Environment issue

Let’s get hooked on reducing plastic waste

Fellowship in Environmentally Sustainable Anaesthesia

Come around to recycling: make a positive change

‘We are living on this planet as if we had another one to go to’

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I am delighted to bring you this bumper edition of Anaesthesia News: ‘The environment and anaesthesia’. Since the last issue on this topic, the Association’s first fellow in Environment and Sustainable Anaesthesia has taken up post, and Cathy Lawson has written an article outlining what she hopes to achieve. We have funding for another fellowship in 2020, so ‘watch this space’ for the advertisement.

This has been a terrific year for the Environment and Sustainability Committee. The Association places great importance on reducing its carbon footprint as an organisation and as individuals, and we are pushing ahead with our links to manufacturers and government agencies to address these issues nationally.

We ran our first free webinar on the environment in December. Over 100 delegates attended from Great Britain and Ireland, South Africa, New Zealand and other parts of the world. Read a report in this issue, or even better, as the three talks are freely available on learn.aagbi.org, you can listen. Frank Swinton ran a ‘World Café’ at WSM, asking ‘What is the role of the Association in moving society towards sustainability’, and you can find the answer(s) soon in a future issue of Anaesthesia News.

Elsewhere in this issue find out about the next environment session at Annual Congress in Glasgow, be inspired by Peter Brook’s article on his project which won the Barerma and Association Environment Award, and look out for the advert for the 2020 award. Tackling issues straight on, Will Rattenberry conducted a social media survey about the plastic hooks on facemasks. You can read where we have got to with this issue. Kenneth Barker has written a personal view on the environmental impact of desflurane. Tackling carbon emissions from all anaesthetic gases is high on the NHS long term strategy and we have asked to be involved in shaping these changes.

No ‘environment issue’ can go without writing about a few of the quirky, inspiring things that we are doing in my hospital. From running a juice pressing day in order to promote our new allotment, quirky, inspiring things that we are doing in my hospital. From running a juice pressing day in order to promote our new allotment, to redirecting/reusing all of the anaesthetic non-recyclable plastic bits to a local scrapstore.

Finally, environment and anaesthesia is a shared concern and cause. We are updating the environment section of our website which will have an area for members to post their case studies/initiatives/snippets. All sensible and fun ideas are gratefully accepted. Please send them to secretariat@aagbi.org.

Samantha Shinde
Vice President, and Chair, Environment and Sustainability Committee
Fellowship in Environmentally Sustainable Anaesthesia

In broad terms the fellowship will examine three main workstreams: volatile anaesthetic agents, waste management, and the carbon footprint of anaesthesia. I’ll be trained by the CSH Sustainability School in leadership skills for sustainable healthcare and quality improvement and incorporate these into the fellowship’s projects. I’ll also be working collaboratively with the CSH sustainable surgical fellow on the carbon footprint of regional anaesthesia for joint replacement surgery. Through quality improvement, research and innovation, we hope to share knowledge and ideas as to how we as anaesthetists can provide excellent care for our patients whilst being mindful of our environmental impact, ensuring that we can provide a sustainable service for many years to come. With one eye on the future, our longer-term goals will include working with medical equipment manufacturers and suppliers to develop and market competitively priced sustainable products, as well as delving into the legal framework surrounding disposal of waste, with a focus on pharmaceuticals. Part of the next year will be starting the groundwork for this.

The next twelve months are going to be a busy and exciting time. If you’re interested in following the work of the fellowship, please follow me on Twitter @cathy_lawson85 where I will be posting regular updates.

Cathy Lawson
ST6 in Anaesthesia and Intensive Care Medicine
Northern School of Anaesthesia and Intensive Care Medicine
‘And now for something completely different…’

Peter Brooks and Juliet Dunn (both at the Chelsea and Westminster Hospital) and winners of the 2018 Barea & Association of Anaesthetists Environment Award with their project ‘Raising awareness of the benefits and reduced environmental impact of paediatric total intravenous anaesthesia’ have a conversation about the use of TIVA in paediatrics and the environment.

Are you an eco-warrior?

PB: I’ve never thought of myself as such, but I once made a movie about gnomes and deforestation, and I used to chop down alien vegetation. I do ride a bicycle but mainly because it makes my commute more efficient and it is good exercise.

JD: Warrior sounds a little too aggressive for my approach to environmental issues. However, I don’t own a car, I reuse and recycle as much as I possibly can, and I used washable nappies for my babies, so I am very aware of my personal impact on the environment.

Why do you use TIVA for your paediatric patients?

PB: The technique offers benefits for the individual patient such as less airway irritability, reduced PONV, and less agitation in recovery.

JD: I agree; as anaesthetists we do what we feel is safest and what we want is for our trainees to feel empowered to use the technique when they are not directly supervised.

Why did you apply for the environmental award?

PB: There is an increased focus on the environment and climate change in the media. The Association, the RCoA and CAI have put out a statement encouraging all of us to consider the environmental impact of decisions we make in theatre and how they may affect people’s health and well-being both now and in the future.

JD: Aside from the patient benefits derived from using TIVA, the nurses and ODPs who work with us in paediatric theatres have noticed that they feel less tired at the end of a busy day on a high turnover list when we use the technique. There is less pollution in the anaesthetic room, which has an impact for those working with us. The recovery nurses also give positive feedback about not breathing in exhaled anaesthetic gases from their patients.

PB: As paediatric anaesthetists we will always need to use inhalational inductions, but switching to TIVA as soon as IV access is established will reduce local pollution and cost, as we frequently use high-flow circuits and uncuffed tracheal tubes. Also, NAP6 data shows that more nitrous oxide is used during inhalational anaesthesia, we have to ask if this is necessary?

JD: I’ve been thinking more about my carbon footprint as an anaesthetist, especially after attending a seminar on Environmentally Sustainable Anaesthesia at the Association in 2018. Intravenous anaesthesia has a much lower lifecycle carbon footprint than volatile anaesthesia. So, the choices I make as an anaesthetist can have much longer-term effects for my patients’ lives.

What do you plan to use the award for?

