



Difficult Airway Society

NEWSLETTER

DAS Medal citations

Prize winners

Book review

Perioperative Medicine

ARC-Scotland review

Pen of the inventor



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JANUARY 2016

EDITORIAL

Happy new year!

Hope you have enjoyed and recovered from the festive season and getting on well with the new year resolutions. Our Society is also set for a new era with our new President and Secretary taking charge during the highly successful WAMM 2015 at Dublin. We also have a new scientific officer and a second trainee representative and of course the lay representative . A warm welcome to all of them to the Society. The wealth of experience they bring will be an asset to us indeed. The full list of the current committee members can be found on our website.

Simulation has been established as an integral part of medical training world-wide. ORSIM[®] was a very welcome addition to the training tools available for management of difficult airways. Its inventor Dr Paul Baker takes us through his journey from the initial idea to establishment in the market. I am sure stories like this inspires many wannabe entrepreneurs among us!

At WAMM ,two other inventors (Dr Jack Pacey and Dr Muhammed Nasir) were awarded with DAS medals for their outstanding contributions that made significant difference in the practice of airway management. Drs Chu and Walunj review Daniel Goleman's book '*Emotional Intelligence*' and look at how relevant the theme is in our day to day professional lives. We have also included feedbacks from the DAS Airway Revalidation Course (ARC) held in Glasgow and the RCoA Perioperative medicine stakeholder event .

DAS-RCOA Airway Leads are meeting again on 17th March and for details and registration, please contact PAnte-Bennett@rcoa.ac.uk

Hope you enjoy reading the newsletter and we welcome any contributions that are interesting and relevant to our readership.

Sajay



Joy Beamer



A.Sajayan

newsletter@das.uk.com

PRESIDENT'S PAGE

It is my great pleasure to begin my term as President of DAS by wishing you on behalf of the Committee a healthy and prosperous New Year.

Our society has grown remarkably over the last twenty years to be the largest airway society in the world and the largest specialist society in the UK with over 3,000 members. It seems such a long way from the first DAS meeting I attended at Guy's Hospital in 1995, and yet as we mingled with friends and colleagues at WAMM 2015 despite an attendance of over 1,800 and colleagues from more than 40 countries it appeared just as relaxed and friendly with some excellent talks which generated lots of discussion. This, I think is what makes our society so popular.

The elections held towards the later part of the year also brought a new Secretary Dr Barry McGuire from Ninewells Hospital with Dr Andy Higgs remaining as Treasurer. I have known both Barry and Andy for many years and I'm very much looking forward to working with them over the next few years.

Our outgoing President, Dr Jairaj Rangasami deserves an enormous thank you from all of us for his leadership over the last few years. He will continue to serve for a year as Past-President and I am very grateful we will be able to rely on his wise counsel. Our outgoing Secretary, Dr Subrahmanyan Radhakrishna has also worked incredibly hard for the society over the last few years and deserves our gratitude and appreciation.

As for the future, we have some exciting projects underway many of which have been led by Prof Jaideep Pandit including DAS PhD Scholarships, DAS Small Grants and ADEPT- more on this soon. We still have lots to do particularly education around the new (2015) DAS Guidelines for the management of difficult and failed tracheal intubation in obstetrics and the new (2015) DAS guidelines for the management of unanticipated difficult intubation in adults.

Finally, as we look forward to next years Annual Scientific Meeting in Torquay I wanted to thank Prof Ellen O'Sullivan and Prof Elizabeth Behringer for their enormous efforts in organising WAMM 2015 in Dublin. Both DAS and SAM should be proud to have organised the largest international airway meeting ever held.



Anil Patel

SECRETARY WRITES.....

I'm delighted to be penning my first newsletter report as the new Honorary Secretary of DAS. I join an extremely stable ship by the looks of things, following the world-beater of an event that was WAMM in Dublin. An excess of 1400 delegates, more than 150 faculty members and 3 days of pretty impressive Irish fare, fun and festivities. Oh and the scientific meeting was splendid too! Torquay have now been handed the DAS torch for the 2016 ASM – I'm sure they will do us proud.

