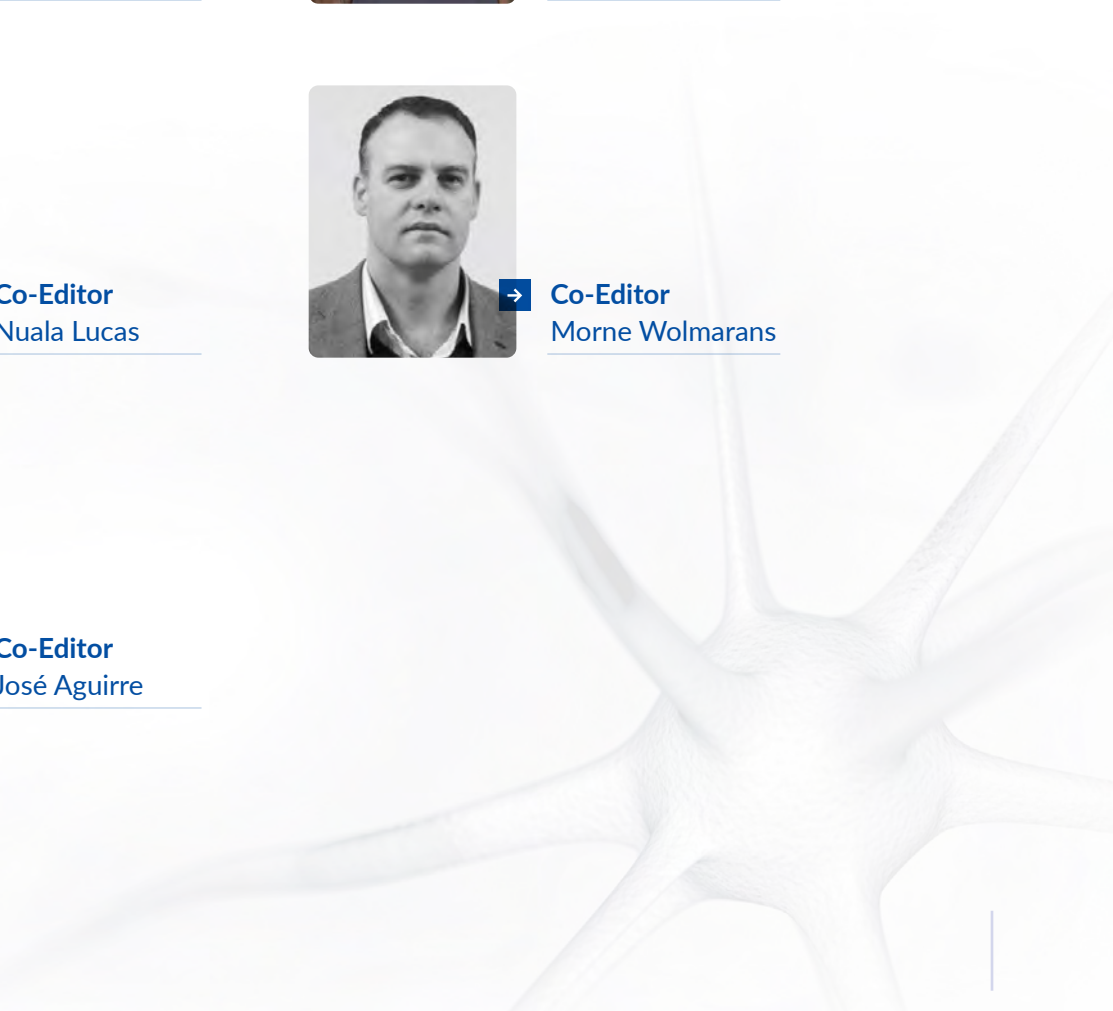
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# Editorial



Peter Merjavý (Craigavon Area University Teaching Hospital, Northern Ireland, UK) @PeterMerjavý



Clara Lobo (Editor of ESRA Updates; Cleveland Clinic Abu Dhabi, UAE) @claralexlobo

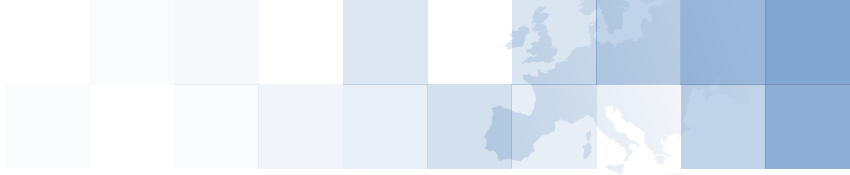
CoViD-19 presents big challenges for healthcare across all countries in the world. The pandemic is far from over and there is a real concern, that it might stay with us for months or even for years to come. Since the start of pandemic, we have seen increased interest in using regional anaesthesia techniques in order to minimise the AGPs (aerosol generating procedures), reduce the use of opioids for peri and postoperative pain management, reduce the resources and costs of PPE, earlier discharge and preservation of immune system when compared with general anaesthesia. Those benefits serves both patients as well as healthcare providers.

Similar to the recommendations for airway management, where the most experienced practitioner should perform the endotracheal intubation, some argue that regional anaesthesia should be performed by the most skilled and experienced person to maximise success, reduce complications and minimise the direct interaction time with the patient.

These challenges can have a negative impact on teaching and exposure of trainees to regional anaesthesia procedures. Trainees are not only facing reduced opportunities, but they are also redeployed to Intensive Care Units, Emergency Departments, Respiratory wards etc by the hospital management team to provide acute care whenever is mostly needed. [Svetlana Galitzine](#) (Oxford, UK) and [Steve Coppens](#) (Leuven, Belgium) bring us their experience how the CoViD impacted on their well-established regional anaesthesia fellowship programmes.

Many of us have changed our habits of communication from personal to some form of virtual meetings. Even prior to pandemic ESRA has been promoting the [online educational activities](#) – eESRA online congress from Paris as well as partially online programme of [ESRA European Day](#) organised simultaneously in multiple cities/centres across Europe. Webinars with several hot topics were recorded and are available for replay in ESRA Academy including the second recordings for Q&A. This year the ESRA team under the leadership of past president and Chair of Scientific Committee Alain Delbos will organise full online Annual Scientific meeting. Virtual education is experiencing a massive boom especially on the social media (SoMe) platforms. There are many advantages of SoMe, especially Twitter when used appropriately for engaging people to virtual learning, communication and cooperation with top leaders in RA, discussing the newly published papers (mostly ahead-of-print). Ed Mariano (Palo Alto, USA) is one of the top influencers in regional anaesthesia in SoMe and real life and we are grateful of [his contribution for our Newsletter](#). Ki Jinn Chin (Toronto, Canada) is another extremely popular author of various educational videos and [he presents the role of YouTube](#) in regional anaesthesia education not only for CoViD pandemic but also for the years ahead.

I'm sure we would agree that ultrasound is very useful tool for a variety of invasive procedures like regional anaesthesia or vascular access, but there is also huge potential for it's use in diagnostic procedures. Point of Care Ultrasound (POCUS) techniques are performed at patient's bedside, they are not invasive, there is no radiation, the results are immediately available (for trained practitioner) and can be repeated several times a day according the clinical situation. Thomas Bendtsen (Aarhus, Denmark) presents [his project of USabcd online interactive e-learning](#), which the ESRA members can access for free since 2018. There are range of POCUS topics: cardiac, lung, airway, gastric, central and peripheral vascular access, nerve blocks, emergency ultrasound, FAST as well as a dedicated course for medical students. Everybody can therefore find the course which will satisfy their clinical needs.



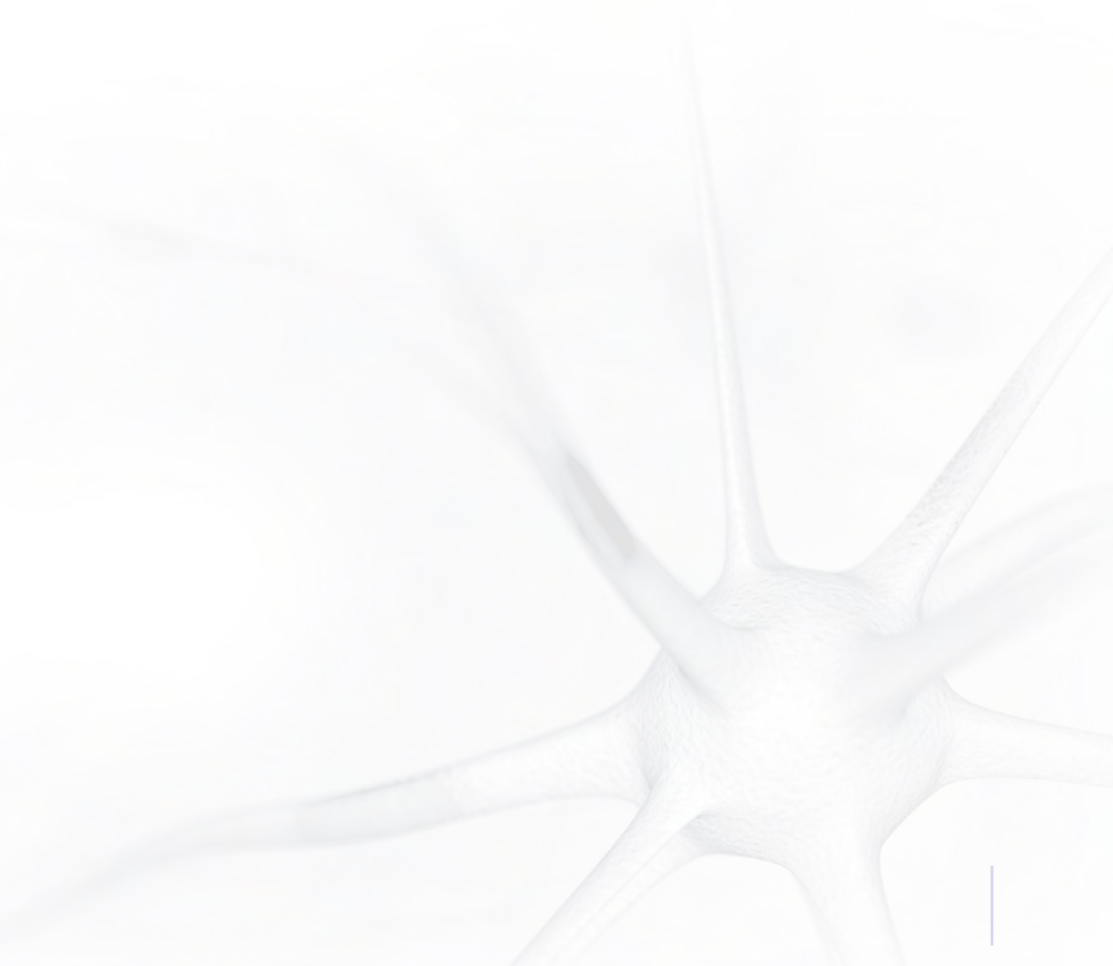
Teaching is only one component of the education process. Another one is examination. EDRA Board has been working extremely hard during last 12 months to adapt to the new situation. Jose Aguirre (Zurich, Switzerland) – [EDRA Chair presents the introduction of fully online EDRA](#) Part 1 (written) exam with exam dates in July and September 2021 and also the changes to EDRA Part 2 exam, which will be divided to online and practical (face to face). Candidates who would consider to sit any part of the EDRA exam will find lots of practical information in this article. The criteria for workshops required for EDRA exam are also changing and we will bring you the details in next issue of ESRA Updates.

Cadaveric workshops were traditionally connected to the core training of future regionalists. Whilst we would generally agree, that anatomy is still extremely relevant for regional anaesthesia, the question is, [are the cadaveric workshops still necessary and fit for purpose in 2021 and for the years ahead?](#) We will try to find out the answers for this and few other questions from the three experts with close connection to regional anaesthesia and anatomy Paul Kessler (Frankfurt, Germany), Graeme McLeod (Dundee, UK) and Mario Fajardo Perez (Madrid, Spain).