PB: It is great that the sponsors of the award are Barea and GEDSA, who represent anaesthetic and respiratory equipment manufacturers and suppliers. The challenge for us as paediatric anaesthetists is how we teach TIVA safely and effectively to our trainees.

JD: It’s one thing to demonstrate the technique during a list, but what we want is for our trainees to feel empowered to use the technique when they are not directly supervised.

PB: Our aim is to use the award to make improvements in the way we teach TIVA to trainees during their experience of paediatric cases.

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PB: Our aim is to use the award to make improvements in the way we teach TIVA to trainees during their experience of paediatric cases.

Patient Safety

- ISO 80369-6: new requirements for small bore connectors in the field of neuraxial applications and peripheral nerve blocks
- Reducing the risks of accidental misconnections of different supply lines to different access routes

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Come around to recycling: make a positive change

Most anaesthetists support recycling in the operating theatre and would like to see more of it, but how many of us work in a hospital with an established recycling scheme? Philip Bewley and Hamish Breach discuss how important and easy it is to set up a recycling scheme where you work.

In 2009 the NHS was responsible for more than 18 million tonnes of carbon dioxide (CO₂) - a 40% increase in carbon footprint since 1990 [1]. The Climate Change Act commits the UK to cutting carbon emissions by 26% by 2020 and by at least 80% by 2050. As one of the largest employers in the world, the NHS has a role to play in achieving this target. In 2008, the Department of Health published a carbon reduction strategy with the widespread support of NHS organisations and staff [1,2]. As a result, in 2015 the NHS was ahead of target, impressively when you consider that activity in the healthcare system has increased by 18% [3].

In a survey of anaesthetists in England, New Zealand and Australia, only 11% of respondents stated that waste recycling occurred in their operating theatres [4]. We decided to do our bit by introducing a PVC recycling scheme into theatres within the Great Western Hospitals NHS Foundation Trust.

How it works

Plastics are conveniently classified into five different types; one of these is PVC (polyvinyl chloride). PVC is used to make 40% of medical devices and a large proportion of which is found in anaesthetic facemasks, postoperative oxygen masks and fluid administration sets, all of which can be readily recycled in anaesthetic facemasks, postoperative oxygen masks and fluid administration sets, all of which can be readily recycled. Overall, the scheme has been a great success, with great participation from all involved, and is still running today.

Introducing change in Swindon

The desire to introduce change came from two places. First, I (Philip) had recently worked at a hospital in Bath with a strong recycling culture. Having started a new placement, I took some of this enthusiasm for sustainability with me. Second, I had edited an Anaesthesia News article about a company that recycles used anaesthetic PVC facemasks [5]. This was the first time I had considered becoming involved in any kind of sustainability project. PVC facemasks are such a commonly used item, it seemed that by recycling them, we could do some real good.

In August 2016, I contacted a PVC recycling company to enquire about the feasibility of recycling facemasks. This was confirmed in the September and I approached a supportive consultant (Hamish) with the idea. I then contacted the Trust Sustainability Lead, Head of Theatres and Head of Recovery and organised a meeting of the following staff members to discuss the project further:

- Recycling representative
- Anaesthetic consultant and myself
- Clinical Lead - theatres
- Clinical Lead - recovery
- Waste Co-ordinator
- Health and Safety Lead
- Clinical Governance Co-ordinator
- Sustainability Lead, Head of Theatres and Head of Recovery

We presented the scheme to the Anaesthetic Department at the local clinical governance meeting in January 2017. Once again, there was widespread support. It was undoubtedly helped by the fact that all anaesthetists needed to do was bring their anaesthetic facemask with the patient to recovery at the end of the case.

The recovery staff members were educated about what could be included in PVC recycling in March. Shortly after this, the project went live.

As of August 2017, the Great Western Hospital in Swindon had been recycling all PVC facemasks used in theatres and recovery for 6 months. By March 2018, we had recycled 222kg of PVC. Overall, the scheme has been a great success, with great participation from all involved, and is still running today.

Show them the money!

No man/woman is an island

You aren't going to be able to do this on your own. For the scheme to take hold and continue when you move on, you need the support of your anaesthetic department. The best way to achieve this is to find a supportive consultant with an interest in sustainability and ask for their help.

Keep your friends close...

The Trust Sustainability Lead is your new best friend and a natural ally. He/she is a great starting point when trying to establish exactly who you need to contact to get the project started. Get in touch with them early, listen to their advice and sit next to them in any and all meetings.
Even the most beautifully organised recycling scheme will be a waste of time if nobody knows what they can and cannot recycle. Anaesthetists, operating department practitioners and recovery staff all need to know what goes in the bins and where they are. In addition to presenting the scheme at clinical governance days, we utilised signs in theatres and recovery reminding everyone to use the PVC recycling bins.

A positive change

While at times it was frustrating, we have learnt an incredible amount and met people working in roles that we didn’t even know existed. It was great management experience and gave a better insight into how complex the workings of a hospital are. Overall, we were amazed with the general level of enthusiasm for the project, and how quickly and easily it was introduced.

Anaesthesia prides itself on being at the forefront of patient safety. Given the devastating effects of climate change, perhaps it is time that we broaden our concept of what that means. We can no longer ignore the impact that our actions and healthcare as a whole has on the environment, and people’s health as a consequence. Change is needed, even if it is difficult. We must be realistic: this change will not happen all at once but will be a series of small steps in the right direction. As anaesthetists, we have a responsibility and are in an ideal position to drive this change.

Philip Bewley
ST6 anaesthetics
Severn School of Anaesthesia

Hamish Breach
Consultant anaesthetist
Great Western Hospitals NHS Foundation Trust
Swindon

References


The Association of Anaesthetists is launching its membership survey in March this year. Here are seven reasons why we ask you to take the time to answer it:

- It’s the most reliable way to get feedback from you regarding the services we provide for you;
- Even though it is completely anonymised, your answers allow us to get to know you better;
- It’s a sure way to let us know which services you would like the Association to provide more of;
- Your answers allow us to represent your views when we interact with political and professional bodies on your behalf;
- Answers to some of the questions asked in this survey may be used to influence workforce planning for the future;
- A high response rate will make the answers much more meaningful and powerful;
- It only takes 7-9 minutes to complete the survey!