As well as being a momentous meeting, WAMM welcomed in a new extremely worthy DAS Professor in Ellen O'Sullivan, co-chair of the WAMM Organising Committee, and, of course, boasted the launch of the new DAS Guidelines on the management of unanticipated difficult intubation in adults. Sadly, it also marked the end of terms in office for a number of DAS stalwarts – Jairaj (Dr Rangasami) as DAS President, Krish (Dr Radhakrishna) as DAS Secretary, Jaideep (Professor Pandit) as DAS Scientific Officer and Ravi (Dr Dravid) as Lead for SMART and Airway Revalidation Courses. They shall all be missed and we thank them all for their massive contributions to DAS. New blood can bring new ideas and I have no doubt that Anil Patel will be an inspiring President. An international speaker of high regard, he has already played a significant role within DAS for many years, having been editor of the newsletter, co-organiser of three ASMs and a main player in DAS Extubation (2011) and Intubation (2015) Guidelines as well as NAP4. He is joined by Prof. Tony Wilkes as the new Scientific Officer. DAS offers a warm welcome you both.

Living up to the successes of 2015 will be a challenge, but we'll give it a good try. As some will be aware, guidelines in Intensive Care airway management are

in development, as are plans to increase DAS collaborative projects, both within the UK in conjunction with other specialist societies and overseas, including Africa and South America. As well as the ASM in Torquay, another Airway Leads meeting is scheduled for March 17th.

The membership continues to grow steadily (last count 3,200) and with the continued development of the DAS website, the DAS app and the newsletter, we shall aim to ensure that members get value for money (even before their ASM discount).

So thanks for the warm welcome to DAS. I aim to do my best.



Barry McGuire

Hon Secretary DAS

TRAINEE REP'S REPORT

I hope you've all had an enjoyable Christmas and New Year and that your on-calls haven't been excessively busy.

I really enjoyed attending WAMM in Dublin, particularly the debates, the human factors sessions and the interesting case reports. There were lots of good posters there too, although the electronic format made it more difficult to browse through them. Indeed I haven't quite finished reading the rather impressive book of abstracts yet. It was also good to talk to other trainees there, even though the number of people attending made it difficult to track someone down if you were looking for them! The session on airway education around the world had some interesting speakers and focussed on the process rather than the various programme objectives. Nevertheless, the questions to the international panel raised interesting questions about exposure to patients and procedures that were of relevance to UK trainees.

Dr Sam Pereira has come to the end of her time as trainee representative (she is now a consultant), and Lewys Richmond, trainee in the Welsh Deanery, has been elected unopposed as the trainee representative for the next two years (there will be a year's overlap with trainee reps from now on). We will be working together with the aims of improving the educational resources provided by the Society (and I'm pleased to say that I am now editing footage for some of the videos that I hope to make available), and also on setting out DAS's vision for how airway fellowships or advanced training modules should look.



Angus McKnight

MACEWEN MEDAL CITATION-DR JACK PACEY



Dr John (Jack) Allen Pacey MD, FRCSc,

Vascular and General Surgeon (1974 to 2008)

Honorary Professor of Anaesthesiology, Pharmacology and Therapeutics Department, University of British Columbia

Jack graduated in the upper third of his class, University of British Columbia (UBC) in 1967. During his surgical training, he worked in Vancouver General Hospital. ICU Shock Trauma Team. He was called to the emergency department to treat a patient with cyanide poisoning. Not knowing much about this, like most of us, he consulted the 'Bible' of drug treatment, Goodman and Gilman's Pharmacological Basis of Therapeutics. This suggested the use of a cyanide poisoning kit, which protects haemoglobin by forming meth-haemoglobin (to bind circulating cyanide). He found that the kit was available, and an early clue to his 'out of the box thinking' was that he also called Dr Bill Trapp, a thoracic surgeon who was head of the West Coast Hyperbaric Chamber, reasoning that hyperbaric oxygen might deliver extra oxygen to the cells. The cyanide kit was administered and the patient rushed to the hyperbaric chamber. The patient regained consciousness immediately with two atmospheres of pressure, and was successfully treated. This proved to be the first recorded use of hyperbaric oxygen for the treatment of cyanide poisoning. (Case Report at the First European Congress on Hyperbaric Medicine in 1983).

He remained in active surgical practice from 1974 to 2008 and Chief of Surgery 1980-82.

His interest in developing the Glidescope[®] was initiated while watching two anesthesiologists struggling to intubate the trachea, on one of his patients. The Glidescope[®] was the first true video laryngoscope, defined as a rigid blade with a digital camera on the blade itself with an on board LED designed and found to be extremely effective in achieving >99% airway views.

The first commercial device was sold in October 2001 in Canada. An anaesthetic colleague, Dr Richard Cooper, working at Toronto General Hospital authenticated this clinically, with the first study on 728 patients in 5 centres and involving 133 operators (2004-5). He demonstrated a very high (97%) success with intubation and an improvement of 1- 2 grades in the Cormack- Lehane view.



