JANUARY 2021



The magazine for members of the Royal College of Anaesthetists

COVID-19: what have we learnt so far?

Optimising training in the 'new normal'

Defining standards: the 2021 Anaesthetics Curriculum

State Store

Young Anaesthesia Artist 2020

Page 8



rcoa.ac.uk @RCoANews

RCoA Events

rcoa.ac.uk/events events@rcoa.ac.uk

JANUARY

GASAgain (Giving Anaesthesia Safely Again) 13 January 2021 Bradford

Anaesthetists as Educators: Advanced Educational **Supervision** 26 January 2021 Virtual event

AaE: Advanced Educational **Supervision** 26 January 2021 Virtual event

RCoA and BJA Joint Webinar: Perioperative Management of the Airway Workshop Frail Elderly Surgical Patient 27 January 2021 Virtual event

Clinical Directors 28 January 2021 Virtual event Invitation only

Anaesthetic Updates 29 January 2021 Virtual event

FEBRUARY

ੀ AaE: Teaching and Training in the Workplace 2-3 February 2021 FULLY BOOKED

Innovations and interlectual **Property Conference** 3 February 2021 Virtual event

Anaesthetic updates 24-25 February 2021 Virtual event

MARCH

1 March 2021 To be confirmed

AaE: Introduction 11 March 2021 FULLY BOOKED

AaE: Simulation Unplugged 12 March 2021

Virtual event **Developing World Anaesthesia** 15 March 2021 RCoA, London

Global Anaesthesia 16 March 2021 RCoA, London

• Leadership and Management: The Essentials 16–17 March 2021 Glasgow

Anaesthetic Updates 23-24 March 2021 Virtual event

ရ Leadership and Management: Personal Effectiveness 26 March 2021 RCoA, London

d Ultrasound Workshop 29 March 2021 RCoA, London

APRIL

A Patient Safety 20 April 2021 Virtual event

ને After the Final 21 April 2021 Virtual event

G Cardiac Symposium 2021 22-23 April 2021 Virtual event

Clinical Directors 16 April 2021 Virtual event

Invitation only

AaE: Teaching and Training in the AaE: Anaesthetists' Non-<u>____</u> Workplace **Technical Skills (ANTS)** 28-29 April 2021 11 May 2021 Edinburgh RCoA. London Airway Workshop GASagain (Giving Anaesthesia Safely Again) 12 May 2021 28 April 2021 Brighton London م Ānaesthesia 2021

MAY **6** Leadership and Management: The Essentials 5-6 May 2021 RCoA, London

10 May 2021

RCoA, London

AaE: An Introduction

Senior Fellows and Members **Club** Meeting 25 May 2021 RCoA, London

Manchester

18–20 May 2021

REVISION COURSES

Primary FRCA Online Revision Course

Start date 1 December 2020 Content will be available until the exam in February

Final FRCA Online Revision Course

Start date 14 December 2020 Content will be available until the exam in March

These courses include:

- video lectures
- Powerpoint presentations
- mock exams
- chat room for discussion between trainees
- the opportunity to send in questions to lecturers and receive feedback.

Book online now at rcoa.ac.uk/events

Discounts may be available for RCoA-registered Senior Fellows and Members, Anaesthetists in Training, Foundation Year Doctors and Medical Students. See our website for details.

Book your place at rcoa.ac.uk/events

Discounts may be available for RCoA-registered Senior Fellows and Members, Anaesthetists in Training, Foundation Year Doctors and Medical Students. See our website for details.

Book your place at rcoa.ac.uk/events

JUNE



Anaesthetic Updates 15 June 2021 Bristol



Anaesthetic Updates 29-31 June 2021 RCoA, London

Primary Revision course June 2021 Venue to be confirmed



JULY

Final Revision course July Venue to be confirmed



Registration still available!



Contents



Guest editorial the SOBA bariatric-drug calculator app

Introducing the Society for Obesity and Bariatric Anaesthesia (SOBA) bariatric-drug calculator app

Page 12

The President's View

An update on how the College is working to prevent further cancellations to our examinations Page 4

COVID-19: what have we learnt so far?

As COVID-19 patients start to fill our intensive care beds again, a lot of us are going to be feeling exhausted and burnt out

Page 30

Optimising training in the 'new normal'

The COVID-19 pandemic has changed the way the NHS will work for the foreseeable future

Page 36

Defining standards: the 2021 Anaesthetics Curriculum

The consultant anaesthetist must possess the capacity for wise judgement, grounded in the values and norms of anaesthetic practice Page 48

The President's View	4
News in brief	8
Guest Editorial	12
Faculty of Pain Medicine (FPM)	14
Faculty of Intensive Care Medicine (FICM)	15
SAS and Specialty Doctors	16
Clinical Directors' Executive Committee	18
Patient perspective	20
Revalidation for anaesthetists	22
Perioperative Journal Watch	23
Anaesthesia Clinical Services Accreditation (ACSA)	24
From the Ethics Committee	26
COVID-19 intubations: are we stressed?	28
11@11: a novel way to teach during the COVID-19 pandemic	32
Life Jackets	34
Australian fellowships: the COVID-19 edit	38
F1 experience of anaesthetics and ICU	40
A fellowship in system-wide safety investigation	42
Safe management of PPE waste during COVID-19	44
Simulation gamification: training future anaesthetists	46
Institutional abuse: do we have a problem?	50
NELA: learning from best practice Contributions from top	
performing NELA teams	52
Experiences in writing and submitting articles	54
As we were	56
New to the College	58
Letters to the editor	59
Notices, adverts and College events	62



Dr Helgi Johannsson

Welcome to the January Bulletin.

I write this in early December having just come out of the lockdown, visited my gym two days in a row and generally enjoying the sight of London coming back to life. I even visited the College in person yesterday, to chair a session of the Winter Symposium. There may not have been an audience there, but actually being on site feels like progress, especially with the hope of a vaccine glinting on the horizon like a spring sunrise.

Will the promise of immunity allow us to go back to the way we were before? I certainly hope not, and after reading about the many areas of progress in this issue of the *Bulletin* I am confident you'll agree with me. The way we deliver education and examinations has changed beyond recognition, and I want to highlight how our teams have transformed the delivery of our exams in a timeframe we would have thought impossible prior to the pandemic (see page 5). Nationwide, teaching sessions, interviews, and meetings have been moved to a virtual platform, with occasional glitches, but generally smoothly.

I think the pandemic and the enormous changes it has brought about has made us realise that despite public perception, we are not superheroes. We are human and we need to look after ourselves and our colleagues in order to be effective and safe at work. After a trainee teaching session on wellbeing yesterday, my trainee mused about quite how well she is treated in anaesthesia compared to her previous placements. I am proud that we in anaesthesia have a reputation for looking after our trainees, but we must not get complacent. There are still many things we can do to improve. One thing I want to highlight is from Lucy Williams' article 'Am I good enough?' (see page 16). We train people every time we anaesthetise, and getting our trainees into a 'growth mindset' with a positive frame of mind not only enhances their learning, but in my experience improves the team dynamics of the whole workplace.

In this issue we continue with some of our themes of the year. We look at how PPE has increased medical waste, in the bigger subject field of sustainability (see page 44), and our article by Hamish McLure and Kirstin May on inequalities in anaesthesia highlight quite how big our staffing crisis is (see page 50). We are not training anywhere near enough anaesthetists for the needs of the UK, and vacancies are already an enormous problem in many areas. Training positions have not kept up with demand, and I suspect in the future we will be thankful for those trainees who didn't give up on not getting a 'training' post, but continued to obtain the CESR equivalence.

I want to end by thanking all those that took part in the Young Anaesthesia Artist 2020 competition (see page 8), and encourage you all to continue contributing either in art form, or in the form of a great 800 word article.

May 2021 bring you joy, hope, and immunity.





The President's View OUR COMMITMENT **TO YOUR** PROGRESSION



Professor Ravi Mahajan President president@rcoa.ac.uk

In the September edition of the *Bulletin*,[†] I highlighted how the College had been working to find ways to prevent further to provide you with this encouraging update.

College examiners, Council and staff understand and recognise that 2020 has been an anxious and stressful time for anaesthetists in training. It has not been easy, I know. While the pressures exerted by COVID on personal lives and on clinical and training responsibilities have been far greater than usual, I have been impressed and heartened how our 2020 cohort of exam candidates have risen to the challenge and not only trusted their College in the changes we've needed to make on their behalf, but showed the patience and flexibility anaesthetists, intensivists and pain clinicians are known for.

The College has responded to COVID in many different ways, but in this article, I would like to explain how and why we needed to virtualise our examinations, and what steps we took to address the pressures these changes exerted upon an important section of our members – our next generation of anaesthetists.

A long journey in a short time

This work has encompassed the complete virtualisation of FRCA, FFICM and FPM examinations using a range of technologies and systems to support new delivery methods – all which needed to be tested and ensure they work seamlessly together. Since September, the College has progressed to successfully deliver fully virtual

cancellations to our examinations, and I am pleased to now be able

OSCE and SOE to approximately 800 candidates and just over 1,200 candidates through online remote proctored written examinations.

A process to move to these systems that would typically take six months following a notification of change a year prior, suddenly became six weeks from mid-September to the first day of the online Primary OSCE SOE examination on 2 November. In that period, the College's examinations department and a small group of senior examiners worked in close partnership. They learned how to use a suite of platforms to write questions, build and schedule exams and to examine on the system. The latter entailed the training of 91 examiners taking over 80 training hours. It was also necessary to develop a new set of processes to support this delivery. To ensure that our members understood how to use the new system, we developed supporting guidance - in both written and video format - for examiners and candidates alike. We investigated and established additional channels for communication, which included Slack, WhatsApp, MS Teams and Zoom. Finally, we brought in additional IT support to help deliver our examinations in this new online format.

I was pleased that this became a project that received input and support from teams across the whole College. It was a truly collaborative effort focused on solving a critically important issue for

Running examinations online is not just about finding a suitable platform

our members. With strong support from College Council and the Board of Trustees, College staff acknowledges and sympathises with the pressures faced by our anaesthetists in training and took their role in supporting and providing a swift, yet robust solution extremely seriously.

The learning curve for the team was steep but the impetus to succeed was strong; we were determined to keep exams running in a pandemic. In this attempt to protect training progression for as many trainees as possible, it was imperative to retain and uphold the integrity of examinations and the high standards of the FRCA. We did this through engagement with other Medical Royal Colleges, the Academy of Medical Royal Colleges and the GMC.

Effective communications

With such significant change to exams, we needed to ensure we communicated with candidates both clearly and in a timely manner. Regular updates were shared with candidates directly via email and through our publications such as the President's News, Bulletin and The Gas Newsletter. Our website, blogs and social media channels were also heavily used to ensure we reached our candidates through one route or another. College tutors, RA(A)s, trainers, examiners – all such College networks were also shared updates which were cascaded to our candidates. A multichannel approach was used to ensure all candidates received the relevant information at the relevant point in time. Another important element of our communications was the involvement of members of the College's Anaesthetists in Training Committee, who input into the messaging, at every step of

the way.We will continue to ensure examination updates are shared through all our communications channels, as swiftly as possible.

Prioritisation

Some of the changes we had to make to keep exams running were understandably difficult for our members, but unavoidable, such as the need to prioritise places on exams. This change to the application process helped ensure that, where necessary, trainees at critical points in their training and career progression could still sit an exam. The publication of the prioritisation process, and its operation in the first sets of examinations, was also something we learned from, with the criteria being updated and improved following feedback for prioritisation for December. With so many critical changes in such a short amount of time, some valuable lessons were learned which will go forward to future exam deliveries.

It's all about IT

Running examinations online is not just about finding a suitable platform, in fact it's all about IT: having the right hardware, a good, stable internet connection, and fast, effective support for when issues arise. This realisation came about as we started on-boarding examiners to the online platforms and concluded in the acquisition of dedicated IT support, not just for examiners but for all candidates sitting one of the clinical exams online.

During the first delivery of the online Primary OSCE SOE in November 2020, this IT support was invaluable and meant that all but one candidate completed their exam despite some technical glitches. Feedback from the candidate survey after the Primary OSCE SOE reflected this success: 'Very quick to resolve issues' and 'Impressive technical support.'

From this first exam delivery we developed a comprehensive troubleshooting guide to support candidates sitting their clinical exams online. However, that level of personal IT support at a critical and stressful time in trainees' lives is something that will continue for all future online exams delivered by the College.

Helping us develop your examinations

We worked hand in hand with our examiners to develop exams in the best way possible for trainees, by seeking the fairest solutions. Some ideas worked, while some needed improvement. Candidates have provided valuable feedback after each new online delivery, by email and post-exam surveys which has been extremely helpful to learn from and improve our processes. A good proportion of the feedback was positive indicating that the Primary OSCE SOE was felt to be well organised, that candidates were provided with useful resources to help prepare for the exam and that candidates were impressed by the work that had gone into creating an exam online.

We also received constructive comments that will help us improve the delivery of your exams, such as the ability to use the online calculators and the need for environment checks to be completed for each exam - we will clarify the processes and policies ahead of the next sittings of the exams.

Some of the issues raised during the Primary delivery in November were subject to the short lead time we had to prepare for this examination. For example, the late notice for exam dates and times and the delayed release of exam preparation materials. Both aspects were contingent on developing sufficient familiarity with the system within a short amount of time and had the greatest impact on the first sitting of exams on Practique. With this in mind, we offer our sincere gratitude to the pioneers of this very first online clinical exam. This group of candidates showed great faith in the College and the delivery method, all were impressively prepared on the day of the exam, and remained calm despite some technical glitches, we thank you.

As anaesthetists, we need to be flexible, adaptable and solution-focused in our daily lives to address whatever clinical challenges are presented. I am incredibly proud not only of the College's Examinations Team and our examiners, but of course of our 2020 cohort of Anaesthetists in Training who, in addition to the clinical pressures of caring for patients during a global health pandemic, have risen to the challenge, remained focused on the task at hand, and have worked with their College to progress through their training in extraordinary circumstances.

None of this work would have been possible without the dedication and support of our body of examiner volunteers, including those who had retired but came back to join us this year. This group has worked tirelessly, dedicating many, many hours of work to bring in these changes in exam delivery, and I would like to thank them personally for the support given to examinations both this year and in the year ahead.

A fitting final note comes from one of the Primary examiners who at the end of the November exam week said; 'Given that the move to full online examining only started around mid-September, the folks at the RCoA have done a truly remarkable job of making the online examination portal work for both candidates and examiners. It really was pretty robust, with much fewer alitches than I expected. A tremendous achievement." Haresh Mulchandani, Primary Examiner, November 2020.

If you have any comments or questions about any of the issues discussed in this President's View, or would like to express your views on any other subject, I would like to hear from you. Please contact me via presidentnews@rcoa.ac.uk

Ravi M Vice-Fiona Willia Edito Helqi Jaidee Coun Krish Coun Jonat

Coun Dunca Lead Anaesthesia

© 2021 Bulletin of the Royal College of Anaesthetists All Rights Reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any other means, electronic, mechanical, photocopying, recording, or otherwise, without prior permission, in writing, of the Royal College of Anaesthetists.

Bulletin of the Royal College of Anaesthetists

Churchill House, 35 Red Lion Square, London WC1R 4SG 020 7092 1500

rcoa.ac.uk/bulletin | bulletin@rcoa.ac.uk

✓ (∂RCoANews) f/RoyalCollegeofAnaesthetists

Registered Charity No 1013887 Registered Charity in Scotland No SC037737 VAT Registration No GB 927 2364 18

Hugo Hunton Lead College Tutor
Emma Stiby SAS Member
Susannah Thoms Anaesthetists in Training Committee
Carol Pellowe Lay Committee
Gavin Dallas Head of Communications
Mandie Kelly Website & Publications Officer
Anamika Trivedi Website & Publications Officer

Articles for submission, together with any declaration of interest, should be sent to the Editor via email to bulletin@rcoa.ac.uk

All contributions will receive an acknowledgement and the Editor reserves the right to edit articles for reasons of space or clarity.

The views and opinions expressed in the Bulletin are solely those of the individual authors. Adverts imply no form of endorsement and neither do they represent the view of the Royal College of Anaesthetists.

ISSN (print): 2040-8846 ISSN (online): 2040-8854



NEWS IN BRIEF

News and information from around the College



8 |

Young Anaesthesia Artist 2020

Thank you all for submitting such excellent art for the Young Anaesthesia Artist 2020 competition. Judging it was great fun and I want to thank every contributor for the time and effort that went into preparing the images. I hope everyone agrees that the expression that Sophia (age 17) captured is definitely worthy of our front cover this month.

I want to mention the excellent submissions on the opposite page by Cerys (age 14) and the much younger Ella who captures a lot of detail in her image, especially for someone only five years old. I really enjoyed how many of the images depict how the children perceive the discipline of anaesthesia, and what their parents do at work.

We plan on using some of the other images as incidental art in the next few issues, and I really want to encourage further submissions, so keep them coming. Please ensure that they are in portrait form, and not too dark, as they won't come out very well in print. All entries will also be displayed around the College building in Holborn once we are able to open the offices again.

Please make sure to send your drawings to <u>comms@rcoa.ac.uk</u> and please share them on Twitter tagging @RCoANews and using #YAArtist2020 for a retweet.

Again very well done everyone!

Helgi Johannsson, Editor



Winner, Sophia (age 17)



Commended, Cerys (age 14)

·CP

Bulletin | Issue 125 | January 2021

Commended, Ella (age 5)



NEWS IN BRIEF

News and information from around the College

COMING UP IN 2021 – RCoA campaign to support the anaesthetic workforce

Workforce issues have always been at the heart of what the College does. But the COVID-19 pandemic has shone a new light on the impact of workforce shortages on the mental and physical wellbeing of our members.

Looking beyond COVID-19 and over the next few years, we have an opportunity to build on the momentum created by the pandemic to raise the profile of the specialty and highlight its critical role in healthcare systems.

This is why in 2021 we will be launching our new campaign on the anaesthetic workforce which aims to:

- change Government policy to secure a sustainable anaesthetic workforce across the four nations
- explore how anaesthesia is changing and what anaesthetic services will look like over the next ten years
- help make a significant and measurable contribution to the workforce for the benefit of our members.

We will engage with you, our members, throughout the campaign to make sure that you remain at the heart of our projects. Look out for more information about the campaign over the coming months!

More on our 2020 Medical Workforce Census on page 50



Annual College award nominations

The College is now inviting nominations for the College annual awards. Fellows and members are invited to put forward nominations for consideration on behalf of Council by the Nominations Committee. To find more details and to understand the criteria for the awards, please find the Criteria for Honours, Awards and Prizes, please go to: http://bit.ly/RCoA-Honours

Nominations should be proposed and seconded using the nominations proposal form online (<u>http://bit.ly/RCoA-Proposal</u>). Completed forms should be submitted via email to: <u>awards@rcoa.ac.uk</u> by Wednesday 31 March 2021.



Looking forward to 2021 – clinical content leads needed

Like many organisations, our events programme in 2020 took a virtual turn.

Whilst going virtual was a new challenge, it has brought many benefits to our attendees – we have managed to attract a more regional and international audience as well as offering a flexible approach for attendees by giving them the opportunity to watch the content on demand.