Upma Misra
Honorary Membership Secretary

Association of Anaesthetists Trainee Wellbeing Initiative Award

NEW FOR 2019

The Trainee Wellbeing Initiative Award has been set up to celebrate excellence in trainee led projects that have and will continue to improve the wellbeing of anaesthetic colleagues in a region or local area in Great Britain and Ireland.

Trainee members of the Association are invited to submit an application as individuals or groups which include trainees. This can be self nomination or nomination of colleagues.

A cash prize or prizes may be awarded at the discretion of the judging panel. The winning trainee project lead will be invited to the Association Trainee Conference in Telford 3-5 July 2019 to present their work.

For more information on the award application process, judging criteria and to submit your application visit www.aagbi.org/professionals/trainees

The closing date for applications is 31 March 2019
Anaesthesia

Peri-operative medicine, critical care and pain

Special Supplement: Patient optimisation before surgery

- Risk prediction models for major surgery: composing a new tune.
  J. B. Carlisle

- Pre-operative respiratory optimisation: an expert review.
  N. Levy et al.

- Pre-operative cardiac optimisation: a directed review.
  J. K. Lee, et al.

- Pre-optimisation of patients undergoing emergency laparotomy: a narrative practice.
  C. Gillis et al.

- Psychological factors, probability and surgical outcomes: evidence and future directions.
  D. H. Liebes et al.

- Multimodal preoperative optimization: addressing the why, when, what, how, who and where now?
  A. B. Lumb et al.

- Preoperative nutrition and the elective surgical patient: why, how, and what?
  K. E. Munting et al.

- Pre-operative patient optimisation comes of age.
  N. Levy et al.

- Shared decision making in peri-operative medicine: a narrative review.
  J. Sturgess et al.

- Optimisation of preoperative anaesthesia in patients before elective major surgery: why, when, and how?
  E. S. Mustard et al.

- Pre-operative optimisation of the surgical patient with diagnosed and undiagnosed diabetes: a practical review.
  N. Levy et al.

- Peri-operative optimisation of elderly patients: a narrative review.
  S. P. Cian, et al.

- Perioperative care pathways: re-engineering care to achieve the triple aim.
  M. F. Grocott et al.

- Pre-operative fasting in adults and children: clinical practice and guidelines.
  W. R. Fear et al.

- The developing world of preoperative optimisation - a systematic review of Cochrane reviews.
  L. du Toit et al.

Editorial: Pre-operative patient optimisation comes of age.

N. Levy et al.

- Psychological factors, probability and surgical outcomes: evidence and future directions.
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  L. du Toit et al.

Guidelines for the safe practice of total intravenous anaesthesia (TIVA): Joint Guidelines from the Association of Anaesthetists and the Society for Intravenous Anaesthesia

Nimmo AF, Absalom AR, Bagshaw O, et al.

Congratulations to Iain (John) Glen who recently received a Lasker award for the discovery of propofol (these often precede a Nobel Prize in Physiology or Medicine). There are so many advantages of propofol-based TIVA over inhalational anaesthesia that I hardly know where to start. It’s hard to find a plausible reason not to use TIVA and it’s now one of the cheapest options for general anaesthesia. So why are so few anaesthetists using it? Before you write in, ‘yes’ I’m biased, but it’s still surprising that even in the UK (the home of TIVA) it is used for less than 1 in 10 anaesthetics. One advantage of inhalational agents is the ability to monitor end-tidal concentrations, although this is not a reason to avoid TIVA. Education and safety are key, and these apposite guidelines are perfectly timed essential reading to address both. The article is accompanied by an excellent editorial.

Global Capnography Project (GCAP): implementation of capnography in Malawi - an international anaesthesia quality improvement project


If you could only have a pulse oximeter or a capnograph, which would you choose? I’d go for the capnograph. The Lifebox Foundation is working hard to improve peri-operative safety in less economically developed environments in areas such as safety checklists, surgical site infection and, probably best known, provision of robust pulse oximeters for every anaesthetic. This fascinating quality improvement project suggests that capnography should be next on the agenda and I must agree this may indeed be one of the most important projects in anaesthesia safety in the last decade.
Effect of early use of noradrenaline on in-hospital mortality in haemorrhagic shock after major trauma: a propensity-score analysis

British Journal of Anaesthesia 2018; 120: 1237-44

Introduction

Trauma remains a significant cause of morbidity and mortality worldwide, resulting in 5 million yearly deaths [1]. Fifty percent of deaths within the first 24 hours are attributed to preventable haemorrhage [1]. The mainstay of treatment is to stop the haemorrhage and adequately fluid resuscitate, preferably with blood products. The use of vasopressors in the management of haemorrhagic shock has long been debated. Some consider that they are detrimental as they prevent tissue reperfusion and removal of metabolic acids and endogenous anticoagulants that build up in shocked tissue [2]. They have also been found to increase mortality two-fold if used within the first 24 hours following haemorrhagic shock [3]. They are also not recommended in the Advanced Trauma Life Support (ATLS) paradigm. Others argue there is a place for their use. However, there are no clear guidelines on the most appropriate vasopressor to use nor the most efficacious dose or timing of administration. The authors of this paper note that vasopressors are commonly used in France as part of the management of haemorrhagic shock. They investigated the early use of noradrenaline on the 24 hour mortality of trauma patients with shock.

Methods

This was a national multicentre study, which prospectively looked at a regional trauma registry in France. The study defined haemorrhagic shock as those trauma patients who received ≥4 units of blood products. Patients with a GCS of 3 or those who had suffered an out-of-hospital cardiac arrests were excluded. In-hospital mortality within 24 hours in patients who did and did not receive early noradrenaline was compared using a propensity-score model. The explicative and adjustment variables were predetermined by a Delphi method.

Results

A total of 7141 patients were in the registry during the study period and 518 suffered haemorrhagic shock. Of these 201 had early noradrenaline and 317 had no vasopressor administration. After propensity-score matching 100 patients were left in each group. The hazard mortality was 0.95 (95% CI: 0.45-2.01; p 0.69).