The international acceptance of this device inevitably followed, and ‘Glidescope Jack’, spent a great deal of time and effort in teaching and training on its effective use to anaesthetists, airway management experts, paramedical and armed forces personnel, around the world. A tribute to his dedication and stamina!

Jack, in collaboration with his friend, Mr Awni Ayoubi, set up a company, Saturn Biomedical Systems in late 2001 to promote the Glidescope, and once again he was quick to adapt to yet another discipline—company management. Not surprisingly, he learned very quickly, and when the company was eventually sold on, he was retained as President of the purchasing company (Verathon).

Jack is charming, and a very friendly and approachable person. He is always keen to teach, whether it be in the use of the Glidescope, or the 20 or more special adaptations of his invention, adapted for use by emergency, paramedics, military personnel etc. ; or on how to develop one’s ideas and inventions. He has also been very supportive and generous to those in countries which have limited financial resources. He has a few more surgical inventions he is currently developing and we await their launch.

We have known and thoroughly enjoyed Jack’s company for more than a decade, as have innumerable anaesthetic colleagues around the world. Jack thoroughly deserves the DAS Macewen Medal for his truly outstanding contribution to airway management worldwide.

Chandy Verghese

Richard Cooper

MACEWEN MEDAL CITATION-DR MUHAMMED NASIR



Dr. Muhammed Aslam Nasir is the inventor of iGel, a second generation supraglottic airway device that has firmly established itself amongst the preferred airway devices in the world.

Muhammed was born in Tulamba on the 27th of August 1961. The small but historical town of Tulamba, lies in the north eastern frontier of Pakistan. From here Muhammed completed his school education with distinction and a scholarship. He won the 'President of Pakistan Scholarship' for his degree in Medicine from Nishtar Medical College and University Hospital in Multan.

After a two year sojourn in surgery in Lahore he switched to anaesthetics. He completed his Anesthetic training from Jinnah Postgraduate Medical University and the Aga Khan University Hospital in Karachi, Pakistan.

It was in Karachi that he conceptualized iGel, inspired by Sir Archie Brain's LMA. After an illustrious career in Pakistan, he came to the UK in 1990 to further his experience in Anaesthesia. He worked for the Royal Airforce Hospitals and various NHS trusts before he joined Luton and Dunstable NHS trust. After the success of iGel, he decided to sacrifice his anesthetic career and to dedicate his entire time to the development and perfection of the product. iGel won the Ministry of trade and industry 'Smart Award' in 2003. This was a significant success for Muhammed and iGel. It won favours particularly in emergency medicine because of the unique design which makes it easy and quick to establish the airway even in the hands of novices. The first generation LMA made of silicone could bend, twist and needed a cuff inflation to establish an airway and prevent leaks. Muhammed's challenge was to find a more secure airway that would be midway between an LMA and an endotracheal tube.

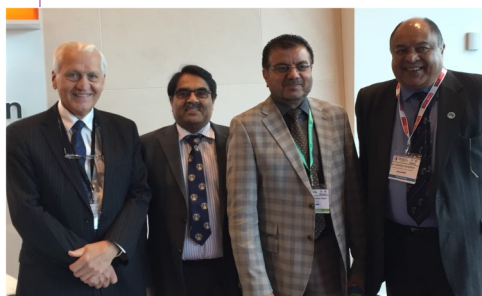
In his own words, *"I wanted a device that was single-use, softer than the human tongue, and designed to minimise post-operative complications"*.

He persevered for nearly a decade working with casts taken from cadavers and with some support from world experts before he discovered the right material that could make the supraglottic part of his device. The material of his choice was SEBS (styrene ethylene butadiene styrene). This was 'soft, malleable and yet robust enough to perform efficiently in the most testing clinical scenarios'.

It is this material that prompted the parent company Intersurgical to give it the name iGel.

iGel's non inflatable cuff made its insertion safer, faster and atraumatic. It has a built-in gastric channel that provides an early warning of regurgitation, allows for the passing of a nasogastric tube to empty the stomach contents and can facilitate the venting of gas from the stomach. Its additional features such as a built-in bite block, a buccal stabiliser to minimise rotation in situ and an epiglottic rest to prevent the epiglottis from down-folding, gave this second generation SAD a high safety profile.