Looking forward to our 2021 events, we have a lot in the pipeline, from our Leadership and Management and Anaesthetists as Educators workshops, to our Anaesthetic Updates and Anaesthesia 2021 in May.

We are now on the lookout for more clinical content leads to help support some of our Anaesthetic Update events later in the year. If you have ever attended one our events and thought to yourself, 'I would love to work on the programme for one of these events' then this is the role for you!

To raise your interest, please email <u>events@rcoa.ac.uk</u> with a short overview on why you would like to be involved.

New patient information leaflet translations available

The patient information leaflet, Anaesthetic choices for hip or knee replacement, has now been translated into the 20 most common languages used in the UK. This is part of the College's ongoing partnership with the international translation charity, Translators without Borders.

Other resources that have been translated to date are: You and your anaesthetic, Your spinal anaesthetic and Your child's general anaesthetic.

Please see our website for further details: rcoa.ac.uk/patientinfo/translations

Reyal Li CC D Wh dep API An eac mei Wh auto you anc

Wh

The API connection will go live in early 2021 and is part of a continual improvement plan. Before August 2021 we will be delivering three major projects that aim to improve user experience, we will shortly be announcing details of these exciting projects.



Lifelong Learning API connection into CRM Dynamics

What is API?

The College's Lifelong Learning team and Membership department have come together to create a two-way API (application programming interface) connection. An API is a tool that allows two applications to talk to each other, enabling the LLP to connect to our new membership system.

What does this mean for LLP users?

When you become a member of the RCoA, you will automatically receive an account on Lifelong Learning if you are eligible. As a trainee, this will make things faster and more efficient, particularly for new starters, those coming up to CCT and when you achieve milestones or pass exams.

When will this be live?





THE SOBA BARIATRIC DRUG CALCULATOR APP

Dr Martyn Ezra, ST7 Anaesthetist, Oxford University Hospitals NHS Foundation Trust Dr Anika Sud, Consultant Anaesthetist, Oxford University Hospitals NHS Foundation Trust Dr Jonathan Redman, Consultant Anaesthetist, York Teaching Hospital NHS Foundation Trust Dr Mike Margarson, Consultant Anaesthetist, St Richard's Hospital, Chichester

Perioperative drug dosing in the obese patient is complex. In this article, we would like to introduce and describe the Society for Obesity and Bariatric Anaesthesia (SOBA) bariatric drug calculator app.

Background

A male patient, six feet tall, nominally has an ideal body weight of 80 kg and has 15 per cent body fat. However, if he is morbidly obese with a BMI of 60, he will have a total body weight of 200 kg with around 60 per cent body fat. Appropriate dosing of perioperative drugs is important in any patient. Calculating doses in the

morbidly obese patient is difficult, and knowing how to apply underlying principles not always well understood. For such a patient – and for each drug - what is the relevance of fat solubility? Redistribution? Hepatic clearance? Total body weight is unlikely to ever be the right dosing scalar. So, how do we adjust our doses, and what scalars should we use?

The answer depends upon multiple factors. The literature is full of gaps, with few clinical trials conducted in really obese patients - most pharmacokinetic modelling stems from the 1980s and 1990s, with cohorts of BMI 30-40 considered obese.

However, bariatric surgery has brought a wider anaesthetic clinical experience, which, together with the theory and

those limited older studies, provides an evolving evidence-base to guide us. For many drugs we now have a clearer idea of which scalar adjustment, based on ideal (IBW), lean (LBW) and adjusted body weight, to use.^{1,2} But applying these formulas and the multi-step calculations can be complex and timeconsuming, and risks introducing drug errors.³ Time for a modern approach.

App development

Initially, an Excel spreadsheet-based drug dose calculator for the high BMI patient was created. The operator inputs height, weight and patient sex, and then, using the appropriate scalar, drug doses are automatically calculated. The concept was unveiled as a trainee presentation at the SOBA annual meeting. It was immediately clear that converting this into an app would allow improved access and additional safety features.

The app was developed for iOS on the iPhone, using Apple's programming language Swift and development platform Firebase. SOBA refined the app specification, reviewed the dosing recommendations (evidence-based where possible, otherwise based on the SOBA expert consensus), and planned the national roll out.

Current function

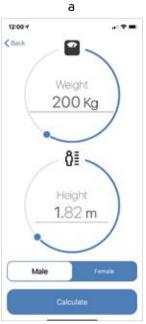
Using inputs of patient height, weight and sex, the app calculates and displays the drug doses (or dose range), the scalar adjustment in use (TBW, IBW, or Adj40BW), and links to the dosing recommendation reference. Thirty-five drugs are currently included, grouped by drug class and colour-coded as per the International Colour Coding System for Syringe Labelling as induction agents, neuromuscular blockers, reversal agents, analgesics, anticoagulants, antibiotics and antiemetics.

The app incorporates several key safety features, providing distinct advantages over a static formulary.

- If the patient's BMI is less than 35, no calculation is performed, and a cautionary message appears.
- Realtime over-the-air updates allow continual improvement, for example to introduce new drugs and modify scalar adjustments or doses as evidence evolves without the need for the user to upgrade the application.
- If safety-critical errors ever appear, the app can be disabled to force users to upgrade to the latest version.

After several development stages, the app has completed beta testing for content, functionality and compatibility on different iPhone and iOS systems. Because it meets the definition of a 'medical device', full MHRA and CE standards will be complied with in the distribution of the app.

Figure 1 (a) User inputs patient weight, height and sex; (b) scalars and drug doses are automatically calculated; (c) references for each dosing recommendation are displayed



The app is now freely available to use and can be accessed from the SOBA website: sobauk.co.uk. where you can also leave any feedback. Never forget, it is merely a tool to help you calculate a recommended initial or loading dose, no more – vou must still understand the issues around clearance and maintenance of therapeutic levels; and adjustment of dose for the individual patient remains the responsibility of the supervising clinician.

Please give it a go, we hope you find it both educational and useful!

- 1 Nightingale CE et al. Perioperative management of the obese surgical patient. Association of Anaesthetists of Great Britain and Ireland, Society for Obesity and Bariatric Anaesthesia, Anaesth 2015:70:859-876.
- 2 Ingrande J, Lemmens HJM. Dose adjustment of anaesthetics in the morbidly obese. Br J Anaesth 2010;105:i16-23.
- 3 Mahajan RP. Medication errors: can we prevent them? Br | Anaesth 2011;107:3-5.

b		C
12:00 4		12:00 4 🚽 🗢
KBack SOE	A Calc	Keack Propofol Induction
Weight: 200 kg He	ight: 1.82 m Gender:	
PARAMETERS		Drug: Propofol Induction
BMI	60.4 kg/m2	Dosing Regime:
an l	77.0 kg	Dose
Adj408W	126.2 kg	1.5 - 3 mg/kg
LBW	94.0 kg 🗧	Notes: Further smaller boluses may be required to avoid accidental awareness
INDUCTION AGENTS		Reference:
Propofel Induction	140 to 280 mg	 Ingrande J, Brodsky JB, Lemmens HJ. Lean body weight scalar for the anesthetic induction dose of propofol in morbidly
Proporal intusion	Use Adj40BW for TCI	obese subjects. Anesth Analg 2011; 113(1): 57-62
Thispentone LBW	280 to 500 mg	
NEUROMUSCULAR E	BLOCKERS	
Atracurium LBW	57 to 76 mg	
Rocuronium LBW	67 to 113 mg	
Vecuronium LBW	9.5 to 11.3 mg	



Faculty of Pain Medicine (FPM) Examination update

Dr Nick Plunkett, Chair, FPM Examinations contact@fpm.ac.uk

Due to the ongoing government restrictions on freedom of movement and association, the RCoA and FPM had made the decision in the early summer to run examination assessments remotely until further notice. The FPM examinations schedule for autumn 2020 was thus retained, with preparations made to deliver remotely.

The MCO examination was run on 26 August. The Faculty provided communication on all aspects of the exam, including the process and procedures set up by the remote proctoring company, TestReach. There were 17 candidates, all attending as planned on the day. There were no reports from TestReach of any irregularity or significant incident in exam delivery.

Following an Angoff standard setting meeting on 10 September, a raw pass mark of 271/398 was determined giving a pass mark of 68% (similar to the previous pass mark). A total of 14 out of 17 passed, a pass rate of 82%.

The SOF examination was delivered via Zoom on 13 October. There was significant preparation from all colleagues – both examiners and the examination department. All examiners were trained in Zoom technology, and attained additional skills in assessing remotely and conducting practice examinations as examiners and as candidates giving feedback on the potential candidate experience to optimise this as much as possible.

A series of measures were adopted to mitigate the potential effects of technical failure/glitches, including provision of a third examiner shadowing each examination episode and prepared to actively examine at a moment's notice if required. The process and additional safeguards worked perfectly on the day, with exams department, examiner, and candidate feedback highly positive.

Of 18 candidates attending, 14 were determined to achieve the necessary standard, with a pass mark of 31/40and a pass rate of 78%.

The pass rates for both elements of the exam were in the upper range of pass rates, which, given the procedural change with remote process, was robustly reassuring for all concerned.

It is especially gratifying that the FPM was the first within the RCoA and FICM family to deliver both MCQ and SOE assessments remotely and successfully - all a testament to the additional hard work in preparation for these events from all concerned.

With the combined experience of candidates, examiners, and the RCoA exam department, I am confident in reassuring all potential candidates that where there is a decision to run either the MCQ and/or the SOE remotely in the future, they can expect an examination experience delivered with the customary highly professional RCoA exam department processes, and the same robust and fair assessment of pain medicine knowledge and understanding for which the FPM exam is renown.

FPM was the first within the RCoA and FICM family to deliver both MCO and SOF assessments remotely and successfully



Faculty of Intensive Care Medicine (FICM) Enhanced care

Dr Danny Bryden, Vice-Dean, FICM contact@ficm.ac.uk

It's a familiar story of extreme clinical pressure driving change. In the late 1990s intensive care medicine was in crisis due to a lack of resources. Interhospital patient transfers were taking place because of the lack of criticalcare beds. The 'Comprehensive Critical Care'¹ report produced in response, led to the growth of Level 2 beds, with critical-care outreach services providing support to the wards – 'critical care without walls'.

Those changes did improve care, but in 2017, when FICM started its Critical Futures initiative,² it was clear that we were losing ground again. This time, however, the gap was between wardlevel care and the critical-care service, and patient groups falling into it were surgical, medical and obstetric. Local solutions were being developed, but were often fragmented. The Getting it Right First Time programme (GIRFT) identified a twofold variation in critical care bed usage for the same surgical procedure, reflecting the variation in support to patients resulting from differences in local resources.

The Enhanced Care project was developed by the Faculty in conjunction with the Royal Colleges of Physicians of the home nations as a four-nation solution to these shortcomings.³ The report was released in May 2020 to reflect first-wave COVID-19. It was supported by NHS England as a possible solution to the pressures of keeping COVID and non-COVID

pathways separate for elective surgery, by avoiding on-the-day cancellations for patients who didn't really need a critical-care bed but who couldn't quite be cared for safely on existing wards.

FICM has worked alongside the Centre for Perioperative Care and other stakeholders to develop guidance for surgical patients needing enhanced perioperative care.⁴ The guidance isn't prescriptive, but follows the lead of the main Enhanced Care report. It identifies the workforce and operational requirements of an enhanced perioperative care service, while allowing the detail to be worked out locally to reflect patient population and staffing.

In order to ensure timely release, additional details of the service specification, such as data collection and funding, are still being refined. Comprehensive critical care was launched with a £140 million cash injection. Enhanced perioperative care's time has come, but in the midst of a

pandemic, we'll all need to find a way to make it work at a local level, hoping that by doing the right thing for patients the money will follow.

- Comprehensive critical care: a review of adult critical care services. DoH, 2000 (https://bit.ly/3lmp7eP).
- 2 Critical Futures Initiative. FICM, 2017 (ficm.ac.uk/criticalfutures)
- 3 Enhanced Care. FICM, 2020 (https://bit.ly/2UdHEhw).
- 4 Guidance on establishing and delivering enhanced perioperative services. FICM, 2020 (https://bit.ly/3lkXtPB).



Dr Lucy Williams RCoA SAS Member of Council, Swindon sas@rcoa.ac.uk

SAS and Specialty Doctors AM I GOOD ENOUGH?

At the time of writing we have just had the delayed birthday honours list, and Dean of the Faculty of Intensive Care, Alison Pittard, was the recipient of an OBE. She tweeted her surprise and pleasure using the hashtag, #impostersyndrome. Alison has been an exceptional leader within the ICU/anaesthetic community by anybody's standards. Why would such a person suffer from imposter syndrome?

Imposter syndrome in high-achieving women was first described in the 1970s. It is prevalent in women. especially women of colour, but it affects men in roughly equal numbers. Key features include doubting one's accomplishments and having a persistent fear of being exposed as a fraud. This is deeper than just lack of confidence. The paradox of imposter syndrome is that individuals who experience it are usually objectively successful and are held in high esteem by their peers.

Imposter syndrome is common in academic high achievers, which selfevidently includes all doctors. At school, we were the bright kids. We went to university and suddenly we were surrounded by others who appeared so much smarter. A career in medicine can be a constant struggle to show that you are more worthy than your peers. Not only do you need great A levels,

you have to demonstrate that you are a rounded person and get involved in all sorts of extra-curricular activities.

As you progress, there are portfolios to polish, then more exams to pass. If you step off the training path, does this make you a failure? Of course not, but it is often what people feel and they project their feelings onto others.

A few years ago, I read a book called 'Growth Mindset' by Carol Dweck, and it changed how I think about learning, success and achievement: I would recommend it to anyone, especially those with children. In essence, a growth mindset enables effective and lifelong

learning by actively seeking the edge of your comfort zone and making mistakes. If you are not there, you are probably not learning very much. It is fine to get it wrong sometimes and this is a vital part of exploring the limits of your knowledge so that it can expand.

I reflected on this in regard to a medical career. Most students starting medical school are unfamiliar with failure (there are others who have overcome significant difficulties, but I generalise to make the point). The trials of postgraduate training are considerable and failing a postgraduate exam may be the first time

how I might contribute more to service development rather than just service delivery. The next step was becoming pain clinical lead. There were a couple of raised eyebrows because I was a specialty doctor, not a consultant, but support from colleagues and their confidence in my capability got me started.

I then got involved in College work and was elected to Council. I found myself in a novel environment and very much at the edge of my comfort zone. Sitting in the Council chamber with famous names from the profession was

Imposter syndrome is common in academic high achievers, which selfevidently includes all doctors

a doctor finds themselves in this position. Those who get through it all, first time, may attribute it to external factors such as good luck with the questions. While this will always play a part, it is more likely that people pass because they worked hard and deserved it.

In recent years, an increasing passion of mine has been the encouragement of SAS doctors to fulfil their potential. This has been driven, in part, by my personal professional development. Initially, I doubted that I had much to contribute beyond giving a decent anaesthetic. For many years, with lots of moving and young children, this was an achievement in itself.

Once the family became more settled, I studied for a masters degree. I rediscovered a love of learning new things and how to apply them in my practice. Success is encouraging and motivating, and I started to consider

daunting to start off with. I have learned a lot and now find myself one of the senior and longer-serving members. I see each new responsibility as an opportunity to learn, and I know that I have the necessary skills. If specific knowledge is lacking, there is always someone to ask.

My next challenge is taking over as departmental clinical lead. I will be the first SAS doctor in such a role in my hospital, but I am not the first to have the capability. I feel that things are really shifting for SAS doctors, that those willing to put themselves forward have much to contribute, and that this is being recognised better within the NHS.

Like Alison, I am often surprised that I have got to where I am. Saying yes when you feel like saying no to things may take you into uncharted waters, but this presents an opportunity for personal growth. Imposter syndrome is not all bad – being humble is a key attribute of a good leader. Try not to let a lack of confidence hold you back. Sometimes you need to make that leap of faith – and great things can happen.

> Please see our website for further information on SAS and Specialty Doctors:

> > rcoa.ac.uk/sas



Dr Deborah Horner Consultant in Anaesthesia and Critical Care, Deputy Operational Medical Director, Bradford Teaching Hospitals NHS Foundation Trust

Clinical Directors' Executive Committee

cd@rcoa.ac.uk

Clinical management in a pandemic

As news of a novel coronavirus broke, I was busy garnering support for a perioperative medicine unit. I had been clinical director for the anaesthesia and critical care clinical business unit (CBU) for two years, having started as a consultant in 2014. My decision to go into 'management' was made early in my career when I realised that if I wanted to change how things worked, I needed to get involved.

I was involved in the hospital COVID-19 meetings from the outset, but by March it became clear that a few things would make the difference between being fully prepared and not.

- We needed a forum with clinical representation from all CBUs to facilitate rapid discussion of clinical issues, to agree SOPs, and to feed information into and from the hospital's command structure.
- There needed to be a whole-hospital response, with each specialty looking at what COVID would mean to them, allowing specialties to take responsibility for planning with nonclinical managerial support.
- There were already reports of PPE and equipment shortages in other countries. We needed to put orders in for kit such as ventilators early and become as independent as possible from PPE supply chains.

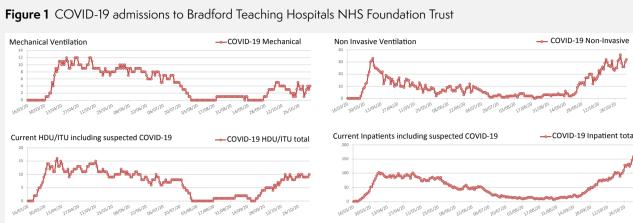
Silver Clinical Reference Group was established and worked successfully to coordinate clinical aspects of the trust's response. I chaired this group together with a surgical colleague, and we were supported by fantastic managers. By working together, the trust transformed the way the hospital functioned over a remarkably short timeframe, establishing care pathways for COVID and non-COVID patients coming into the hospital. The decision to scale back elective work was a difficult one, but, by working closely with managers and having clear lines of communication to the executive board, this was done at exactly the right time and meant we were ready for the rapid influx of patients at the beginning of April.

By closely monitoring national and international reports and research, we were able to rapidly implement the most up-to-date ways of treating COVID

patients. Some of the key decisions included early continuous positive airway pressure (CPAP) in all patients requiring more than four litres of oxygen per minute. By adapting community CPAP machines, we were able to provide CPAP requiring far less oxygen than our inpatient machines. We were also early adopters of awake-proning, anticoagulation and steroid treatments, and recruited to national trials.

We procured industrial FFP3 masks and established a cleaning process using alcohol sourced from a local gin distillery. We used steam sterilisers for visors and chlorine cleaning for single-use gowns. These innovative solutions meant that we never ran out of PPE and reduced our dependency on national supply chains.

The importance of engaging with teams working on the shop floor cannot be overstated. I would never have come up with the innovative ideas around



By working together, the trust transformed the way the hospital functioned over a remarkably short timeframe

PPE and repurposing community CPAP machines, but I absolutely recognised their importance and championed their implementation. Listening to people and celebrating successes has been key, both the little things that happen every day on the wards and also the bigger things; my colleague Dr Tom Lawton who came up with several innovative ways of working has recently been awarded an MBE for his work.

