Difficult Airway Society

NEWSLETTER

DAS EDINBURGH-2018

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PROJECTS EDITION 2018

EDITORIAL

Welcome to the autumn 2018 edition of the DAS Newsletter.

In this edition, Barry McGuire, the DAS Secretary, updates us on the upcoming changes to the DAS Committee. There is information about future DAS ASMs including the announcement of where we will be going in 2020! Plus, there is news of projects that DAS has been contributing funds to and guidelines that are in progress.

Andy Higgs, our Treasurer, explains the challenges he faces in keeping the financial side of the society in order. From the sound of things, he is doing an excellent job in uncertain times.

In the Scientific Officer's report, there is news of 2 completed DAS PhDs by Published Works, plus a list of recipients who have been awarded DAS research project grants in 2018. One of the new PhD scholars, Brendan McGrath, writes to describe his journey of how he went about applying for and completing his PhD. It sounds like a lot of work but ultimately a very rewarding and enriching experience.

There is an interview with Dr Mark Stacey. He shares his wealth of experience in airway management, teaching and training.

Also published in this newsletter is the winning essay from the 2018 Trainee Essay Competition titled "Training in Airway Management: Opportunities and Challenges". Congratulations to Dr Kimberley Hodge!

Just one month to DAS ASM in Edinburgh! Have you booked your place yet? It sounds like it will be a great meeting in a beautiful location.

For the last time, Sajay (skilled in the art of organisation and IT) and myself (armed with my big red pen and eye for grammar and typos) will be acting as editors for this newsletter as it is our time to step down from our roles on the DAS Committee. We wish Vass every success with taking over the Newsletter editor role and in the future as the newsletter evolves into a journal.

Joy

Dr Sajayan **Dr Joy Beamer**

PRESIDENT'S PAGE

The final DAS Newsletter of 2018 marks quite a change for the society. Later this year we will have a newly elected DAS President and Honorary Secretary as well as a new Scientific Officer, Trainee Representative, Newsletter lead and Website lead.

I would very much like to thank all those on the committee that have worked so hard over the last few years for DAS. First, Joy Beamer and Achuthan Sajayan as the outgoing newsletter editors who have always managed to publish an excellent newsletter on time (despite my own rather late contributions) and on budget. Second, our Website lead Karthik Ponnusamy who steps down form his role after many years of tireless work behind the scenes in setting up, maintaining and troubleshooting the DAS website. Third, Tony Wilkes DAS Scientific Officer who has made major contributions helping the DAS PhD Scholars, organising the DAS-funded research projects and liaising with the NIAA. Finally, I'd like to thank Kanika Dua for her contributions and tireless support as Trainee Rep and congratulations on the new consultant post.

It has been an immense privilege to be DAS President over the last three years. I've met some fantastic people doing incredible work, learnt a lot and I believe the society is in great shape.

Our membership is the largest of any airway society in the world, our annual scientific meetings attract 500-700 participants, we publish guidelines that are used around the world, we support research through the NIAA, support PhD's, support airway training in developing countries, and

have a number of groups working on guidance on various aspects of airway practice. Over the next few years we can look forward to guidance on awake tracheal intubation, obstructed airway, airway ethics and human factors.

Finally, a huge thank you to DAS members and committee for making the last three years so enjoyable, informative, supportive and educational.

I look forward to seeing you at DAS Edinburgh 2018.

Anil

Dr Anil Patel

DAS President

SECRETARY WRITES……..

After the relative lull that a warm summer brings, DAS matters are back in full swing as we approach this year's ASM in 'Auld Reekie' (Edinburgh smells beautifully now, I promise). The society is in rude health, but continues to strive to move forward in terms of ethos, design and delivery.

This November, the DAS committee is likely to experience its largest 're-shuffle' in many years. In August/September, DAS advertised for a new President and Honorary Secretary, as well as new co-opted members in the form of a new Trainee Rep, a new Scientific Officer, a new Newsletter Lead and a new Website lead – I think that's about half of the committee! Hopefully, it shall be more evolution than revolution. The co-opted positions are appointed via application and then interview of the strongest candidates. The posts are 2 year tenures, although continuing for a second 2-year period is not uncommon (except for the Trainee Reps fixed 2-year tenure).

There has been a lot of activity recently regarding DAS ASMs. Planning for WAMM2 in 2019 and in particular, DAS Edinburgh in November in a month or so continue apace. Both look very exciting prospects, although quite different meetings. I have been part of the local organising committee for Edinburgh and despite my presence, the team have done a fantastic job. I'm happy to put my head on the block and state confidently that this will be an impressive meeting. In September, we also reviewed 3 applications to run future DAS ASMs from 2020 onwards and the committee heard from each of the leads of these applications. All 3 were first class, but sadly only one could be selected to host DAS ASM 2020. The successful application was BRIGHTON 2020. We hope that the other 2 venues consider re-applying for 2021. DAS very much encourages enthusiasts from the airway community to apply to run ASMs and our aim is to spread these meetings to the 4 corners of the UK as much as possible. Please get in touch with me if you want to chat informally about the possibility of running a meeting.

The DAS website is about to be upgraded, a process that we have talked about for some time! This costs money of course, but we hope that members can enjoy a more informative website soon.

Vass Athanassoglou from Oxford has been confirmed as our new Website Lead. We wish him a warm welcome and an enjoyable and productive time with DAS. Sadly, we are saying goodbye to our long-term friend and colleague, Karthik Ponnusamy, who relocated last year to Qatar and who has done a huge amount of fabulous work for DAS both on the DAS website and on the Airway Alert Database. Vass has been brave or mad enough to also agree to take on the DAS newsletter, which will remain in its current form for a little longer. We have plans to combine the newsletter with an electronic journal, but the latter is still in development. We must also thank our out-going newsletter editors, Joy Beamer and Achuthan Sajayan ('Sajay') who have both worked tirelessly to produce an excellent publication for DAS members. Our best wishes and gratitude to you both.