Conclusion

The authors report that their findings did not demonstrate a negative outcome on mortality from early use of noradrenaline in haemorrhagic shock. They suggest that the results of this study support the need for larger prospective trials on the use of vasopressors in this situation. The study did not make any recommendations of dose or timing of noradrenaline administration. The importance of haemorrhage control and volume resuscitation, preferably with blood products, should not be delayed in lieu of vasopressor administration. Until a high quality RCT is conducted there will remain equipoise over this question. Our current practice is that vasopressors should ideally be avoided in haemorrhagic shock patients due to the potential to adversely affect tissue perfusion.

Edward Rogers
CTT Anaesthetics

David Hunt
Consultant in Critical Care and Anaesthetics
Frimley Park NHS Foundation Trust

References

1 Gupta B, Gerg N, Ramachandran R. Vasopressors: do they have any role in haemorrhagic shock? J of Anaesthesiology Clinical Pharmacology 2017; 32: 3-4

Lee D, Czech JA, Eldinly M, Nair, A, El-Boghdadly K, Ahmad I

A multicentre prospective cohort study of the accuracy of conventional landmark technique for cricoid localisation using ultrasound scanning

Anaesthesia 2018; 73: 1229-34

Introduction

Application of cricoid pressure is standard practice during rapid sequence induction, but the efficacy of this manoeuvre depends on correct identification of the surface landmarks. Studies have suggested an inconsistent ability to do this [1, 2]. The primary objective of this study was to evaluate the accuracy of identifying the cricoid cartilage by landmark technique. Secondary objectives were the relationship between this and BMI, age and sex.

Methods

This was a prospective, observational study of adult patients undergoing elective surgery, excluding pregnant patients and those with previous maxillofacial surgery or anatomical deformities. Qualified anaesthetic assistants were asked to identify and mark the cricoid cartilage using a conventional landmark technique. With the patient maintaining the same position, this was compared with the crano-caudal midpoint of the cricoid cartilage as identified in the sagittal plane using a high-frequency linear transistor. The distance between the two marks was then compared. As the height of the anterior cricoid arch varies between 5.5 and 10 mm in adults [3-5], the authors proposed that application of pressure more than 5 mm away from the midpoint would constitute an ineffective manoeuvre.

Patients’ weight, height, age, sex and ASA status were also recorded.

Results

100 patients were recruited. 35 anaesthetic assistants were involved, with two-thirds of them having more than five years’ experience. The midpoint of the cricoid cartilage was incorrectly identified by a margin of more than 5 mm in 41% of patients (in 21%, the margin was more than 10 mm). This error was uniformly distributed above and below the midpoint of the cricoid cartilage. There was no significant correlation with BMI, age, or sex.

Discussion

The authors conclude that using surface anatomy to identify the cricoid cartilage is inadequate, has a high degree of variability, and is independent of the patient’s baseline characteristics and practitioner experience. They argue that as ultrasound allows easier identification of the anatomy and may improve the application of cricoid pressure, pre-induction ultrasound scanning should be a standard of care for rapid sequence induction.

Conclusion

Though controversy exists over the benefits of the Sellick manoeuvre [6], in many countries cricoid pressure is a core skill deployed in critical circumstances. Misapplication may have adverse consequences, including incomplete oesophageal occlusion with subsequent gastric aspiration and, distortion of the anatomy. This study focuses on a contentious topic as ultrasound scanning during rapid sequence induction does not reflect current practice.

However, ultrasound of the neck may be of use during airway assessment to assist in correctly identifying structures such as the cricoid cartilage and cricothyroid membrane.

Andrea Haren
Perioperative Medicine Fellow
University College London Hospitals

References

Anaesthesia News

It’s your Anaesthesia News.... we welcome original, thoughtful, insightful, creative or amusing letters to the Editor on topical matters.

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Programme
Learning lessons from high profile paediatric cases
Pre-operative preparation using virtual reality
Improving pain at home after day case surgery
Anaesthesia challenges in paediatric oncology
Debate: This house believes that all children should be intubated using videolaryngoscopy
Managing a child with “noisy breathing”:
  -Surgeon’s perspective
  -Anaesthetists perspective

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30 years

The Association of Anaesthetists may have rebranded, reorganised and restructured its image, but its values remain the same. Our members are fortunate to have a strong voice representing them via the Environment and Sustainability Committee and Education Committee, and never has our environmental stance been stronger than at our Annual Congress in Dublin.

Thirteen foolhardy anaesthetists cycled all, or part, of the way from London to Dublin saving goodness knows how many air/train miles. (Pause for a confession: on day one I was full of energy, got lost and cycled five extra miles; on day three I was cold and windswept and got the train for ten miles. I’ve just about convinced myself that the two cancel each other out, as for my Strava stats...).

For the third year running we had a meat-free day; we banned all plastic cups at the venue and went old fashioned with water ‘on tap’ in glass jugs and glasses; we banned all disposable coffee cups at the venue; at the environment session, we live-streamed three talks from speakers in the North of England, Scotland and Japan. The conference centre in Dublin was chosen for its superb green credentials (for example, all the trees used to create the building, lecture theatres and panels were replanted tree for tree, and the escalators picked up speed only when they sensed people on them, thereby saving energy). We took this opportunity to launch our new branding with disposable coffee cups, tote bags made from 100% recyclable material and ball-point pens that were 80% derived from plants and 80% biodegradable.

Who knows what sustainability initiatives we will come up for Glasgow 2019... any ideas?

Samantha Shinde
Chair, Environment and Sustainability Committee

Association of Anaesthetists goes orange, but is still green!
Courses for trainees working in resource poor settings

Global surgery and developing world anaesthesia are rapidly becoming important and widely discussed topics with the publication of the Lancet Commission on Global Surgery in 2015 [1]. However, the first Association of Anaesthetists working group to look at anaesthesia provision in lower/middle income countries was set up in the mid-1960s with a steady stream of anaesthetists interested in working overseas ever since. Increasing support of trainees and consultants interested in working abroad has developed, with the RCoA outlining optional modules in anaesthesia in developing countries in their higher curriculum [2].