PROSPECT group under leadership of Marc Van de Velde (Leuven, Belgium) has been very efficient during last 2 years and brought us seven recommendations for postoperative pain management. Caesarean section, Laminectomy, Complex spine surgery, Open liver resection, Tonsilectomy and two updates Total hip replacement and Inguinal hernia repair. All recommendations are published in English, German, French, Spanish, Portuguese, Chinese, Japanese and Turkish languages. There are another 7 recommendations in progress. If you are as curious to know more about PROSPECT do not hesitate to [read their article](#).

Many articles published in peer reviewed journals are of great quality. We are grateful for Brian O'Donnell (Cork, Ireland) to share his view which of recently published papers have influenced his clinical practice. If you want to know more, [read our Journal Club with Brian O'Donnell](#).

We hope that you'll enjoy your summer ESRA Updates edition and we are looking forward to see you all soon in person in Annual Congress in Thessaloniki 2022.



# RA Training during COVID-19: Oxford University Hospitals NHS Foundation Trust



Svetlana Galitzine (Oxford University Hospitals NHS Trust, UK)

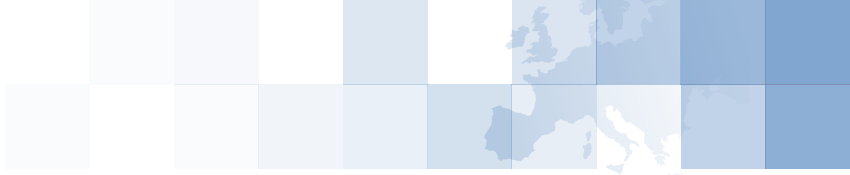


“ The challenge was how to compensate for reduction in blocks numbers. ”

The COVID-19 pandemic is nowhere near to be over but it is, probably, the right time to reflect on “the good, the bad and the ugly” changes that it has brought to RA training programmes in various centres.

In our centre, Oxford University Hospitals NHS Foundation Trust (OUHFT), RA training is an important part of the multi-specialty training provided by the Nuffield Department of Anaesthetics. The NDA, founded in 1937, is the first independent department of anaesthesia in the UK, in Europe, and in the Commonwealth (<https://www.ndcn.ox.ac.uk/divisions/nda/history>). Although RA has been practiced and taught in our Department for decades, the formal training module was set up in 2002, following obstetric and airway ATMs. Over the years it has become one of the most popular advanced training modules, with no shortage in applicants. From the RA ATM with 1 advanced trainee in 2003 it has grown to the RA Programme which, with careful rota planning, can accommodate up to five subspecialty trainees, internal and external, with different career objectives. Some 60 trainees have been trained since 2003, with very positive feedback, as confirmed by the recent survey. Although the priority is to provide a 6 months advanced training for “internal” specialist registrars in their two final years of their training in the Oxford School of Anaesthesia, we have also been able to offer “out of programme” 12 months training for external fellows from Malta, Australia, Ireland and other countries. Some of these trainees have already completed their training in their countries ( post CCT ), others have less straightforward career paths. The key to successful training is a flexible and individual approach to trainees’ learning objectives.

OUHFT is a busy teaching hospital with some 45 theatres on 4 sites and separate on-call rotas for different sites. The ‘base’ site for the RA training is the Nuffield Orthopaedic Centre. The NOC is a tertiary and quaternary referral centre with most theatre lists suitable for training in neuraxial or peripheral nerve blocks. According to our year-long audit of training opportunities at the NOC in 2016/17 (well before COVID-19, “BC” times), over 3,500 blocks were performed during the year in 8 theatres. This volume of blocks allowed us to accommodate 4-5 full time trainee during one training round. Operations range from straightforward hip and knees to complex limb reconstructions, joint revisions, major spine, ortho- and oncological surgery. Significant number of patients are very complex – either surgically or anaesthetically, or both. High volume surgery procedures allow good audits and Quality Improvement Projects such as standardised documentation for blocks or day case spinal anaesthesia for hip replacements. Care for complex patients allow ample opportunities for Problem Based Learning Discussions and presentations/publications such as limb reconstruction surgery during COVID pandemic in a patient with a heart-lung transplant.



In addition to the NOC case mix, there are opportunities to perform Regional Anaesthesia (RA) techniques on other OUHFT lists, such as Trauma, Vascular, Emergency, Transplant, and Plastic lists, as well as Obstetrics, depending on the service lists and on-call commitments.

During the lists a RA trainee is directly or indirectly supervised by a named Clinical Supervisor or another Consultant Anaesthetist, the level of responsibility being increased according to the trainee's progress. Various workplace based assessments are completed during the course of training. Sub-speciality qualifications such as EDRA are encouraged.



«During the lists a RA trainee is directly or indirectly supervised by a named Clinical Supervisor or another Consultant Anaesthetist, the level of responsibility being increased according to the trainee's progress.»

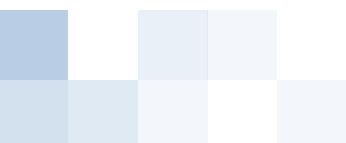
Apart from the practical skills acquisition there are several non-clinical objectives which may differ for various trainees. We offer opportunities to develop organisational, management, leadership and teaching skills relevant to regional anaesthesia, perform and complete audits and QIPs, submit, present and ultimately publish a variety of projects and studies. At the beginning of the training block an individual training plan is agreed between a trainee and their Named Clinical Supervisor, the progress is reviewed during the interim and final assessments. The NCS and the trainee stay in close contact during the training block and often for a few months after, completing various projects.

Reflecting on the past year as a trainer, the words that come to my mind are “dedication”, “resilience”, “resourcefulness”, “flexibility”, “tiredness”, “anxiety”, “uncertainty”, “frustration”, “disruption”, “overload”, “perseverance”, “new normal”. We know from the recent BMA trainees' survey that majority of trainees (74%) feel that COVID-19 had disrupted their training, many opportunities were lost and the mental toll was quite significant (The Doctor, March 2021). I wouldn't be surprised if the GMC Training survey will also capture a significant negative impact of COVID-19 on the trainers' wellbeing.

From the RA trainer point of view, it will be fair to say that all aspects of training in our centre were affected by COVID-19 pandemic to some extent – from skills acquisition to publishing papers, but there were also unexpected and excellent new opportunities – from presenting very unusual COVID relevant cases to developing new “hybrid” teaching models. I am grateful that two former RA trainees share their stories in this article – one is on training “hit by the 1st COVID wave”, the other – “between the waves”. From their stories it is obvious that not everything is gloom and doom, so together – trainers and trainees – we have done something good even in the most extraordinary challenging times.

As for any other procedural-based specialty, **skills acquisition in RA training** was inevitably affected by the reduction in elective operating during the pandemic. At the same time, interestingly, change in practices and PPE guidelines during COVID created unique training opportunities such as learning and teaching US-guided CNA in Force8/10 masks in a patient with severe scoliosis, an experience not to be forgotten (picture). I wish that more pictures were taken during this short teaching session for a future presentation, but at the time the patient safety and clinical success was a priority.

The challenge was how to compensate for reduction in blocks numbers. As a trainer I felt that the way to do it was to accept the limitations of missing a few dozens of blocks in one's logbook, fill this gap in future and instead take every opportunity to learn from unique COVID-specific clinical experiences, submit a few extra abstracts and “buff up” one's CV in time for that consultant post application or a specialist registrar position interview etc.... “When you can't have the best have the best of what you can” – this is the principal that I particularly valued during the last months





«From the RA trainer point of view, it will be fair to say that all aspects of training in our centre were affected by COVID-19 pandemic to some extent [...]»

**Presenting and publishing.** Although many European meetings were postponed or run without abstract presentations, on-line presentation opportunities were created “at home”. British Society of Orthopaedic Anaesthetists (BSOA) initiated a series of virtual webinars, with trainees’ presentations in November 2020. This was followed by the AAGBI WSM in January 2021. Some 15 abstracts were submitted from our RA trainees through the last 12 months (and I may have missed a couple). They were accepted and presented as poster and oral presentations, with some prizes won and great potential for several full paper publications. The full papers, however, remain “work in progress”, with a real threat that, unfortunately, in the big world of the PubMed search our hard work may remain barely noticeable. Unless of course, tired trainees and trainers will make this final push to get the work published...

**Teaching/management/leadership.** In the past the Oxford RA Course with Cadaveric Anatomy not only was very popular amongst attendees but also offered excellent opportunities for teaching/management/leadership skills to RA trainees. It is, sadly, not running at present, however, the pandemic has stimulated us to develop a new hybrid teaching model – a Sonoclub. This is an excellent example of being resourceful and adapting to the “new normal”. Trainees should be congratulated on taking this project on.

Finally, the pandemic has taught me to allow for unexpected changes and respect the Reinhold Niebuhr’s prayer even more: **“God, grant me the serenity to accept the things I cannot change, the courage to change the things I can, and the wisdom to know the difference”**. Although it was written almost 90 years ago, at the challenging times of training during the COVID-19 pandemic I think it is very relevant. Hope all trainers and trainees will agree with me.

### **Julie Kuzhively**

*In-programme RA ATM Training, 6 months, Aug 2020-Feb2021*

«Advanced Training Modules (ATMs) in regional anaesthesia (RA) are usually six month trainee selected placement, undertaken in the final years of training. I have just completed my RA-ATM at the Nuffield Orthopaedic Centre (NOC) in Oxford. My ATM started in August 2020, as the initial UK COVID-19 surge had fallen in the UK and elective orthopaedic lists started to return to the NOC. Theatre lists returned slowly but not to full capacity, with decrease from eight full elective lists to six by August 2020 and then unfortunately, the second wave in December 2020, led to a further fall to only two semi-urgent lists. Being conscious of the likely impact on training, I proactively sought out RA training opportunities and exposure and in the first three months of training, I managed to achieve a similar number of peripheral nerve block experience compared to my higher RA module two years earlier. I have been lucky in terms of my RA experience, as a recent RA trainee survey in the deanery has highlighted that over 50% of trainees had experienced a decrease in RA training due to COVID-19. To improve training opportunities, new and alternative avenues for training are required and I have been involved in starting up the Oxford Sonoclub, a RA teaching course, directed at deanery anaesthetic trainees. The course is trainee led with consultant supervision, with hands on sonoanatomy teaching covering the ‘Plan A’ blocks endorsed by the RA-UK, neuraxial blocks and beyond. COVID-19 had complicated the setup of the teaching programme, with need for social distancing, smaller group workshops, PPE and extra infection control precautions. Due to recent spikes in COVID-19 numbers and the lockdown, we had to cancel the face to face training, but we are adapting and trying to organise an online video library of approved ‘how to’ block YouTube links and pre-recorded block talks through our trainee website. Aside from the negative impact on training lists and opportunities, the pandemic has brought an upsurge in the access to teaching materials online, through webinars and access to international conferences. Virtual reality is the likely avenue to investigate and focus on for RA training.»



## Orlaith McMahon

*Out of programme Fellow, post CCT, Aug 2019-Jul 2020*

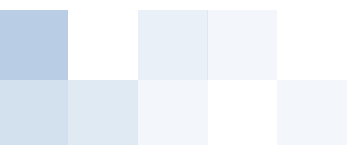
*"Hit by the first wave"*

«Having completed my specialist anaesthesia training in Ireland in July 2019, I was delighted to be offered a one-year fellowship in regional anaesthesia (RA) in Oxford University Hospitals. My RA experience in Ireland was primarily during a 2-month module in the "block bay" of University Hospital Galway, and it was here that I realised I wished to pursue advanced training in RA. "Practice makes perfect" and so I sought a fellowship in RA to improve my block proficiency and confidence. As my first introduction to the NHS, I quickly realised that while there were differences, often subtle, to get to grips with, that the Nuffield Orthopaedic Centre (NOC), as a quaternary centre for orthopaedic care, was an excellent place to begin my journey in the NHS. After figuring out the system, gaining my consultant trainers' trust and recovering from an unfortunate elbow fracture, I was able to enhance my RA experience with over 220 blocks during my time in the NOC. Little did I realise that the blocks done during that first six months would make up the bulk of my numbers for the year!