DAS continues to contribute significantly to academia and charity. This includes grants for research and DAS PhDs. DAS supports a wide variety of charitable causes, provides travel grants through the International Relations Committee (IRC) and aims to promote airway management worldwide. A recent example is the Facing the World project, which supports Vietnamese doctors to come to the UK to gain experience. They also plan to translate the 2015 guidelines into Vietnamese.

There has been considerable work of late on the various DAS guidelines currently in development, following on from the huge success at the start of this year of the DAS Guidelines for the Management of Tracheal Intubation in Critically Ill Adults. The plan is to launch the Awake Tracheal Intubation (ATI) Guidelines at the ASM in November. Translations, international presentations and use of the guidelines/algorithms in a huge variety of publications continue to increase year on year to the immense credit to those involved in producing them. And there are more to come.

Please feel free to get in touch with any suggestions, queries or concerns relating to DAS business. I'm all ears.

Barry

B McGuire, Hon. Sec. DAS secretary@das.uk.com

TREASURER'S REPORT

Should the DAS Treasurer worry about Brexit?

I'm writing this at the beginning of October having just put the finishing touches to the draft accounts for 2017-18 which will be crunched into the real thing for your approval at the Edinburgh Annual Scientific Meeting in November. I'll write the Charity Commission submission in December.

The bottom line is that despite quite high levels of expenditure - and lower than usual income - the accounts remain in a healthy position, due in no small part to the success of the 1st World Airway Management Meeting at Dublin in 2015.

What is draining the funds? Well, we have four guideline groups to pay for (mainly travel and coffee), unprecedented sponsorship for small and larger airway research projects – except for the last six months when I thought a bit of prudence was in order - and well-maintained levels of member and charitable support.

Whilst keeping our main source of income, the membership fees, steady at £25 for almost 10 years this is a difficult time for our second biggest source of revenue, namely the ASM. The financial numbers are in for the truly epic London 2017. Previous UK meetings in Torquay 2016 and Stratford 2014 had made 3 times as much profit, but we must remember, however, that Fauzia and Bernie delivered a really fantastic meeting in one of the planet's most expensive cities! The venue costs alone explain the apparent difference in fortunes.

As a society, it is clear to me that we must consider where we hold ASMs in the future. Now well into its 3rd decade, DAS has become the world's biggest airway interest group by some margin, but like many of us in their 3rd decade, its size has become slightly problematic: to wit, we reliably muster 550-650 delegates and 100+ in the workshops - which is too big for standard hotel conference suites, but nowhere near big enough for international congress venues in the more famous cities and the number of mid-sized *affordable* facilities in our 'global cities' is limited.

The serious point here is that it's therefore difficult to realise the profits DAS has grown accustomed to in 'global cities' like London and – dare I say it – Edinburgh. Going forward, we may benefit from meeting in slightly smaller locations where the venue itself won't eat into funds which could support the society's wider aims such as teaching, guidelines and research.

The 2019 meeting will be the 2nd World Airway Management Meeting in Amsterdam, which of course brings the issue of Brexit into focus…

WAMM Dublin made a significant profit for both DAS and the Society for Airway Management, but that was back in 2015 when Ireland and the UK happily pooled sovereignty to their mutual advantage* / shared oppression by the same burgeoning supra-national tyranny* (*delete according to how Brexity you feel).

WAMMsterdam will be 7+ months after Brexit Day and I must admit to worrying how many Brits will travel to Holland if Sterling nose-dives, they need visas to cross the Channel or have to scavenge roadkill to feed the kids.

Whatever happens, the UK Airway Community *will* maintain our close links with EU countries, not least because we are – by definition – a UK *& Ireland* group, but there are sound reasons for the DAS Treasurer to be concerned about the UK's relationship with the EU.

Anyhow, before you all decide to commit hara kiri, let's welcome the news that DAS 2020 has been awarded to the fair city of Brighton (Congrats to Sandeep, Kate and the team) and what could be any more British than Brighton in November, whilst being as close as possible to out continental cousins?

I look forward to seeing you in Edinburgh to enjoy the world's best airway jamboree whilst quaffing Scotland's finest single-malted solution to existential angst. Barry has confirmed to Anil and me that Englishmen *are* officially permitted to wear kilts north of the border so this will the only

opportunity to see the entire DAS executive in tartan: surely worth the price of admission itself and something to put all your Brexit worries into perspective.

See you there,

Andy.

Andy Higgs,

DAS Treasurer

(I'm sure that by the time you read this, Mrs May will have it all sorted but I admit the brinkmanship is getting to me. I may not be alone…)

SCIENTIFIC OFFICER'S REPORT

DAS PhD Scholars

We are delighted to announce that Brendan McGrath and Maren Kleine-Brueggeney have both successfully completed their DAS-supported PhDs by Published Works. The titles of the PhDs are:

Brendan McGrath: Advances in multidisciplinary tracheostomy care and their impact on the safety and quality of care in the critically ill (Manchester Metropolitan University)

Maren Kleine-Brueggeney: Difficult Airway Management (University of Portsmouth)

Congratulations to both on this fantastic achievement!

If anyone has a long list of publications in the field of airway management and would like to consider applying for the DAS PhD Scholarship programme, please find further information here.

DAS-funded Research Projects

2017 was a bumper year for the number of projects that DAS supported financially through the National Institute of Academic Anaesthesia (the NIAA). Two types of grants are awarded; the DAS Project Grant for up to £15K and the DAS Small Grant for up to £5K.

In the NIAA Round 1, 2017, the following were supported:

Maria Chereshneva New videolaryngoscopy scoring system development (Small Grant)

Claire Gillan The use of a second generation LMA as a rescue device in patients with previous head and neck radiotherapy (Small Grant)

Mark Raper Developing a framework for the assessment of Single Use Video Laryngoscopes (Small Grant)

Thunga Setty Clinical Trial of Transnasal Humidified Rapid-Insufflation Ventilatory Exchange (THRIVE) Oxygen in Women having Planned Caesarean Delivery (Small Grant)

And in the NIAA Round 2, 2017, the following were supported:

Paul Fennessy Creation and validation of anatomically correct cricothyroidotomy models for training by 3-D printing (Project Grant)

Christopher Gough 'Obese neck' training manikin project (we are grateful to the AAGBI for funding this particular project)

Kim Caulfield To determine the optimal endotracheal tube diameter for cricothyroidotomy and to assess the effect of the tracheal hook on cricothyroid membrane height (Small Grant)

Toby Winterbottom Comparative study evaluating cricothyroidotomy part-task simulation trainers (Small Grant)

Although DAS did not support any research projects in 2018, we are planning to support further projects in 2019, so look out for the call for grant applications on the NIAA website.