Opportunities abound range from shorter placements that focus on teaching and service provision, such as SAFE courses and Facing Africa Fellowship in Ethiopia, to longer term commitments such as Lifebox fellowships and time deployed with Médecins Sans Frontières (MSF), UK-Med and Voluntary Services Overseas (VSO). Preparation and training prior to undertaking one of these roles has not been structured in the past and has relied on the experience and expertise of the organisation responsible for the placement. VSO and MSF offer robust and thorough pre-deployment programs, but many others do not allow the opportunity to consider ethical, political, institutional and safety issues prior to the start. However, a wide range of resources are available to support anaesthetists: online courses that can be completed in your own time, face to face courses and longer term diplomas. These all aim to discuss personal safety, awareness of the limitations of both your role and the structure you are working within, and consideration of sustainability and achievement of long-term goals.

The courses described will be of use to anaesthetists both in the early stages of planning or interest, and to those who have plans already in place.

Online

e-LA Anaesthesia for Humanitarian and Austere Environments sessions
These e-learning modules were developed by E-LH and the RCoA. They focus on differences between the UK and resource poor environments and provide practical tips.
https://www.rcoa.ac.uk/e-la/anaesthesia-humanitarian-austere-environments

Global Health and Humanitarian Medicine course
The Global Health and Humanitarian Medicine course is a part-time, online or classroom-based course run by Médecins Sans Frontières (Doctors Without Borders). The course is designed to provide doctors with the essentials for working in tropical medicine.
https://www.msf.org.uk/global-health-and-humanitarian-medicine-course

Other qualifications

Courses in Conflict and Catastrophe Medicine
This course leads to a diploma upon completion of the examination. It explores specialist knowledge for all practitioners working within medical response teams who provide medical and surgical response at the scene of major man-made and natural disasters.
https://www.apothecaries.org/course-in-conflict-catastrophe-medicine/

Coming up in the future

Good Volunteering Practice for Anaesthetists
This online course is being developed. It is supported by WAS, WFSA, RCoA, Association of Anaesthetists, VSO, THET to act as a universal tool for all UK anaesthetists interested in working overseas. The focus is not clinical provision, but the ethical, personal, and professional challenges that come from working within the environment of international development.

Online resources / further information

RCoA Global Partnerships https://www.rcoa.ac.uk/careers-training/oospe-and-oapt/working-training-developing-countries
Association of Anaesthetists https://www.aagbi.org/international
World Anaesthesia Society (WAS) http://worldanaesthesia.uk
World Federation Societies of Anaesthesiologists (WFSA) https://www.wfsahq.org

Fancesca Mazzola
ST7 Anaesthetics, London and World Anaesthesia Society

References
Let’s get hooked on reducing plastic waste

The devastating environmental impact of plastic waste is becoming increasingly apparent. Public interest in reducing wasteful practices has increased dramatically in recent years. National campaigns including the Daily Mail’s ‘Turn the Tide on Plastic’ and television documentaries, in particular ‘Blue Planet 2’, have helped to raise the profile of this issue dramatically. The NHS generates approximately 5.5 kg of waste per patient per day [1]. Of that, ~ 30% is plastic, and 20% of all hospital waste arises from operating theatres [2]. A 2009 audit estimated that each operating theatre creates 2300 kg/year, of which about 40% is recyclable [3]. However, less than 15% of NHS waste is recycled [4]. This means that a huge amount of plastic is currently sent to landfill or incinerated at great environmental and financial cost.

RecoMed (who ran a trial at Queen Victoria Hospital, and won the first Barema and Association Environment prize, in 2015), now run a PVC recycling service for 28 hospitals. It is funded by VinylPlus (an EU association of PVC manufacturers committed to sustainability). They recycle PVC medical products including facemasks, oxygen tubing and fluid bags. In November 2018, RecoMed informed us that they had collected a total of 11 349 kg of PVC. Unfortunately, at present the recruitment of more hospitals is suspended while further funding is awaited, raising questions about the economic sustainability and scalability of the project. Moreover, many single use plastic items are not made from PVC and are not collected, including the anaesthetic mask hook ring.

A simple way to reduce plastic waste is to identify items that are disposed of unused. In the UK we believe the plastic hook ring to be one such item. Hook rings are routinely supplied on anaesthetic face masks despite the fact that the Clauseaux harness for which they were originally designed is obsolete. The NHS performs approximately 2.39 million general anaesthetics each year [5]. It follows that an enormous number of hook rings are being disposed of unused. In 2016, Radhakrishna and Rangappa wrote about this issue [6]. They stated that a survey in the UK had revealed that the hook rings were discarded unused. They contacted ‘three leading manufacturers’ who were aware that ‘hooks were not used by anaesthetists in most of the UK and Europe’ but were ‘still popular in North America’. The manufacturing of hook rings was justified as ‘the logistics of supplying only to a European market without the hook was far costlier than the manufacture and supply of the hooks to all regions.’

We decided to conduct a further survey to provide additional evidence to manufacturers that the routine provision of the hook ring is not required. The survey was advertised locally and online, and was accompanied by an international response. Data was collected between May and October 2018. There were 352 responses; 90% of respondents were from Europe. 92% had never used the hook ring and 97% agreed that disposable masks should be manufactured without a hook ring (see table). 99% believe that manufacturers need to do more to address plastic waste in anaesthetic practice, and 66 commented or suggested ways to reduce plastic waste. The survey suggests that hook rings are very rarely used and that the overwhelming majority of anaesthetists are in favour of discontinuing their routine manufacture. The low response from outside Europe means that it is impossible to draw firm conclusions about their use elsewhere. It is, however, apparent that there is international concern amongst anaesthetists about plastic waste.

Survey question                                      Agree  | Disagree
I have NEVER used the hook ring provided on disposable anaesthetic face masks | 92%    | 8%
I AGREE that disposable anaesthetic face masks should be manufactured without a hook ring | 98%    | 2%
I believe that manufacturers need to do more to reduce unnecessary plastic waste in anaesthetic practice | 99%    | 1%

The Association of Anaesthetists Environment and Sustainability Committee have now discussed this issue with the Association for Anaesthetic and Respiratory Device Suppliers (Barema) and we have contacted three leading manufacturers directly. There is a desire to reduce plastic waste, but global tender specifications remain an issue. In the UK, the Public Services (Social Value) Act 2012 places a statutory obligation on the NHS to consider social and environmental wellbeing as well as financial wellbeing when procuring goods. We are in discussion with key members of NHS Supply Chain, an arm’s length body of the Department of Health. This group has been tasked with optimising products (to ensure safety and quality alongside value), in line with Lord Carter’s report [7], and engages with clinicians. They agree with us that waste and disposal requirements should be considered in future procurement specifications and are keen to involve the Association with the changes that are being undertaken, not just on plastic, but on specifications that feed into the procurement process. We have received clarification from the team at NHS Supply Chain confirming that procurement specification framework for anaesthetic masks in the England does not stipulate that manufacturers must supply hook rings with facemasks.