In March 2020, as COVID-19 spread throughout the UK, elective orthopaedic and plastics lists were among the 1st to go, and consequently the number of operating lists with opportunities to perform RA dropped significantly. Furthermore, trainees and fellows were allocated to ICU and emergency theatre rosters to cope with the first surge in COVID-19 admissions. While this was indeed a challenge, especially with almost weekly changes in PPE/protocols/SOPs, I was fortunate to have gained sufficient experience in RA during the first half of my fellowship to apply to trauma and emergency cases, thus avoid aerosol generating general anaesthesia. This practice applied the joint ESRA/ASRA guidelines of late March 2020, recommending RA over GA for patients with COVID-19 to reduce the risk of COVID-19 transmission. RA +/- sedation techniques allowed appropriate cases to continue without the risk of AGPs.

Uncertainty and huge changes in work practice made continuing "normal fellowship service", such as maintaining research projects, audits, a diploma and even minimum continuing professional development, difficult to say the least. As RA Fellow I was invited to join the organising committee for the British Society of Orthopaedic Anaesthetists (BSOA) Spring Scientific Meeting, a great experience which provided insight into work that goes on behind the scenes at medical conferences! While COVID restrictions prevented the Oxford meeting in April, the format was adapted and a successful virtual event series was delivered in October-November 2020. This included a trainee oral presentation competition, involving a "talking slides" presentation followed by a "zoom" Q&A session, another great learning experience and I was delighted to be awarded 2nd Place overall.

Resilience is a term I have come to associate with doing a fellowship during a pandemic! Having submitted abstracts to European conferences that were cancelled, keeping the research momentum going has been a challenge. Projects have continued, albeit at slower pace, and thankfully some conferences, and the opportunity to present work, have resumed in a "virtual" format. A project examining the strengths and weaknesses of the Oxford RA training programme over the past 17 years was shortlisted for oral poster presentation at the Association of Anaesthetists ASM in January 2021. Furthermore, having been faculty for the neuraxial ultrasound workshop at the Oxford CPD day "pre-COVID" in December 2019, I was delighted to contribute to the innovative "sonoclub" at the NOC in December 2020, teaching (via zoom) the fundamentals of neuraxial ultrasound techniques. Adaptability has been key to continuing teaching and research in the pressurised COVID-19 environment and RA/coping/life-skills I learned during my time on fellowship in Oxford will be greater than I can ever describe on my CV!»





# RA Training during COVID-19: UZ Leuven



Steve Coppens (Co-editor of ESRA Updates, UZ Leuven, Belgium) @Steve\_Coppens



“ I am sure that both fellows and trainers will look back at these days quite favorable in general as time progresses. ”

UZ Leuven has been member of the ESRA Approved Training Institutions for quite some time.  
ESRA Approved Training Institutions – ESRA ([esraeurope.org](http://esraeurope.org))

We have had the pleasure to train young locoregional enthusiasts from all over the globe, ranging from Greece, Bulgaria, South-Africa, The Philippines, Italy, Ireland, Lebanon up to Belgium itself.

Leuven is a small university city of about 100 000 inhabitants and more than 30 000 students. The university of Leuven is one of the oldest in the world, dating back to 1425.

Andreas Vesalius the founder of modern day anatomy and graduated in the University of Leuven before moving around Europe and writing his famous “De humani corporis fabrica libri septem” We all know that RA is simply applied anatomy. With such a famous alumni, it can be no coincidence that regional anesthesia has become very important in UZ Leuven.

The university hospital is one of the biggest in the Benelux and has around 2000 beds. A whopping 45 operating theatres, 5 separate block rooms in the main operating centre and 4 more in the ambulatory operation unit. The rotation usually consists of covering the main OR block rooms during the first few months, then moving to ambulatory regional blocking and adding a few weeks of maternity ward as well to get some obstetric Combined Spinal Epidural practice as well.

Roughly 4500 nerve blocks are performed annually. We still have about 2000 thoracic epidurals a year, making it an excellent place to train this slowly disappearing art. About the same amount of neuraxial blocks are performed in obstetrics. Routinely a fellow of regional anesthesia will perform roughly 1000 to 1500 blocks themselves. This case-load makes our facility quite unique and we have a waiting list for foreign fellows up to 2025 at this moment.

Currently we have two fellows. Mohammed Bashraheel from Saudi Arabia and Jacky Corpuz from the Philippines. The effect of the COVID has been profound on both fellows and the fellowship. Although some electives cases have been postponed throughout this year of tribulation we only saw a 4% drop rate in regional block cases. This small insignificant decrease have minimally influenced their regional block progress and skill development. We believe this slight reduction was due to a reduction of airway manipulation, combined with a limited decline in cases due to the tertiary referral role of the UZ Leuven. (fig 1)



Figure 1: Mohammed Bashraheel and Jacky Corpuz in Covid times

Currently we have two fellows. Mohammed Bashraheel from Saudi Arabia and Jacky Corpuz from the Philippines. The effect of the COVID has been profound on both fellows and the fellowship. Although some elective cases have been postponed throughout this year of tribulation we only saw a 4% drop rate in regional block cases. This small insignificant decrease have minimally influenced their regional block progress and skill development. We believe this slight reduction was due to a reduction of airway manipulation, combined with a limited decline in cases due to the tertiary referral role of the UZ Leuven. (fig 1)

In our hospital vascular access with ultrasound is a valued skill and as anesthesiologists we were asked to routinely provide this service on COVID wards. Midline catheters and other lines were one of the main tasks at the end of the block day. This is quite a challenge in the protective gear on these wards, however our fellows have excelled at this essential task.

We take in observers and have had a few ESRA grant observers. Margarita (Margo) Borislavova planned visit collided with the first viral wave in 2020. She courageously helped us during these difficult times, being more involved than any other observer ever had been. Frequent were our visits to Covid unites. You can see her and me admiring our PPE gear stripes like so many people did at that time. (fig 2)



Figure 2: Margo and the PPE stripes

One of the most profound difference with previous fellowships has been the absence of possible networking.

A yearly recurring exchange event were regional fellows from Duke University North Carolina visit our hub and our close allies at NYSORA Belgium Genk was brutally interrupted. Of course this leaves the fellows with a lot of missed opportunities to form bonds, friendships and open up possible collaborations in the future. Jeff Gadsden, Admir Hadzic and me sorely missed having our fellows enjoy this beautiful project.

The Belgian Association of Regional Anesthesia BARA – BARA (bara2001.be) is the biggest society of RA in Europe with most members even leading big countries like the UK and France. The BARA organizes cadaver workshops every year and the fellows in the UZ Leuven get the possibility to visit the dissection room and even enjoy the hands-on opportunity with anatomical dissections themselves. This unique opportunity again also had to be cancelled. This was my biggest regret because these dissections offer unparalleled understanding of anatomy.

Workshops organized by the regional team in hospital and lead by the instructors and the fellows are also a great way for our residents to present the inspiring progress our fellows have made. By giving them the chance to pass on the knowledge and experience they gained throughout the year, we support the bond between residents and fellows to make our regional program even stronger. Covid-19 again stripped us of the possibility of organizing these workshops and these were greatly missed by everyone.

Our fellows try to give basic teaching in a one to one safer environment, without models, but with our multitude of phantoms, simulators and other teaching equipment (fig 3)

Improvising to fill up the teaching gap has also inspired us to come up with novel ideas and unique solutions to the problems due to the social distancing requirements.



Figure 3: Mohammed giving an improved one-to-one teaching “workshop”

Of course new opportunity's also appear with the pandemic. Thanks to Jacky Corpuz and his excellent colleagues in the Philippines we were able to set up a workshop and lecture live broadcasted to the far east. (fig 4) Mohammed Bashraheel is also a tech wizard and he helped with camera setup and technical support. It was a huge success, with more than a 100 delegates joining in!

The possibilities of visiting other centres like our neighboring NYSORA colleagues in Genk was also not available, however good and close relationships were preserved and I hope I can still offer the fellows a visit to some of our friendly neighbors if they visit us again in the future.

Traditionally we also indulge in a lot of social events. The UZ Leuven Winter-symposium and its festivities were unfortunately cancelled for an online congress. Leuven is a nice medieval town and beautifully decorated during the Christmas time, was strangely quiet with no parties organized this year. (fig 5) Drinks, get together, dinners.... Almost all these fantastic bonding events had to be dropped. I really feel so bad for our fantastic team. I know we will welcome them again once this nightmare pandemic is over, to come and celebrate the friendship which has blossomed even during difficult times.

Though these covid times have been a mix of hits and misses, limited opportunities and new developments, I am sure that both fellows and trainers will look back at these days quite favorable in general as time progresses. The bonds that were formed were in my opinion even stronger than they usually are in a fellowship program. The few times we did have some drinks or socializing when new covid rules applied and lockdowns eased were even more intense than usual and they are and will stay engraved deep in my soul as extremely memorable.



Figure 4: Turning one of our block rooms into a live workshop/lecture area

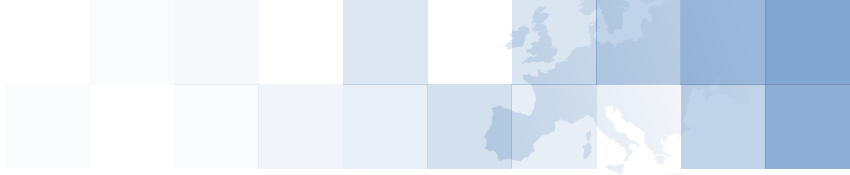
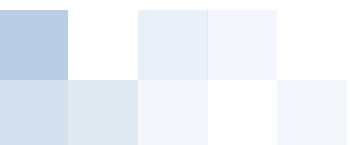


Figure 5: Christmas time is magical in city of Leuven

Nothing intensifies the feeling of this mutual struggle as much as doing Covid rounds with the ultrasound placing vascular access on demand. Nothing will make me forget the genuine respect I have for these people leaving their loved ones, friends and family behind to go on adventure in Europe and then ending up lonely in lock-down. Nothing will make me forget their courage, devotion and enthusiasm during their special and challenging time with us in Leuven.  
NOTHING...



# ESRA Online Activities



Laure Terrier (ESRA Marketing & Sponsorship Manager)

To keep in touch with its community, ESRA had to adjust to COVID constraints and proposed even more virtual events than before. Please find below a summary of the different virtual activities managed by ESRA since the beginning of 2021:

## A successful e-ESRA: 13th March

Your interactive  
online congress

# 4<sup>th</sup> e-ESRA

Saturday, 13 March 2021

Round tables & live demos  
Live chat & quizzes  
Free for members

- 15 hours broadcast
- 50+ international KOL
- 1,310 live online attendees
- 2,300 total number of registrations
- 1M impressions on Twitter

## Monthly free webinars

# ESRA WEBINARS

Every last Thursday  
of the month

7pm CET

- Proposed by ESRA on the last Thursday of the month, or by industry on the second Tuesday of the month
- Various topics covered: Regional Anaesthesia, Pain Therapy, POCUS...
- Average participation of 1,000 online attendees per webinar
- CME accreditation will be provided to ESRA webinars in the forthcoming weeks
- [Click here](#) to access the replay on the Academy (free for ESRA members!)