Prof. Tony Wilkes

DAS Scientific Officer

REFLECTIONS OF DAS PhD SCHOLAR

I had been thinking about undertaking a higher degree for some time as my full-time clinical role with an interest in academia was turning more into a 50:50 job plan. I had always been reasonably active in publishing small local projects and some larger collaborative work, mainly focused around airway incidents, airway safety and particularly, the safe management of tracheostomies.

I sat down with some local mentors and attempted to map out a 5-10 year plan for my academic work and although not essential, it seemed that a lack of higher degree was a potential barrier to my academic credibility and likely progression.

At the time of applying for the PhD, I had been qualified nearly 20 years and working as an NHS consultant for 8 years. I had a number of established commitments, including some grant funded roles, and so taking time out to undertake a more traditional route Masters or PhD was not going to be easy. Finding the funding to do this prospectively was also a potential challenge, without the higher degree that many of my likely competitors for these grants would have. I explored the NIHR fellowship (prospective) options, but the feedback from this exploratory work was that I had already built up a significant, themed body of work, which could be applicable for a 'retrospective' higher degree 'by publication'.

This coincided with the DAS programme of support for which I was aware, and I made enquiries with both DAS and my local universities in Manchester. Finding a university that supported a PhD by Publication was not as straightforward as I anticipated. I hold an Honorary Senior Lecturer post with the University of Manchester, but their regulations state that only full time, salaried employees (with >3 years' service) were eligible to apply. My Alma Mater (Sheffield University) had similar rules and although support seemed possible, getting a formal contract with them without any current connections to the university sounded like it was going to be difficult.

Manchester Metropolitan University (MMU) is one of the three major universities in Manchester (although the locals will rightly point out that the

University of Salford is in Salford!). MMU have a strong track record in healthcare science, but have traditionally focussed on nursing, allied healthcare, social sciences and psychology. This is changing to some extent with potential plans for a new medical school, but their regulations allow people in the healthcare sector to submit for a PhD by Published Works (Route 2) who are not current staff.

I met with an experienced PhD supervisor (technically an advisor for a PhD by Published Works) who reviewed the 10 papers I proposed to include in my thesis. Essentially, these papers had to demonstrate a cohesive body of work over a period of time that would be the equivalent of that expected output from a formal prospective PhD. A typical prospective PhD would be expected to produce 3 or 4 significant papers, and the expectations for a PhD by publication are generally greater. Unofficially, 6 to 8 papers were expected to be included over 3 to 6 years, although the guidance was open to a degree of interpretation. An advisor can guide you here, based on the expectations of your chosen university. Papers for inclusion had to have been published within the last 6 years, but older papers could be included with justification. Papers had to be in relevant and in reasonably well-respected journals (presented with the impact factor of the journals) and to be reasonably well cited (mine ranged from 1-95 citations, although I also included social media citations, article downloads and reads as additional metrics of impact).

We cut my papers down to eight key publications that told the story of my work. It became clear that they fitted into sections: understanding the problem (with tracheostomies), putting it into context (in ICU), developing solutions (emergency algorithms), testing the effect of these solutions (incident reduction) and then developing new metrics to judge the quality and safety of care (patient experiences and the impact that a tracheostomy team could have).

At this point I contacted DAS formally and received helpful feedback on my proposal from two experienced reviewers. DAS agreed to support me and paid around half of my £4,250 fee. This was clearly a great help. I was planning to undertake the PhD anyway, but the DAS financial support

made my application to the domestic finance committee much easier! I had to submit a 2-page overview of what I planned to do, to MMU and to DAS, and also secure two short references of support from relevant local academic colleagues. This was actually really useful, as I was able to formally register my intentions with the university and with the academic leaders in my specialities in Manchester. I think they knew locally I was serious about pursuing a more academic career, but this made it clear.

I spent the next six months drafting an introduction and trying out different formats for the narrative and critical appraisal that supported the papers. With the help of my advisor, we ended up splitting these into the themes above, as I realised that as I critically appraised my work, I had actually gone on to address a number of the issues identified in earlier publications in later work. The critical appraisal also allowed me to think about what was missing from my work and what I should be doing next – useful for the conclusion chapter and also for my future direction.

I met with my advisor five or six times over the course of 12 months, with each meeting preceded by a flurry of late night activity from me. The thesis took shape and was submitted within eight months of starting. Unfortunately, there was an eight-month delay to the viva as we had a little difficulty pinning down an appropriate external examiner and coordinating dates. The viva was interesting, as both examiners felt unable to critique the papers too much as they had been published, peer reviewed and in some cases, embedded into practice. We spent more time discussing methodologies and the future direction of my work, which was what I was expecting and overall, was the most useful aspect of preparing the thesis. I am weakest on methodology and found reading up about what I had done, what I could (and maybe should) have done, and ideas of how to do it next time, really useful.

I was fortunate to pass the viva and only be required to make minor typographical corrections, which I did within the week and was subsequently awarded the PhD, backdated to the date of the viva.

The whole process has been really worthwhile. I feel it has given me a bit

more academic credibility but more importantly, made me reflect on my work and identify strengths, weaknesses, gaps and opportunities going forwards, read a bit more about methodology and statistics and plan for the future. The process has helped me develop a 5-year plan and give me some direction about what I want to do with the research part of my career going forwards. The support of DAS was great, and the comments of the DAS experts helped me prepare for the thesis and viva. I had a local mock viva at the university and did not need to take up the offer of the DAS faculty viva. This would be very useful I suspect if a future candidate did not have the local support or options for a mock viva. The cash from DAS was also very helpful, although not critical in my case.