After 19 years of hard work, the product was officially launched in January 2007 at the Association of Anaesthetists of Great Britain and Ireland's Winter Scientific Meeting at the QEII Conference Centre in London. After the success of iGel, Dr Muhammed Nasir has developed v-Gel for use in veterinary medicine particularly in rabbits and cats.



Drs Jack Pacey, S.Radhakrishna, Muhammed Nasir and Chandy Verghese

Dr Muhammed Nasir also founded the charity light4life in 2005 to help victims of the Pakistan earthquake in 2005 and floods in 2010. He supports several other health and educational projects in Pakistan. While Sir Archie Brain's LMA was a distinct revolutionary moment in the history of anaesthesia and airway management, Muhammed Nasir's iGel is a further momentous leap in the evolution of the supraglottic device. Because of the

parallels between these two great inventors, I have given Muhammed the title of 'Karachi Brain' a title that rhymes with Sir Archie Brain and one that Muhammed likes.

For his invaluable contribution to the management of airway, DAS is proud to present Dr. Muhammed Aslam Nasir the coveted 'Macewen Award'.

Dr. Subrahmanyan Radhakrishna

AIRWAY REVALIDATION COURSE-REVIEW

Difficult Airway Society Airway Revalidation Course 13th October 2015, Kirklands Hospital, NHS Lanarkshire.

A great thank you to my colleague Dr Raj Padmanabhan for inviting many eminent DAS-Speakers to talk on this revalidation course for the anaesthetist who is not routinely exposed to lists with difficult airways. Indeed I perceived this as time very well spent, as it offered a good mix between relevant clinical scenarios, an overview over new equipment and useful advice for day to day practice.

Dr Ravi Dravid started with an overview of human factors and their relevance to airway management. Communication and Team Work seems key and the personal “stress bucket” needs to be emptied from time to time. Pre-assessment and Documentation was presented by Dr Mark Price. As I vaguely still remembered, each test in isolation has low sensitivity and specificity – however some value lies in their combination. Dr Christina Diaz Navaro refreshed our knowledge on tracheal intubation. Sniffing the morning air is still up-to-date. “Squirt and Puff” or “Puff and Squirt” – the jury is still out but there is perhaps a trend to “Squirt and Puff”. Whatever technique is used it is always vital to know your Plan B and this should include the whole anaesthetic team. Supra-glottic airway devices by Dr Cyprian Mendonca and Videolaryngoscopes by Dr Subrahmanyam Radhakrishna were the topics for the following talks. There is a myriad of models on the market – each with individual advantages and disadvantages. Key is knowledge and familiarity of the available equipment in your local hospital. If you have no routine experience with it ,any gadget is perhaps not of much use if used first time in an emergency and one should really only rely on techniques and equipment one is familiar with.





Dr Iain Wallace Medical director , NHS Lanarkshire
and Dr Jairaj Rangasami



Dr Ravi Dravid and Mrs . C . Paton , Deputy Director
of Medical Education, NHS Lanarkshire

Extubation is not always as straightforward as one might think and in certain scenarios controlled extubation over an airway exchange catheter with this left in situ for a period of time can be useful as demonstrated by Dr Andy Higgs. Dr Stuart Benham had returned from Oxford to his Glaswegian roots and gave an interesting talk about Airway Management Outside Theatre – occasionally this can prove to be a bit of a minefield and led to some stimulating discussion with the audience. Dr Simon Crawley gave an overview over management of the obstructed airway. Gaseous induction seems to have gone somewhat out of fashion and neuromuscular blockade in the context of RSI is permitted. Halothane is no longer available. Knowing your Plan B including cricothyroidotomy and having your ENT-Colleagues scrubbed on standby is of value. Lastly, Dr McGuire from Dundee, the well known founder of the Scottish Airway Group refreshed us on management of the much dreaded CICV-Scenario.

Overall it was a day of updates and consolidation that was highly clinical relevant. The quality of the coffee was acceptable and one could even stand outside during the breaks and enjoy some rays of sunshine. This does not happen too often in Scotland.

Dr Stephan Dalchow MD(Giessen) FRCA EDICM
Consultant Anaesthetist/ICM

WAMM-2015 PRIZE WINNERS



Prof Ellen O' Sullivan and Prof Elizabeth Behringer presenting Oral presentation prizes-

First Prize (Karl Storz award)

Dr Louisa Chrisman



Second Prize (Ralph Vaughan Cup)

Dr Kai Su



Third Prize

Dr Lisa Sohn



Dr Katherine Gill receiving SAM award

Mr Chris Lawrence (Facing Africa) receiving WAMM award



COVENTRY CADAVERIC AIRWAY COURSE

Tuesday 10th May 2016

Course aimed at doctors from trainee grade through to consultant level in Anaesthetics, Emergency Medicine, Paediatrics, and Intensive Care Medicine. Course is also open to Nurses, ODPs, Paramedics, and Trade Representatives.