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### ESRA 2021 Virtual Congress: 8-10 September



Despite the hope that has accompanied the vaccine programme, the pandemic's continued impact currently precludes face-to-face meetings. To serve your needs, we are delighted to announce the ESRA 2021 Virtual Congress. 60+ educational hours, 70+ scientific sessions, and 100+ international experts organized just for you!

- [Go to esra2021.com](https://esra2021.com) to get all the information about the programme, registration and abstract submission. Looking forward to e-meeting you there!

For any inquiry regarding our online activities, please contact:  
ESRA Events  
[events@esraeurope.org](mailto:events@esraeurope.org)

# ESRA European Day



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E-Day (European Day) is a single day meeting dedicated to Regional Anaesthesia and Analgesia which has been organized by ESRA for 3 years. This year, E-Day will be held in over 24 cities in 15 countries. The increase in the number of countries and cities supports the interest of this unique meeting format: **a single day, a single programme, local experts.**

The same programme on the same day marks the unity dear to ESRA. It's a great link between cities.

- > **Local meeting.** The multitude of sites offers proximity and easy accessibility. This reduces travel and hotel reservations. It makes it easier to participate.
- > **Local experts.** The intervention of local experts is the hallmark of this day. Their knowledge of local situations allows them to adapt the subjects to your problems, your environment. They are often colleagues or practitioners that you know. This facilitates discussions, exchanges and interactions.

The program is based on new topics. Podcasts of international experts introduce each subject. This global vision can thus be discussed and adapted to your local context.

Moreover, E-day proposes many practical workshops and round tables.

**A moment of exchange and conviviality.** This year, sanitary conditions are unclear, and nobody knows how they will be in September. Nevertheless, each city, each country will be able to adapt its organization in order to offer the long-awaited face-to-face meeting. This “small friendly meeting” is perfectly suited to this!

**Close to you – Close to experts – Dedicated to Regional Anesthesia, E-Day is a great day of discussion and conviviality. E-Day, there is definitely a city near you.**

All information on ESRA website: [click here](#)

# Social media and regional anaesthesia education



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“Social media, when used professionally, can be considered as a means of content curation.”

From the [Oxford Dictionaries](#), social media is defined as “Websites and applications that enable users to create and share content or to participate in social networking.” Common platforms include YouTube, Facebook, Twitter, LinkedIn, Instagram, TikTok, blogs, and many others. Given this broad definition, and unfortunately not enough time or space to do justice to this topic, this brief review will focus on specific reasons to engage in social media and the use of Twitter for regional anaesthesia knowledge translation. For a broader discussion of the potential benefits of using social media within the practice of regional anaesthesia, please refer to the article by Schwenk and colleagues, “How social media is changing the practice of regional anesthesiology.”<sup>1</sup>

## Social media for lifelong learners

Data from the Pew Institute show that 70% of Americans use some form of social media, and the most common platforms are YouTube and Facebook.<sup>2</sup> Social media represents a powerful learning tool that can aid the regional anaesthetist in keeping up with the ever-growing body of literature. As one example, the number of PubMed citations containing “plane block” in the title has increased exponentially from 2007 to 2020 with hundreds of article published per year just on this topic.<sup>3</sup> When it comes to choosing a social media platform for professional networking and continuing education, results from a survey of ASRA annual meeting attendees show a preference for Twitter while Facebook remains popular for personal use.<sup>4</sup>

Twitter is an online social media platform launched in 2006 and based in San Francisco, CA, USA, that allows its users to post “micro-blogs” of 280 characters or less (referred to as “Tweets”).<sup>5</sup> Through Twitter, users can interact with people and organizations from around the world with similar interests. ASRA ([@ASRA\\_Society](#)), ESRA ([@ESRA\\_Society](#)), and Regional Anaesthesia UK ([@RegionalAnaesUK](#)) have Twitter accounts. Searching hashtags (keywords or phrases preceded by “#”) such as #regionalanaesthesia and #regionalanesthesia can help the user identify other accounts with similar interests.<sup>5</sup>

Medical journals have identified the benefits of social media and have also become active users. Journals relevant to regional anaesthesia with Twitter accounts include: Regional Anesthesia and Pain Medicine ([@RAPMOnline](#)), Anaesthesia ([@Anaes\\_Journal](#)), Anesthesiology ([@\\_anesthesiology](#)), and Pain Medicine ([@PainMedJournal](#)). Highly tweeted articles are 11 times more likely to be cited by future publications than articles that are not tweeted.<sup>6</sup> In a study of Cochrane reviews, articles randomized to Twitter promotion received nearly three times as many page visits compared to controls.<sup>7</sup> Altmetric scores which reflect the reach of an article through social media and lay press outlets can be found on the article pages of major journal websites.<sup>1</sup>



The traditional journal club has become much more advanced with the incorporation of Twitter.<sup>8</sup> The Twitter journal club is a moderated discussion focused on an article of interest to the specialty and open to the global Twitter community. #AnesJC was started by Dr. Ankeet Udani (@ankeetudani) and colleagues at Duke University School of Medicine (@Duke\_Anesthesia) and covers articles relevant to the specialties of anesthesiology and pain medicine.<sup>8</sup>

Social media, when used professionally, can be considered as a means of content curation. Users can even create lists of accounts around common themes for further curation. Followed accounts on Twitter form a learning community which provide content to the user's feed that is most likely to be relevant to the user's scholarly interests and clinical practice. In addition, innovating educational initiatives such as #Blocktober created by Dr. Jeff Gadsden (@jeffgadsden) can become annual events that the regional anaesthesia Twitter community looks forward to every year. For every day of October, the regional anaesthesia group at Duke posts a video tutorial on one nerve block procedure along with relevant references.

## Social media for conferences

A popular trend at medical conferences is "live-tweeting" the meeting.<sup>5,9-16</sup> One of known difficulties when attending scientific conferences is choosing between simultaneous activities that have interesting topics or speakers, and no one can possibly attend every meeting. Before social media, it was impossible to be in more than one place at a time. Through Twitter, any user can pick up key learning points from conferences by searching the meeting hashtag. During the COVID-19 pandemic, all continuing medical education around the world pivoted to the virtual format. Despite the lectures and demonstration-focused workshops being livestreamed, conference Twitter activity has continued. At the most recent Regional Anaesthesia UK annual scientific meeting held virtually in 2021, over 700 Twitter users tweeted and participated in conversations including the hashtag #RAUK21 with potential reach to over 20 million Twitter user accounts (Figure 1)! As a comparison, the ASRA spring meeting in 2016 (#ASRA\_RA16) was a live in person event with 999 onsite conference attendees but generated only 1.5 million impressions on Twitter,<sup>17</sup> demonstrating tremendous growth in Twitter activity within the regional anaesthesia community worldwide.

## Practical tips for getting started

The first step is to start download the Twitter app on your phone and create an account. A new user may be assigned a default username (also known as a "handle") that can be changed later through the user's account settings. I recommend uploading a photo and writing a brief description of yourself so people you choose to follow will know who you are (Figure 2).



Figure 1. Tweet from Dr. Amit Pawa (@amit\_pawa) presenting the Twitter analytics from the Regional Anaesthesia UK 2021 annual scientific meeting.



Figure 2. Sample profile complete with a user photo, background photo, and short biography.

This also helps identify you if you are a conference speaker as attendees who tweet learning points from your lectures may wish to mention you in their tweets. When I give lectures, I include my Twitter handle on all my slides to make it as easy as possible for attendees to find me on the platform in case they wish to mention me in a tweet or follow me (Figure 3).



Figure 3. Sample slide featuring a user's Twitter handle in the upper left corner. This slide provides a "To Do List" of practical tips when starting a new Twitter account.

The next important thing to do is start following a few accounts. You can follow me ([@EMARIANOMD](https://twitter.com/EMARIANOMD)) or many others specialising in regional anaesthesia who are active on Twitter. Many of these Twitter users are shown in Figure 3. If you search the hashtags #RAUK21 or #ASRASpring21, both regional anaesthesia conferences that have taken place recently, you can find additional accounts representing individuals or organisations interested in this subspecialty. Spend some time observing how these Twitter users tweet and interact with each other, and remember that observation is a key part of the scientific method. It is very common for Twitter users to merely use the platform as a consumer of information and not tweet at all. Up to 44% of [Twitter accounts have never sent a tweet!](#)

If you decide to tweet, here are a few practical tips (Figure 4): 1) Include relevant hashtags (e.g., conference hashtag if applicable); 2) Mention Twitter users who may be interested in your tweet, especially the speaker if you are tweeting about a lecture; 3) Include a relevant image; and, if an image is included, 4) Tag interested Twitter users to give them a notification of your tweet, thereby increasing your reach and generating engagement.

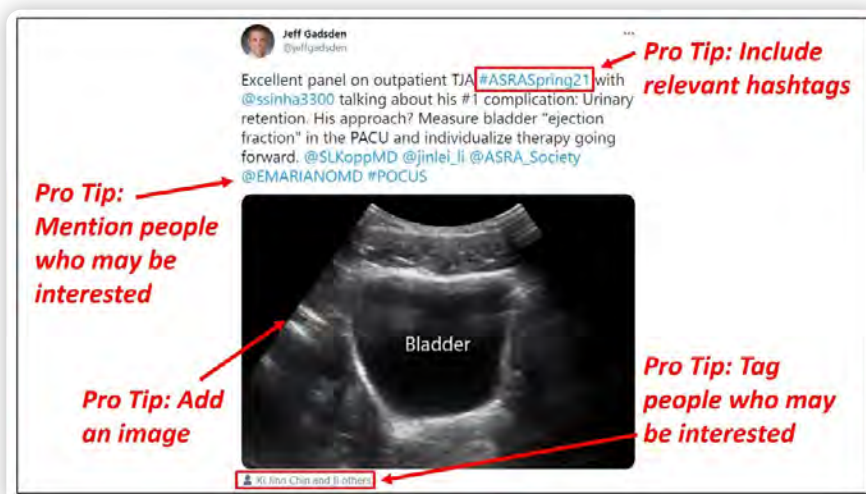


Figure 4. Sample tweet from Dr. Jeff Gadsden (@jeffgadsden) from the 2021 ASRA spring meet demonstrating some practical tips for tweeting.

Of course, to be a physician actively engaged on Twitter requires respect for patient privacy and professionalism. I recommend following Dr. John Mandrola's [10 rules for doctors on social media](#). I will admit that getting started is intimidating, but I encourage you to check out this list of [social media resources](#). I promise that you will not regret joining Twitter, and chances are that you will be very happy that you did. At the very least, sign up to reserve your handle and observe.

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# YouTube – A Powerful But Double-Edged Tool in Modern Regional Anesthesia Education



Ki Jinn Chin (Professor, University of Toronto, Department of Anesthesiology and Pain Medicine) @KJinnChin



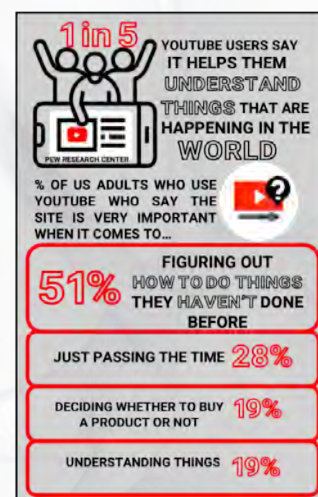
Samantha Claire M. Braganza (St. Luke's Medical Center Bonifacio Global City, Manila, Philippines) @scmbraganza




The 21st century has ushered in a new era of learning, one in which technological platforms are heavily relied upon for the dissemination and acquisition of information. One of these platforms is YouTube. It is difficult to overestimate the impact of YouTube on the world we live in today. It has revolutionized the sharing of information between creators and consumers, by expanding communication beyond the written word and still images and removing barriers to the distribution and access of content.