So, if you have published a few papers around a theme and you want to get a bit more serious about your research, then a PhD by Published Works could be for you. It's a non-traditional route to a higher degree, but a perfectly valid route that is attractive to those who have not taken dedicated time out during training. As ever, its more work than you think, and as most people doing this are likely to have significant clinical commitments, finding the time can be tricky. DAS can help you though, which makes life a lot easier. Good luck!

With thanks to the DAS committee, Jaideep Pandit, Tony Wilkes, and Andy Smith.

Brendan

Dr Brendan McGrath

DAS PhD Scholar

DAS ASM 2018 Highlights

DAS ASM 2018 returns to Scotland and to the Scottish capital, Edinburgh. If the articles in the summer newsletter about our traditional and simulation workshops, or the one about our social programme and events in the city at the end of November haven't yet convinced you to book your study leave and pay your registration fees, perhaps a look at our scientific programme will (available in full at www.das2018.co.uk).

Delivered over 2 days (Thursday and Friday November 29th & 30th), we have eminent speakers from across the country, continent and globe, and are honoured to be able to offer such a high calibre programme to you.

Representatives from subspecialty groups will bring us up-to-date on current thinking in paediatric, obstetric, bariatric, and pre-hospital airway management. We will also learn more about managing bleeding and obstructed airways, and gain some insights into tracheal intubation complications.

On the Thursday, we have a session covering learning from adverse incidents and how to maintain the clinical skills required to recognise and appropriately manage rare adverse events. This will be followed by an expert panel review of authentic clinical cases.

The DAS session will include the inaugural professorial lecture and brief updates from members of the groups with guidelines and projects currently under development. In addition, it is hoped that the guidelines for awake intubation will be ready to launch at DAS 2018, with publication following in 2019.

Carin Hagberg from the USA will remind us how airway management has developed over the years, and give us some insights into future possible directions.

Day 2 starts early, with the DAS AMM for members of the society, followed by the excellent oral presentation session. A parallel session will

run aimed at anaesthetic assistants and ODPs. This will take a slightly less formal approach to delivering content, with input from consultant anaesthetists and anaesthetic assistants. Clinically relevant topics include the planning and preparation for, and management of, difficulty. There will be particular emphasis on guideline use, human factors, ergonomics and safety.

Dr Joseph Quinlan from Pittsburgh will deliver the Society for Airway Management Lecture during which he will educate us on how to educate others in airway management and discuss the role of simulation. The remainder of this session will consider the use of preoperative testing and imaging, to predict difficulty with managing the airway, with contribution from an author of the recent Cochrane review on the subject.

We end the meeting with the traditional and often controversial debate. The motion being considered this year is whether high flow nasal oxygen should be a standard of care. You may have your own thoughts, but it will be interesting to hear the arguments on both sides.

So! What are you waiting for? – get that study leave booked. We look forward to seeing you in Edinburgh.

Claire Wallace

Scientific Programme Coordinator

DAS 2018 LOC

INTERVIEW: DR MARK STACEY

Re-starting our series of interviews, this edition includes an interview with Dr Mark Stacey . Mark is an Obstetric Anaesthetist and Associate Dean of New Initiatives at Cardiff University. He is highly regarded in his role as an airway expert, and has a wealth of experience in teaching and training- ***Elana Owen***

EO: *Why did you first become interested in difficult airways?*
MS: As a trainee I was recommended by one of my then consultants to become an expert in something. I had a fascination for practical skills, and it seemed to be to me to be a useful skill to have in anaesthetics, so I started practising and learning and teaching about the difficult airway.

EO: *What do you think the biggest development in airway management has been during your career?*
MS: I suppose there's two things really. Firstly, the introduction of the laryngeal mask airway by Archie Brain which transformed not just the process of anaesthesia but also the thinking behind it. Secondly, the introduction of fibreoscopes and videolaryngoscopes – that technology has really made cases that were impossible when I started, a lot less impossible.

EO*: Do you think that all the advances in airway management technology are a good thing?*
MS: It's not always a good thing. I think the technology is amazing and we occasionally blame the technology for our own failings. My concern with the technology (and SGA is a good example) is that they can encourage lazy thinking. The problem with lazy thinking is that if things go wrong, it makes it then very difficult to rescue the airway. I'm a great believer in skills training - we're supposed to be airway experts which means not just understanding the technology, but using it as well as we can use it.

EO: *We have a lot of new equipment at our disposal – have you got any thoughts about how we can use the kit to our advantage, and how can we ensure we use the right kit at the right time?*

MS: There is a variety of things that we need to do. I think that when we start as a novice we need to focus on three things. 1.Manage Bag-Mask ventilation, 2. Do a laryngoscopy properly, 3. Use a fibrescope.

Once those skills are in the process of being mastered, then we can then look at other techniques.

In terms of training, the problems with having lots of kit is that we don't really get good at using any of them. Sometimes the solution to the problem isn't based around a piece of kit, but how you use that piece of kit. If you can use a small number of bits of equipment well, then you can start to develop interest in others. If you can learn how to use a fibreoptic scope well, then it improves the way that we use videolaryngoscopes, because you begin to understand the process of 'looking round a corner'. In terms of training people, I think we need to use manikins better (both in terms of practice and assessment), I think we need to use simulation better (in practice and assessment), and I think we need to understand the cognitive problems associated around the stress of the rapidly deteriorating airway. We need to learn how to deal with stress preferably in a safe fashion with manikins, before we start dealing with our stress on a patient.

EO: *So you think we should build on our practical skills, before looking at cognitive load after that?*

MS: Yes. I've developed a context specific training model, which I try to use when I'm starting to teach any skill, which is when you start to try to develop something called automaticity.

So, let's say you practice a skill 30-40 times on a manikin, beginning to understand the effect of fatigue on performance, and then you start to perform that skill almost without thinking.

Once that's been developed, then you can start to change the rules, introducing things like the SimMon monitor, which is a very useful tool. What I can then do is turn a manikin into a deteriorating patient, by decreasing the sats for example. What I've found is that trainees will be able to perform a skill, but they don't recognise that the monitor is even on, so then you can start introducing other learning tools, such as situation awareness and fixation errors. Taking that skill set then from a lower fidelity, low consequences, high stress model, to a higher fidelity (i.e. patient) low stress model, you can then start to show the trainee the difference between performing it on a simulator or a manikin, and a patient**.** Of course, there are differences, but frequently they're not as challenging as has been reported.