Hands-on experience of direct laryngoscopy and videolaryngoscopy using a variety of different blades and devices, inserting LMAs and i-gels, intubating through the laryngeal mask, fibre-optic intubation (nasal and oral), ultrasound of the neck and surgical cricothyroidotomy on 8 human cadaveric specimens. A ratio of only 2 delegates per specimen to ensure a high quality experience, far superior to practice on mannequins. One delegate of the pair will have the opportunity of performing the surgical cricothyroidotomy.



One day course available on Tuesday 10th May, 2016 at West Midlands Surgical Training Centre, University Hospital Coventry, CV2 2DX.

CPD points applied for.

Course directors: Dr Joy Beamer, Consultant Anaesthetist UHCW; and Dr Rajneesh Sachdeva, Consultant Anaesthetist UHB.

To reserve a place on this course please email:-

Dr Joy Beamer,
Consultant Anaesthetist UHCW.
Email: Joy.Beamer@uhcw.nhs.uk



PERIOPERATIVE MEDICINE

Perioperative medicine, the College and where we see ourselves as anaesthetists



A year ago, on January 23rd 2015, I represented the Difficult Airway Society at the Royal College of Anaesthetists stakeholder engagement event to launch the 'Perioperative medicine, the pathway to better surgical care' initiative. This is a College initiative aimed at developing a collaborative programme for the delivery of perioperative care across the UK. Although tardy in writing it has given ample time to consider and read some of the subsequent articles published in the perioperative medicine (POM) themed edition of the RCoA Bulletin, September 2015 edition.

As discussed in the meeting and launch document many components of good perioperative management already exist in the UK; including an increasing percentage of hospitals with a dedicated preoperative assessment clinics, the increasing use of cardiopulmonary exercise testing for risk stratification and the use of enhanced recovery programmes to improve quality of care via bundles of best evidence based practice. The vision encapsulated in this initiative is to offer a complete package of care from before surgery through to late after surgery via a dedicated perioperative medicine team that acts as a single point of contact for surgeons and GPs co-ordinating the care of complex patients. You will not be surprised to notice that this complete model of care does not yet exist in the UK.

The presenters were clear that this was an aspirational outline of a model and a starting point for discussion, not an explicit roadmap as to how it will be achieved. Throughout the morning the topics of exemplar successes, putting theory into practice and the implications for training and workforce were discussed. The most interesting part of any such meeting is the discussion it generates. With an attempt at being impartial I shall try to outline each end of the spectrum of debate.

PROS¹

All of us want to support an initiative that leads to improved quality of care, safety being one of the most important markers of quality. As a proof of concept document it appears a believable premise. Potentially money saved due to reduced cost of complications could find its way back into funding the process.

Historically, anaesthesia has developed into the domains of critical care, pain and obstetrics. This can be seen as just another step in the evolution of our speciality. The importance of anaesthesia in hospitals is often perceived by us as undervalued within hospital medicine. The small proportion of ACCEA awards to the largest based hospital speciality bear this out. By expanding into an extended role this may give us greater credence and respect in our working environment?

CONS²

The counter response is that most people went into anaesthetics to practice the science and art of anaesthesia, and are not trained as perioperative physicians. We should perform and teach our core skills rather than extend into new responsibilities. Many of the ideas are not new and although the vision to combine them into a single strand is laudable, in reality it will require tangible investment at a time of stretched resources. Government is littered with money saving initiatives where savings, if any, have never been repatriated to the drivers of change.

I suspect, like myself, there are many people who would agree with some aspects of each side of the debate simultaneously. Anaesthesia has always been a broad church and to its credit there will continue to be practitioners who want to acquire skills and knowledge in new areas. The issue of changing roles and interests over a minimum of a 25 year consultant career is also relevant.

One of the most interesting aspects was the proposition by Dr Colin Berry regarding the inclusion of an anaesthetist on multidisciplinary team (MDT) meetings, particularly in specific oncology and cardiac services that involve surgery. Here I think there is a real role regarding risk stratification and a realistic overview of the whole process to give the patient truly informed consent. Most of us have wondered at some point whether a high risk patient really wanted or would ultimately benefit from a major surgical procedure. Just because you can surgically do it, does not mean it should be done.