Of the three manufacturers approached, one has responded. We are pleased that they acknowledge the issue and are offering an alternative. However, at present they are not planning on removing hook rings from their existing product. In 2019 the re-tendering process of the ‘airways management’ framework will provide an opportunity for the NHS to stipulate that masks are provided without hook rings, enabling this change.

Sean Duggan, the Anaesthesia and Filtration Group Manager Product Management at Intersurgical responded: “Intersurgical appreciate the recent dialogue with the Association’s Environment and Sustainability Committee and recognise the issues that this thread has raised regarding unnecessary waste within anaesthetic practice. We aim to minimise the environmental impact of our products and services and have implemented an Environmental Management System certified to ISO 14001. Part of this commitment has been the development of innovative products that use alternative materials to PVC. In line with current global market requirements we and many other suppliers provide a range of anaesthetic face masks without hook rings, allowing clinicians the opportunity not only to reduce plastic waste but also make an improved environmental choice in their daily clinical practice.”

Discontinuing the routine manufacture of the hook ring will require further communication and co-operation between users, providers and manufacturers. The Association is lucky to have great working relationships with our industry colleagues and Barema. We will continue to pursue this issue and, if successful, it will set a precedent for how users can feedback and reduce wasteful practice on a large scale. In the meantime, we urge local procurement teams to look into purchasing masks provided without hook rings. We believe that cost alone is no longer an acceptable justification for environmentally damaging practice.

Managers perhaps would be wise to consider the impact on their corporate identity and brand if they continue wasteful practices simply to increase profit.

William Rattenberry
St George’s Hospital
Nottingham University Hospitals

Samantha Shinde
Vice President Association of Anaesthetists, Chair Environment and Sustainability Committee

References

Anaesthesia News | February 2019 | Issue 379
We are living on this planet as if we had another one to go to

(Quote from Terry Swearingen, Nurse and Winner of the Goldman Environmental Prize 1997)

The anaesthetic team at North Bristol NHS Trust (led by our Senior ODP Malcolm Hand) frustrated by the enormous mountains of plastic that we generate every day and which cannot be recycled, have been collecting small plastic pieces of anaesthetic kit and sending them to an art scrapstore (reusefuluk; https://reusefuluk.org/) to be reused as pieces for art projects. This is an original and fun way to find a solution to a waste problem whilst engaging with the local community. To give you an idea of how much we collect, the photo shows how much plastic was collected in one week from 24 theatres and how many set wraps were collected from one theatre in one day.

In two weeks, 12.2 kg of plastic was collected - which may not seem like a lot, but since the heaviest piece of plastic is an i-gel® ‘spoon’, that’s pretty good going. If we continue collecting these pieces at our current rate, that will be over 300 kg/yr of plastic that is going to be reused, rather than being landfilled or sent for energy from waste disposal.

To our knowledge we are the first trust/board in the UK and Ireland to be doing this. However, via social media and the ODP’s Forum, this snowball is gathering momentum and, enquirers are starting to come in from many other hospitals in South Wales, Liverpool, Newcastle, London, Norwich, Cardiff and Sheffield to name but a few. Chesterfield and Abergavenny have since started this project off the ground and organise collection of the plastic waste; and, a ‘green anaesthetic department’ who are interested in the potential to organise a Christmas decoration workshop to see what festive creations we can make out of our left-over plastics.

Malcolm Hand
Senior ODP
Esther Coffin-Smith
Sustainable Development Manager
North Bristol NHS Trust
Samantha Shinde
Chair, Environment and Sustainability Committee

The downside is that you need to be wary of the dangers of small bits of plastic in small children’s hands; and, you need to make sure that the scrapstore isn’t overwhelmed by the amount of scrap – it takes a bit at a time to determine how much they can find a home for. Items not to reuse include anything clinical or that may have been near a patient, no ‘twist off’ tops of saline/water bottles, and no sharps.

To keep the momentum going, we need to encourage other hospitals to do the same; put pressure on manufacturers and the NHS to get rid of useless bits of plastics such as face hooks (see article in this issue), email the Association of Anaesthetists with your innovative ideas, so that we can share your stories of good ‘green practice’ with other departments via Anaesthesia News, our environment network (‘work in progress’) and as a resource on our website; become an Association of Anaesthetists ‘eco champion’ and spearhead good environment practice in your hospital! We would rather not have to recycle plastic in the first place, but until we succeed in putting pressure on and work with manufacturers to find alternatives and ask them to clearly label their products so that we know they can be recycled, then we will reuse rather than wastefully dump our plastic. Our next project is to organise a Christmas decoration workshop to see what festive creations we can make out of our left-over plastics.

Malcolm Hand
Senior ODP
Esther Coffin-Smith
Sustainable Development Manager
North Bristol NHS Trust
Samantha Shinde
Chair, Environment and Sustainability Committee

The Association of Anaesthetists has launched a new fully independent case report journal, Anaesthesia Reports, in January 2019. This is the latest iteration of Anaesthesia Cases and takes the traditional case report to the 21st century by also including multimedia pieces. The Editorial Board hopes to be indexed in the main databases such as PubMed in the near future. The role of the Assistant Editor is mostly email and web-based and involves reviewing submitted manuscripts and multimedia items and editing them in preparation for publication. The successful applicant should have a history of publication, be able to write coherent and elegant English, and have good time management skills. Previous editorial experience is not necessary, but experience of acting as an assessor/referee for papers submitted to peer-review journals is desirable. The term of office is 3 years with up to two extensions. As well as the opportunity to work with an excellent and cohesive editorial team, rewards include free registration at major Association of Anaesthetists’ meetings.