The first ever YouTube video was uploaded on April 23, 2005 by YouTube co-founder Jawed Karim. Entitled “Me at the zoo”, it was 18 seconds long and described himself “in front of the elephants with a long trunk”. From this unlikely beginning, YouTube has grown into the largest video-sharing platform on the internet, with more than 2 billion-logged monthly users. At the same time it has also turned from a source of entertainment into a resource for learning about virtually any subject under the sun. All of us have turned to YouTube at some point to find a video on “how to do something”, particularly with respect to tasks that benefit from live demonstration or topics that involve a lot of visual information.





## YouTube and online videos in regional anesthesia education



**is an invaluable resource for "JUST IN TIME" learning**

In most cases, clinicians are uploading these videos to help guide other doctors through medical procedures. Dr. Ki Jinn Chin, a regional anesthesia program director at Toronto Western Hospital and a prominent YouTube content creator, said he thought that it would be more efficient if he recorded these presentations and had the videos available for people to view "as needed". He added that he wanted to be able to "direct the trainees" to view the videos to "reinforce learning" that is happening in the block room. The videos are particularly helpful for doctor-in-training who are learning to perform new procedures but many experienced doctors report that they turn to YouTube not only to refresh their skills but see other approaches to a specific technique as well.



 **60%** of the videos uploaded were evaluated as being aimed at medical education or health professionals<sup>9</sup>

### Advantages

Regional anesthesia is a subject that is ideally suited to video-based education, given that it involves a complex motor task with a large visual component, especially with regard to ultrasound guided techniques. Ultrasound guided regional anesthesia is a highly dynamic process with multiple complex streams of visual and tactile information that must be processed, including the ultrasound scan, and manipulation of probe and needle relative to the patient. This requires the integration of a working knowledge of sonoanatomy, hand-eye coordination and manual dexterity. These skills are difficult to convey with the written word and still images and is one reason for the popularity of hands-on workshops at conferences, in which the process of pre-procedural scanning and the relevant sonoanatomy can be demonstrated. This same information can be conveyed in a YouTube video, and although the learner is unable to request clarification and obtain feedback in real-time, this is compensated by other advantages of this format. The creator-educator can communicate other information required for understanding, such as the clinical anatomy underpinning the block technique<sup>1</sup>, the indications and contraindications, and the complications. The technical execution of the block can also be demonstrated with videos from actual clinical practice, bridging the gap between the pre-procedural scanning (which can be learnt at in-person workshops) and needling and local anesthetic injection (which cannot). The learner is also able to review the material as often as required, and at their convenience. The 24/7 availability of YouTube content and its accessibility on a variety of devices, ranging from laptops to tablets or smartphones, makes it an invaluable resource for "just in time" learning. Short procedure-focused videos can be used as a 'refresher" prior to performing a block. Teachers can also direct trainees to use this material as a post-procedure review to reinforce learning after having completed a supervised block, which is both resource and time-efficient during a busy clinical day.

## Quality Concerns

It is important to recognize that many of the advantages of YouTube can also be limitations when it comes to education in regional anesthesia. The lack of significant barriers to the creation and distribution of information facilitates rapid and early dissemination of new knowledge and techniques. However, this creates problems related to both quantity and quality. The learner has a vast repository of uncurated content at their fingertips and the issue becomes: where to begin and who to trust? The absence of a minimum bar for quality, mandatory requirements to substantiate video content with evidence, and the need for peer-review or any other form of fact-checking, raises the very real risk that the information presented may be unreliable, inaccurate, or unsupported<sup>10</sup>. The ease of content consumption, together with the tendency for YouTube creators to make short videos in recognition of the limited attention span of viewers also risks encouraging shallow learning, which may not sufficiently equip physicians to handle the complexity of actual management of real patients. Deep learning of important concepts and facts, and retention of this knowledge is best acquired with a slower process of reading, thinking, application to a real or simulated problem, and repeating this process. Poorly produced videos with suboptimal ultrasound images and inadequate text or narrated descriptions, while not containing gross misinformation, may further mislead novice practitioners<sup>5</sup>. Furthermore, when searching for videos on a specific topic, it must be remembered that the results generated by YouTube's search engine are ordered not by quality, but by engagement metrics that are determined by YouTube's own proprietary algorithm<sup>7</sup>. The onus is therefore currently very much on the learner to determine where to focus their time and attention, and to make a judgment as to whether the content is trustworthy.



There are a number of ways that these limitations could be addressed. Several studies evaluating the quality and education value of regional anesthesia content have found that the most valuable videos were produced and uploaded by academic institutions, specialty societies, or well-recognized experts through their respective websites and YouTube channels. Using questionnaire-based scoring systems<sup>4,5,9</sup>, these videos were found to possess evidence-based key elements and systematic approaches necessary for successful execution of a particular technique for the benefit of patients<sup>11</sup>. This can should be further developed into a standardized rating system or specialty-specific guidelines for educational videos, to assist learners in judging the quality of the viewed material. Academic institutions and subspecialty societies can also take on a more direct role by acknowledging the importance and validity of online videos in medical education, dedicating resources to content creation, and recognizing the individuals who contribute to producing high-quality content. There may also be a place for a virtual library or hub of curated online video content, vetted and overseen by a reputable organization or appropriately-qualified individuals. A final point is that the impact of a video extends beyond just its content, and is very much dependent on the way in which the message is delivered. Budding creators should therefore invest time and effort in the study of media arts and presentation in general, as effective audiovisual design and communication is common across all subjects.

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## Conclusion

YouTube has not and will not replace other methods of regional anesthesia education, as for all its advantages, the learning experience remains a virtual one. There will still be a place for in-person workshops incorporating scanning on live human models, or needling practice on phantoms or cadavers, as well as structured clinical exposure within residency programs. It is nevertheless a valuable complement to textbooks and published articles in facilitating the study and acquisition of factual knowledge that must (or should) precede the hands-on learning experience. YouTube and other online digital video-sharing platforms are here to stay, and we must leverage their unique advantages to improve both the quality and reach of regional anesthesia education.

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# ESRA and USabcd POCUS e-learning



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The members of ESRA Europe have been granted exclusive access to the USabcd online interactive e-learning resource of point-of-care ultrasound (POCUS) on the ESRA website since 2018. The range of POCUS topics is: Cardiac, lung, airway, gastric, central and peripheral vascular access, and nerve blocks. In addition, courses are also offered about emergency ultrasound, FAST, basic ultrasound physics, as well as a dedicated course for medical students.

The concept of the POCUS e-learning resource is to provide theoretical knowledge in order to prepare for hands-on focused training workshops. The goal is acquisition of competency and high-performance practical skills standing on a solid base of theory. The virtue of online e-learning compared to traditional lectures and class room teaching is that it can be studied anywhere and anytime (Figure 1).

The design of the e-learning site is very structured aiming at maximizing 'knowledge retention' complying with a proven model: (1) Introduce the topic (2) Teach it (3) Test it. All figures, animations and videos comply with this structure. Each video is short and focused on a single message (Video 1).

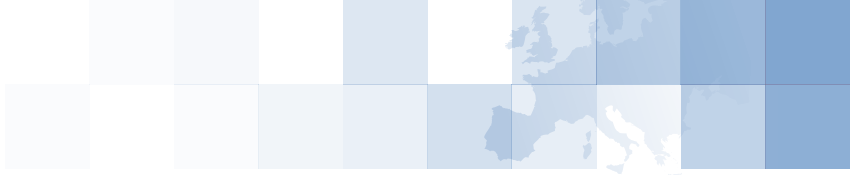


*«In the present times of pandemic hardship, the virtue of online e-learning is becoming even more prominent.»*

learned that on-site hands-on teaching is slowed down and becomes inefficient unless the participants share a pre-course common understanding of the topic and knows the terminology. Those lessons learned ignited our online, interactive e-learning site USabcd – 'Ultrasound of the Airway, Breathing, Circulation & Dolor'. The first version of the USabcd e-learning site went online in 2009.

We used to run annual Scandinavian 3-day POCUS meetings based on lectures and hands-on training workshops at Aarhus University Hospital, Denmark from 2006 to 2009. It was costly, time consuming and demanded a lot of on-site man power. The participants and their hospital managements spent a lot of time and money on traveling, hotels, and registration fees. When we evaluated the 'knowledge retention' of the participants, it became clear to us that the true benefit of on-site lectures and practical hands-on training is typically very limited – unless the participants are well prepared theoretically before arrival to the venue. We





In non-pandemic times, the virtue of e-learning is that it facilitates maximum cost-effectiveness and quality of hands-on training. By eliminating on-site lectures and theory classes, the costly on-site time can be reduced or more time can be dedicated to focused hands-on training. It saves on-site hours and workshop expenses for instructors and models. It reduces time away from the hospital and travel expenses. Online e-learning facilitates that hands-on training can focus on learning practical skills as everybody already shares a common reference of knowledge and terminology.

An additional benefit for an academic society such as ESRA is that a successful shared resource of e-learning can help promote a standardised terminology and a mutual understanding of basic concepts.

In the present times of pandemic hardship, the virtue of online e-learning is becoming even more prominent. It has the potential to become a powerful resource for each and every department of anaesthesiology that the ESRA members are affiliated to – all over Europe and the rest of the world. The opportunity to join international meetings, courses and congresses is practically non-existent and will most likely be very limited for a long time to come. This means that the e-learning accessible on the ESRA website becomes an important resource for enthusiastic ESRA members who are typically the point-of-care ultrasound (POCUS) experts of their department and the natural born in-hospital POCUS course instructors. The ESRA member can use the ESRA/USabcd e-learning to prepare small groups of peers for covid-compliant sessions of hands-on training on models in the department. The benefits are obvious. Even the most enthusiastic POCUS expert who truly wants to teach her peers in her own department of anaesthesiology often does not have the time or motivation to prepare high-quality power point presentations of all the relevant and important theory that is mandated for efficient outcome of practical hands-on training. In addition, such presentations are typically run in a class room format during working hours. Allocating time for this is not necessarily feasible or easy or well-received by the management of the department.

The e-learning theory prepares the colleagues theoretically for the practical skills training. Less time is needed to reach the learning goals of hands-on training. The e-learning promotes a shared terminology, a shared language and fruitful academic discussion. It also minimizes bias and misunderstandings.

The local in-hospital ESRA affiliated course instructor can take advantage of the course management resource on the USabcd website. This resource allows dynamic monitoring of the e-learning progress of the ‘students’ in the department. It means the instructor is offered the opportunity to demand and control that the colleagues only get access to the in-hospital hands-on training of POCUS, if they have appropriately completed the relevant e-learning course.

We would like to emphasize that this learning model based on the combination of online interactive e-learning and hands-on training in small groups in-hospital requires that an enthusiast and expert of POCUS is employed in the local department of anaesthesiology – the beacon of POCUS in the department. That would typically be an ESRA member.