Finally what does it mean to us as members of DAS? The growing membership will inevitably hold a wide range of views. As previously expounded³ we should see hypoxia as the disease state, from the upper airway to the mitochondria, that we are experts in managing and loudly present ourselves as such.

I would encourage you to visit www.rcoa.ac.uk/perioperativemedicine if only just to see the nifty animated short promoting the initiative.



Dr Mark Price

Consultant Anaesthetist

Cardiff and Vale University Health Board

www.talkdebrief.org

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LAY MEMBER PAGE

September 3rd 1973 – my first day in a proper job, my first day in the NHS, my first day in an operating theatre and my first day in an anaesthetic room – it was a brilliant day. I had somehow managed to get myself employed as a Theatre Attendant, a very young eighteen year old and the first day passed in a blur. I am sure I was the butt of a few practical jokes that went completely over my head at the time; “can you go and ask Bill for a set of Fallopian Tubes?” – you know the sort of thing. By the end of that first day I knew I never wanted to work anywhere else but the NHS.

What is a Theatre Attendant I hear you ask? The Theatre Attendant (we preferred to be called Theatre Technicians!) was the forerunner of the ODA and now the ODP. We were ancillary staff, working a 44 hour basic working week plus weekends and nights – I think that’s probably a 7 day service by anyone’s standards! – and my first pay packet was £18 before stoppages, I thought I had won the pools. A national training scheme didn’t start until later in the 70’s and if you had a certain amount of service you could sit the exam externally. So we all duly bought our copy of Lee and Atkinson’s Synopsis of Anaesthesia, swotted for weeks and most of us duly passed – City and Guilds 752, a proud day!

Anaesthetics was a bit different back in 1973, the only capnogram between ten theatres was the size of a small fridge, and if you wanted to get an ECG machine for your list that wasn't the size of a large fridge, it was best to get in early and steal one from another theatre! Potential difficult airway – well that will mean the large bladed laryngoscope and the gum elastic bougie then. The bougie was a bit of a new fangled idea, and there was only ever one size – so for smaller tubes and paed’s we innovated and used urethral bougies – those were the days! So fast forward to my second DAS committee at the WAMM conference last November, it was simply incredible – the massive leap in knowledge, training, equipment and the importance of system, process, simulation, teamwork and human factors was fantastic.

I was particularly proud to see the integral role that ODP's have to all of that and it was great to see a couple of familiar faces there.

I retired from the NHS in March last year after 41 years – I eventually ended up managing theatres and anaesthetic services and then many other services and functions over my career. I spent the last 15 years or so in clinical governance and am passionate about improving quality and patient safety for patients – another reason that WAMM was so inspirational.

I am honoured to be the first lay member on the DAS Committee and hope my long and varied experience can be of value – I also hope I can bring a slightly different voice to the committee and in particular bring a lay/patient perspective to its deliberations.

The editor tells me he would like a lay members page for each edition, sorry! - given I spend probably too long on the golf course, any suggestions for future content would be much appreciated.



Paul Martin

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The ORSIM® Bronchoscopy Simulator



Dr Paul Baker

Senior Lecturer, Department of Anaesthesiology, University of Auckland and Specialist Anaesthetist, Starship Children's Hospital, Auckland, New Zealand.

The ORSIM is a virtual reality simulator designed for any practitioner involved in advanced airway management to develop and maintain their skills at managing difficult airways with a flexible bronchoscope. Users can learn intubating skills by practising on a wide range of virtual airways. The ORSIM consists of a replica video-bronchoscope, a desktop sensor module and a dedicated laptop computer.

The ORSIM was designed to overcome problems with learning flexible bronchoscopy. Despite the importance of this clinical skill, evidence suggests that the use of the flexible bronchoscope has declined since the advent of supraglottic airways and videolaryngoscopes¹. Inevitably, this will result in a loss of technical skill, decreased confidence and fewer awake intubations with a flexible bronchoscope.

Skill development has traditionally depended on clinical experience, training in the operating room or attendance at airway workshops². For many anaesthetists, clinical experience with the flexible bronchoscope is intermittent and inadequate due to the low incidence of difficult airways. Simulation training has previously been geared towards simple dexterity development on models or airway manikins. Such training is pitched at the novice and prepares them to manage the normal airway, but does not equip them for managing the difficult airway. By default, difficult airway management then evolves back in the operating room, usually very slowly, without supervision, feedback or assessment and using patients as subjects³.