Applicants should submit a report of up to 500 words on ‘The value of case reports in 21st century anaesthesia’ by email to the Editor, Dr Kariem El-Boghdadly (elboghdadly@gmail.com), together with a short curriculum vitae (no more than two A4 pages). Shortlisted candidates may be asked to perform a small number of editorial tasks as part of the selection process.

We would particularly welcome applications from senior trainees and consultants who are within the first ten years of their substantive appointments and looking to develop their reviewing and editing skills.

Applicants who wish to discuss this post are advised to contact the Editor, Dr Kariem El-Boghdadly.

The closing date for applications is 17 March 2019
What about the environment? Desflurane has a 14-year lifespan, giving it a Global Warming Potential (GWP100) of 2540, as compared with 130 for sevoflurane and 510 for isoflurane [5]. All three agents are bad for the environment, occupying the same part of the light spectrum as CFC’s and trapping certain wavelengths of light within the atmosphere, thus contributing to global warming. Inhalational agents represent 5% of acute hospital carbon emissions, but their contribution is not included in the annual Carbon Reduction Commitment figures in any of the four countries of the UK. Although the physical characteristics of desflurane make it twenty times as bad for the environment as sevoflurane, for the complete picture one must also take into account its potency. In fact, one MAC hour of desflurane is fifty times as bad for the environment as one MAC hour of sevoflurane [6].

Imagine taking a flight to New York with 200 other people. Now consider the same 200 passengers divided into groups of four, each group taking one of fifty aircraft to fly simultaneously on the same route at the same time, in order to arrive 5 min earlier (Figure 1). The first example is sevoflurane, the second is desflurane. Nobody could justify the use of fifty aircraft, but we cling to the availability of desflurane on the basis of clinical choice, advantages for some patient groups, and a minor time saving. Anaesthetists on the whole are not a conservative bunch, our practice evolves constantly such as decreasing flow rates, reducing the use of nitrous oxide, adopting TIVA or regional anaesthesia where appropriate, and leading on issues such as patient safety and fatigue, but still we want our desflurane.

Desflurane is a great anaesthetic agent: cardio-stable, minimal metabolism and a low blood-gas partition giving quick wakening and extubation. These advantages are of course highlighted by the manufacturer and by enthusiasts. A meta-analysis found that the mean patient responsiveness time was better by 1.7 minutes and tracheal extubation could be performed 1.3 minutes earlier in patients receiving desflurane compared with sevoflurane [1]. In a similar meta-analysis, the corresponding values in obese patients were found to be 3.8 and 4.97 minutes, respectively [2]. Some have argued that there are less respiratory complications in recovery units, though NAPs 4 and 5 hinted that poor reversal may be the bigger issue [3, 4].

IRC travel and project grants funding

The International Relations Committee (IRC) offer travel grants to anaesthetists who are seeking funding to work, or to deliver educational training courses, usually, but not exclusively, in low and middle-income countries.

IRC travel grants - for short visits (usually less than one month) to a maximum of £1,000.
IRC project grants - for projects involving an individual or team over a period of weeks or months.
IRC volunteer/OOPTE grants - for long-term voluntary work, generally longer than one month.

Eligible travel dates: 24 May 2019 - 25 July 2019
Application deadline: 22 March 2019
More information: www.aagbi.org/travel-grants

SAFE funding

The Safer Anaesthesia from Education (SAFE) Steering Group offers funding for appropriately experienced Faculty Leaders for anaesthetists to deliver a modular training course in obstetric or paediatric anaesthesia in low-income countries. Priority is given for projects undertaken in African countries.

Eligible travel dates: 1 April 2019 - 1 April 2020
Application deadline: 1 March 2019
More information: www.aagbi.org/SAFE-funding

Funding applications will not be considered retrospectively.

For more information, please email secretariat@aagbi.org or telephone 020 7631 1650 (option 3).
As a first step, we could start to measure the use of all volatiles, and describe their contribution to global warming? Deciding how to minimise this pollution might then be addressed, but the nature of commercial and political interests will, in all likelihood, make this a lengthy process, and favouring one product against another is very difficult for a government or national organisation to do. Change may be better achieved from the grassroots up. Many anaesthetists are already making great strides to minimise their impact on the environment, but many are asking questions. Will it make a difference? Is it easy to change? The 5% of acute hospital carbon emissions from volatile anaesthetics equals to half of all energy used to heat hospital buildings and water [7]. By not using desflurane, we could reduce the amount due to volatiles to 0.5%

If you want to try, it is easy to make the change. Here is our own recipe:

Talk about the issue with your friends and colleagues;

- Raise awareness by sharing the facts in an educational presentation;

- Discuss low flow anaesthesia (< 0.5 l.min⁻¹) and desflurane use at your departmental meeting;

- Concession to gain is to have the desflurane removed from the anaesthetic machine – still available, but not the default;

- Mentioning a wish-list of new toys seems to help win people over;

- Meet your budget holder and get agreement to re allocate any cost savings to new toys (ultrasound, TIVA pumps, depth of anaesthesia monitors, etc.);

- Audit use of low flows;

- Desflurane will still be used, but ensure that it is removed after each use, and go around the theatre Desflurane will still be used, but ensure that it is removed after each use, and go around the theatre Desflurane will still be used, but ensure that it is removed after each use, and go around the theatre Desflurane will still be used, but ensure that it is removed after each use, and go around the theatre Desflurane will still be used, but ensure that it is removed after each use, and go around the theatre Desflurane will still be used, but ensure that it is removed after each use, and go around the theatre Desflurane will still be used, but ensure that it is removed after each use, and go around the theatre Desflurane will still be used, but ensure that it is removed after each use, and go around the theatre Desflurane will still be used, but ensure that it is removed after each use, and go around the theatre Desflurane will still be used, but ensure that it is removed after each use, and go around the theatre