All the planning paid off. Despite significantly higher than average levels of co-morbidity and a large BAME community, mortality in our hospital was 14 per cent lower than the national average.¹

Bradford has seen a long-tailed first wave, but towards the end of September COVID admissions increased again, just as we had re-established routine work. This second wave has brought new challenges. Colleagues are tired and burnt out by the first wave; our clinical

psychology team have been invaluable in supporting staff through this. An article in The Telegraph by Aisha Ahmad caught my eye in September.² She described how morale varies with time in a disaster zone. Recognising that low morale is normal six months into the management of any disaster really helped me to understand that the feelings of tiredness and low mood in the hospital are completely normal and that this will improve, even though the pandemic isn't over.

I have now been promoted to Deputy Operational Medical Director and am championing the collaborative ways of working that were deployed so effectively in the first wave, a model that is clinically led and management facilitated. This has already borne fruit - the perioperative medicine unit that I was working so hard to get support for before the pandemic has now been agreed, with funding to refurbish it to be used as a surge critical care unit when required in the future.

References

- Lawton T et al. Reduced ICU demand with early CPAP and proning in COVID-19 at Bradford: a single centre cohort (https://bit.ly/2lhpWaM).
- 2 Ahmad A. How to power through the sixmonth 'crisis wall' – by an expert in disaster zones. The Telegraph, 23 September 2020 https://bit.ly/3nhKbnx).

More information on the Clinical Directors' Network is available from:

rcoa.ac.uk/clinicaldirector-network



Carol Pellowe Chair, RCoA Lay Committee laycomm@rcoa.ac.uk

Patient perspective

DO WE HAVE THE STRENGTH TO CONTINUE?

In my previous *Bulletin* article (September 2020 issue, but written in June)[†] I was considering what would happen at the end of the pandemic. Would we have the stamina to continue? What had we learned to get us through? And more importantly, would we still be here?



Well here we are in October (as I write this article), and the new tiers of restrictions have been announced. Although not as stringent as the situation in the summer, we shall face them with shorter days, colder weather and increasing public scepticism. Can it get any worse?

I am not sure NHS staff have had sufficient time to recover from the first onslaught before facing this rising wave. We will not be clapping on the doorstep on Thursday nights to say thank-you – it will be too dark and cold. The prospect of not being able to see family and friends at Christmas is not only frightening turkey farmers, it is an additional stress for many in these uncertain times. Interestingly, there now seems to be a discussion about whether it is better to be in the very high tier. as the extra resource benefits may help those most adversely affected. However, I note Andy Burnham, Mayor of Greater Manchester, strongly disagrees.

As time goes by in these strange times, I begin to wonder if we shall ever return to what we considered normal pre-COVID, or is this it? What concerns me most is that some elderly people who survived the first phase are now too scared to go out at all. I have tried to encourage neighbours to try and take a trip to a cinema or a walk locally, but they seem very reticent about venturing beyond their doorstep. No wonder concern about mental health in all age groups is an increasing issue. In the summer we could sit in parks and gardens, listen to the bird song but now it is getting dark earlier we seem to have entered the winter season in less than a week.

Although most people over 60 have received their influenza vaccine, few have managed to see their GP. In my area you are obliged to book (by phone, not in person) a telephone consultation with the doctor who will decide if you need a face-to-face consultation. Current waiting time from booking to talking to the doctor is three weeks. I did not have the heart to ask how long one then had to wait, if a face-to-face consultation is required. My brother (a retired GP) says assessment starts as the person walks in and sits down - before they even speak. Older people are comfortable with a face-to-face consultation, but I am not convinced they can accurately describe the issue over the phone, never mind by Zoom. As the incidence of dementia increases, asking someone to wait three weeks is surely going to risk them forgetting why they asked to see the doctor. So, when the question of why hospital use is below expected levels, is the issue of more restricted access to GPs considered?

Many care homes have still to organise how one relative can visit their loved one without being outside the window or beyond a screen. It seems ironic that the word 'care', such a short word, is so difficult to demonstrate in a manner that an elderly person can understand. Stories of the distress caused by not being physically close to family or friends are heart breaking. While some homes are excellent, others do not have the resources to provide a quality of life, worthy of the vulnerable and frail.

[†]Patient perspective: Reflections on lockdown (https://bit.ly/RCoAB123-PP).

Use of food banks is increasing everywhere. People, affected by the closing of businesses or the end of furlough find themselves seeking support, many for the first time. While providing an essential service, the food is predominantly dried or tinned. As food bank supplies are intended as emergency food to cover three days, they do not include fresh fruit and vegetables. Any donated fresh supplies are offered in addition to the three-day ration, and clients are invited to help themselves. School breakfast-clubs and school meals continue to be a crucial food source for hungry children. If one is hungry, learning is impossible.

As the clocks change back, we face a very difficult time of cold weather, short days, and limited work and social opportunities, with a Christmas coming that few can enjoy or afford, as well as, dare I say it, Brexit?

Revalidation for anaesthetists

A focus on appraisals for revalidation



Chris Kennedy RCoA CPD and Revalidation Co-ordinator revalidation@rcoa.ac.uk

The impact of COVID-19 has meant that doctors who were due to revalidate between 17 March 2020 and 16 March 2021 had their revalidation submission dates moved back by one year. Given the ongoing challenges caused by the pandemic, the GMC has moved back by four months the dates of doctors due to revalidate between March and July 2021.

Appraisals have now been restarted and, while it remains important to reduce the burden of demonstrating continued competence during the pandemic, the purposes of appraisals are to provide a supportive intervention that reaches every doctor and helps them to improve their patient care and plan for the future. It is all the more important to provide doctors with protected time and a safe space to reflect with a trained peer during these times.

As a result, we would like to reference guidance on appraisals which has been produced by the Academy of Medical Royal Colleges (https://bit.ly/2J7hc7a) and which includes the following key points:

- it is understood that your supporting information and written reflection may have been limited by the disruption caused by the pandemic. However, you will need to provide at least the minimum essentials for your appraisal
- the appraisal discussion will cover key learning from any CPD, quality improvement activity or significant events, and any feedback from patients and colleagues (including complaints and compliments) you might have received since your last appraisal, as usual. Verbal reflection

captured by your appraiser will be used as supporting information where appropriate

- maintaining your health and wellbeing is key to your ability to offer high-quality, safe care at this challenging time. Your appraiser will encourage you to reflect on this aspect of your professionalism and signpost you to suitable resources if needed. This is particularly relevant if you are at additional risk from COVID-19, for example if you are from a black, Asian or minority ethnic (BAME) background or have other factors that increase risk, such as a pre-existing condition, increasing age, or pregnancy
- after the meeting, your appraiser will complete the appraisal outputs with you in the same way as previously
- you should be able to use your usual documentation. For example, the Medical Appraisal 2020 template illustrates the key areas for you to reflect on, while ensuring that you are still meeting the essential GMC requirements to demonstrate continued competence.

For any further information please contact: revalidation@rcoa.ac.uk



For some inspiration and to view some of the RCoA's upcoming events and courses, both virtual and face to face, please visit our website:

PERIOPERATIVE JOURNAL WATCH

Dr Charlotte Crossland, ST4 Anaesthetics, Kent, Surrey and Sussex School of Anaesthesia Dr Henry Collier, ST6 and Dr Christopher Darwen, ST5, Cochrane Clinical Dissemination Fellows, North West Deanery

Perioperative Journal Watch is written by TRIPOM (trainees with an interest in perioperative medicine - tripom.org) and is a brief distillation of recent important papers and articles on perioperative medicine from across the spectrum of medical publications.

Erythropoietin (EPO) plus iron versus control treatment including placebo or iron for preoperative anaemic adults undergoing noncardiac surgery

28–39% of patients undergoing surgery have preoperative anaemia. This Cochrane systematic review of 12 RCTs compared EPO plus iron, to placebo, no treatment or standard of care (with or without iron) in anaemic adults (n=1,880) undergoing non-cardiac surgery

Patients receiving EPO plus iron were much less likely to require red-cell transfusion, (RR 0.55, 95% CI 0.38-0.80). In those transfused, the volumes given were unchanged (mean difference -0.09, 95% CI -0.23-0.05). Preoperative haemoglobin concentration was increased in those receiving 'high dose' EPO, but not in those receiving 'lowdose' EPO. Secondary outcomes of mortality, adverse events, and length of stay were unchanged.

Although there were no patients with severe anaemia, and there was variation in both EPO regimens and route of iron supplementation, the results suggest that 231 fewer patients would need transfusion for every 1,000 treated.

Kaufner L et al. Cochrane Database of Systematic Reviews 2020, Issue 8, Article No.CD012451 https://bit.ly/38AVFhE

Drugs for preventing postoperative nausea and vomiting (PONV) in adults after general anaesthesia: a network meta-analysis

PONV is a common complication of anaesthesia, with up to 30% of all patients, and 80% of high-risk patients affected. This Cochrane systematic review looked at 585 studies (97,516 patients) across a range of surgical specialties and anaesthetic modalities.

There was good evidence of a reduction in PONV with aprepitant (RR 0.26, 95% CI 0.18-0.38), ramosetron (RR 0.44, 95% CI 0.32-0.59), granisetron (RR 0.45, 95% CI 0.38-0.54), dexamethasone (RR 0.51, 95% CI 0.44-0.57) and ondansetron (RR 0.55, 95% CI 0.51-0.60). Combinations of drugs were more effective than the corresponding single drugs.

This confirms that combination therapy is more effective than single anti-emetic use, and that dexamethasone and ondansetron (a commonly used combination) are two of the most effective anti-emetics for PONV. The review suggests that if only one anti-emetic is given then dexamethasone is the more effective of the two.

Weibel S et al. Cochrane Database of Systematic Reviews 2020, Issue 10, Article No.CD012859 https://bit.ly/3kUZAbF).

procedures to a greater extent provided the initial postoperative course can be weathered. McIsaac DI et al. Br | Anaesth 2020;125(5):704-7711 (https://bit.ly/3n9aQ5C)

The College is committed to developing a collaborative programme for the delivery of perioperative care across the UK: cpoc.org.uk

Bulletin | Issue 125 | January 2021



Frailty and long-term postoperative disability trajectories: a prospective multicentre cohort study

This Canadian study is one of the first to look at postoperative trajectories in the context of frailty, and followed up 687 patients aged over 65 years for the first year following major elective non-cardiac surgery.

Patients' frailty was assessed using the Fried Phenotype and the Clinical Frailty Scale. The primary outcome was a patientreported disability score (using the WHO Disability Assessment) at baseline, 30, 90 and 365 days after surgery.

Frail patients experienced a decrease in disability score at 365 days, while those without frailty had no significant change in their disability score from baseline (P<0.0001). However, patients with frailty were more likely to experience an initial postoperative worsening in disability, and the authors conclude that frail patients may stand to benefit from their

Goal-directed haemodynamic therapy (GDHT) in surgical patients: systematic review and metaanalysis of the impact of GDHT on postoperative pulmonary complications

This systematic review looked at the specific effect of GDHT on postoperative pulmonary complications (PPCs). The review included 66 RCTs and 9.548 patients. PPCs were defined as pneumonia, atelectasis, acute lung injury, aspiration pneumonitis. pulmonary embolism, and pulmonary oedema.

The use of GDHT reduced overall pulmonary complications significantly (OR 0.74, 95% CI 0.59 to 0.92). The incidence of pulmonary infections was lower with GDHT use (OR 0.72, CI 0.60 to 0.86), as was pulmonary oedema (OR 0.47, CI 0.30 to 0.73). There were no differences in rates of pulmonary embolism or acute respiratory distress syndrome.

Subgroup analyses demonstrated that the benefit was seen in general and cardiothoracic surgery and when the GDHT protocol used fluids and inotropes/ vasopressors in combination, rather than fluid alone.

Dushianthan A et al. Perioper Med 2020;9:30 (https://bit.ly/2K1DveZ).



Dr Russell Perkins Chair, RCoA ACSA Committee acsa@rcoa.ac.uk



Ruth Nichols RCoA Head of Clinical Quality acsa@rcoa.ac.uk

Anaesthesia Clinical Services Accreditation (ACSA)

THE SECOND DECADE OF ACSA AND BEYOND

The year 2020 was not the year that anyone planned, and this is certainly true for the ACSA scheme. A packed visit schedule was planned and we were on course to deliver more visits in 2020 than in any previous year, but this came to a halt in March. The decision was taken to pause onsite visits until March 2021 in recognition of the significant reorganisation of services taking place in departments, as well as concerns about safety and the availability of clinical reviewers and departments to engage in the onsite review process. But this doesn't mean that ACSA has stood still.

We recognised that a fully onsite review may not be possible for some time. The ACSA committee, after consultation with our ACSA reviewers, decided that it would not be possible to offer accreditation without some element of onsite review, but that delivering more elements of the review process remotely would assist departments to progress with their ACSA journey. Some elements of the review process already happened remotely; departments

24

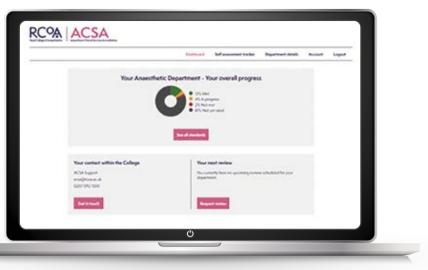
submit a large volume of evidence such as policies and audit data that reviewers examine prior to the review visit. We piloted delivering our classroom sessions and meetings with a variety of different staff groups online; we plan to roll this out more widely as part of a hybrid review process from March 2021. We realise that not everyone will be available at the same time and that, particularly in large departments, it may be logistically unfeasible to get to meet a reasonable proportion of the department. To address this, we have developed surveys that all members of the department – trainees, SAS doctors and consultants – will be asked to complete to give their views about a selection of the standards and an opportunity to share anything else they want to raise with the review team. Answers will be treated with complete confidentiality and used to triangulate other evidence submitted by the

Even during the pandemic, some departments have managed to continue the quality improvement journey department. It is planned that, following these remote review processes, a shorter onsite review will take place at a later date.

In 2020, we delivered enhancements to the support we offer to anaesthesia departments. In November, we launched the ACSA portal (acsa.rcoa.ac.uk). This interactive website enables departments to upload evidence against the ACSA standards and track their progress towards gaining accreditation. Accredited departments consistently say that the key ingredient to achieving accreditation is getting the whole department involved; the ACSA portal facilitates this by allowing the departmental ACSA lead to invite colleagues to contribute to their department's self-assessment directly in the portal. The ACSA resource library has been made easily accessible to registered departments via the portal, providing multiple examples of the different ways that other departments have met the ACSA standards.

In September, the RCoA published its Quality Improvement Compendium (rcoa.ac.uk/quality-improvementcompendium), which provides comprehensive recipes for quality improvement and audit, mapped to GPAS and the ACSA standards. We hope that this will prove a valuable tool for departments needing to collect evidence or to bridge a gap between their current practice and the ACSA standard. Links to the relevant sections of the Qualty Improvement Compendium are provided in the ACSA portal, and a video of Dr Carolyn Johnson, one of the Compendium editors, talking about how to use the book, is available on our website rcoa.ac.uk/acsa-information-webinar).

The ACSA committee cancelled its annual standards review in 2020, and departments were advised to continue using the 2019 standards.



New ACSA standards will be published in early 2021. As well as clarifying and adding new standards to drive quality improvement, the 2021 edition contains some new standards, evidence requirements and help notes specifically related to the COVID-19 pandemic. We've tried to avoid adding lots of new standards that (hopefully) will no longer be relevant in the years to come; instead, we've made additions or clarifications to existing standards that may need to be met in different ways in the covid pandemic. For instance, standard 2.1.1.14 on the adequate protection of staff from environmental hazards now includes specific evidence requirements on the provision of PPE. To learn more about COVIDrelated ACSA standards, as well as the hybrid review process and the ACSA portal, sign up to our free webinar (rcoa.ac.uk/acsa-events). The video of this webinar will be made available on the website for those who can't attend on the day.

ACSA Portal (Final design in progress)

Even during the pandemic, some departments have managed to continue the quality improvement journey and, at the time of writing, we have accredited a further four departments since March, as well as reaccrediting another department. Many congratulations to the anaesthetic departments in South Tees NHS Foundation Trust, Countess of Chester NHS Foundation Trust, Frimley Health NHS Foundation Trust and Leeds Teaching Hospitals NHS Trust on their accreditation and to Kingston Hospital NHS Foundation Trust on their reaccreditation. While we've not been able to hold the usual plague presentations, we look forward to celebrating your successes with you soon.

To find out more about ACSA please visit: rcoa.ac.uk/acsa or contact the ACSA team by telephone on 020 7092 1697), or email: acsa@rcoa.ac.uk



Dr Kate McCombe Consultant Anaesthetist, Mediclinic City Hospital; Associate Professor, Mohammed Bin Rashid University, Dubai and member, RCoA Ethics Committee katemccombe1@me.com

From the Ethics Committee

GMC DECISION-MAKING AND CONSENT GUIDANCE 2020

On 9 November 2020, the GMC's updated Decision-making and consent *guidance* came into effect. You would be forgiven for thinking that this guidance is a long-overdue response to the Supreme Court's 2015 ruling in Montgomery v Lanarkshire Health Board,¹ but this is not the case. Despite the furore caused by this ruling, it did little more than bring the law into line with the professional standards already demanded by the GMC² and the Association of Anaesthetists.^{3,4} Rather, following extensive professional and public consultation,⁵ the GMC has endeavoured to set its new guidance in the context of modern healthcare.

While there is little change to the substance of the previous guidance, the tone of this document is subtly different: it is more collaborative than the 2008 version. It acknowledges the difficulties faced by doctors when seeking informed consent and that the process often occurs within a collapsing time frame, but it does not exonerate failure in this situation. Instead, it states:

'61 If you are concerned that patients are not given the time or support to understand relevant information, and this seriously compromises their ability to make informed decisions, you must consider raising a concern. You should also consider whether it is appropriate to proceed...'

The new guidance stresses that seeking consent is a process rather than an event, and emphasises its ongoing nature, stating explicitly:

'55 Filling in a consent form is not a substitute for meaningful dialogue tailored to the individual patient's needs.'

By way of explanation of the phrase, 'meaningful dialogue', which is new to the guidance, the GMC expands further:

- '16 You must listen to your patient and encourage them to ask questions.
- 17 You should try to find out what matters to the patient – in terms of their wishes and fears and what activities are important to their

quality of life, both personally and professionally – so you can support them to assess the likely impact of the potential outcomes of each option.

18 You must seek to explore your patient's need, values and priorities that influence their decision making, their concerns or preferences about the options and their expectations about what the treatment or care could achieve.

With regards to discussing risk with patients, the guidance concedes:

'22 It wouldn't be reasonable to share every possible risk of harm, potential complication or side effect. Instead, you should tailor the discussion to each individual patient...'



and goes on to elucidate further:

'23 You should usually include recognised risks that anyone in the patient's position would want to know...risks that the patient would consider significant for any reason... Any risk of serious harm, however unlikely it is to occur.

These statements seem rather contradictory, since it is hard to envisage which risks one need not reveal when following the edict of paragraph 23.