The ORSIM was conceived to address these problems. The light, portable design of the ORSIM allows training on demand, near the operating room, hospital offices, conference workshops or simulation centres. Whereas alternative virtual reality bronchoscopy simulators are cumbersome and multi-modular (gastroscopy, colonoscopy and bronchoscopy), the ORSIM targets the airway. Mimicking airway pathology with accurate anatomical models decreases the gap between reality and simulation, so as to enhance the transfer of skill from one set of conditions to another and better prepare the learner for managing difficult airways⁴.

Development of the ORSIM started in 2007. Beta test sites were set up in 2010 and the simulator was made available for general sale the following year. Much of the early development involved designing software of sufficient speed and fidelity for a laptop computer to provide real-time performance.

Like any new product, the initial focus was on research and development. Being a unique product, specific hardware had to be designed and manufactured. Purpose designed software, based on clinical experience, had to be written for the laptop. This process is ongoing as the demand for new modules grows. Educational goals of assessment, feedback and variability were incorporated into the software with an emphasis on deliberate practice and distributed learning. Performance on the ORSIM can be recorded, replayed and measured to enhance skill development.

The ORSIM project has been primarily self-funded. A New Zealand Trade and Enterprise (NZTE) government grant was awarded for one year, which helped in the second year of product development. In 2010, the ORSIM was entered into an NZTE Focus on Health competition for start-up companies in the New Zealand health sector. Over 100 companies entered the competition and the ORSIM qualified for the final 10, resulting in a prize consisting of business, sales and marketing advice plus a two-week promotional tour of the USA. Lectures and seminars relevant to start-up companies were presented to the finalists, with mentoring and practical advice during the course of the competition.

Development of this product has been a huge learning experience for our start-up company. Major hurdles involved finding people with appropriate technical skill and knowledge to fill research and development (R&D) roles in hardware and software product development. This process taught us to keep a close eye on all development costs to avoid the budget growing beyond our means.

This proved to be difficult, because, as with most new technologies, it is hard to predict “how long is a piece of string”.

In the early stages, the end is generally a long way off, with serious costs being incurred during the start-up and early development phases. This is where the commitment to deliver something unique becomes a major driver and the inspiration to find the time and money to persevere.

Research and development is only one component of product commercialisation. The cost of marketing and sales can exceed R&D. Important lessons we learned were: take time to develop a trusted brand and be prepared to protect it; keep in touch with your customers; emphasise your key points of distinction and don't stop development.

Business advice is essential to chart a course to commercialisation. If you want to be successful, you have to take risks; but you can minimise those risks by seeking expert advice. Developing a new product into a commercially successful venture depends on many variables. Each company and its product will have unique characteristics which will determine a specific business strategy. Marketing an educational product is quite different from marketing a new drug or clinical device. Ideally, choose an idea or product that fits within your existing knowledge and experience; it will take over your life, so make sure it is something you are interested in. Look at the competition and estimate the size of your market. Write a detailed business plan and discuss this with a trusted advisor before you start. Consider the advantages and cost of intellectual property protection and talk with companies who have gone down the same path, then determine the cost/benefit. Think carefully before involving investors or shareholders into your company. Choosing a business partner is a bit like a marriage. Give careful consideration before you share or sell equity in your company.



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A construct validation study for the ORSIM has been completed and is under review. Face, content and concurrent validation studies have already been published⁵⁻⁸. In the field of medical simulation, advances in technology are occurring at a rapid rate. ORSIM customers can expect software updates at regular intervals. Many opportunities exist to expand the capabilities of the ORSIM. These form the basis of our ongoing R&D program.

In nine years, we have gone from a concept on a drawing board to installations in 18 countries. We have learnt a great deal in that time. I now have a healthy respect for inventors and the true cost of their products. The risk of failure is high and the cost of development can be huge, but the benefits are there if you're prepared to be persistent, take risks and believe in what you're doing.

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Emotional Intelligence

Daniel Goleman

Daniel Goleman is an internationally renowned author, psychologist, science journalist and a leading expert in the concept of emotional intelligence.

In his New York Times best-selling book, *Emotional Intelligence*, Goleman challenges the traditional view of intelligence being based simply on one's IQ and explores the role in which our emotions play in determining one's successes and attainment in life.

The book explores the various components of emotional intelligence that have been frequently deliberated in the business sector. However as we explain, they are also applicable to medicine and allied professions as well.