What you then do is as they get better at that skill on a patient, you start to change the rules and increase the cognitive workload. What you're trying to demonstrate to the individual, is what happens to anybody when you overload them. Sometimes it's a miles better way of learning, than just saying "this is what happens".

EO: *Do you think all anaesthetists should be airway experts?*
MS: I think all anaesthetists should be able to deliver oxygen. It also depends on what the definition of an expert is. If you take Ericsson's definition of somebody who's done 4 hours of practice a day, 250 days a year, for 10 years, then that is a minority of people. So in any group of anaesthetists, there will be some who are experts, and some who will be approaching that process. But I think that there are some basic principles that everyone should learn, that will make us better at our job.
For example, airway evaluation - if that is done properly, then at least the plan is appropriate. If it's not done properly then the plan is often flawed.
Then, how we use our equipment - do we use it as well as we can?
Knowing that there are experts out there that can help, when there are tricky cases. For a training opportunity (which I try and do in my practice), or to solve a clinical problem.
I think the reality is that with huge number of cases we have to deal with, it would be tricky for everyone to be an expert. I think we can all certainly be competent.

EO: *How do you think NAP-4 has influenced our practice on a day to day basis?*
MS: It's very interesting - I think it is an astonishing document. There is no doubt that it has re-framed the way that many people think about this process. Interestingly, going back to when I started as a consultant in Cardiff, we used to run a DAME course (Difficult Airway Management and Education), on which people like Tim Cook and Anil Patel taught for many years. As part of the learning process of that course, cases were often presented that would have been cases in NAP4.

I think what concerns me slightly now is that those cases still seem to be happening. It's very interesting if you ask a group of anaesthetists how many have even read the recommendations of NAP 4. Many haven't, and the numbers aren't really as high as I'd like. If you ask them how many have read the whole of NAP 4 then the numbers would be even less.
I use it a lot for teaching, the vignettes in there are great – people learn from stories, and hopefully then they frame the way they think about that process from that story.

EO: *Do you think that there are certain areas in the hospital that have benefited from NAP 4, for example in ITU/A&E?*
MS: Undoubtedly. I think if we take ITU as an example, then the recent intensive care airway guidelines have come from that process and I think they are a very good set of guidelines. I think A&E have begun to embrace this, and in some respects their performance components are better than in theatre. They don't do as much airway management as we do, but they've embraced the managing of the cognitive workload, for example with checklists.
If you look at the emergency services outside of A&E, their performances can be quite remarkable really. Bearing in mind they're trying to manage the working memory component of a difficult skill in a stressful scenario, they do that really well, and we can learn from that.

EO: *Talking about learning from others.. You've worked in many different countries around the world, what can we learn from the provision of healthcare in other countries?*
MS: That's a loaded question!
Having been to America – not a lot. There are some extraordinary individuals over there who do stuff that's impressive, because of the resources they have.
Australia, I think is a fantastic example of the way they resource their education, in a way we've never been resourced in the UK.
If you go to places like Africa, they're incredibly innovative, and they manage with very poor resources, and their innovation is exciting. It's a good way of reframing your work and life when you come back to the UK.
I think there's a lot of things we do well here! What DAS has achieved, I must say in the last 10 years, are some of the most important advances in medicine that I've been involved with in my career.

EO: *What's the highlight of your career so far?*
MS: Every day is a highlight! I love my job. I'm very lucky, and I enjoy going to work. I'm never bored, and I get to work with amazing people. It's great. There are always issues, but the actual clinical work with the patients is a real privilege.

EO: *What's the most useful thing you've learnt from a trainee?*
MS: Lots and lots of things - I learn things from trainees every day! One of the things I teach is the way I lay my tray out for spinal anaesthetic, and I learnt that from a trainee.
I learnt a little tip from trainee about putting cannulae in, which is remarkable as I'd been putting cannulae in for about 20 years! This I now teach to everyone, and I hail the trainee who taught it to me!

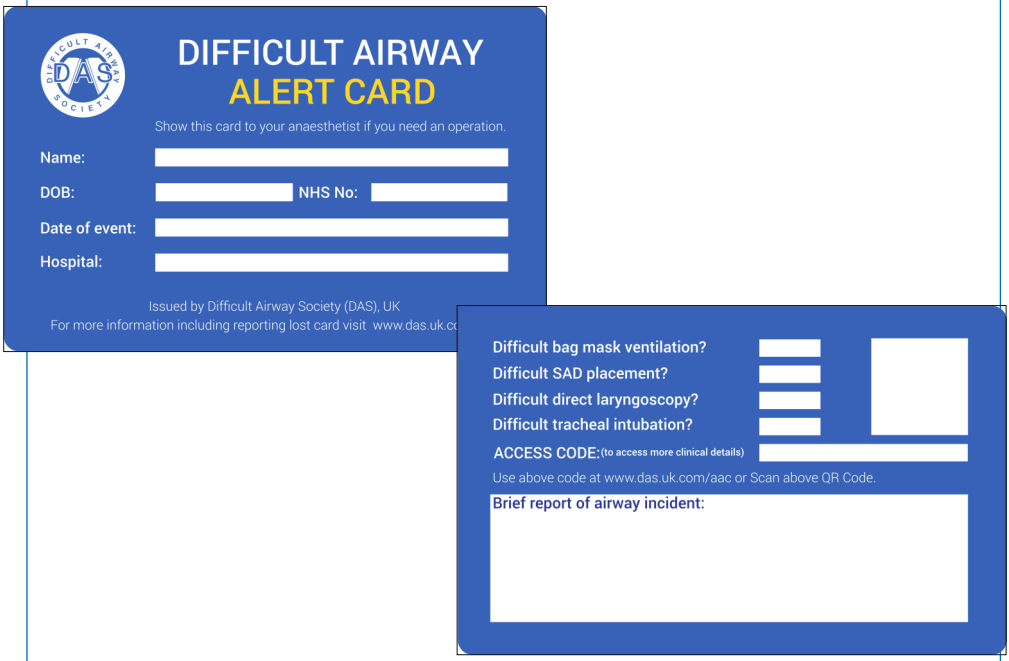
EO: *Do you think that Human Factors training should be compulsory for all medical staff?*
MS: Undoubtedly, but it needs to be embedded in all forms of training. So when you're teaching something, you teach human factors alongside it. I don't discriminate between human factors and skill. I call it one thing - "Performance". I think there are several pillars to that performance model. One is an understanding of human factors, another is recognising that we make mistakes. Also, that you have to be resilient or "anti-fragile" as Nassim Taleb calls it, which means you can deal with difficulties both on an acute and chronic basis. Understanding the way we learn, and learning better, maximising the skills that we have. I've been an anaesthetist for around 30 years now. My colleagues consider me good at doing 3 things. I can put a cannula in, I can do a spinal, and I can manage an airway.