As well as demanding a two-way flow of information to promote informed consent, the GMC now places the responsibility for ensuring patientcomprehension squarely on the shoulders of the doctor by changing the word 'should' to 'must' in the following instruction:

'**30** You must check the patients have understood the information they have been given, and if they would like more before making a decision. A new section of the guidance addresses requests by patients to record their consultations. Doctors are advised to:

'27 ...accommodate the patient's wishes if they would like to record the discussion.

Paragraphs 52 and 53 clarify that audio or visual recordings of the consultation made by the doctor should be kept in the patient's medical record and be treated in the same way as other records. If the patient makes a recording, however, then this belongs to them and need not be stored with the medical record.

While acknowledging that doctors often have to seek consent from patients in less-than-ideal circumstances, the new guidance does not make any allowances for this. As a specialty, rather than resisting this position, perhaps instead we should see the document as leverage with which to demand earlier contact with our patients on their journey towards the labour ward or operating theatre.

This article summarises the most salient points of the new guidance in the context of anaesthesia. However, the guidance warrants more careful reading in its entirety by each of us, since it will form the new standard against which the quality of consent is measured in negligence claims in the future.

- 1 Montgomery v Lanarkshire Health Board [2015] UKSC 11, [2015] All ER(D) 113 (Mar).
- 2 Consent: patients and doctors making decisions together. GMC, 2020 (https://bit.ly/2JQvQji)
- 3 AAGBI: consent for anaesthesia Anaesth 2017;72:93-105
- McCombe K, Bogod DG. Paternalism and consent: has the law finally caught up with the profession? Anaesth 2015;70:1016-1019.
- 5 Review of our consent guidance. GMC, 2020 (https://bit.ly/36pKUw7)



Dr Shreela Ghosh Senior Clinical Fellow, Bedfordshire Hospitals NHS Foundation Trust shreela.ghosh@bedfordhospital.nhs.uk

Dr Harriet Kent, ACCS Trainee, Bedfordshire Hospitals NHS Foundation Trust Dr Pallab Rudra, Consultant Anaesthetist, Bedfordshire Hospitals NHS Foundation Trust

COVID-19 INTUBATIONS: are we stressed?

This article aims to explore how human factors affected intubation of COVID-19 patients at Bedford Hospital, a 400-bedded district general hospital, and what steps were taken to acknowledge and overcome them.

Human factors in anaesthesia were first highlighted by the publication of the Anaesthetists Non-Technical Skills Framework.¹ Subsequently, the 2015 Difficult Airway Society (DAS) guidelines for unanticipated difficult airways included a whole section on human factors.² This indicates increased awareness of their importance in patient safety.

The COVID-19 airway-management guideline focused on the issues of safety, accuracy, and swiftness.³ Despite educating airway-management teams on the pathophysiology of novel COVID-19 and how intubation is likely to affect these patients, there were multiple non-clinical factors affecting each intervention, some of which we discuss below. The Simplified Human Factors Investigation Tool has been used for coding the anaesthetic events to avoid ambiguous nomenclature.⁴

Contributing factors

'Lack of situational awareness', such as failure in task cognition, was not uncommon. Though not an exhaustive list, we feel that contributing factors included the general hysteria over COVID-19 and 'threats' due to pandemic work pressure, inappropriate staffing levels, fatigue, anxiety, and the rapid emergence of multiple guidelines leading to ambiguity and technical failures. It also rapidly became clear that personal protective equipment (PPE) makes interpersonal communication between team members difficult. Unfamiliarity of the environment for multidisciplinary team members such as theatre staff, operating department practitioners and physiotherapists who have been redeployed to support an expanded intensive care unit meant a higher proportion of inexperienced team members managing each patient. Unsurprisingly this caused stress and anxiety during emergency intubation regardless of experience, but more so for those whose area of expertise

lies elsewhere. Acknowledging the major differences between a normal intubation and a COVID-19 intubation in an emergency require time and experience, both of which were limited.

Checklists were generated for COVID-19 intubations, which included a team brief with names and job roles (written on their PPE), and equipment and drug checks before entering the room in full PPE. Regular debrief after each such intervention led to fewer complications due to human factors. Weekly training sessions by critical care staff were held to reduce unfamiliarity of the environment among redeployed staff thereby reducing anxiety. 'Action errors', such as accidental ventilator circuit disconnections leading to de-recruitment and hypoxia (and in extreme cases cardiac arrests), in PEEP dependent COVID-19 patients were discussed. One of the contributing factors was the propensity for changing ventilator settings and attempting frequent manual lung-recruitment

manoeuvres in an effort to raise patient oxygenation levels. Regular debriefing sessions emphasised that patients with COVID-19 took a long time to regain their pulse-oximetry saturation levels, and that lower oxygen saturations are acceptable.

WELCOME TO CRITICAL CARE

DATE:

REDS

SAFETY CROSSES

NURSE IN CHARGE:

O/REACH

Videolaryngoscopy

This was recommended for all intubations, and it necessitated the procurement of new videolaryngoscopes. Steps taken to help intubators gain experience with the new devices included having one available in the anaesthetic coffee room to allow staff to familiarise themselves with the new equipment and discuss and compare individual experiences.

Information overload

Another significant issue has been 'information overload' with regards to COVID-19; ever-evolving guidelines and protocols on top of daily updates

and intra-specialty communications leave staff feeling saturated. We counted 128 intra-hospital emails relating to COVID-19 in a two-month period, with 14 relating specifically to airway management. Consensus within the department and clear senior quidance is paramount.

Shreela

Conclusion

The complexities of human cognition and behaviour in pandemic preparation and responses is not fully understood, though it is clear that poor communication, poor training and poor teamwork predispose to loss of situational awareness and subsequent poor decision-making. When applied to COVID-19 and the general uncertainty that surrounds the management of this disease, it is clear that the perception of increased risk and the associated stress can lead to potential errors and mistakes in the clinical management of patients.

Our experiences suggest that only through increased awareness of human factors, reflective practice, abiding by checklists, senior guidance regarding guidelines, team debriefing, and regular training sessions can we overcome the human factors during such interventions. Not only does this improve patient safety, it also improves staff wellbeing.

RESTRICTED

ACCESS

- 1 Fletcher G et al. Anaesthetists' non-technical skills (ANTS): evaluation of a behavioural marker system. Br J Anaesth 2003;90:580-588
- 2 Frerk C et al. Difficult Airway Society 2015 guidelines for management of unanticipated difficult intubation in adults. Br J Anaesth 2015:115:827-848
- 3 Cook T et al. Consensus guidelines for managing the airway in patients with COVID-19. Anaesth 2020;75:785-799.
- 4 Flin R et al. Human factors in the development of complications of airway management: preliminary evaluation of an interview tool. Anaesth 2013:68:817-825.





Dr Sarah Nightingale CT2 ACCS (Anaesthetics), New Cross Hospital, Wolverhampton



Dr Dinesh Jeyabalan CT2 ACCS (Emergency Medicine), New Cross Hospital, Wolverhampton

COVID-19: WHAT HAVE WE LEARNT SO FAR?

As COVID-19 patients start to fill our intensive care beds again, a lot of us are going to be feeling exhausted and burnt out. The thought of standing up to the second wave has left a few of us on edge. Before we pull out all the stops and fight the surge, we wanted to reflect on what has worked out well and what lessons we have learnt for the future.

1 Consultants don't have all the answers

COVID-19 patients presented with various features which initially took treating clinicians into uncharted territory, regardless of their grade or experience. Together we shared information, often from social media, about countries ahead of the UK on the COVID-19 timeline to help us to make informed decisions for our local population. We all looked to the consultants to make decisions on minimum staffing numbers, surge plans, step-down plans, non-COVID plans, etc. As trainees, we realised that we could also offer insight into the current working conditions. A group of us worked closely with the consultants in order to rapidly upscale the ITU medical cover for the peak, and then to safely step down as we return to normal.

2 We can write our names upside down

With the use of PPE came new communication challenges. We were thankful to be protected and to be able to protect our patients, but the compromise was significant. Suddenly colleagues we had worked with for some months were unrecognisable. The respirators blocked your nose and so changed your voice, and you had to shout to be heard. The hoods blew air past your ears, so you struggled to hear.

As patients woke up and started their respiratory weaning, it was difficult to talk with them. They couldn't see the faces of the nurses and doctors looking after them. At times there was a system in place where various team members wore a specific coloured hat. Name stickers were ordered, but only stuck to some of the gowns. Ultimately, we resorted to good old-fashioned marker pens.

3 Education never stops

Early in the pandemic, all teaching, exams and courses were cancelled. We were nearing the end of our academic year and many of us still had requirements to accomplish a successful outcome at ARCP. We made a habit of completing at least one workplace-based assessment as a group every shift, where clinical needs allowed.

At the start of the crisis the anaesthetics simulation faculty ran a donning and doffing session which included a rapidsequence induction and intubation. This was delivered on a large scale when elective theatre lists had been cancelled but rotas had not yet been changed. As we moved past the initial surge, regional and local teaching restarted via video conferencing, with varying success. This will now be in place for as long as is needed.

4 Anaesthetics can be quite a lonely specialty

Despite working an incredibly intense rota, one of the main surprises was how high morale was. We moved to a new rota with very little notice. This rota split us into teams to maximise the number of doctors working on ITU at all times. The hours were longer, the out-ofhours work was increased, the rest time between shifts was shorter, the clinical variation was reduced – and yet we seemed extraordinarily happy!

Wellbeing was heavily promoted by our consultants, by the hospital trust and in College communications. As well as being mentally supported by our consultants, we were also physically supported with a consultant present at all times. We formalised breaks and booked on-call rooms. The team structure meant that we got to know each other really well, were able to support each other more effectively, worked as a team more efficiently, and even scheduled social events if there was some rare downtime. Returning to a normal working pattern, we are more aware that, although anaesthetists work in teams every day, we don't actually see other anaesthetists very much at all.

5 Healthcare workers really are heroes

As well as seeing the devastation of COVID-19 at work, we and our colleagues have also had our share of issues in our personal lives. Schools and nurseries shut with no notice. Some had to shield themselves, or move out of their homes to protect those they love. This is a sacrifice that none of us expect to make for a job, and yet countless individuals have done this with smiles on their covered faces. We are now supporting each other through the recovery phase and bracing ourselves for the second wave. The impact of mass redeployment of staff is becoming apparent, with many staff feeling burnt-out and lost, even resentful towards the people who were not redeployed. As trainees, we are grateful to have had the opportunity to work through such a valuable experience. As well as the rapid clinical learning we have achieved, we feel far more resilient and equipped to rapidly adapt in the future. We have had role models who will influence how we will behave as we progress through our careers. Above all, we have even greater respect for human fragility, and have developed lifelong skills to help patients, relatives and even colleagues on the worst days of their lives.

*The 'wall of heroes' created by one of our ICU staff is to celebrate the extraordinary efforts of our team, the old and the new re-deployed coming together uniting in the battle against COVID-19. The handprints on the wall, pictorially represent our fabulous ICU team. Each of the handprints has a story to tell which echoes extreme commitments, tremendous dedication and great sacrifices made by us working during the pandemic.

Corresponding author

Dr Saibal Ganguly, Consultant Anaesthetist and Intensivist, RWT Sepsis and Critical Care Outreach Lead, New Cross Hospital saibalganguly@nhs.net



Dr Emma Joynes ST7 Anaesthetic trainee, Severn Deanery emmajoynes@doctors.org.uk



Dr Andrew Grant ST7 Anaesthetic trainee, Severn Deanery drandrewpgrant@gmail.com

11@11: a novel way to teach during the COVID-19 pandemic

We have a trainee-led teaching programme at North Bristol NHS Trust (NBT), called '11@11', which involves presenting 11 slides at 11.00am fortnightly. Trainees can take time out to attend teaching with a biscuit and a cup of tea. It helps to provide continued medical education on a variety of topics and allows trainees the opportunity to teach at a session.

Teaching was paused during the COVID-19 pandemic, and we were faced with the dilemma of how to deliver effective education.^{1,2,3} Trainees were worried about ongoing training and meeting criteria for completedunit-of-training (CUT) forms.

In April we trialled an education session via Zoom. It was well received and we restarted teaching using Zoom. We tailored teaching to cover aspects of the curriculum in order for trainees to evidence this and complete their CUT forms. This allowed trainees access from home, and we have seen a dramatic rise in trainees' ability to 'attend' sessions. Senior trainees and consultants have successfully delivered teaching from home or via the departmental webcam since its reintroduction.

Recently covered topics include: regional anaesthesia, trauma, vascular anaesthesia, difficult airway management, obstetric anaesthesia, and perioperative care.
 Table 1
 Number of trainees attending each teaching session

Session	February 2020 No of attendees	Session	April 2020 No of attendees
1 trainee-led	6	1 trainee-led	17
2 trainee-led	8	2 consultant-led	19
3 trainee-led	7	3 consultant-led	18
4 trainee-led	5	4 consultant-led	20
Average (mean)	7		19

A prospective qualitative survey was sent to trainees, and this had a response rate of 100 per cent for 19 trainees. A short survey after every teaching session was sent to trainees, and suggestions from these were used to help improve technical delivery and quality of presentations. Trainees were asked about their work commute, and responses showed that on average they travelled 8.8 miles in order to attend face-to-face teaching. Overall responses from trainees showed that:

- 100 per cent found sessions 'very useful' or 'useful' and were able to attend more online than face-to-face teaching
- 91 per cent wanted future teaching broadcast remotely
- 100 per cent found Zoom as good as or better that face-to-face teaching
- 82 per cent would watch recorded teaching all or some of the time
- 45 per cent were more likely to contribute in face-to-face as opposed to online tutorials.

Comments from the survey were positive and included:

'Excellent idea', 'Positive experience all round. Good learning environment', 'Much easier', 'Great initiative... simple yet effective way of aiding teaching', 'Thank you!', 'It is so much easier to remotely join a short teaching session rather than travel into work.'

A designated meeting ID was introduced for trainees to log into Zoom each week, and an office in the anaesthetic department was allocated for scheduled teaching to take place. The anaesthetic department funded a webcam and microphone to facilitate this. Also, a number of virtual platforms were trialled, and Zoom was found to be the best suited to deliver tutorials. Surveying trainees showed that didactic-style teaching worked best with tutorials. One limitation was that 45 per cent of trainees felt that they were more likely to interact with face-to-face as opposed to online teaching. Interactive tutorials were slow to start, and feedback has improved as trainees have got accustomed to them. Another change that has

to them. Another change that has improved trainee interaction has been the introduction of polls and quizzes, including 'Kahoot', a quiz embedded within Zoom.

As working patterns are becoming more normal, social distancing is still in place, and our department will continue to use online teaching platforms. At NBT a library of recorded short lectures is being developed and uploaded to the trust intranet site for future access. Following our pilot, Zoom teaching has been rolled out across the deanery. Regional teaching has prioritised FRCA exam revision days, and these have been broadcast live via Zoom and recorded for later viewing. A 'Code of Conduct' for regional online teaching is being trialled to maximise learning opportunities using Zoom. For example users are encouraged to switch off their microphones during teaching sessions and to switch on their cameras to encourage user interaction. We hope that our novel and perhaps greener adaptations to the ways in which we teach can inspire anaesthetic departments across the UK.

Perspective from the 11@11 trainee organiser:

Why do you think there has been such an increase in attendees since the Zoom meetings began?

'A limited number of trainees could attend face-to-face teaching. Some trainees would be doing solo lists or would be unable to get out of theatre. The number of trainees in attendance was usually low. There's always a significant proportion of trainees at home – either pre/post call or because they work part-time. Now trainees can potentially attend from anywhere in the world! The best feedback has been from parttime trainees who had previously not attended teaching scheduled for their day off.'

Can you see this being a part of ongoing education for anaesthetic trainees in the long term?

'This should become more widespread. Remote teaching has allowed teaching to continue through the pandemic and is better attended than before the crisis.'

Have there been any issues with using Zoom?

'The main issues are with IT skills. A few people have never used Zoom, but it is a straightforward programme which everyone has got the hang of. The webcam and microphone cost under £100, and Zoom is free to use, so the cost is negligible. The main downside we found was the lack of presenter interaction. Interactive tutorials are not as successful as a multi-way conversation about complex ideas face-to-face. People seem a little intimidated to get involved to start with. That said, I feel as people get more comfortable with using Zoom they will be happier to contribute to meetings.'

- Walsh K. Medical education during the COVID-19 outbreak. BMJ Best Practice, 20 March 2020 (https://bit.ly/31gf7M2).
- 2 Coronavirus (COVID-19) how we are responding. RCoA, 6 March 2020 (https://bit.ly/RCoA-COVID-19).
- 3 Patil NG, Yan Y. SARS and its effect on medical education in Hong Kong. *Med Educ* 2003;**37**(12):1127–1128.

LIFE JACKETS

We may all need a life jacket at some point in our lives. Before COVID-19 struck we identified the need for an accessible, collaborative and fully supportive network to address the wellbeing of our anaesthetists in training. To keep trainees 'buoyant' throughout their training we have named the resources hub 'Life Jackets'.



Numerous non-clinical life events within our trainee population in Wessex have prompted us to look at our support process in depth. Events can have serious personal and emotional consequences which destabilise trainees and at their most extreme render them unable to function at work or at home.

Our primary aim is to have a mentally healthy school of anaesthesia.

Mental health was defined by the WHO in 2014 as 'a state of wellbeing in which each individual reaches his/ her own potential, and can cope with the normal stressors of life, they can work productively and contribute within their community'.

Trainees are often familiar with the support that is available if they are involved in a significant clinical event. But trainees and supervisors alike are less sure of how to access help for trainees in distress in situations outside the clinical sphere. These events can be related to the strain of the training programme and its demands, a rota, or an exam. But they can equally be focused around home life, divorce, or grief, or they may involve caring for a dependent with a long-term illness. In our experience the event itself may initially be manageable, but any further problems encountered can lead to coping mechanisms being overwhelmed. It is well recognised that there is an optimal stress zone where our performance is at its peak. Too much stress - an overload - can lead to student anxiety levels becoming unmanageable, and our normal mental regulation is unable to bring us back to peak performance.

Dr Julie Onslow Head of School, Wessex School of Anaesthetics julie.onslow@nhs.net



Following extensive work published by the College after its listening events in 2017, the welfare of our trainees became top of the agenda. Some 85% of anaesthetists in training reported being at risk of burn out.¹

We surveyed the trainees in Wessex, and out of 163 trainees 51 responded. Of our trainees, 26% had experienced a significant event, and 43% had experienced more than one event during their training. Of these events 50% were personal, 35% clinical and 15% training-related. With a high number of trainees experiencing personal events, we identified the need for a transparent, easy-to-access support service.

63% of all trainees felt comfortable asking for help, 79% found help easy to access, and 84% found that the help they had sought was useful.

But it was a concern that 43% of trainees who had experienced a significant non-clinical event felt that they had encountered barriers to getting help or support. These barriers included perception and culture, unhelpful use of language (such as 'snowflake'), and a lack of awareness of the options available. Trainees were unsure of who to approach and felt that the deanery levels of support could conflict with their training career progression.

We asked them 'what would trainees find supportive when they experience a significant event?' Several important points were made – the hub should be a proactive, automatic and confidential resource.