As a first step, we could start to measure the use of all volatiles, and describe their contribution to global warming? Deciding how to minimise this pollution might then be addressed, but the nature of commercial and political interests will, in all likelihood, make this a lengthy process, and favouring one product against another is very difficult for a government or national organisation to do. Change may be better achieved from the grassroots up. Many anaesthetists are already making great strides to minimise their impact on the environment, but many are asking questions. Will it make a difference? Is it easy to change? The 5% of acute hospital carbon emissions from volatile anaesthetics equals to half of all energy used to heat hospital buildings and water [7]. By not using desflurane, we could reduce the amount due to volatiles to 0.5%

Finally, we talked to our friends about desflurane. We formed a WhatsApp group calling ourselves the Scottish Environmental Anaesthesia Group (SEA-G) - aiming to have two representatives in every hospital in Scotland. The chat has ranged from volatile anaesthetics, to TIVA, to waste disposal, and to drug disposal with thanks to Rosie Ní Eadhra for the image

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Accidental lidocaine infusion

We came across an unusual intravenous fluid preparation in our intensive care unit whilst collecting a few different fluid bags to use as props at medical student teaching. The fluid was a 500 ml bag of 5% dextrose with 0.2% lidocaine hydrochloride (Fresenius Kabi). This would equal a total dose of 16 of lidocaine should it be given in error, and almost five times the safe amount for an average 70 kg person. It was not something we expected to find! It was stored next to 5% and 20% dextrose bags (Figure 1) and could therefore be given in error during the treatment of hypoglycaemia or made up to make vasoactive or inotropic medications. None of our ICU team knew the fluid was being stocked and it is not used for pain management at our institution. A stock check has shown it was being kept in other locations within the hospital, and has now been removed.

There has been extensive press coverage due to errors involving drugs such as intravenous bupivacaine injection via the wrong route [1, 2]. Intravenous fluid preparations tend to be produced in similar packaging, which can lead to inadvertent errors when the incorrect fluid was initially chosen [2]. We invite manufacturers of intravenous fluids (and other drugs) to take steps to improve the consistency in labelling and packaging of medication. This would aid the discrimination of different products, and help to reduce the risk of drug errors.

Geoffrey Warnock
ST 5 Anaesthesia

Judith Ramsey
Consultant Anaesthetist
University Hospital Ayr

References

Dear Editor

How green does your garden grow?

Our Trust is building an allotment on site for staff and patients. The allotment will provide a space for gentle exercise, rehabilitation and an opportunity to spend time outdoors. The produce grown will be harvested by allotment users for their own consumption; however, as part of the plan we are hoping to plant more fruit trees. Generous donations from the local community, staff and businesses in the form of a greenhouse, water butt, wheelbarrow, garden buildings, raised beds, tools, money and time, have meant that plans are on track. In order to promote the allotment site, the Sustainability Team organised a community fruit pressing day, using a fruit press loaned by the National Trust at Tyntesfield. The pears were from trees on site but were also bolstered by donations from staff and the local community. The apples trees sadly failed to produce a single apple, so we relied on donations. The 18 lites of fruit juice generated was a real success.

We are hoping for greener fingers next year, and who knows what fabulous fruit and veg we will grow in the allotment. Fruit juice one year, smoothies and pies the next!

Samantha Shinde
Consultant Anaesthetist
North Bristol NHS Trust

Dear Editor

Time to change the name

In 2006 I wrote an article in the College Bulletin stating my view that we should retain the name ‘anaesthetist’ and not become ‘anaesthesiologists’ [1]. I have changed my mind! What twelve years ago I thought was rather a pleasant anachronism and very English in its ‘splendid isolation’ from the rest of our colleagues around the world, I now believe to be a mistake that both College and Association should seek to change. The words I quoted in 2006 from the Chicago surgeon MJ Seifert resonate more strongly with me today: “An ANESTHETIST is a technician, and an ANESTHESIOLOGIST is the scientific authority on anesthesia and anesthetics”, he wrote [2]. I see no reason to adopt the American spelling, but I now have a much greater sympathy with the basic message. At a recent Asian Australasian Congress of Anaesthesiology held in Beijing I was asked, after a historical lecture, why in the UK we remained ‘anaesthetists’? Is it just what the College and Association want I said, as I believe it had been recently re-debated by high Councils. Neither the questioner or I were convinced! As our profession moves, in some quarters, towards the adoption of the term ‘perioperative physician’ I would ask that the UK aligns itself with almost all of the rest of the world and starts to use the term ‘anaesthesiologist’ for who we are. Please can we re-open this debate?

David Wilkinson
Retired Anaesthetist
London

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Annual Congress
11-13 September 2019, SEC, Glasgow

Abstract submission is open

Submitting an abstract is a great way to raise your profile professionally. Prizes are available to winners and runners up. Plus, all accepted abstracts will be published in a special online supplement of the journal Anaesthesia.

You can submit an abstract for oral (free paper) or poster presentation in the following categories:
- Audit and quality improvement
- Case reports
- Original research
- Survey

Submission deadline: 3 April 2019

SAS Audit Poster Prize

Specialty and associate specialist anaesthetists can also submit an abstract for the SAS Audit Poster Prize.

Submission deadline: 3 April 2019

Roddie McNicol safety prize

Showcase how you and your team have improved safety in anaesthesia. The winner will receive a cash prize and will be invited to make a three-minute presentation at Annual Congress 2019 about their safety project. The Roddie McNicol safety prize is open to members of the Association.

Submission deadline: 3 April 2019

Barema and Association environment award

Calling environment champions. Let us know how your project in anaesthesia, intensive care or pain management has had and will continue to have a measurable beneficial effect on the environment. You could win a cash prize and a grant to further support and develop your project.

The closing date for applications is 17 May 2019

Booking is now open

Special early booking rates for members of the Association.

www.annualcongress.org

‘Early Bird’ rates to 31st March 2019

www.epbom.org
Trainee Conference
3–5 July 2019, Telford International Centre

Booking now open

Join us at the event for anaesthetists in training, first-year consultants and medical students.

- Three fun days of top-quality anaesthesia education, professional development, exam techniques, wellbeing and social events
- Special keynote presentations from: Dr Peter Homa, Chair, NHS Leadership Academy and Dr Colin Melville, Director of Education and Standards, General Medical Council
- Discounts for members of the Association and new one-day tickets available

Book today at www.gatasm.org