EO: *Is there someone who has, or does, inspire you?*
MS: My wife – without her I definitely wouldn't have been able to do all the things that I have done. My colleagues and trainees inspire me. Specifically, my Godfather who got me into medicine in the first place – he's an inspirational general physician who's just retired recently in his eighties, having done voluntary medical clinics until he was 80. He's an incredible man. Lots of people inspire me and it would be unfair to single anyone out, I probably have a list of about hundred people to be honest!

EO: *How do you see the future of airway training?*
MS: There is some fantastic research in the cognitive psychology of learning which I don't think is embedded yet in teaching, let alone in the way we teach in medicine. That needs to be embedded from the start. If we can get people to understand the importance of learning what they're learning, and the importance of what Ericsson calls "deliberate practice" – in terms of getting good at what we learn. Also, the importance of Lifelong Learning - understanding that we can always get better. I'm a big fan of Daniel Kahneman, who's an expert in decision making. He was recently asked "what one trait you would get rid of in human beings, in order for them to get better at decision making?" He answered "overconfidence". I would argue that this would be a trait to get rid of to get better at learning too. He said that if you're overconfident, you don't learn and can make disastrous decisions. I'd like to see that integrated into the way we learn.

Elana Owen
DAS Trainee Representative

DAS DIFFICULT AIRWAY DATABASE



After a two year pilot project involving more than 50 hospitals, DAS is pleased to announce that the National Difficult Airway Database and Alert Card project will be launched during the DAS Annual Scientific Meeting at Edinburgh in November.

If your hospital is not already registered with the database, please get in touch with us for further details. It usually takes at least a month before a hospital can be added to the list due to the information governance requirements. Please note, this project is only open to UK hospitals.

Contact us
dad@das.uk.com

For further information, please visit
www.das.uk.com/dad

Training in Airway Management: Opportunities and Challenges

The shift from paternalistic medicine to a patient-centred approach provides ethical dilemmas not encountered previously by anaesthetists. Shortened working hours, and abridged training programmes mean less time is available to become proficient in the ever-expanding range of airway devices offered. Novel educational approaches are being explored, including the use of 'tea-trolley' teaching and high-fidelity simulators.

The first challenge regarding training in airway management involves stipulating which skills are an essential requirement. This will inexorably vary depending upon experience, case mix and equipment availability; for brevity only core airway management skills will be discussed. It is difficult to define opportunities and challenges for training when the sands upon which the pillars are placed are constantly shifting. The Royal College of Anaesthetists produce curricula defining the competencies required for airway management. This document does not keep pace with the technological innovations being thrust into clinical practice. En vogue techniques such as awake videolaryngoscopy, pitched to almost replace awake fibreoptic intubation, or familiarity with the Aintree Intubating Catheter as suggested by DAS Guidelines, are notable omissions.

Numerous challenges facing training were highlighted by Mason back in 1998. She observed that changes to working patterns, shortening of training schemes and the plethora of airway devices results in suboptimal training opportunities. She also noted there was an unhealthy reliance upon clinicians not necessarily well versed in teaching methods being expected to provide the bulk of training. Cook revisited these themes in his 2006 editorial. He noted an even greater influx of airway devices since Mason's report, attenuating competency further, but suggested training methods could be adapted with the use of simulation, reinforcement in theatre, and anaesthetic skill rooms to allow self-directed training.

The biggest shift in medicine over the past twenty years has been the change from paternalistic medicine to patient centred care models. This has led to ethical dilemmas regarding training. The four guiding principles of medical ethics need to be considered: autonomy, justice, beneficence and non-maleficence. Autonomy implies consent – and the Montgomery ruling reinforced the notion of duty of disclosure. Whilst airway management may seem innocuous, there is still the risk of harm. Patients should be consented for non-essential airway procedures to be undertaken. Consent should be obtained in the learner's absence to empower the patient to decline if they so wish. Clinicians often assume that patients will refuse, but more commonly patients agree to have learners involved in their care as there is a genuine desire to create a net-gain for society. When deciding whether to use "patients as mannikins", clinicians must consider the possibility of "unknown unknowns". Unwittingly, prior to the advent of single use fibreoptic devices, patients were potentially exposed to prion diseases – a risk totally unforeseen by clinicians – the "unknown unknown".

Beneficence (favouring the patient's well-being), and non-maleficence, (inflicting minimal harm), should be considered together. Clinicians must endeavour to produce net benefit over harm not just for the immediate individual, but also for society as a whole. This creates a turbulent ethical chasm for the practitioner to traverse.

Learning styles have changed through the generations. Today's trainees - millennials - respond poorly to didactic teaching, and instead prefer the "flipped classroom" approach of prior self-learning, (often through the use of e-resources and social media), which is

solidified through tutor and peer facilitated discussion. Millennials also thrive with simulation, and gamification (using game design elements to provide the learner with gratification). Modern airway management courses reflect these learning styles; which can be a challenge for both senior faculty, and senior clinicians attending such events for refresher training.