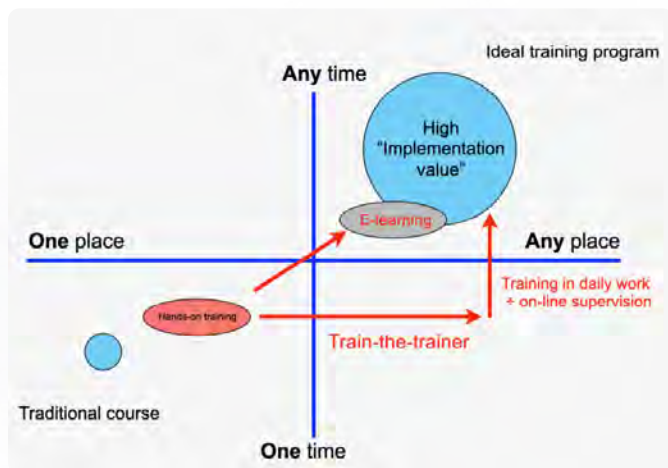
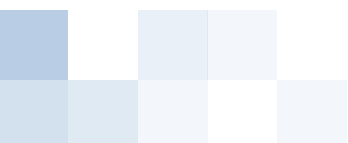


figure 1. Ideal training program. An ideal training program involves e-learning based presentation of theory as it can be implemented anywhere and anytime

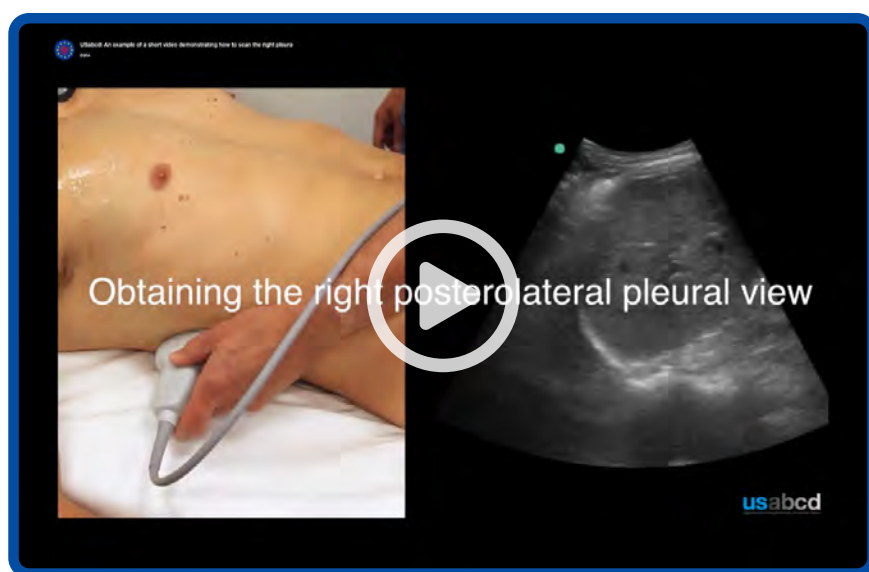


On-line e-learning has many advantages over traditional on-site learning (lectures, classroom teaching). It allows progress that is tailor-made for the individual student. It can be repeated as required and it is independent of time and place. It can be accessed on different devices (mobile phone, computer, tablet). In the case that the student needs an intermission, the e-learning can be re-accessed where the student stopped. The interactivity using tests and quizzes makes the learning more fun and efficient. The digital, interactive format especially suits the digitally native younger colleagues and strengthens their motivation for learning POCUS. It offers different ways to grasp difficult theoretical concepts – text, images, videos, animations, voice-over, quizzes and tests. This promotes faster and easier understanding.

A limitation of many e-learning systems is the lack of access to an expert supervisor during the online e-learning based training. This is probably not a critical problem, when the course instructor is employed in the same department as the course participants. In the case that the course instructor wants to communicate online with the in-hospital POCUS course participants and grant them access to submit questions along their e-learning course that is also a built-in option in the USabcd course management tool.

We encourage all ESRA members who want to teach POCUS hands-on training to their peers in their own hospital to take advantage of the complimentary USabcd POCUS e-learning resource.

To access the USabcd as an ESRA member: [click here](#).



Video 1. An example of a short video demonstrating how to scan the right pleura.

# EDRA Goes Online



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“ Using this new, updated and flexible format EDRA Board & EDRA Examiners offer the possibility to all candidates to pursue their desire for high level RA exam. ”

COVID-19 pandemic had a great impact in our social and education lives.

Many congresses have been moved to an online version so also the first ESRA Remote Congress Sept 8th-10th 2021.

Due to the current situation EDRA has adapted updated format in order to offer the possibility to assess the knowledge for all eligible candidates for EDRA Part 1 and Part 2 (section A only) in a remote/online version. For all information, please [click here](#).

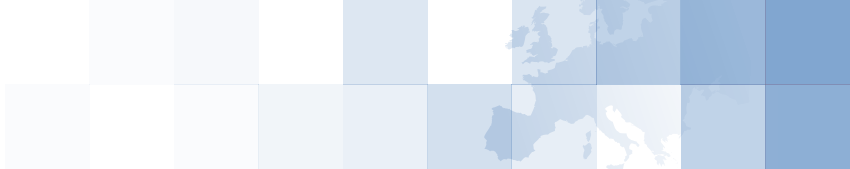


*«EDRA board is fully aware, that last and this year were extremely challenging for everyone.»*

The Part 1 examination remains written exam covering all the important topics for regional anaesthesia. A total of 100 Multiple choice questions (MCQ) and single best answer questions (SBA) need to be answered online during the time limit of 2 hours and 30 minutes. The special platform offered by Orzone™ will allow examiners to closely observe the candidates during their exam to ensure fair and transparent examination using the computer / cellphone cameras.

EDRA Part 2 remains an oral / practical examination. We decided to split the examination in two parts to allow for an online version in the first session (section A) and an on-site session (section B) during the next annual meeting.

The section A will consist on the discussion of a typical clinical case scenario with focus on regional anaesthesia and the discussion of a regional anaesthesia – associated complication. Each question will take approximately 20 minutes. Two examiners and an observer (EDRA Examiner Candidate or EDRA Board Member) will share the screen with the candidate. Section B consists on an anatomical / landmark session and the discussion of an ultrasound-guided block. For this scenario a live model and an ultrasound machine are necessary to assess candidate practical skills. Therefore, the section B remains an on-site examination.



EDRA board is fully aware, that last and this year were extremely challenging for everyone. All face to face teaching events like cadaveric or ultrasound courses and workshops were cancelled, included official ESRA courses. It was therefore very hard for candidates to fulfill the criteria for EDRA Part 2 exam. EDRA board has carefully looked into this issue and whilst fully appreciate current situation as well as being as flexible as possible, there is also need to preserve and maintain its high standards. There are three workshops required in order to apply for EDRA Part 2 exam. One of them need to be official ESRA workshop and one of them has to be cadaveric workshop. Official ESRA workshop can be either cadaveric or ultrasound. EDRA Board, therefore made a following recommendations for candidates, who would like to apply for oral exam:

> **For EDRA Part 2 – Section A exam**

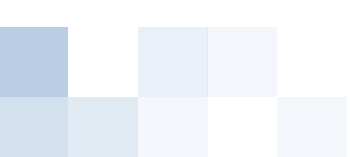
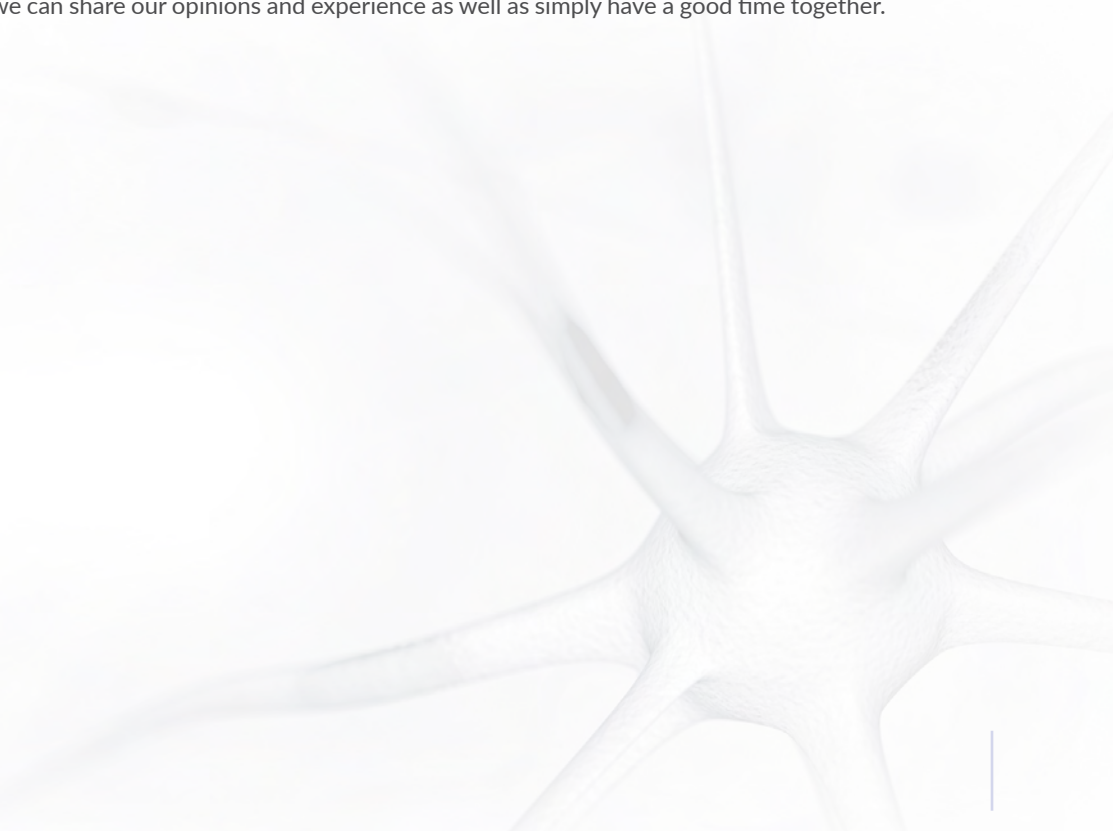
Candidates can apply after successfully passed EDRA Part 1 without certificates from all required workshops/ courses for Part 2 exam

> **For EDRA Part 2 – Section B exam**

Candidates must present the certificates from all required workshops for Part 2 exam as well as successful pass of EDRA Part 2 – Section A exam.

In order to allow candidates to use ultrasound hands-on or cadaveric workshops offered during the ESRA congress in Thessaloniki 2022 (22-25.6.2022) for their EDRA exam requirements, EDRA Board as well as ESRA Board decided to move the dates of EDRA Part 2 – Section B exam after the congress. EDRA Part 2 – Section B exam will therefore take place on Sunday and Monday (26-27.6.2022). As we have experienced high interest for those workshops during previous years (even prior to pandemic), we would recommend people to book early to avoid any disappointment. Scientific Committee is also looking into expanding the number of both ultrasound and cadaveric workshops during the ESRA Annual Congress.

Using this new, updated and flexible format EDRA Board & EDRA Examiners offer the possibility to all candidates to pursue their desire for high level regional anaesthesia exam. However, we sincerely hope that we will meet our candidates not only for practical (section B) of EDRA Part 2 exam during ESRA Annual Meeting, but also at other ESRA Events, where we can share our opinions and experience as well as simply have a good time together.



# Cadaveric regional anaesthesia workshops – do we really need them?



Peter Merjavy (Craigavon Area University Teaching Hospital, Northern Ireland, UK) @PeterMerjavy



“ Whilst we would generally agree, that teaching anatomy is still extremely relevant, the question is, are the cadaveric workshops still necessary [...]? ”

Regional anaesthesia always works when you put the right dose of the right drug in the right place. When it doesn't work, it is usually because the local anaesthetic has not been delivered to the right place. From the first brachial plexus block performed under direct vision, through percutaneous techniques using various anatomical landmarks, later paresthesia and nerve stimulation to real time ultrasound guidance, anatomy has been deemed of the utmost importance for correct needle tip location and injection of local anaesthetic. I am sure, everyone in the world of regional anaesthesia is aware of famous Alon Winnie's quote 'regional anaesthesia is simply an exercise in applied anatomy'.

Cadaveric workshops were traditionally connected to the core training of future regionalists. Whilst we would generally agree, that teaching anatomy is still extremely relevant, the question is, are the cadaveric workshops still necessary and fit for purpose in 2021 and for the years ahead? We will try to find out the answers for this and few other questions from the three experts with close connection to regional anaesthesia and anatomy.