It is obvious that, with 69% of trainees experiencing one or more events and with 50% of these being personal, there

Bulletin | Issue 125 | January 2021

Dr Amanda Mortier Higher Specialist Trainee, Southampton University Hospital

is a need for improved support in our region. Both the RCoA and the Royal College of Physicians have focused predominantly on clinical events; we see the picture as wider than this. We can no longer rely on the immersive nature of a 100-hour week and tight team work as a new generation of working lives emerge.

Moving forward, Wessex has developed a Life Jackets hub to improve education and awareness of sources of help. We have focused on four specific areas:

- awareness and training of the impact of events on our trainees
- perception and culture
- peer support to include 'wellbeing days' and expansion of the buddy system. There are large bodies of local support groups in many of our hospitals already. The aim of these is often the sharing of clinical scenarios
- increased use of supportive, nonjudgemental language.

At induction the trainees are made aware that it is a common occurrence for adults to experience adverse life events within their arduous training schedule.

Now, more than ever, we believe that our Life Jackets hub in Wessex will prove to be a useful site where information is pooled to allow unified access to sources of help in your hospital or nationally.

Reference

 A report on welfare, morale and experiences of anaesthetists in training: the need to listen. RCoA 2017 (http://bit.ly/RCoA-Welfare2017).



Dr Emma Welfare ST7, Liverpool University Hospitals NHS Foundation Trust emma.welfare@liverpoolft.nhs.uk



Dr Simon Mercer Consultant Anaesthetist. Liverpool University Hospitals NHS Foundation Trust

OPTIMISING TRAINING IN THE 'NEW NORMAL'

The COVID-19 pandemic has changed the way that the NHS will work for the foreseeable future. Despite this, training must continue, and the onus will be on trainees and trainers to 'work smarter' and take advantage of every opportunity. This article outlines strategies to maximise opportunities in the 'new normal'

Training in anaesthesia is a positive experience, but it is not without its challenges. Considerable effort is required to find a balance between shift work, frequent rotations, qualityimprovement projects and passing the FRCA examinations, to name but a few. During clinical sessions a balance is required between training with service provision, rota gaps, and the need for efficiency. Many will have experienced disheartening sessions where it is felt nothing has been learnt, but with some proactive changes this can and should be avoided. At a time when there is great disruption to services and consequently to training due to the COVID-19 pandemic and the gradual 'resetting' of services to the 'new normal', recognition and maximisation of every training opportunity is essential.

As adult learners, trainees will have favoured and distinct learning styles, past experiences, and needs.¹ Some time spent reflecting on what your own requirements are will facilitate learning

and development going forward. Trainees should feel empowered to direct learning goals and collaborate with their supervisor for the session to ensure opportunities are created and maximised. Local or distant supervision must not be a barrier for this and can be used to one's advantage for improving autonomy and list management for example. Where possible, a knowledge of cases or experiences that may be encountered on a list before it happens can aid planning and help with providing focus and structure to the session. Adoption locally of a tool such as 'LOAF & BREAD,' which acts as an educational checklist to be utilised during a clinical session, can encourage the creation of a learning culture and also provide structure for the learning event.² The proactive, collaborative engagement that such a tool requires can help promote the educational benefits of completing workplacebased assessment, receiving feedback, and portfolio development, and can steer us away from the misconception

of a tick-box approach.³ Necessary theatre downtime offers a prime opportunity to engage in reflective practice, either with colleagues or selfdirected. The value of this should not be overlooked, as this practice underpins all forms of curriculum-assessment tools and modern medical training. We have drawn up some suggestions on how to approach the construction of a list to benefit the whole anaesthetic team in Table 1, and we show the current list of workplace-based assessments with suggestions in Table 2.

In the 'new normal' the onus will now be on trainees and trainers to work smartly to achieve training competencies and assessments in an era of potential inefficiency and deficiency in elective opportunities.

Table 1	Suggestions	for a	'supervised list'	
---------	-------------	-------	-------------------	--

Anaesthetic Team Brief		Anaesthesia list	The trainee is responsible for	
ALL	What cases are on the list? What are individual priorities for the list? When will PPE breaks be scheduled?		management tool (ALMAT)	the list management. Both technical and non-technical skills can be developed. In a doubled-up list, the trainee can
	Practical	What are the procedures on the list?		organise the list while others complete technical aspects.
	Resources	Role allocationPPE availabilityWhat stage of training is being undertaken?What modules are being undertaken by the trainees?CV review Exam preparation needs Clinical governance projects	Direct observation of procedural skills (DOPS)	There will be numerous technical procedures on the list
	Curriculum			that a trainee can arrange to be assessed on.
			Anaesthesia clinical evaluation exercise (A-CEX)	Clinical performance and a single case on the list can be explored in further detail. The
	Career			assessment itself focuses on what went well, what could have gone better and a plan for further learning.
		Case-based discussion	This could be performed	
Consultant Are you deskilling? Might you wish to undertake practical procedures? Educational discussion on recent articles or webinars		(CBD)	during the case or during theatre downtime. The emphasis on this assessment is upon the decision-making involved in the management of the case.	

- 1 Taylor D, Hamdy H. Adult learning theories: implications for learning and teaching in medical education: AMEE Guide No. 83. Medical Teacher 2013;35(11):e1561-e1572.
- 2 Maclennan K. The Educational Checklist. RCoA Bulletin 2015:94:60-62.
- 3 Massie J, Ali JM. Workplace-based assessment: a review of user perceptions and strategies to address the identified shortcomings. Adv in Health Sci Educ 2016:21:455-473.

 Table 2
 Current RCoA Workplace-based assessments



AUSTRALIAN FELLOWSHIPS: The Covid-19 Edit

Dr Kate Arrow, Anaesthetic Fellow, Adelaide Women and Children's Hospital, Australia; Former ST7, Tayside School of Anaesthesia, Dundee

katearrow@hotmail.com Twitter: @arrowkmr

In 2019 I secured a post-CCT Fellowship in Adelaide Women and Children's Hospital.

I had a lot to do, the hurdles included:

- complete training
- jump through paperwork hoops of registration and visas
- sort 'life admin' involved in moving a family of four to Australia
- complete work projects
- be enthusiastic and friendly throughout to ensure my department wanted me back as a consultant.

It seemed like a lot. Until March 2020.

In March I started a week of nights I will never forget. On night one we knew there was 'a case' locally – the first COVID-19 case in Scotland. There was anxiety and grapevine news. The ICU nurses and I watched donning and doffing PPE videos and had our usual night-shift chat. None of it seemed real. By the end of night four we had intubated three suspected cases. By the following week the hospital was unrecognisable and we were working in full 'battle mode'. Fellowships were a distant thought, and I decided to continue the processes and reassess in May.

By May, Australian life looked appealing, with lockdown lifted and spread contained. Elective operating in Scotland was limited, and I was faced with the choice of working my 'period of grace' with minimal theatre time, or travelling to Australia in the midst of a global pandemic. I can't explain the thought processes which weighed in favour of Australia, but there was a large 'gut feeling' component along with the promise of school for the kids and the training I needed for the consultant job I wanted.

The planning

COVID-19 overwhelmingly complicated the process, but the move to digitalised services did work in our favour. The Australia Health Practitioner Regulation Agency accepted online submissions of notarised documents, and visa applications were also online. My Australian employers were savvy and nominated me for a skill-shortage visa (Australian visa #482), which ensured our admittance to the country despite the travel ban. Friends who were nominated for training visas (Australian visa #407) were told they would be significantly delayed.

In June I completed training, and friends enquired about our leaving date. The answer was still 'no idea!'. Our journey was by no means finalised.

Flights were booked but visas and travel exemptions slow to materialise. After many phone-calls to immigration, our visas arrived. The separate travel exemption came on the morning of our flight. House rented, car sold and bags packed, we taxied to the airport. Excited and nervous, armed with jumbo packs of antibacterial wipes and vats of alcohol gel.

The journey

The excitement grew as we queued at check in. The warning shot came when our passports were scanned and staff started to avoid eye contact and talk in whispers. Three hours later, we walked rather than flew out of that airport. Australia had capped international arrivals and we had been cancelled from the flight. No back up, no compensation, no flight with that airline for another month.

Plan B materialised as we rented a car and drove south for a flight with a different airline. We successfully boarded that plane and were finally able to give an unambiguous response to our kids repeated question 'Are we DEFINITELY going to Australia?' I know now that we were lucky. Some fellows have booked multiple flights with cancellations, slow refunds, and lost income as they wait to travel.



The journey was long and eerie. Empty airports, mandatory masks and complex rules around immigration meant that check in and security were strange and slow. Airline staff were under huge pressure, complying with each country's evolving, complex and individual entry rules.

Quarantine

14 days of mandatory hotel quarantine was required on arrival in Adelaide. Leaving the plane we were detained by friendly police and led onto a bus. We were given no choice or notice of our hotel provision so a mystery tour ensued. We arrived at the hotel and were checked in by the police. I was worried this would be daunting but everyone was lovely, and the PPE

and military operation didn't deter our young kids. Accommodation varies, but we were lucky to have a balcony and adjoining rooms. The hotel staff were brilliant and meals were delivered in a 'knock and run' fashion. The police and nurses checked in daily and enquired about our wellbeing and COVID-19 symptoms. We started with a daily routine of work, exercise and games, but by day ten lethargy set in and screen time exponentially increased. There were highs and lows but the days passed, and in this era of Zoom X (substitute for X party/quiz/meeting/ games) it was easy to stay connected.

Following two negative COVID-19 swabs and 14 nights, we were liberated. South Australia's borders have been closed for the majority of the pandemic and so life is quite normal. Along with getting an A* for pandemic management, South Australia has shown us unrelenting warmth and care, and I'm so glad we made it.

As a child, in times of particular stress or indecision, my Mum, herself a retired anaesthetist, would always repeat the same quote which became a mantra for our family: 'Be bold and mighty forces will come to your aid'.

I still don't know if my gut instinct was right. Maybe I won't be able to tell you for another 30 years, but consultant colleagues have regaled me with unforgettable fellowship stories and this experience is etched into our family's storybook.



Dr Sameen Kausar Former Anaesthetics/ICU F1, King's Mill Hospital, Mansfield sameen.kausar1@nhs.net

F1 EXPERIENCE OF ANAESTHETICS AND ICU

In August 2019, I finished my elective in New Zealand and was looking forward to starting as an F1. After medical school, I felt I was late to start working life and was ready to be a junior doctor. I particularly looked forward to my rotation in anaesthetics as this was a potential career option. As a medical student, I had never considered a career in anaesthesia – I had what I would call the 'common misconceptions' of thinking that it was boring, that it didn't involve enough patient contact, and that it somehow wasn't 'medical' enough.

On my first placement in fourth year, I found anaesthetics fascinating and not at all what I had expected. Fast forward a few years, and I'd completed a selected student component and an elective in anaesthetics, giving me a taste of what to look forward to during my anaesthetics foundation post.

Of the four months, one was spent in ICU and the rest in theatres. Then, as COVID-19 hit and rotations paused, I spent a further four months on ICU with some sporadic theatre time. I think all F1s initially feel like a spare part, but being a supernumerary junior in anaesthetics it was hard to feel helpful. When I joined ICU, I was extremely keen and pushy. This was, to my surprise, well received by the team; I wanted to learn and feel helpful, and they wanted to help me gain the most from my experience. Within the first week, I learnt to insert arterial lines and even inserted my first central line (under supervision!). Having A-E assessments as part of my daily job on ICU stood me in good stead for managing acutely unwell patients when on call. This meant that in stressful situations I could revert to a system I knew, removing large amounts of the stress and hesitation associated with attending these situations for the first time.

When I returned to theatres, these new found skills improved my confidence and ability to contribute. These experiences enabled me to immerse myself, spend time learning the fundamental skills of airway management and the more nuanced decision-making around managing an anaesthetic.

When rotations paused, I was glad to remain in anaesthetics. Although I was redeployed to ICU, having been there recently I was happy to return. Of course it was different, more intense in terms of the patient volume and disease severity. Despite COVID-19 there were still plenty of non-COVID-19 cases. One in particular stays with me. She was a 50-year-old ventilated lady who was critically ill; on reviewing her I identified that she was deteriorating. I discussed this with the consultant and the registrar, who came to paralyse her with the aim of improving her ventilation. Having interacted with the patient previously, I knew she was not fully sedated and would open her eyes to our voices. We explained what was happening and I could see she was afraid. Instinctively, I held her hand and

told her everything would be okay. A week later, when I was next on the unit, I realised she was no longer there, and it dawned on me that she had died. Our last interaction has stayed with me; I hadn't known at the time that she wouldn't survive, but looking back I realised how significant it is in those moments to be there with patients and not get lost in the technical aspect of managing a patient in ICU.

The surge provided plenty of learning opportunities, such as identifying patients requiring interventions (for example vasopressor support), and making basic adjustments to ventilator settings and building on my practical skills of inserting arterial and central lines.

ICU before and during COVID was a career-altering experience. Despite being among the most junior members of the team, I felt able to contribute, to voice my opinions, and to offer suggestions and criticisms. I truly feel this was because of the fantastic team that I was surrounded by. We became a family, caring and looking out for one another. Because of this, my confidence in my abilities and what I could offer grew. This meant that despite the challenging nature of our work I looked forward to going in. I remember one particular evening in the department when an ICU consultant and I were talking about the food we liked. There were many other times when I chatted to the registrars and to the new ICU

consultant – who became my role model. This experience affirmed the importance of a team, and how a good team can make all the difference in a difficult situation. This sense of belonging stayed with me when I moved back to theatres.

In the end, when it came to moving to my first F2 job, I felt a sense of loss and knew that I would happily continue to work in the anaesthetic department. I don't know many colleagues who have been lucky enough to experience a job and team which they would happily stay in for the remainder of their career. My time in anaesthetics and ICU, even during COVID-19, was invaluable, helping confirm my passion for a career in anaesthesia.

Instinctively, I held her hand and told her everything would be okay





Dr Paul Sampson ST7 Anaesthesia, University Hospitals Plymouth NHS Trust psampson1@nhs.net



A FELLOWSHIP IN SYSTEM-WIDE SAFETY INVESTIGATION

The Healthcare Safety Investigation Branch (HSIB), operational since 2017, is a world-first organisation undertaking independent system and learning focused patient safety investigations that don't apportion blame or liability.

A multidisciplinary organisation

In August 2019, I embarked on an out-of-programme experience with a young organisation that fosters a new approach to the investigation of patient-safety incidents in the English NHS. My new colleagues at HSIB came from various backgrounds, including healthcare, military accident investigation, human factors, and safety science.

HSIB has two investigation programmes: 'Maternity' and 'National'

The Maternity programme investigates all incidents involving intrapartum stillbirth, early neonatal death, and potential severe brain injury that meet 'Each Baby Counts' criteria. It also investigates deaths of women during or shortly after pregnancy. Reports are only shared with the family, NHS trust, and staff involved. Thematic analyses of these reports are published openly in the form of National Learning Reports.¹

The national programme accepts referrals from anyone (https://bit.ly/2FK45qZ) and undertakes 30 investigations a year. HSIB cannot investigate cases that express concerns about an individual's competence or where concerns lie with a particular organisation.

I was hosted by the Intelligence Unit (IU), a multidisciplinary team whose core function is advising the Chief Investigator of cases to progress to national investigation. This is done through the analysis of intelligence (incident reporting databases,

academic and national literature and expert opinion) to determine whether a safety risk meets the criteria for national investigation.

When deciding what to investigate, the following criteria are assessed:

- how prevalent is the risk and does it span multiple levels of the healthcare system?
- what impact does the risk have on patients and the wider healthcare system?
- what is the learning potential, and what different perspective can HSIB bring to the issue?

National investigations examine the local circumstances of an incident before expanding to a wider national context. The investigations make systemwide safety recommendations which aim to drive improvement. Examples of investigations have included: 'Recognising and responding to critically unwell patients' and 'Administering a wrong-site nerve block'.²

While at HSIB I actively participated in all stages of multiple investigations. I have developed skills in investigation interview, evidence analysis and report writing. My time at HSIB highlighted the importance of environmental and equipment design and how clinicians have to adapt to deficiencies through workarounds. I now acknowledge, more so than ever before, the complexity of the system in which I work and how this influences my role in delivering safe care.

Theory into practice

Healthcare has the properties of a complex system with numerous interacting components necessary for its success. Linear accident-causation models are not seen as sufficient to understand the context in which healthcare incidents occur. HSIB uses models that represent this complexity during the collection of evidence and its analysis – models such as the Systems Engineering Initiative for Patient Safety (SEIPS).³ SEIPS emphasises the importance of well functioning system interactions over individual performance for safe patient care.

The Safety-II approach, currently receiving popular attention in healthcare, argues that because safety exists in the absence of incidents, systems should be examined during incident-free times to see how it prevents these from occurring.⁴ Safety-II focuses on how work is actually done, looking for the different ways people adapt to gaps and challenges. This is often different to how work is imagined by stakeholders and subsequently formalised in policies and guidelines ('work-as-prescribed'). In practical terms, identifying the discrepancy between 'work-asprescribed' and 'work-as-done' during HSIB investigations is achieved through observation visits across the country and subsequent human factors analyses.

During the height of the COVID-19 pandemic some operational aspects of HSIB's investigations paused. Many staff, including myself, temporarily returned to full-time clinical practice. However, work continued, and a national intelligence report published by HSIB during the pandemic contributed to the Royal College of Physicians issuing guidance on how early-warning scores should be used in the context of COVID-19.5

While the ability of individual trusts to influence the wider healthcare system is limited, their challenge is to begin applying a systems approach to local incident investigation. In 2019, NHS England/Improvement published their Patient Safety Strategy in which it announced the intention to publish a new Patient Safety Incident Response Framework (PSIRF). This describes a broader systems approach to incident management, moving away from 'root -cause analysis' focused on personbased factors.⁶

I thoroughly enjoyed my time with HSIB, and I return to the clinical practice, a more rounded anaesthetist. I would like to thank the Peninsula Deanery for allowing me time away and my family for their support.

- 1 National report highlights life threatening risk posed by delay in group B strep treatment, 2020 (https://bit.ly/2HiCnSE).
- 2 HSIB National investigations (https://bit.ly/3dHXcmx).
- 3 Holden RJ et al. SEIPS 2.0: a human factors framework for studying and improving the work of healthcare professionals and patients. Ergonomics 2013:56:1669-1686.
- 4 Hollnagel E et al. From Safety-I to Safety-II: A White Paper, 2015 (https://bit.ly/2HqB5Ym)
- 5 National Intelligence Report: Early warning scores to detect deterioration in COVID-19 inpatients. Independent report by the Healthcare Safety Investigation Branch, 2020 (https://bit.ly/34eaXGz)
- 6 Patient Safety Incident Response Framework. NHSE (https://bit.ly/3jfnnlJ)



Dr James Evans FY1, Kettering General Hospital, Northamptonshire



Dr Raghavendra Kulkarni Consultant Anaesthetist and Intensivist and Undergraduate Lead in Medical Education, Kettering General Hospital, Northamptonshire raghavendra.kulkarni1@nhs.net

SAFE MANAGEMENT OF PPE WASTE DURING COVID-19

Since the first case of the novel coronavirus, now known as COVID-19, was identified in Wuhan, Hubei Province, China in late 2019, the production, use, and disposal of medical waste, and more specifically of PPE (Personal Protective Equipment) has increased significantly. Some academics have proposed entirely new logistical systems to manage waste,¹ but in most areas the existing infrastructure has had no choice but to cope with the demand.