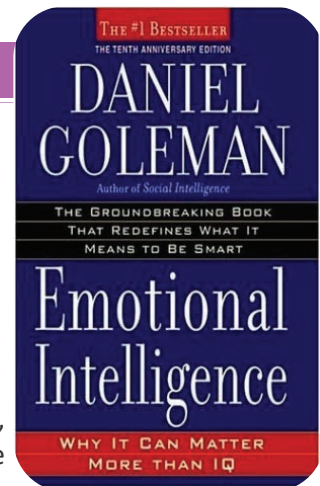
1. Emotional awareness:

Being aware of our emotions is empowering as it allows us to take steps towards self-improvement and development. Seeking feedback from colleagues and patients helps us to understand our strengths and weaknesses that may guide our future professional development goals.

2. Emotional management including self-motivation:

Controlling emotions are vital in order to limit the potential impact they may have on our judgment and decision-making. We often work in a busy and stressful environment. A single shift can be a roller coaster of highs and lows. However, the development of guidelines and emergency algorithms potentially dampen the impact our emotions may play in crisis situations.

Progression and success in any specialty demands self-motivation, discipline and effective emotional management, in order to successfully and delicately balance work, home and social commitments.



3. Empathy:

Efficient working relationships are crucial within medicine. Empathising with team members in a non-judgmental manner often provides a moral boost and builds sustained working relationships and overall improved productivity of the team. Difficult and sensitive conversations, such as breaking bad news, with patients and their family are a regular feature of our job profile. Being able to sincerely empathise with patients and relatives is thus a key skill to develop.

4. Social skills:

Accurately reading social situations, managing colleagues with varying personalities and goals and interacting efficiently are skills vital to any clinical team leader. Some individuals are naturally gifted in this area whilst others learn and develop through experience. These skills also enable us to support junior colleagues and liaise with other specialties as part of the multidisciplinary team approach, which is fundamental towards the care of our patients.

To summarise- this book attempts to explain an intriguing and widely debated concept integral to self-development in a very exhaustive manner, starting with anatomical concepts, touching upon evolutionary aspects of emotions and filling in anecdotes essentially stressing the importance of soft skills both in the work place and at home to ensure long lasting success.



Annette Chu, Registrar, Anaesthesia



Ajit Walunj, Consultant Anaesthetist

Good Hope Hospital, Sutton Coldfield



A call for examples of best practice

The Royal College of Anaesthetists and the Difficult Airway Society are delighted to announce the second Airway Leads day to be held at the Royal College of Anaesthetists on Thursday 17 March 2016.

Following the survey of airway lead activity in 2014, it was apparent that many Airway Leads are doing tremendous things that simply aren't being brought to everyone's attention. Therefore as part of the Airway Leads Day we are going to include an entire session devoted to Airway Leads sharing how they deliver various aspects of the role of Airway Leads within their hospital or trust.

Five selected Airway Leads will each be invited to present an aspect of their activity in a ten minute slot - there will then be a moderated discussion with the audience of Airway Leads around the issues raised.

We would encourage all Airway Leads to submit one page of A4 on an aspect of their role as an AWL. These will then be reviewed and 5 different Airway Leads will be invited to present their activity.

Please note that this is not a competition, and the presenters will be selected to present a variety of activities that Airway Leads can be involved in. The selected Airway Leads will be entitled to free registration at the event and will be listed in the programme as an invited speaker*.

The closing date for receipt of submissions is **Sunday 31st of January 2016** at midnight.

Submissions (one page of A4, normal margins, not less than 11 point Times New Roman including a Title, Author Name, Institution and email address) should be sent to pante-bennett@rcoa.ac.uk.

Please note that this is meant to be a description of activity you as an AWL undertake - references and diagrams may be included but we would not expect this to be the norm. In any case, no more than five references should be used and they should be in the style of the BJA but with the title of the article omitted. Specifically, references for NAP4 or any of the DAS guidelines are not required.

Areas of responsibility of an Airway Lead:

1. Overseeing local airway training for anaesthetists and assisting in airway training more widely.
2. Ensuring local policies exist and are disseminated for predictable airway emergencies.
3. Ensuring that difficult airway equipment is appropriate to the local guidelines and standardised within the organisation.
4. Liaising specifically with the Intensive Care Unit and Emergency Department to ensure consistency.
5. Facilitating NAP4 follow up surveys on institutional responses to NAP4 and audit of airway management practices.

*Please note that travel and accommodation expenses will not be paid.

If you have any queries around the submission please contact althegasman@btinternet.com.

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