**Prof. Paul Kessler**  
ESRA Chair for cadaveric workshops,  
Vice Chairman Anaesthesia & Intensive  
Care Medicine, Frankfurt, Germany



**Prof. Graeme McLeod**  
Consultant Anaesthetist Dundee,  
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Co-Lead MSc Regional Anaesthesia,  
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**Dr. Mario Fajardo-Perez**  
Director of ESRA Cadaveric Workshop,  
Madrid, Spain  
Director of Ultradissection

## Why do we need cadaveric workshops for regional anaesthesia?

### Prof. Kessler

- > The successful performance of an ultrasound-guided interfascial or peripheral nerve block is a highly complex process. These include to visualize nervous structures, to guide the needle to the target and to deposit local anaesthetic solution around the nerve. Since it is unethical to learn such a complex process on the patient, there are different phantom models for acquiring one's skills in ultrasound-guided regional blocks.
- > The most realistic and closest to the patient are cadavers. All components of nerve block such as nerve anatomy, needle movement, fascial penetration, perineural fluid injection and inadvertent intraneural injection can be shown and learned. Therefore, when properly prepared, the use of cadavers is second to none for proper ultrasound procedural training and learning. Cadavers provide an ideal tool for learning sono-anatomy and skills required for performing U/S-guided regional anaesthesia.

### Prof. McLeod

- > Regional anaesthesia can provide the best possible outcomes for patients. We should be aiming for complete anaesthesia without need for adjuvants or resort to general anaesthesia; and prolonged pain relief, based on the type and extent of the surgical procedure, while taking account of individual chronic pain and psychological make-up.
- > Thus, the bar for clinical performance in regional anaesthesia is set high. Excellent practice, the repetitive, everyday provision of high-quality anaesthesia and analgesia outlined above is difficult to achieve. The learning curve for excellence is long and reflective of other interventional and surgical practice.
- > Regional anaesthesia practice is a double-edged sword. Failure to provide adequate anaesthesia or premature postoperative resolution of block, can ruin the expectations of patients and surgeons, and limit enthusiasm for a block service. Indeed, failure to ensure the highest possible quality of regional anaesthesia is characteristic of many outcome trials.
- > Thus, within current practice considerable variation occurs in the performance of block between and within anaesthetists; and between patients with regard to postoperative pain, pain trajectories, chronic pain and functional outcome.
- > Traditional learning has been based on the accumulation of as much self-taught clinical experience as possible. Curricula have ordained a set number of supervised and non-supervised blocks, and a level of proficiency that reflects the minimum standard needed for a clinician to progress to the next stage of training. In fact, the number of blocks performed has little influence on individual performance and clinical outcomes.
- > Simulation seeks to: reduce such variability; and accelerate learning, in order to translate higher skills to clinical practice.

### Dr. Fajardo-Perez

- > I think the anaesthesiologist needs to learn applied anatomy. We don't have a good book on regional anaesthesia and applied anatomy. Anaesthesiologists are learning through youtube videos and anatomy based books. The entire college and curriculum must include basic science such as anatomy. All regional anaesthesia society need join to one university to send the residents to learn.

## Can we use other resources (book, atlas, videos ... etc) for anatomy teaching?

### Prof. Kessler

- > The basic prerequisites for successful regional anaesthesia are, in addition to well-founded anatomy, knowledge of the physical and physicochemical properties of local anaesthetics and the associated pathophysiological changes in the organism.
- > This knowledge can be acquired from books, atlases or videos, also on YouTube. Webinars, which are increasingly popular as e-learning methods, are also suitable. Nowadays, book-bound learning materials such as atlases deliver CDs or the videos can be viewed via barcode recognition. In the meantime there is a large number of excellent video animations on the internet about the implementation of almost all clinically used nerve blocks, from the anatomical basics to the complications, including the current literature. Videos are mostly more up-to-date than atlases, which is an advantage given the large number of new blocks.
- > There are various Apps about regional anaesthesia for mobile phones, also from the anaesthesiology societies. Handling is usually easy, sometimes expensive. I don't want to focus on names now, but in principle the Apps are better that not only explain the simple performance of the nerve block, but also go into things such as indication, contraindication, advantages and disadvantages, complications, i.e. illuminating a regional block from a to z.

### Prof. McLeod

- > Books and atlases provide detailed description of anatomy, but retention of knowledge is variable. Videos can provide good 3D rotating images and mnemonics to aid, for example the nerves of the brachial plexus.
- > Are there any good virtual reality software or mobile apps for teaching anatomy? What are their strengths and weaknesses?
- > Complete Anatomy from Elsevier provides 3D rotating images and plenty of detail

### Dr. Fajardo-Perez

- > I think the main source of anatomy learning is cadaver dissection and training with cadaver to improve your needling skills, prior to performing the blocks in real patients, and simulate the complications
- > The residents should be evaluated in regional or international cadaver course practicing in cadaver.
- > The residents should have an unrestricted access to the anatomy labs

## What kind of cadaveric specimens can we use and what are their advantages and disadvantages?

### Prof. Kessler

- > Cadavers differ in several aspects such as color, flexibility, quality of preserved tissue, cost, and storage on the basis of embalming method. Depending on the preservation technique used, there are three types of cadavers.
- > Traditionally, formalin embalmed cadavers have been used for learning various surgical skills. Fresh frozen cadavers were developed by keeping the cadavers in deep freezing refrigerator at  $-20^{\circ}\text{C}$  for 3–4 days after serologic testing for infectious diseases. Fresh, non-embalmed specimens begin to deteriorate within 1-2 days and are quite foul smelling. Formaldehyde is a known carcinogen, absorbed easily through skin and mucous membranes, and non-embalmed cadavers, such as fresh cadavers, increase the risk of exposure to infection.

- > Cadavers prepared using Thiel's embalming method overcome many of these problems. Thiel's embalming mixture is a water-based mixture of salts for fixation, boric acid for disinfecting, glycol, chlorocresol and ethanol, morpholine as colour preservative, and a small amount of formaldehyde. Fully embalmed specimens last longer but do not have the texture, flexibility and tactile feedback from needling that is important for learning needle guided procedures such as nerve blocks. Formalin embalmed cadavers were rigid with stiff joints and had an unpleasant odor, fresh frozen cadavers were less rigid, and Thiel cadavers were the most flexible. Color, suppleness of skin, joint flexibility, and fascial integrity of the cadavers is retained. In Thiel cadavers, due to fluid in tissues echogenicity of muscles increases which enhances the sonographic contrast between muscles and nerves.
- > One problem with cadavers is the absence of normal vascular anatomy. For all cadavers, vessels are usually collapsed, which makes it difficult to carry out some nerve blocks where the nerves run right next to the vessels. Many nerve structures are accompanied by, or adjacent to, blood vessels that are often better identifiable using ultrasound than the nerve. This is why using blood vessel landmarks for ultrasound-guided localization of neural structures is more difficult in the cadaver than in the real patient.
- > A disadvantage of fresh frozen and Thiel's embalmed cadavers is that they are more expensive than cadavers embalmed with formaldehyde. Furthermore, one has to consider that, for moral and ethical reasons, cadavers are not permitted in all countries. Under certain circumstances, individual body parts are permitted for study purposes, on which us-guided nerve blocks can also be carried out.



*Dr. Peter Merjavy, at the XVII ESRA Eastern European Cadaver Workshop in Prague, Czech Republic (26-27 September 2019)*

### **Prof. McLeod**

Four cadaver preparations are available: formaldehyde-based; plastinated; fresh-frozen and soft embalmed.

- > Formaldehyde is a traditional embalming fluid that denatures proteins and kills bacteria. It is highly toxic and carcinogenic. Cadavers are dry and stiff, and insonation is not possible.
- > Plastination was invented by Gunther von Hagens in 1977. It involves: fixation with formaldehyde; dehydration in an acetone bath, vaporisation of acetone in a vacuum; cell replacement with liquid polymer and hardening. Tissues feel plastic but retain their size, shape, and 3D anatomical relationships
- > Fresh frozen cadavers are unembalmed cadavers. They possess fine anatomical detail and provide good ultrasound images of needle-tissue interaction. However, they decompose quickly and accumulate injectate, distorting anatomy.
- > Soft preparation or soft-fix methods preserve tissue elasticity, and thus enable limb movement, ventilation, and tissue expansion and relaxation following injection. Dispersion of fluid from the target area allows repeated injection with minimal tissue change.
- > An example of soft embalming is the Thiel preservation method. Cadavers are soaked in large vats containing solutions of boric acid, propylene glycol and a very small amount of formaldehyde for up to 6 months. Thereafter, cadavers remain soft and flexible<sup>1</sup>. Histology is maintained for 12 months. The cadaver retains elasticity, has similar strain properties as patients during extraneural and intraneural injection. Injection fluid "opening" pressure has been validated at different flow rates against anaesthetized animal models and patients<sup>2</sup>. Although representing the best available UGRA simulator, the cost of preparation and storage is prohibitive.



### Dr. Fajardo-Perez

- > The best cadaver to ultrasound and needing its Thiel, for dissection formaldehyde.

### What should be included in ideal cadaveric course for novices and what for advanced learners in your opinion?

#### Prof. Kessler

- > In principle, whole-body cadavers and dissected cadavers should be made available for both beginners and advanced users. For cost reasons, half of the body could be dissected and the other half of the body kept intact. US-guided regional procedures can be performed on whole-body cadavers, while the topographical anatomy is demonstrated on the dissected cadavers. The so-called basic blocks are for novices, the more risky and deep blocks for advanced learners.
- > Short, time-limited introductions in a lecture hall would be desirable.
- > Monitors in the dissecting hall should first be used to demonstrate the individual steps of the various blocks, as well as the topographical anatomy.
- > For better learning of needling, several stations with gel phantoms should also be available for novices.
- > A sufficiently large number of high-resolution US machines, echogenic needles and catheters are a basic requirement.
- > The ratio of participants per cadaver should ideally not be greater than 5: 1, as otherwise, from personal experience, there will not be enough time for the individual participants to practice. Such an implementation is becoming increasingly difficult due to the high cost of the cadaver.

#### Prof. McLeod

- > Practical training for beginners consists of a short anatomy lecture; ultrasound training on a volunteer, scanning the neck and forearm; needle-ultrasound alignment training on a blue plastic phantom or pork belly with embedded tendon.
- > We regard training as a continuum that regularly needs appraisal and testing.
- > We use mastery learning<sup>3</sup> as the basis of training, whereby trainees gain expertise irrespective of time, by repeating a specific task until a predefined standard has been achieved. Mastery learning is characterised by seven factors: (i) baseline testing; (ii) clear learning objectives; (iii) deliberate practice; (iv) a set minimum passing standard for each educational unit; (v) formative feedback; (vi) progress to the next educational level; and (vii) continued practice until a pre-defined standard is reached.
- > The expert performance approach<sup>4</sup> uses mastery learning as a baseline. In Dundee, we believe that clinical excellence can be taught using the expert-performance approach with deliberate practice on high fidelity soft-embalmed cadaver simulators. The expert-performance approach embraces reliable, objective real-time metrics, immediate feedback, and the assimilation of mental approach to excellence that drives self-reflection and learning that achieves the marginal gains necessary to improve patient outcomes. This approach is not dissimilar to that used to train elite athletes or within aerospace. Deliberate practice is intense. It entails 1:1 training on a simulator that emphasises repetition and successive refinement while undertaking effortful tasks demanding high concentration.

### Dr. Fajardo-Perez

- > I think the residents should go to the cadaver labs all month, to learn anatomy, ultrasounds, dissections, neurophysiology.