Exact figures are elusive, but a press release from the UK Government Press Office on 26 May 2020 stated that due to the COVID-19 pandemic an additional 2 billion PPE items had been ordered from UK firms by that date, and a further 3 billion purchased from abroad.² The majority of these consisted of single-use gloves, aprons and Type IIR face

masks. In fact, they claim that a total of 3.7 billion extra gloves have been purchased. At an average weight of 3.8 grams per glove, this is more than an additional 14,000 metric tonnes of used gloves alone entering the wastedisposal chain. On top of this, there has been a significant increase in the use of masks and gloves by the public. Global estimates suggest that as many as 129 billion face masks and 65 billion gloves are currently being used each month.³

According to a report by the United Nations Environment Programme, the increase in medical waste, combined with a reluctance to separate recyclable materials from waste streams during the pandemic, could contribute to a 30–50 per cent increase in total waste materials worldwide,⁴ resulting in massive risks to human health.

You need do little more than venture outside these days to witness the improper disposal of face masks. It seems that a small, but significant, proportion of those using masks in public places, have little regard for their safe and proper disposal. Streets are littered with these small rectangles of blue and white, nonwoven plastic material blowing in the wind. The most immediate risk these pose is infection with COVID-19, or other pathogens. A study published in the New England Journal of Medicine found that COVID-19 has a half-life of 6.8 hours on dry plastic.⁵

In addition to this, once the infectious period is over the plastic itself remains in the environment, causing damage to waterworks, harming wildlife, and eventually breaking down into potentially harmful microplastics.⁶ The United Nations Environment Programme recommends what they call the '3S methodology' -Sorting, Segregation, and Storage.⁴ They recommend that waste that is potentially infected with COVID-19 should be separated from general

medical or household waste at the point of production and then stored, allowing for a more informed assessment of demand and to allow the development of appropriate disposal solutions. A period of storage also reduces the likelihood that waste remains infectious at the point of final disposal.

Unfortunately, this approach requires both significant additional effort from the point of view of the user and national oversight of the entire wastedisposal process, and so it has not been widely adopted. My own trust has taken the decision, from an infection control standpoint, to treat all waste from any 'red' area as highly infectious waste for incineration, significantly increasing the volume of infectious waste produced. So far, the logistical systems locally have coped with this, but at a national scale it is becoming a concern.

The final disposal of any form of medical waste can have significant impacts on human health, particularly in low-resource environments. There are two main ways that medical waste can be safely treated and disposed of:⁷

- incineration hospital/medical/ infectious waste incinerators burn the waste in a controlled manner. These are usually heavily regulated to avoid the release of potentially harmful compounds into the atmosphere
- 2 sterilisation and land disposal medical waste is treated with heat, chlorine-based compounds or radiation to render any pathogens inactive, and then disposed of into landfill.

Unfortunately, waste produced in a domestic setting rarely enters the formal medical waste-disposal chain. It is also the case that in some jurisdictions, usually those with less regulation, it is not uncommon for medical waste to be disposed of directly into landfill or to

be burnt in non-medical incinerators. This can expose refuse workers to both the risks of infection, and the hazardous compounds released when burning this waste in a less controlled environment.

While the problems posed by this rapid expansion in PPE use are clear, the solutions are far less so. For the public, limiting the use of inappropriate PPE, such as gloves in shops, and the use of reusable cloth masks have merit, however cloth masks are not generally appropriate in medical settings. While the problems are extensive, I would caution against anyone advising against the use of PPE items such as masks. If we are to manage medical waste on a global scale, we will have to ensure there is cooperation on a national, and international level.

- 1 Hao Yu et al. Reverse Logistics Network Design for Effective Management of Medical Waste in Epidemic Outbreaks: insights from the Coronavirus Disease 2019 (COVID-19) Outbreak in Wuhan (China). Int | Environ Res Public Health 2020;17(5):1770 (https://bit.ly/3kgMrJC).
- 2 Government significantly boosts UK PPE supply with more than 100 new deals. UK Government Press office 2020 (updated 26 May 2020) (https://bit.ly/2GLp9Oj).
- 3 Prata JC et al. COVID-19 Pandemic Repercussions on the Use and Management of Plastics. Environ Sci Technol 2020: 54(13):7760-7765 (doi: 10.1021/acs. est.0c02178)
- COVID-19 waste management factsheet: Introduction to COVID-19 waste management. wasteaid.org: United Nations Environment Programme; 2020 (updated 7 July 2020) (https://bit.ly/2UcNUpJ)
- 5 Van Doremalen N et al. Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-CoV-1. (Correspondence) N Engl | Med 2020;382(16):1564-1567 (doi: 10.1056/NEJMc2004973).
- 6 Patrício SA et al. Increased plastic pollution due to COVID-19 pandemic: challenges and recommendations. Chem Eng / 2021;405:126683 (doi: 10.1016/j. cej.2020.126683).
- 7 Key methods for disposing of medical waste waste. Secure Waste Disposal Inc 2016 (updated 17 December 2016) (https://bit.ly/3kbUkjy).



Dr Laura Troth, Consultant Anaesthetist, Hereford County Hospital Dr Isobel Toy, Education Fellow, Hereford County Hospital

SIMULATION GAMIFICATION: TRAINING FUTURE ANAESTHETISTS

Simulation-based training is a core component of the anaesthetic curriculum, allowing non-technical skills (NTS), to be developed in a risk-free environment. Given the recent advances incorporating gamification into medical education, this article discusses the role of escape rooms and relays as engaging and immersive educational experiences for the anaesthetist in training.

Simulation

The importance of NTS in safe anaesthetic practice is well documented,¹ however these skills are difficult to teach. Subsequently, simulation has been used as an effective method of teaching NTS without compromising patient safety.² Sessions often involve linear virtual cases, played out in a predictable manner. Predictable and mundane simulation sessions may still benefit the trainees' learning needs but does nothing for their enthusiasm or passion. Our approach must therefore change to engage trainees, and the emphasis should be on the need for the trainer to be more creative in the educational delivery.

Gamification

Immersive educational strategies should encourage learners to draw on existing knowledge and apply it to a given scenario. The use of games in learning (gamification) is thought to stimulate engagement by:

- being challenging
- encouraging a community of collaborative play
- generating competition between peers.⁴

Delivering educational material in this interactive manner improves engagement and enhances trainee experience.⁵

The future of simulation

Combining simulation and gamification could be the future of anaesthetic training. Here we discuss two innovative techniques that demonstrate its potential.

The relay simulation

The relay simulation sees trainees participate in a scenario independently for five minutes each before handing over to their colleague. Once each trainee finishes their handover, they observe the scenario progression in silence. Remaining in the simulation suite enables trainees to reflect on their handover and highlights whether they have missed anything which may ultimately alter the patient management.

Relay simulations demonstrate the importance of concise and accurate handovers, encouraging an effective relay of material and highlighting the potential effects of missed information. Relay simulations are not only challenging and enjoyable but relevant and applicable to day-to-day life as an anaesthetist.

The medical escape room

Escape rooms are popular live action games where players are immersed within a 'locked' room and tasked with working together to solve clues and complete numerous tasks in order to 'escape'. They are used to help trainees consolidate theoretical and clinical teaching in a learner-centred manner.^{6,7} Recreating hectic environments allows trainees to immerse themselves in a fun, non-threatening and rewarding experience where the application of nontechnical skills is required to succeed.⁸ Progression through the session requires trainees to treat patients, calculate drug doses, apply clinical guidance, and interpret radiological images to unlock coded combination padlocks.

Our experiences

Developing these innovative and creative sessions has been enjoyable for both the facilitator and the trainee. Each session has been warmly received, and feedback has been resoundingly positive, especially if participants had previous escape-room experience. This framework can be adapted for different levels of training or multidisciplinary teaching by adjusting the games and challenges, and its potential is only limited by the facilitator's creativity.

Conclusion

Simulation training has been embraced by the anaesthetic community as an effective and safe means of teaching NTS. The role of gamification in medical education is continually evolving to create immersive and enjoyable educational sessions. Relay simulations and escape rooms allow the creation of interactive and engaging educational events that enhance trainee experience. We therefore argue that the use of gamification in simulation appears to be a perfect advancement in the delivery of more engaging and enjoyable educational sessions.

Combining simulation and gamification could be the future of anaesthetic training

- Moll-Khorrawi P. Anaesthesiology students' non-technical skills: development and evaluation of a behavioural marker system for students (AS-NTS), BMC Med Educat 2019;19(1):205 (doi: 10.1186/512909-01901609-8).
- 2 Aggarwal P et al. Training and simulation for patient safety. *Qual Saf Health Care* 2010;**Suppl 2**:i34–43 (doi 10.1136/ qshc.2009.038561).
- 3 Moseley A, Whitton N. Innovative pedagogies series: playful learning. Using games to enhance the student experience. *Higher Education Academy*, 2015 (https://bit.ly/2TOPmhV).
- 4 Winkel D et al. Gamification of electronic learning in radiology education to improve diagnostic confidence and reducing error rates. *Am J Roentgenology* 2020;**214(3)**:618–623.
- 5 Nevin C et al. Gamification as a tool for enhancing graduate medical education. Postgrad Med J 2014;90(1070):685–693.
- 6 Guckian J et al. Exploring the perspectives of dermatology undergraduates with an escape room game. Clinical and Experimental Dermatology, 2019 (doi: 10.1111/CED.14039).
- 7 Kinio A et al. Break out of the classroom: the use of escape rooms as an alternative teaching strategy in surgical education. *J Surg Ed* 2019;**76(1)**:134–139.
- 8 Zhang X et al. Trapped as a group, escape as a team: applying gamification to incorporate team-building skills through an 'escape room' experience. *Cureus J Med Sc* 2018;10(3):e2256 (doi: 10/7759/ cureus.2256).

DEFINING STANDARDS The 2021 Anaesthetics Curriculum partone



Dr Ben Shippey Consultant Anaesthetist. Ninewells Hospital. Dundee 2020cct@rcoa.ac.uk



Dr Marie Nixon Consultant Anaesthetist, Portsmouth Hospitals NHS Trust 2020cct@rcoa.ac.uk

In order to provide high-quality anaesthesia, critical care and pain medicine, the aspiring anaesthetist must develop wide-ranging knowledge, be proficient in a number of technical and nontechnical skills, and must understand how to best apply these abilities safely in different contexts. The consultant anaesthetist must possess the capacity for wise judgement, grounded in the values and norms of anaesthetic practice, and ably embrace the complexity and uncertainty of practice.

A new curriculum

Since 2017, the GMC has required colleges to embed 'Good Medical Practice' and the 'Generic Professional Capabilities Framework' within curricula, alongside specialty specific capabilities. The 2021 Curriculum is our response to these requirements.

It has been organised around the abilities of the anaesthetist, defined as professional and clinical higher learning outcomes described in terms of professional capabilities. This moves away from the previous structure where the activities were defined 'by proxy' according to the surgical activity that the anaesthetist supported. The abilities of the anaesthetist are applicable in many contexts, and it is not the case that those abilities can only be acquired during exposure to a single surgical discipline. For example, the understanding of the physiology of one-lung ventilation and the skill of delivering anaesthesia while allowing a lung to deflate are applicable not only to thoracic surgery but also to any procedure where one-lung ventilation is required. It is not important in which context that ability is acquired, but it is important that the anaesthetist's skill, knowledge and understanding can then be applied in a variety of contexts.

The curriculum also recognises that anaesthetic practice extends far beyond the delivery of direct patient care, and emphasises much more strongly than before the importance of anaesthetists in training cultivating their ability in generic professional domains, such as working in teams and research. It is expected that as a result of more explicit descriptions of these abilities anaesthetists will be

guided towards developing capabilities in these domains, and that these capabilities will be assessed during the training programme.

A holistic approach

The curriculum remains outcome based, as required by the GMC, as opposed to relying on case numbers and training duration as proxies for educational attainment. As such the achievement of competence facilitates progress through the curriculum, rather than the passage of time, and it is expected that learners will make progress at different speeds. expertise (a Technical Rational view of practice). Rather, it is one with frameworks but which starts where rules fade, where knowledge is temporary, dynamic and problematic, and where judgement is key (a Professional Artistry view). This view of practice as complex and uncertain, requiring initiation into the understanding and beliefs of the practice and the development of judgement and wisdom as to what ought to be done when there are competing ideas, conflicts with the reductionist 'competency based' approaches of previous curricula.

The curriculum in practice should be much more than a list of the hurdles to be jumped

However, there is a firm move away from over-specification of competencies that can be accumulated individually, towards examining the whole. This a welcome step for our profession, as it is widely understood that attempting to simplify the complexity of anaesthetic practice by breaking it down to component parts is inadequate. In educating anaesthetists we are not producing trained performers but educating wise professionals who engage in intelligent practice.

A philosophy based on shared beliefs and values

The philosophy underpinning this curriculum is based on shared beliefs and values, the most fundamental of which are, firstly, our view of anaesthetics is as something more difficult to pin down than as a practice which follows rules, where knowledge is graspable, and where the focus is on visible performance and technical

Secondly, our view of how anaesthetic expertise develops, through a process of immersion in the anaesthetic 'community of practice', where the learner engages in legitimate, peripheral participation in the activities of the anaesthetic community, and moves towards the centre of the community as they acquire the knowledge, skills, values and behaviours of that community. This process could be entirely passive: it is not unreasonable to believe that, without any structure, summative assessment, or regulation a learner could, given time, achieve a degree of competence in the practice of anaesthesia. Many current trainers will notice a resonance with that approach and the way in which they learned. Providing structure to a programme of adult learning avoids some of the pitfalls of an unstructured 'experience'.

Thirdly, our understanding of how learners learn anaesthetic practice is based on constructivist theory, in the sense that anaesthetists become active participants in their own learning rather than passive receivers of knowledge; the responsibility of the trainer is to signpost appropriate experiences and guide the learner's development. The curriculum seeks to support learners in their peripheral participation by providing structure, signposting opportunities, and defining the educational achievements that anaesthetists should reach at milestones in the training programme.

The curriculum in practice should be much more than a list of the hurdles to be jumped. It should be underpinned by a philosophy in which the complexity of practice is both understood and embraced, and in which learners are encouraged to take part in the activities of the wider anaesthetic community and build their own framework of knowledge and skills based on their experiences. It should be delivered in a context where development is expected by anaesthetists in training and supported by trainers, in which performance is explored frequently and honestly, and in which open conversations based on targeted observations guide improvement.

For suggested further reading please visit the website: rcoa.ac.uk/2021curriculum-philosophy



60

Dr Hamish McLure Consultant Anaesthetist and England Representative for the RCoA Workforce Strategy Committee workforce@rcoa.ac.uk



Dr Kirstin May RCoA SAS Member of Council, Oxford sas@rcoa.ac.uk

Institutional abuse: do we have a problem?

Windrush, the death of George Floyd, and the Black Lives Matter movement have highlighted deeply rooted inequalities in society that should force us to look within and consider where we're contributing to the difficulties of others.

The disproportionate impact of COVID-19 on the BAME community is likely to have multiple contributing factors, but still raises uncomfortable questions about inequalities in healthcare provision, income, housing and employment. Many of us would like to believe that the specialty of anaesthesia embraces racial equality. We have a high proportion of BAME

anaesthetists, a BAME president, himself an immigrant, and a glance across the audience at national Clinical Director meetings reveals faces from all over the world, showing that BAME colleagues are achieving senior leadership positions. Our diversity and equality is a source

of pride. However, would all anaesthetists agree that the specialty has treated them justly?

Over recent years, the UK has generated a hostile environment for immigrants seeking work. The visa cap and concerns around the points-based immigration system do little to persuade foreign doctors that the UK will welcome them. Brexit will restrict free movement of workers from the EU into the

UK, and creates uncertainties for those already here. These issues are of particular relevance to many SAS doctors. The 2017 College report, 'SAS anaesthetists - securing our workforce', (https://bit.ly/SASReport2017) showed that 69% of SAS doctors were from the outside the UK. These doctors represent 21% of the 'permanent' anaesthesia workforce and make a significant and valuable contribution to the service our specialty provides for patients. The recently published 2020 census (rcoa.ac.uk/

medical-workforce-census-report-2020

showed that the consultant workforce is growing at the rate of 2.1% per year - probably reflecting pipeline supply rather than demand, as the number of

consultant vacancies is growing faster. The funded consultant workforce gap has grown from 4.4% in 2015 to 8% in 2020, and is even higher (11.8%) if we include work for which there is no identified anaesthetic funding. Despite this obviously increasing demand, the number of SAS doctors appears to have remained static over the last five years, raising questions about why this is the case.

It is likely that some overseas doctors may see an unwelcoming attitude towards foreigners in the UK and choose to relocate elsewhere. This presents a problem, as the UK doesn't produce sufficient trained anaesthetists for our growing needs, and so we stand at the edge of a very significant workforce crisis. With this in mind, it's important that we look to those doctors who are already here and ensure that they know they are wanted and valued. Is this the case?

The 2020 census shows that anaesthetists work hard. 62% of consultants are contracted to work more than 40 hours per week (10 programmed activities (PAs)), whereas 72% of SAS doctors work in excess of 10 PAs. In addition, the activity within those contracted hours is very different. The 2017 report showed that 13% of SAS anaesthetists didn't even have one PA (the contractual minimum) of time for supporting professional activity (SPA). The 2020 census showed that one SPA per week is the minimum for newly appointed consultants, and that 93% of hospitals offered new consultants 1.5 SPA or more when they started. This greater hands-on clinical element to SAS doctors' job plans is reflected in their on-call commitments. Consultants are

mostly contracted to non-resident rotas, whereas SAS anaesthetists are more likely to be resident-on-call and typically on higher-frequency rotas. Another stark inequality revealed by the census is that only 7% of departments had a policy for the age at which SAS doctors could come off on-call rotas, whereas 34% of departments had a policy for consultants, perhaps reflecting the fact that SAS working conditions are seen as less important. More significantly, where an age was specified, consultants could come off on-call duties when they reached 55 years of age, whereas SAS doctors, who were more likely to be doing more frequent residenton-calls, had to wait until they were 60 years of age.

At a recent College Clinical Directors meeting, Dr Thomas lames, an SAS doctor, gave an excellent talk. He described the typical SAS job plan and noted differences compared with consultants. He understood the pressures on clinical directors and their perspective, and the serious service implications any change would bring. He offered an insight for many clinical directors into issues that they may not have considered. Were the situation reversed, would the consultant body have a similar balanced attitude? It's time we understood the needs of the SAS doctor community and started to address these inequalities. Investment in SAS doctors and improving equality will help ensure that they know they're valued members of the big anaesthetic 'family'.

Medical Workforce Census Report 2020



Consultant workforce

Results showed that the consultant workforce in the UK had reached 7,959, growing at an average 2.1% per year since 2007.



Gender balance

Female consultants make up 38% of the workforce in 2020, compared with 28% in 2007. Similarly, the SAS doctor workforce is now 39% female compared with 35% in 2010.