It is not all doom and gloom. There are many innovative solutions being introduced and opportunities being developed to improve airway training. These solutions need to address the three main components to training – knowledge, technical skills, and non-technical skills. Firstly, looking at knowledge promulgation: methods can include didactic teaching, interactive discussions, open learning, audio-visual aids, and social media applications. Guidelines, such as those produced by DAS3, function as foundation tools and these should be distributed widely throughout the multidisciplinary team.

Technical skills can be obtained through learning on bench models, manikins, animal models, cadavers, and live humans, and can be delivered in a multitude of locations – within daily practice to specialist training courses. The first known manikin was designed in the 11th century to facilitate training of acupuncturists. Manikins became increasingly sophisticated in the 17th century when cadaveric pelvises were modified to be able to leak blood, or amniotic fluid, whilst the student endeavoured to deliver a dead foetus. Despite the effectiveness of these training techniques they fell out of favour to be rediscovered in the latter part of the 20th century, whereas now they play a monumental role in delivering quality training to clinicians. Performance of manikins is variable, and whilst they do play an important role in training they are no substitute for hands on patient experience.

Currently, it is not mandatory for UK anaesthetists to attend formal airway training, and it is up to the learner to determine their own learning needs. Concerningly, 16% of UK hospitals do not provide local airway training workshops – and in over half of these lack of interest was cited as the reason why. In Denmark, it is mandatory to attend a four-day course covering both technical, and nontechnical skills in airway management funded by the National Board of Health. Participants are evaluated using an Objective Structured Clinical Examination at the end of the course.

Another method of delivering technical skills is through the “tea trolley” approach described by O’Farrell. Two anaesthetists rotate around the theatre complex with a trolley loaded with airway equipment (and refreshments!). One anaesthetist manages the intraoperative care of a patient whilst the listed anaesthetist is released to attend training with the other in the anaesthetic room. This is cost effective and efficient, important considerations in the current challenging austere environment. An alternative approach is to run “drop in sessions”. A space is commandeered within the theatre complex within which airway training materials and tutors are based for the day. This allows the multidisciplinary team to drop in for refresher training as and when they become available.

There are opportunities to undertake airway training on patients outside the theatre environment, ethical issues notwithstanding. Otolaryngologists gain flexible nasal endoscopy (FNE) skills in the outpatient setting, as it has been shown that simulation is ineffective for acquiring this particular skill . FNE is useful for anaesthetists for two reasons – firstly to assess upper airway anatomy, and secondly as motor skill practice for handling a bronchoscope. Respiratory physicians regularly perform flexible bronchoscopy using local anaesthetic topicalization and sedation; trainees may be expected to perform up to 200

bronchoscopies throughout their training. Anaesthetists should be empowered to also attend these clinics.

Non-technical skills are crucial, and NAP4 showed that human factors regularly played a part in the airway complications experienced. Poor communication, team work, and judgement played a significant role in the 75% of cases judged retrospectively to have suboptimal or poor management. Simulation plays a crucial role in fostering team relationships and allowing physicians to become more adept at operating under stress. It is important to note, however, that simulation is not a suitable singular vehicle to convey "knowledge" in the conventional sense.

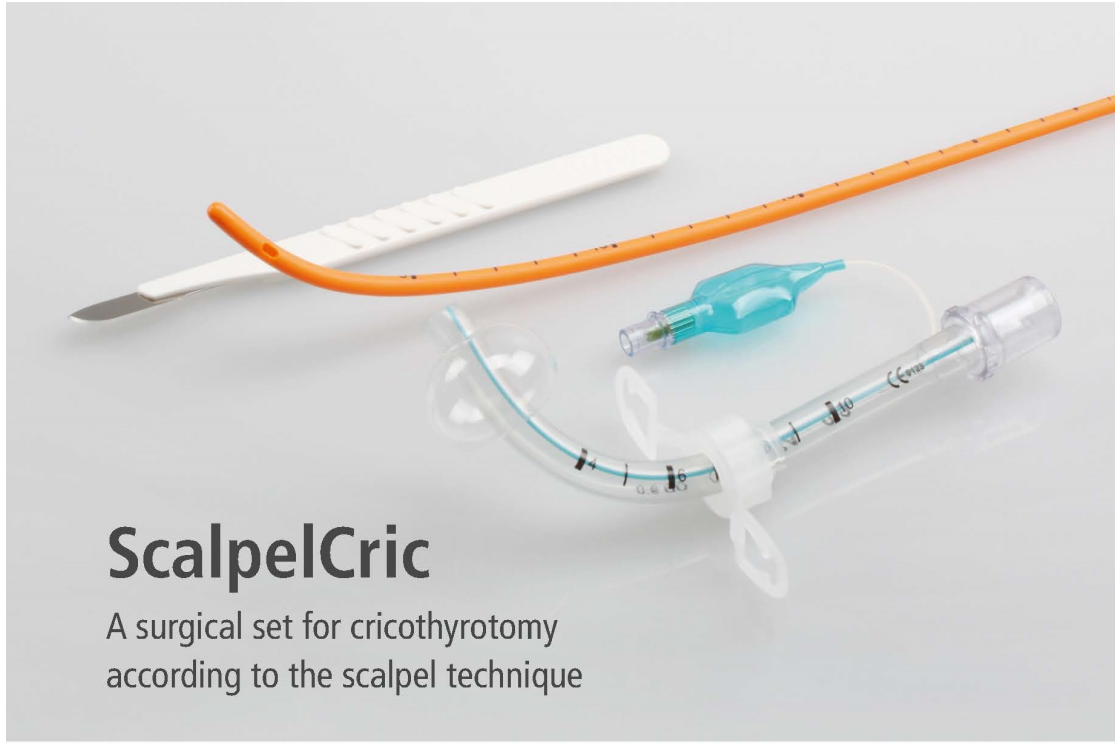
There is currently a trend for reinforcing airway training in catastrophic events, such as Can't Intubate Can't Oxygenate (CICO). Whilst this is an essential skill at all grades of training, concerns have been expressed that if the mandatory components of airway management are limited to situations such as thus, clinicians may neglect to engage with other areas of airway education. This may then lead to lack of mastery in the techniques required to prevent CICO in the first place.