Pr. Paul Kessler, at the XVII ESRA Eastern European Cadaver Workshop in Prague, Czech Republic (26-27 September 2019)

## What else can we incorporate into cadaveric anatomy teaching?

### Prof. Kessler

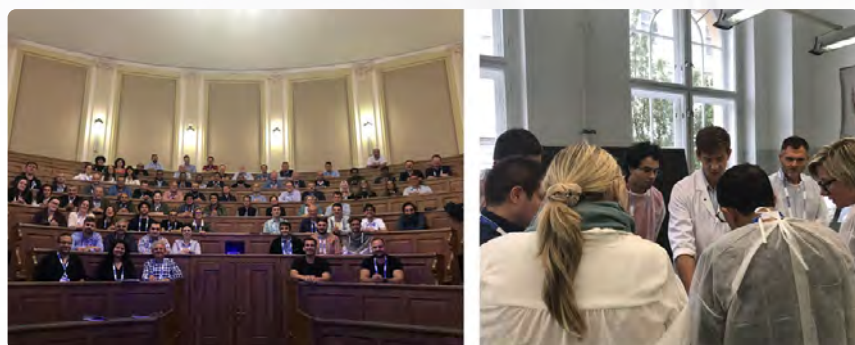
- > In the meantime, the requirements for cadaver course have increased. The purely descriptive anatomy is no longer sufficient; newer conservation techniques make it possible to imitate a complete us-guided nerve block.
- > This means first of all searching for and recognizing the target structure, advancing the puncture needle and injecting and perineural spreading the local anaesthetic, another key component of successful block. Even an intraneural needle position and spread of the local anaesthetic as a sign of nerve damage can be demonstrated, a process that must be avoided at all times on the patient.
- > Continuous procedures with catheter advancement and correct placement are also possible in cadavers. Often it is not possible to identify the position of the catheter tip even with US and injection of fluid. Cadavers allow targeted search for the catheter tip by means of tissue dissection.
- > Various needling techniques, in-plane and out-of-plane, can be learned, alignment of needle and US beam as well as hand-eye coordination. For learning fascia blocks the feeling of the passage of fascia (pop sound) is important, which is felt very well with especially embalmed cadavers. Likewise, the correct spread of the local anaesthetic between two layers of fascia is shown in cadavers.
- > While non-dissected cadavers are required for us-guided as well as for landmark-guided blocks, the topographical anatomy of the nerves and the surrounding tissue can be demonstrated particularly well on dissected cadavers.

### Prof. McLeod

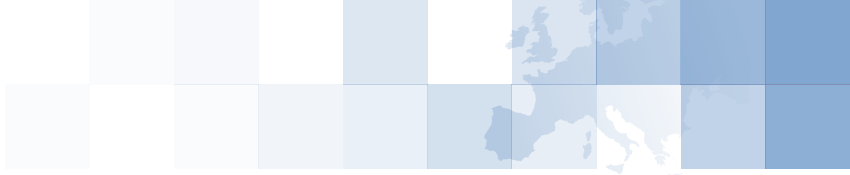
- > The collection and use of digital metrics lies at the heart of the expert performance approach<sup>5</sup>.
- > First and foremost, we use validated checklists of steps and errors – steps that should be performed and errors that should be avoided. Trainees are videoed under exam conditions and at least two trainers independently rate video performance. Our checklist has been refined to 15 steps and 6 errors. In addition, we provide summative assessment using a standard, validated global rating score. Our experience is that our checklists and global rating scores align well<sup>6</sup>.
- > We use eye tracking, an acknowledged objective measure of visual attention in order to gain an insight into visual perception. We have demonstrated construct validity using eye tracking and good correlation with checklists and global rating scores. Our data shows that both checklists and eye tracking can discriminate between skill levels.
- > Measurement of fine motor skills remains a research tool<sup>7</sup>, but should be investigated as a metric for use within skills courses.

### Dr. Fajardo-Perez

- > A lot of teachers of regional anaesthesia don't practice any cadaver dissections. In my opinion there is definitely room for improvement.



*The XVII ESRA Eastern European Cadaver Workshop in Prague, Czech Republic (26-27 September 2019)*



## What else can we incorporate into cadaveric anatomy teaching?

### Prof. Kessler

- > Possibly, which would be regrettable, we will have to forego cadaver workshops in 2035 because the costs are too high.
- > One solution would be to switch to body parts.
- > It would also be possible that by then there will be corresponding simulators with which everything that is possible on cadavers can be done.
- > The bottom line is that whole body and especially Thiel-embalmed cadavers provides best conditions for anaesthetists to learn sonoanatomy and simulate regional anaesthetic block techniques using ultraso

### Prof. McLeod

- > Immersive technologies will be used in training rather than clinically. Formal time will be given to simulation training. Variation in the quality of clinical input/interventions and clinical outcomes will drive the need for simulation training.
- > Formal simulation skills training will allow trainers to address technical and non-technical problems before patient exposure, identify individual traits and measure performance relative to peer groups.
- > New technologies will embrace 3D Virtual Reality (VR), and Augmented/Mixed Reality (AR/MR), whereby anatomy is superimposed over a cadaver or patient. Immersion will allow interaction within computer-generated 3D environments.
- > The role of VR and AR in training is not yet established. Application to training should be based on the learning needs of trainees and the desired outcomes on patients. Thus the make-up of technology will be reverse engineered from clinical need.
- > Combination of AR/VR with traditional teaching needs to be established.
- > In addition, the mechanisms underpinning the interaction of anaesthetists with real and virtual environments needs to be understood better, particularly when presented with a tricky or stressful scenario.
- > There needs to be a deeper scientific understanding of the processes that underlie skill acquisition, perception, movement, decision making and machine interaction. That way application of eye-tracking, haptics and wearable sensors to training will be based on a mechanistic approach.
- > This means a greater role for psychologists in skills training.

### Dr. Fajardo-Perez

- > I think we will combine anatomy, ultrasound, neurophysiology, virtual reality and cadaver.

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# An update on PROSPECT



Marc Van de Velde (Chair of PROSPECT, UZ Leuven, Belgium) @MarcVandeVelde6



The PROSPECT initiative provides healthcare professionals with practical recommendations for postoperative pain management in common surgical procedures. The aim is to promote the use of effective, procedure-specific analgesia to enable optimal patient recovery after surgery.

PROSPECT recommendations are formulated by an expert working group of anaesthesiologists and surgeons, after careful evaluation of:

- > Procedure-specific evidence, based on a systematic review of the literature.
- > The risks and benefits of each intervention in the specific surgical setting.
- > Use of the intervention in the context of multimodal, non-opioid analgesic strategies and modern peri-operative care pathways.

The evidence, recommendations and methodology can be found on the PROSPECT website ([esraeurope.org/prospect](https://esraeurope.org/prospect)), together with links to all PROSPECT publications (most are open access). Summary recommendations are available in English, German, French, Spanish, Portuguese, Chinese, Japanese and Turkish. Since November 2020, seven new PROSPECT reviews have been published. These most recent PROSPECT recommendations are:\*

- > [Total Hip Arthroplasty 2019 \(update\)](#)
- > [Caesarean Section 2020](#)
- > [Complex Spine Surgery 2020](#)
- > [Laminectomy 2020](#)
- > [Open Liver Resection 2019](#)
- > [Inguinal hernia repair surgery 2019 \(update\)](#)
- > [Tonsillectomy 2019](#)

\*Years reflect the literature search date.

New PROSPECT reviews and updates are underway. The next procedure recommendations that are nearly finalised include sternotomy, hip fracture, total knee arthroplasty (update), video-assisted thoracoscopic surgery, laparoscopic colectomy, open abdominal hysterectomy and prostatectomy.

PROSPECT is supported by an unrestricted grant from the European Society of Regional Anaesthesia and Pain Therapy (ESRA) as an independent Working Group of the society.

**Don't miss the [PROSPECT guidelines session at the ESRA virtual congress!](#)**

**10 September at 10:00–11:00**

**Narinder Rawal will chair a panel discussion with authors of the latest recommendations on pain management for hallux valgus surgery (Eric Albrecht), oncological breast surgery (Marc Van de Velde) and total hip arthroplasty (Axel Sauter).**

**The session will be live, so please join us and get involved in the discussions!**

# Quick Journal Club



Brian O'Donnell (BreastCheck and Cork University Hospital, Ireland) @briodnl



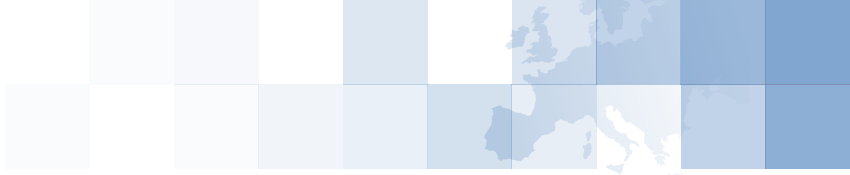
“The anaesthesia literature contributed significantly to my professional growth and has influenced my day to day clinical practice.”

**For this edition Dr Brian O'Donnell was asked to select one (or more) article(s) which for him were/are important, interesting or changed his clinical practice. This choice can be a general big randomized study but can also be very personal. Dr Brian O'Donnell does not need a lot of introduction. He is a leading expert in anaesthesia and a fantastic tutor and lecturer. It is with great pleasure that we like to share his contribution for this journal club.**

There's little doubt that the global pandemic flipped our collective personal and professional lives at a weird dystopian angle. Notwithstanding the phenomenon of Covid-related information, the anaesthesia literature contributed significantly to my professional growth and has influenced my day to day clinical practice. I will probably remember 2020 for three key publications on the topic of prehabilitation and frailty, intraoperative blood pressure control and long awaited anaesthesia guidelines for hip fracture care.

Prehabilitation can be thought of as a multidisciplinary process to: (1) identify patients at greatest risk of adverse clinical outcome following surgery; and (2) to optimise nutritional, lifestyle (smoking cessation, alcohol modification etc) and cardiorespiratory fitness in the days and weeks prior to surgery. As an anaesthesiologist with interests in both regional anaesthesia and perioperative medicine, I frequently encounter older frail people presenting for cancer and non-cancer surgery at our perioperative assessment clinic. Prehabilitation may have a significant role in managing and mitigating risk in this cohort of patients. Frailty was the topic of the June 2020 edition of journal Anesthesia and Analgesia. Norris and Close provide a balanced review of the role of prehabilitation in managing perioperative risk and enhancing patient outcome in older people with frailty syndrome [1].

Hypotension has long been accepted as an inevitable consequence of both general and neuraxial anaesthesia. The impact of hypotension on clinical outcome is poorly understood. A noteworthy example is the relationship between cerebral autoregulation, cerebral blood flow and mean arterial pressure. The accepted critical threshold of 50 mmHg [2] is at best an over-simplification and at worst a potential contributor to cerebral hypo-perfusion during anaesthesia [3]. The Perioperative Quality Initiative (POQI <https://thepoqi.org>), an international multidisciplinary organization with interests related to perioperative medicine, published a series of consensus articles on the physiology of blood pressure and the optimisation of pre-, intra-, and postoperative blood pressure [4,5,6,7]. While each of these articles are worth reading, the article describing the association between intraoperative hypotension and the occurrence of harm has had greatest impact on my clinical practice [6]. I now aggressively treat all episodes of hypotension and I no longer tolerate systolic blood pressure of less than 100mmHg or mean arterial pressure of less than 65mmHg.



Evidence based clinical standards for the provision of better anaesthesia and analgesia for patients undergoing hip fracture anaesthesia have been published [8]. The integration of these standards into clinical practice causes significant challenges in terms of challenging established practices of individuals (clinicians and patients) and healthcare institutions. The Association of Anaesthetists 2020 guideline document provides an excellent oversight into the establishment of patient-outcome centred perioperative care for patients with neck of femur fracture [9]. Evident within this document is a focus on 'what matters most' to the patient, the integration of a multidisciplinary approach to patient care and the alignment of service provision to meet patient needs.

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