Vacancies

Just over 90% of departments had at least one consultant vacancy. There were 680 vacant consultant posts and 243 vacant SAS doctor posts in the UK.

NELA: LEARNING FROM BEST PRACTICE

Contributions from top performing NELA teams

Collated by Dr Carolyn Johnston, NELA Quality Improvement Lead carolyn.johnston1@nhs.net

November saw the publication of the sixth annual NELA report. Four hospitals had a risk-adjusted mortality below the lower 95% control limit, meaning that they have the best outcomes in England and Wales for their case volume. As part of NELA's remit to share best practice, we spoke to these sites about what they think explains their great results.

1 Getting good data

Stepping Hill: 'We include NELA as part of our WHO huddle, postoperative documentation, and sign-out. Our audit department checks our hospital computer system for patients. We also have an associate specialist with job-planned time to review our NELA data for completeness.'

Gloucester: 'We have a dedicated group of anaesthetists and surgeons who are very thorough about the quality and completeness of our data. The theatre operating books are trawled for all eligible cases. We also have a team who ensure that the final data is complete.' Addenbrookes: 'An electronic health record is a big help patients can be remotely (and simultaneously!) reviewed by anyone involved in their care. Easier to have prompts and reminders for specific parts of the pathway (ie, category of laparotomy booked, referral to geriatrics, etc)."

Salford: 'Our audit department developed an excel spreadsheet emailed out to each clinician within 48 hours of the case, so easier to fill in. We prefer this to putting data into the webtool directly.

2 Using data to highlight issues

Salford: 'We have good elderly-care support, reviewing all patients aged over 75. We've been looking at the data, to see any small changes in that service and hopefully improve it.

Stepping Hill: 'We reviewed all NELA deaths. Some patients had high predicted-mortality scores and should never have had surgery. It made us improve our risk prediction and use these scores more consistently in assessing patients."

Gloucester: 'We have excellent engagement from Critical Care, who have been fantastic at supporting the admission of high-risk patients, aided by a dedicated surgical HDU. Having looked through our dashboard, this is the most impressive positive trend."

3 MDT working

Salford: 'Anaesthetists and surgeons went to the ASGBI laparotomy meeting together. We have regular meetings with all leads looking at data collection and results. We were all motivated – a national project makes it easier to get engagement.'

Stepping Hill: 'Surgeon, anaesthetist and critical care consultant see patients together at the bedside making it easier to make decisions and place ceilings of care as appropriate. This ensures good, clear communication with patients and relatives. We feel that our relatively small group of consultants working collaboratively is part of our strength. We have a high proportion of cases with both consultants in theatre delivering care.'

Addenbrookes: 'We have a core

team driving efforts to improve. Initially anaesthesia, critical care and surgery, and now including radiology and geriatrics, and soon ED. It's a quintessentially multidisciplinary pathway. We tackle a large number of elderly-frail cases with ICU support, and we palliate, with a multidisciplinary approach, cases where surgery is not in the patient's best interests. We have early consultant review and a good critical care outreach team - often helping with resuscitation in ED.'

4 NELA Mortality and Morbidity (M&M) meetinas

Salford: 'Surgeons and anaesthetists started to do joint M&M laparotomy mornings together – this worked well and we got loads of positive feedback."

Gloucester: 'We hold a regular Quality Improvement meeting at which we present the data, and this really helps encourage colleagues into fully engaging (especially out of hours)."

Addenbrookes: 'We have audit and M&M meetings to review cases where things don't go to plan and then look for improvements to implement."

5 Specific pathway improvements

Stepping Hill: 'We drew up criteria for CT scanning on initial presentation. During a trial, patients had a CT during their first presentation to ED, and so had their surgery when their mortality and morbidity were lowest. This has embedded early CT for scanning highrisk patients. We believe this early identification has had a significant impact on our NELA results."

Addenbrookes: 'Postoperatively, we have a well developed, closely involved physiotherapy service and dieticians integrated into the GI team.

Top performing sites

Hospital	Caseload	Risk adjusted 30-day mortality
Addenbrookes Hospital	244	5.32
Gloucestershire Royal Hospital	240	5.16
Salford Royal Hospital	136	2.62
Stepping Hill Hospital	129	2.38

We aggressively treat and rescue complications, supported by all these teams. We have seven-day-a-week consultant review - weekend daily consultant review drives recovery and early pick up of complications.

Gloucester: 'We have very good access to prompt CT scanning, and this speeds up primary treatment, and diagnosis/treatment of complications. Patients are cared for in a dedicated GI ward with very experienced nurses. This makes a huge difference in routine care and prompt identification/treatment of complications. We have started Care of the Elderly liaison recently too.'

The above are an abridged version of feedback from our top performing sites; more complete summaries can be found on the NELA website. If you have any examples of best practice in your emergency laparotomy pathways, please send them to NELA@rcoa.ac.uk for inclusion on our best-practice pages.

Thank you to those who have contributed to this report on behalf of their NELA pathway colleagues: Dr Jonathan Lightfoot (Gloucester), Dr Petrus Fourie and Mr John Bennett (Addenbrookes hospital), Dr Sarah Braham (Salford Royal Hospital), and Dr Tallat Nazir and Miss Natasha Henley (Stepping Hill hospital).

AN INSIDER'S VIEW

EXPERIENCES IN WRITING AND SUBMITTING ARTICLES



An interview with Dr Robert Fleming, Specialty Doctor in Anaesthesia, Nottingham University Hospitals NHS Trust

More than 1,700 of our fellows and members selflessly offer their time, energy and skills enthusiastically to the work of the College. These roles range from examiners and committee members, to ACSA leads and AAC Assessors. To highlight these roles further, and to provide you with a true taste of what they involve, we started regular 'Insider's View' interviews for the *Bulletin* last year.

In this issue, we have Dr Robert Fleming, an SAS anaesthetist at Nottingham University Hospital, and Board and Council member for the Association of Anaesthetists. He regularly contributes superb articles to the *Bulletin*. Below is an abbreviated version of an interview with him about his experiences in writing and submitting articles for the *Bulletin* and other publications.

Before we speak about your writing, can you please tell us a bit about yourself and your journey to date as an anaesthetist?

I've been a specialty doctor for about eight years, and before that I was a trainee for five years in both the North West and the East Midlands regions. My clinical interests are mostly obstetrics and regional ophthalmic anaesthesia. In the last couple of years I have become more involved with the College and with the Association.

Did you have any experience writing articles before submitting to the College?

Not at all. I had a letter published in a journal more than 10 years ago when I was a trainee. My first publication anywhere was an article for the *Bulletin* in March last year. I have subsequently had half a dozen articles published in the *Bulletin* and *Anaesthesia News*. These things tend to snowball if you put yourself forward. You'll find that people will approach you again to submit more things, especially if the things you've had printed have been well received.

What was your first article about?

I was asked to write something about my experiences of being a specialty doctor (<u>https://bit.ly/RCoA-B114</u>). I wrote about my journey so far, what my experiences of the grade has been, and the opportunities within the grade that I hadn't necessarily realised were there until I started doing them myself. I had just been appointed to the SAS committee at the College as well as to the local negotiating committee looking after SAS doctors within my own trust. My first article was a signpost that some of these things were available to other SAS doctors if they wanted to do them and that the role didn't necessarily have to be entirely about service provision, unless that is want they wanted it to be.

Why did you put yourself forward to write an article?

I'm very passionate about advocating for SAS doctors. That's why in 2018 I joined the College SAS committee. At one of the first committee meetings I met Kirstin May – one of the elected SAS Council members of the College, a fierce defender of our grade and a very inspirational individual. It's quite hard to say no to her. She was looking for new volunteers from amongst SAS committee members to write some content, because the *Bulletin* has historically had the space available in each issue for SAS-related articles.

Are there any other subject matters of interest that you've written about as well?

I have had an article in *Anaesthesia News* about patient safety-related issues and an article in the *Bulletin* on my experience in taking the final FRCA as an SAS doctor. There is probably quite a considerable overlap in that article for trainee associates and others. I wrote about how I found doing the exam as an SAS doctor and having been out of training for quite a long time.

Can you share any professional and personal learning that you have gained through your work with the College?

I don't know if I write any more fluently now than I did in the beginning. An awful lot of work goes on behind the scenes with the editorial team and the friends and colleagues who read my articles before they are printed. The experiences that I've enjoyed the most are when people have got in touch after I've had something printed. After my first article in particular, I had a number of people email me saying that they were having difficulty as trainees. It had reassured them that if they decided to step out of training as I had there was still a role for them, that there was a bigger world out there for them as an SAS doctor, and that they could still have a very meaningful career as a non-consultant anaesthetist. You don't realise how many people actually read the College Bulletin and Anaesthesia News until you have something printed in them. All of a sudden you'll get emails from a variety of people saying, 'I enjoyed your article' or, 'have you thought about this...?' It's put me in contact with people I might have not otherwise been in contact with. And that can only be a good thing.

If you are interested in submitting an article to the *Bulletin* you can find our submission guidelines on our website: <u>https://bit.ly/RCoABulletin-Subs</u>

To listen to the full interview with Dr Robert Fleming please visit our website: https://bit.ly/RCoA-RobFleming

If you could give one piece of advice to someone thinking about authoring articles, what would it be?

I'd tell them to absolutely do it. Prior to writing articles myself, I didn't necessarily feel my viewpoint was something that I was reading. If you read any of the glossies and you feel unrepresented, it's very easy to say that publication is not for you. A better way of looking at it is that your demographic is what is missing. If you aren't seeing yourself represented in print, then you should stand up, say that you want to have something published, and write your own content.





Professor Mike F M James Emeritus Professor of Anaesthesia, University of Cape Town archives@rcoa.ac.uk

AS WE WERE... Origins of anaesthesia in Rhodesia (Zimbabwe)

The first recorded anaesthetic in what is now Zimbabwe was administered at Hope Fountain mission station, south-east of Bulawayo, in 1878 or early 1879. The wife of one of the missionaries was having a difficult labour requiring instrumental delivery performed by the senior missionary, Charles Helm, who had some medical training. Helm's wife, Elsbeth, in fear and trembling, administered chloroform by handkerchief to the expectant mother. Fortunately, both mother and child did well.

The pioneer column which entered the country in 1890 included several medical men in addition to its leader, Leander Starr Jameson. They brought substantial medical supplies, including morphine – which Jameson used to treat the Ndebele King, Lobengula, who suffered from gout. Dr Frank Rand was a trained surgeon who administered chloroform to a patient in Fort Salisbury for the repair of a severely injured hand - three hours under candlelight! Fellow-pioneer John Strachan, a chemist, brought supplies of nitrous oxide, which he used to establish a successful dentistry practice. He was joined in 1904 by an American dentist, Byron-Moore, who manufactured his own nitrous oxide. Recognising the deficiencies of the gas at altitude, he

bubbled nitrous oxide through alcohol and chloroform, producing what he called 'vitalised air' that provided more satisfactory anaesthesia. He also explored the use of cocaine and procaine for local anaesthesia.

With the population expanding, hospitals were built in Bulawayo and Salisbury, and a recent arrival, Dr Andrew Fleming (1894), was the first full-time doctor appointed to the staff of the new Salisbury Hospital. He became Medical Director and Inspector of Health while Dr Rand was appointed surgeon to the Salisbury Hospital from 1897 to 1899. In Bulawayo, the first medical officer was Dr Fred Vigne, who arrived in 1893 and was soon joined by others, including Edward Head. Dr Head soon showed himself highly

proficient at anaesthesia and was the first official appointee as Senior Anaesthetist to the Bulawayo Hospital. He was highly skilled in the 'rag and bottle' technique, using chloroform, ether or ACE (a mixture of alcohol, chloroform and ether).

The influx of medical practitioners included Godfrey Martin Huggins (later Prime Minister and Lord Malvern), who arrived in Salisbury in 1911. Huggins formed a partnership that soon included two regular anaesthetists -Dr R S MacNaughton (who became expert with the Shipway apparatus) in 1912 and Dr J E Hurworth (who later became the first full-time appointment as Anaesthetist at the Salisbury Hospital) in 1919. However, there were no real specialists at this time, and a

The College's Heritage and Archives Committee welcome any expressions of interest for new committee members. Please contact: archives@rcoa.ac.uk for more information

hospital surgical-theatre list from 1911 shows several practitioners acting as anaesthetist at different times, including Huggins himself. The technique was invariably either ACE or chloroform.

In the rural areas, anaesthesia was frequently given by non-medical personnel, often including family members! Mt Selinda (Adventist Mission) Hospital and Morgenster Mission Hospital had recorded more than 600 surgical procedures by 1952. Sadly, there are no records as to who gave what anaesthesia or of the outcomes.

Worldwide improvements in anaesthetic equipment were having an impact, and by 1943 a Boyle's machine was available in Salisbury, although it was reported that 'rag and bottle' was still the most widely used technique.

The first trained specialist, holding an English Diploma in Anaesthesia, G V S Wright, arrived in 1950 and commented on the mediocre standard of anaesthesia in the country at the time. However, anaesthetic practice rapidly improved with the introduction of thiopentone and nitrous-oxideoxygen mixtures (often with ether or cyclopropane) from a proper breathing circuit. Several more specialists arrived over the next few years, bringing with them expertise and new techniques (including various muscle relaxants). Halothane was introduced in 1958 and warmly welcomed despite its great expense!



In Bulawavo, Peter Cushman was appointed as full-time anaesthetist and recruited several people over the following years to form the first strong core of anaesthetists in public service. These included R A Cahi, S Zwana, and later | C Dlamini and J Andifasi. Cahi became the first Rhodesian to obtain the FFARCS (UK) and later established the first intensive care unit, initially to treat tetanus.

The Godfrey Huggins School of Medicine opened in Salisbury in 1963, and an independent department of anaesthetics was established in 1974 with Professor Ashley Duthie as the first head. Training in anaesthesia at that time emphasised clinical skills, as modern essentials such as automated sphygmomanometers, gas analysers and pulse oximeters were non-existent. Perhaps it was these challenging conditions that enabled the training of a solid base of local specialists, nurse-anaesthetists and many highquality individuals (including three full professors) who have made their mark internationally.

More recently, the economic crises in Zimbabwe have massively handicapped the training of anaesthetists, but a dedicated core of specialists have maintained good clinical training and practice despite the difficulties.

Note: after independence in 1980, Rhodesia was renamed Zimbabwe and several place names have changed. I have used the names that were relevant at the time to avoid confusion.

- 1 Hickman AS. Police Pioneer Doctors. Rhodesiana 1957;2:3-15.
- 2 Gelfand M, Ritchken J (eds). Godfrey Martin Huggins: his life and work. Salisbury, Rhodesia: Bardwell & Co (Pvt) Ltd.
- 3 McKenzie AG. The development of anaesthesia in Zimbabwe. Third International Symposium on the History of Anesthesia. Wood Library 1992 – Museum of Anesthesia
- 4 Bader S. Muscle relaxants in anaesthesia. Cen African | Med 1956;2:185-190.
- 5 Bader S, Micklem NJ, Wright GVS. Halothane: a new anaesthetic agent. Cen African | Med 1958;4:233-235.

NEW TO THE COLLEGE

The following appointments/re-appointments were approved (re-appointments marked with an asterisk).

Regional Advisers Anaesthesia

East of Scotland

Dr Cameron Weir (Ninewells Hospital and Medical School) in succession to Dr Fiona Cameron

Wales

Dr Simon Ford (Morriston Hospital) in succession to Dr Sarah Harries

Deputy Regional Advisers Anaesthesia

Wessex

Dr Elsbeth Dyson (Queen Alexandra Hospital) in succession to Dr Michael lackson

College Tutors

Kent Surrey and Sussex

Dr Paul Smith (Royal Sussex County Hospital) in succession to Dr Lynne Campbell

London Imperial

Dr Dafydd Lloyd (Charing Cross Hospital) in succession to Dr Edward Costar

North Central London

Dr Bindiya Varma (Royal Free Hospital) in succession to Dr Tanya Jones Dr Benjamin Silverman (Harefield Hospital) in succession to Dr Paul Harris

North West Mersey

Dr Amit Dawar (Countess of Chester Hospital) in succession Dr Simon Ridler

West Midlands Stoke

Dr Derrick Clarence (Walsall Hospital) in succession to Dr Sumant Shanbhag

Yorkshire and the Humber West Yorks

Dr Andrew Baker (Bradford Teaching Hospitals NHS Foundation Trust) in succession to Dr Catherine Farrow

Scotland West of Scotland

Dr Ryan Moffat (Queen Elizabeth University Hospital) in succession to Dr Jonathan McGhie

*Dr David Reid (Golden Jubilee National Hospital)

*Dr Susan McIlveney (Royal Hospital for Children, Glasgow)

Certificate of Completion of Training

To note recommendations made to the GMC for approval, that CCTs/ CESR (CP)s be awarded to those set out below, who have satisfactorily completed the full period of higher specialist training in anaesthesia, or anaesthesia with intensive care medicine or pre-hospital emergency medicine where highlighted.

Barts & The London Jennifer Lambert

Defence David Hall

East of Scotland Amy Sadler

Kent, Surrey & Sussex Stuart Wade

North Central London Jeremy Fabes

Northern Katharine Cranfield Dual ICM

Oxford Dwipanjan Das Katherine Oliver

Peninsula David Kotwinski Francesca Mazzola

South East

Waisun Kok Lauren Tully

Wessex Richard Lowe Dual ICM

West of Scotland

Joanne Bell

LETTERS TO THE EDITOR

If you would like to submit a letter to the editor please email **bulletin@rcoa.ac.uk**

Dear Editor

Minority Report RCoA Bulletin 2020:123:26-27

It was heartening reading the excellent article by Dr Olusanya and Dr Wong. As a Black British woman I unfortunately identify with some of their negative experiences within medicine. I have found anaesthesia to be a welcoming specialty and have embraced role models from different backgrounds during my time in the specialty. However, there is a significant lack of Black role models within anaesthesia, and as the editor pointed out it is very difficult to visualise your goals without a role model. I commend the College for tackling this issue of racial inequality head-on and putting diversity and inclusivity at the heart of its agenda. However, there is a lot more to be done in our specialty. We know why, and must now look to how we are going to implement change. We cannot effect change if we cannot measure it. We need to identify parameters that we want to change and measure them regularly in order to ensure the College remains a consistently diverse organisation. I look forward to the implementation of the College's future plans promoting transparency and accountability discussed at the webinar 'Talking Straight on Racism' hosted in October. We must aim not just for equity, but to remove the systemic barriers that cause inequity.

Dr Sekina Bakare, ST4 Anaesthesia and Intensive Care Medicine, Imperial School of Anaesthesia

A timely airway (leads) intervention

Dear Editor.

We would like to highlight the vital role the RCoA and DAS Airway Leads' Day (5 March) had in our institution's COVID-19 preparedness. We suspect many of the attending Airway Leads, their respective institutions, and crucially, their patients derived similar benefit.

The organisers demonstrated incredible foresight to re-arrange the programme at the last minute, dedicating the entire afternoon session to COVID-19 topics. At the time, only a few UK cases had been reported, and whilst experiences in China and Italy were well publicised, the potential UK impact was still largely unknown, and underestimated by many

The COVID-19 session, chaired by Dr Alistair McNarry (RCoA-DAS Lead Advisor), and led by Professor Tim Cook (RCoA Advisor for NAPs) was very informative and, appropriately terrifying! This was one of the last highattendance, face-to-face conferences, and the absence of social distancing was illustrative of delegates' relative innocence of what lay ahead. The potential risk of viral transmission was almost certainly outweighed by the immense value of the arresting information being presented, and subsequently disseminated.