It has been noted that although airway algorithms are technically accurate, they contain a large amount of text-based information which makes them potentially difficult to use in a crisis. The Vortex is a cognitive aid that seeks to alleviate this by providing a simple, flexible, visual tool that promotes team working and decision making in an unfolding crisis in conjunction with algorithms and guidelines. Significant advances have been made in the field of learning theory. There is an opportunity to embrace these developments when designing airway training schemes using tools such as the Vortex.

It is clear that the problems regarding training in airway management are monumental. With shorter training periods, increased variety of medical equipment, and ethical dilemmas to navigate solutions need to be implemented rapidly and shifted from the apprenticeship style model of learning. This has created an exciting time for training in airway management as novel solutions are being explored with simulation, e-resources, development of cognitive aids, and training opportunities outside of the theatre suite.

Kimberley Hodge
ST5, Chelsea and Westminster Hospital

The second and third prize were won by **Dr Gary Rodgers** ST3, Dumfries & Galloway Royal Infirmary and **Dr Mike Robson** ST6, St George's University Hospitals NHS Foundation Trust, respectively



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COURSE REPORT: GAMC 2018

The Guy's Advanced Airway Management Course
June 2018

Another year, another fantastic course at Guy's! Not even the beginnings of the recent glorious weather could tempt those with an interest in airway management away from the packed programme. In addition to the 250 delegates present, almost 200,000 people were also reached via social media in the course of the two days.

Delegate feedback was overwhelmingly positive, with comments praising the "top class speakers", the "engaging and interactive faculty" and the "amount of equipment" available. In fact, one of the few suggestions for improvement was a repeated request for more time for the course!

The lecture programme moved effortlessly from Shakespeare to Sugammadex. The world-class speakers covered all aspects of airway management, including the legal and the technical as well as human factors. One highlight, as always, was the live-streamed awake tracheal intubation requiring the steady hand and nerve of Dr Ahmad and a very accommodating patient in Guy's Hospital nearby.

The workshops mobilised scores of airway experts and industry representatives to impart their knowledge whilst allowing delegates to get their

hands dirty, quite literally in the case of those attempting to intubate a vomiting mannequin! Amongst the content covered were multiple front-of-neck-access strategies, fiberoptic intubation simulation, paediatrics and plenty of both videolaryngoscopes and supraglottic airways.

Another innovative aspect of the course was the presence, on the first day, of our much appreciated, anaesthetic room colleagues: the ODPs and Anaesthetic Nurses. This was a rare opportunity for everyone involved in ensuring airway plans work to hear the same lectures and for ODPs and Anaesthetic Nurses to take part in workshops demonstrating the latest techniques and new devices.

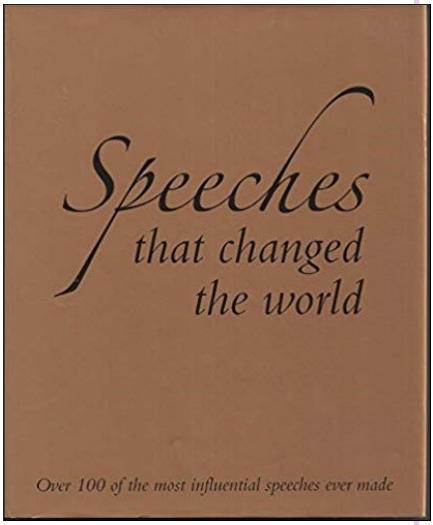
Overall, it was a great couple of days' learning in the midst of enthusiastic and friendly faculty and delegates. A huge thank you is due to Dr Gunjeet Dua and Dr Imran Ahmad, who have yet again taken on the massive task of organising this course and done it so brilliantly. Further appreciation must go to the faculty members who came along to lecture, teach and assist with organisation, as well as the sponsors who both support the course and provide expertise regarding their products. Last but not least, thanks go to all the delegates for coming along and being so enthusiastic in their support for another, very successful year of this course.

Until 2019!

Dr Simon Mathews
Airway Fellow
Guy's Hospital

Speeches That Changed The World

Compiled by Cathy Lowe



What is in the spoken word, which can make it immortal in the mind of man? Our minds are often influenced and inspired by speech, due to the charisma of the deliverer, wisdom, and possible underlying agendas or how they can still be relevant through time.

This compilation of 'over 100 of the most influential speeches ever made' includes formal speeches, announcements and remarks made by individuals, as examples of how oratory has influenced and continues to influence people. Speeches are of various lengths, some only a few words, and in the book are divided into various categories including Ancient History, Love, Religion, Science, Politics and War.

First are orations from Ancient Greece. The two, which stand out to us, are the speeches after the Peloponnesian War; The Funeral of Oration of Pericles, and The Apology of Socrates. The former was intended to provide solace to survivors, with passionate patriotism for the great Athens. Whilst in the latter, Socrates set out to defend himself after being condemned to death.

Science begins with a speech by John F. Kennedy about the ambition for Americans to be the first to walk on the moon, where he eloquently describes man's accomplishments through time by condensing 50 000 years of history to 50, and instills the desire to continually achieve and learn more. It is followed on by the famous words of Armstrong 'The Eagle Has Landed'... 'One small step for man, one giant leap for mankind', as well as

the dramatised words of Lovell from the Apollo 13 mission; 'Houston, we've had a problem'.

Although the speeches from the book are thought provoking, they are largely based around patriotism and war, and are particularly from American History. It would have been encouraging to have read light-hearted but significant quotes, the most amusing being the obituary of the England Cricket team when The Ashes were first lost, as well as speeches not limited to or by men. The changing status of women and significance in our roles can and should be reflected upon.

Nevertheless, speeches from this book allow for a stimulating read to revise history and the constant basic human needs. This book also helps us regain confidence in the power of words and speeches to influence and lead a clinical team towards a common goal in potentially adverse conditions.

Dr Ajit Walunj **Dr Nafeesa Akthar**

Good Hope Hospital, Sutton Coldfield

Difficult Airway Society, Annual Scientific Meeting 2018

Abstract Submission / Early Bird Registration closes 16th September

To register visit www.das2018.co.uk

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