Dr Helgi Johannsson

Following the meeting, we devised and implemented a comprehensive local COVID-19 airway management strategy, comprising intubation checklist, standard operating procedure, dedicated airway trolleys, consultant led-intubation rota and extensive educational programme. However, preparations were not restricted to airway management. The Airway Leads day served as a stimulus for our entire hospital's preparedness. We thank the organisers and speakers for their timely contribution to our, and many other hospitals', preparations, which undoubtedly influenced the safety of patients and staff during the pandemic.

Dr Christopher JA Lockie, Locum **Consultant Anaesthetist and** Intensivist, Chelsea and Westminster Hospital, London

Dr Patrick A Ward, Consultant Anaesthetist and Airway Lead, Chelsea and Westminster Hospital, London

Dear Editor.

Coaching through COVID-19: psychological safety and compassion

RCoA Bulletin 2020:123:30-31

I read with interest the consideration of psychological safety and compassion and the steps the Royal Free Hospital in London have taken to nurture the mental wellbeing of medical staff. Indeed, has there been a time with greater need for ensuring the psychological and spiritual welfare among healthcare workers within the NHS?

After much discussion with friends and colleagues, there is a consensus among us that the stresses of working within healthcare are considerably amplified during this global pandemic.

At work, there is the anxiety of changing into new roles, stepping into uncomfortable situations and difficult telephone conversations with patients' relatives. At home, there is the concern of catching COVID-19 or having to make home-care arrangements due to cancelled school. This together with the endless worries of loved ones who are high risk, the stresses of extended training, cancelled examinations and even just the loneliness and tedium of lock down.

On a positive note, I have heard many say that they have, in fact, felt fortunate that we can simply continue our daily jobs and avoid the mundanity of quarantine, and that the social circle of work has been rather beneficial. During a morning handover, I myself, recall feeling a sense of gratitude when the hospital reverend popped her head in and offered counselling for anyone who felt the need.

As we again worry about the increasing number of COVID-19 cases in the coming winter months, maybe we should also focus on whether we have the sufficient support and platforms in place within our hospitals to mitigate further emotional fatigue and burnout among our workforce.

Dr Toby Ma, Anaesthetic Clinical Fellow, Nottingham

Dear Editor,

Our neurosurgical department have always been efficient at proning and de-proning patients; our technique was to disconnect everything possible, prone and re-connect. COVID-19 presented many challenges, but reducing the number of times the patient was disconnected from the anaesthetic circuit was paramount to reduce the risk of transmission.¹ For neurosurgical cases, particularly with prone patients, we always use reinforced ETTs, and therefore clamping the ETT is not possible.

We have developed a technique for our prone theatre cases where we place the circuit through the pressure-relieving helmet system prior to intubation, which facilitates a zero-disconnection method.



The patient is preoxygenated and intubated on their bed with a reinforced ET. The protective helmet system is then brought to their face, and then the patient is proned onto the operating table without disconnection.

At the end of the procedure, they can be de-proned back onto their bed without disconnection and the helmet system freed from their face to allow for a normal extubation.

We have found this technique very easy and hope that others can adopt this method in order to reduce staff exposure to COVID-19.

Dr Jennifer Hawkins, ST6 Anaesthetic Trainee, Royal Surrey County **Hospital NHS Foundation Trust**

Dr Carlos Fiandeir, Consultant Neuroanaesthetist, King's College Hospital, London

Reference

1 Cook TM et al. Consensus guidelines for managing the airway in patients with COVID-19. Anaesth 2020; 75(6):785-799.

Dear Editor,

Tea Trolley Teaching delivers short teaching sessions in the workplace, and we have established a successful bedside programme in our intensive care unit (see the May Bulletin: https://bit.ly/RCoA-B121). Here, we wish to report what we believe is the first collection of the views on Tea Trolley Teaching of patients and visiting families in the ICU.

Over eight weeks we have collected feedback from 32 patients or relatives in the ICU. Feedback was predominantly collected by an independent medical student, with 30% collected by one author (CG).

We found that the vast majority of those surveyed were comfortable with the teaching occurring at the bedside, with no impression of teaching taking time away from patient care. Most found the sessions reassuring, reflecting a commitment to staff education (see figure on opposite page). A small number of comments reflected concern around timing and appropriateness of teaching during busy periods and impact on clinical care.

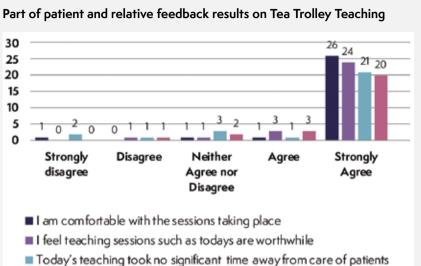
With this in mind, we have built a formal check into the lesson plan to ensure that the timing and clinical workload is appropriate for teaching to take place, as well as re-iterating to staff that the teaching can be interrupted to respond to patient needs. Furthermore, teachers are encouraged to explain the nature and rationale of bedside teaching to patients and visitors if present.

These findings should reassure that as long as steps are taken to be conscious of place and timing, bedside Tea Trolley Teaching sessions are well received by patients and their families.

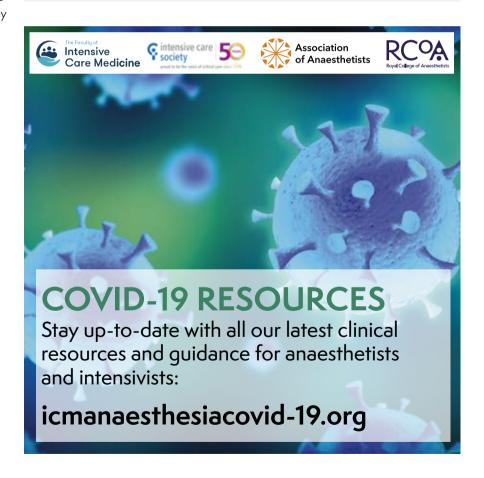
Dr Christopher J Acott, Specialist **Registrar in ICM**

Dr Christopher Gough, Post-CCT Intensive Care Medicine Clinical Fellow

Dr Claire Pickering, Education and Simulation Fellow in Intensive Care Medicine, Oxford



- The teaching sessions were non-disruptive



APPOINTMENT OF MEMBERS. ASSOCIATE MEMBERS AND ASSOCIATE FELLOWS

Associate Fellow

Dr Khurram Shahzad

Members

Dr Iames Ionathan Foxlee Dr Ashraf Mohamed El Souda

Associate Members

Dr Rajiv Gnanasekar Dr Emma Bradlev Dr Christopher Robert Smith Dr Christopher Guy Alexander Beaves Dr Fahad Zahid Dr Andrew Sadler Dr Ahmed Mohammed Attia Omara Dr Segei Privalov Dr Fatma Mahmoud Osama Abdelkarim Ali Hammady Dr Rachna Prasad Dr Thomas Kong Dr Filip Sianos Dr David Robert Cambray-Deakin Dr Andrew Sadler Dr William Smith Dr Tanvier Kaurl Dr Vishnu Nadarajan Dr Ala Omar Ali Saadeh Dr Thomas William Aquilina Dr James Barclay Dr Adeniyi Tobun Dr Kim Caulfield Dr Haytham Mohamed Zien Algameel Dr Andrea Ximena Boedo Dr Hassan Abdullah Dr Thomas Allan Capstick Dr Peter Mervyn Haigh Dr Sagitha Joseph Dr Ayesha Khan Dr Charlotte Louise Jenkins Dr Dilip Vijay Dr Jeremy James Scanlon

Dr Muhammad Yahya Dr Vitor Goncalves Savoia Dr Caroline Ellis Dr Bindiya Atul Shah Dr Stefanie Catharina Scheuermann Dr Gabriella Anna Boerner Dr Ronald Odhiambo Ombaka Dr Irfan Liagat Ali Dr Wafaa Alnasan Dr James Biggs Dr Matilda John Ravindran Dr Omneya Assef Abdelhalim Khowailed Dr Adebimpe Omowonuola Aladeojebi Dr Ahmed Abdelaziz Soufy Abdelaziz Dr Raghda Mohamed Ashraf Kortam Dr Charlotte Emma Lokes Dr Emily Sarah London Dr Nimal Valiyaveedu Mani Dr Barnila Mohapatra Dr Norbert Skarbit Dr Ahmed Mostafa Sanad Soliman Dr Avinash Tulsiani Dr Aimee Melissa Yonan Dr Ahmed Youssef Abdelaleem Essa Dr Adedoyin Adunni Ilesanmi Dr Ahmed Mohamed Sabri Mahmoud 7aher Dr Paayal Chandrashekar Dr Bilaji Kpalayam Vijayachamundeswari Kesavan Dr Alex Jude Fonseca Dr Shubhangi Shivaji Mane Dr Cornelius Andries Van Wyk Dr Babatunde Adebayo Osokoya Dr Agah Rauf Isquzar Dr Deiyagala Arachchillage Lahiru Hemajith Deiyagala Dr Avinash Kumar Janqde Dr Waleed Mohamed Khairy Abdelkader Ibrahim Dr Tamur Akhtar

Dr Sairah Adnan Dr Noah John Granger Dr Nabil-ur-rahman Faroogi Dr Mohamed Elsayed Abdelhay Elsayed Dr Kerry Hunter Dr Ikhuemose Emmanuel Enaholo Dr Abdelhady Sayed Mohamed Ali Dr Sripriva Sivaramakrishnan Dr Suvir Dubey Dr Abdallah Badie Azeez Nazzal Dr Hassan Ahmed Hany Hassan Ahmed Elsayed Abdelhalim Dr James Alastair Robinson Dr Subhadip Basak Dr Charlotte Lucy Hammonds Dr Samiran Das Dr Nikita Bhugra Dr Deepa Divakar Ramasadanam Dr Ahmed Badr Metwally Kotb Aboelneil Dr Sravanthi Badu Reddy Dr Gopika Raiesh Dr Sarah Loise Carolyn Wysling Dr Charles William Francis Rookes Dr Hemesh Shewale Dr Vipal Chawla Dr Khushali Jigar Shah Dr Tamanna Parmar Dr Sana Imtiaz

Affiliates

Ms Heather Campbell Ms Paula Jane Nash Ms Dawn Bryant Mr Darren Fergus

CONSULTATIONS

The following is a list of consultations which the College has responded to in the last two months. Further information can be found on our website (rcoa.ac.uk/consultation-responses).

	Originator	Consultation
	Health Select Committee	Inquiry into Workforce burnout and re
	HM Treasury	Comprehensive Spending Review 202
	Department of Health and Social Care	Reducing bureaucracy in the health a

DEATHS

With sadness, we record the death of those listed below.

Dr John M Anderton, Manchester Dr Alan | McLintic, Auckland, New Zealand Dr Robert W Myers, Grimsby Dr Araz Pourkashanian, Gerrards Cross Professor Leo Strunin, Lincolnshire Dr Krishnan Subramanian, Derby Dr Alan R Tappin, Surrey Dr Trevor A Thomas, Bristol

To submit an obituary that will be displayed on our website (rcoa.ac.uk/obituaries), please email your text (500 words) to <u>archives@rcoa.ac.uk</u>

APPOINTMENT OF FELLOWS TO CONSULTANT AND SIMILAR POSTS

The College congratulates the following fellows on their consultant appointments:

Dr Paul Groves, Southampton General Hospital

Dr Francesca Mazzola, Charing Cross Hospital, Imperial Healthcare Trust

Dr Alistair | Millar, East Lancashire Hospitals NHS Trust

Dr Natalie Quinn, Royal Manchester Children's Hospital Dr Kevin Tan, Warrington and Halton Teaching Hospitals NHS Trust

Dr Sarvesh Zope, Dartford & Gravesham NHS trust, Dartford

esilience in the NHS and social care

)20

and social care system call for evidence







Fitter Better Sooner



The College has developed a toolkit that offers patients the information they need to prepare for surgery, including the important steps they can take to improve health and speed up recovery after an operation.

The Fitter Better Sooner toolkit consists of:

- one main leaflet on preparing for surgery
- six specific leaflets on preparing for some of the most common surgical procedures
- an animation which can be shown on tablets, smart phones, laptops and TVs.

You can view the toolkit here: rcoa.ac.uk/fitterbettersooner

We have also created printable posters, flyers and stickers to help you signpost patients to the toolkit. The animation can be shown on TVs in waiting areas. You can find all these additional resources and instructions on how to download the animation in MP4 format (or request a version in PowerPoint) on our website here: rcoa.ac.uk/patientinfo/healthcare-professionals

Please share this toolkit with colleagues in both primary and secondary care settings.

It has been shown that people who improve their lifestyle in the run up to surgery are much more likely to keep up these changes after surgery.





TICKETS AVAILABLE SOON VIA WWW.EBPOM.ORG



EBPOM Las Vegas 28 January 2021

Join us LIVE in Las ∀egas!

FOR MORE INFORMATION VISIT:



VISIT US: **TOPMEDTALK.COM**

SIGN UP: FOR THE NEWSLETTER

SUBSCRIBE: **ON YOUR FAVOURITE** PODCASTER

FOLLOW US:





@EBPOM / @EBPOM_USA www.ebpom.org

FREE Continuing Medical Education **On-The-Go**

- FREE open access Med ED for a global audience
- Listened to in over 100 countries
- Downloaded over 1 million times
- FREE TopMedTalk APP



Mersey School of Anaesthesia

"If you feed the children with a spoon, they will never learn to use the chopsticks."

COVID-19/MSA NOTICE

At the time of this Artwork Design (October 2020); We are unable to predict the certainty of In-Person Courses going ahead. Dates will be published on the Website as and when we feel able to confirm that they will go ahead.

All updated Dates and Notices can be found on our Website or Social Media Channels

www.msoa.org.uk

21st - 25th Feb 2021 • BOOKER CRAMMER E-COURSE

for the Final FRCA Written Exam March 2021

A 5-Day Intensive Course, Including: 12-Question CRQ E-Papers & Review Presentations on Key Points on Various FRCA Sub-Specialties SBA E-Papers

PLACES

LIMITED

★REMOTE LEARNING OPPORTUNITIES★

FINAL FRCA WRITTEN CRQ E-CLUB

A Peer Learning opportunity starting 6 months before the Exam

Candidates are urged to join before April 2021 for the Autumn 2021 Examination to gain Maximum Benefit

PRIMARY & FINAL FRCA SBA Crammer E-CLUBS

A Peer Learning opportunity starting 2 months before the Exam

 To ensure Reading & Understanding To Identify Gaps in Knowledge

To Consolidate Learning

Further information regarding our remote Courses can be found on our Website

The Mersey Exam Buddy Scheme Virtual Exam Buddy and Support Bubble

For Trainees sitting any upcoming FRCA Exam

Post-FRCA Trainees interested in becoming a Support Bubble Lead

Scan the QR code to Learn More:



Video Viva Club May 2021 Primary SOE/June 2021 Final SOE

The opportunity to improve your readiness for the Primary/Final FRCA SOE via the use of video conferencing software.

Scan the QR code to Register Interest:



PLEASE NOTE:

Trainees planning on taking part in MSA Courses must appreciate that the MSA Courses are designed for Exam Preparation only, and include:

- Exposure to Exam <u>Style</u> Questions
- Opportunities to Practise
- Learn & Fine-Tune Exam Techniques

They are not designed to Teach. The advice to Trainees is that they should only attend MSA Courses when they consider themselves adequately Prepared for the Imminent Examinations.



Global Anaesthesia: **Towards Health Equity** 16 March 2021 Virtual event

Book now:

rcoa.ac.uk/global-anaesthesiatowards-health-equity

UPCOMING WEBINA





Discounts may be available for RCoA-registered Senior Fellows and Members, Anaesthetists in Training, Foundation Year Doctors and Medical Students. See our website for details.

Book your place at rcoa.ac.uk/events

Developing World Anaesthesia

15 March 2021 Virtual event

Spaces are limited, book now:

rcoa.ac.uk/developing-worldanaesthesia









Virtual events

29 January 2021

Attend our one day online conference to connect with experts in anaesthetics. The theme for this event is 'Hearts and Minds'

Topics include:

- postoperative morbidity
- pre-hospital extra-corporeal CPR
- critical decision making
- regional anaesthesia
- perioperative BP management.

24-25 February 2021

Stay ahead of the curve and join us for two days of new ideas in anaesthesia, critical care and pain management.

Topics include:

- advances in obstetrics
- the obstructed airway
- litigation for nerve injury
- bariatric dosages, implications for TIVA
- key updates in perioperative medicine.

Book online now at: rcoa.ac.uk/events

Discounts may be available for RCoA-registered Senior Fellows and Members, Anaesthetists in Training, Foundation Year Doctors and Medical Students. See our website for details.

Leadership and Management for Anaesthetists

Run by practicing NHS clinical directors and experienced management facilitators – start with our signature two-day introduction course and follow up with one of our suite of management courses.

The essentials

16–17 March 2021 Glasgow

Personal Effectiveness

26 March 2021 RCoA, London

The Essentials

5-6 May 2021 RCoA, London



WATCH NOW >

Leadership modules and the reasons to attend: rcoa.ac.uk/leadership-management-programme

Book your place at rcoa.ac.uk/events

Off your second course if booked within six months of the first or if two booked at the same time.

10% DISCOUNT



ANAESTHESIA A CAI 2021//////





Proton Beam therapy – anaesthetist view Dr Lauren Oswald, Manchester

18 - 20

SAVE 10%

available until

EARLY10

when booking

early bird places

31 January – quote

May 2021



MACINTOSH PROFESSORSHIP LECTUR Perioperative anaemia Dr Andrew Klein, Cambridge



Anaesthesia and the developing infant brain Professor Suellen Walker, London



Data science and artificial intelligence for better healthcare Professor Niels Peek, Manchester



My life in global health Professor Kathryn Maitland, London



The challenges of giving your patients high quality information preoperatively Dr Hilary Swales, RCoA Patient Information Lead

rcoa.ac.uk/anaesthesia

Patient Safety in Perioperative Practice

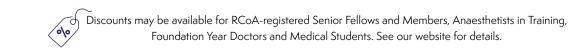
20 April 2021 | Virtual event





Cardiac Disease and Anaesthesia Symposium

22–23 April 2021 | Virtual event



Book your place at rcoa.ac.uk/events







Online Training for Carestation[™] 650

SIMPLE. SMART. AGILE.

*Additional Anaesthesia courses available

GE Healthcare Online Education

Limited offer - First 30 users

2.5 CPD points per course



For log in access please contact: GEHealthcare.EducationLeader@ge.com

Your portal to access GE Healthcare product training and education.

All Rights Reserved. GE and GE Mo



(Free of charge)

(Certificate issued)





 Single-use
 No reusable components
 Fully disposable
 No reprocessing
 Minimises the risk of cross contamination

i-view video laryngoscopy wherever and whenever you intubate

www.intersurgical.co.uk/info/iview





Quality, innovation and choice