THE NEWSLETTER OF THE ASSOCIATION OF ANAESTHETISTS OF GREAT BRITAIN AND IRELAND

# ANAESTHESIA NEWS

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# Editorial

**'My pain may be the reason for somebody's laugh, but my laugh must never be the reason for someone's pain.' Charlie Chaplin.**

The January issue of *Anaesthesia News* contained a spoof article from a member of the public who is also a lay member on the AAGBI Board. This article depicted a time in the future when fully trained and highly paid pilots might be all but replaced by a less qualified and significantly less well-paid workforce; the pilots' assistants.

Several Physicians' Assistants (Anaesthesia), or PAAs, tweeted and wrote in to complain that this article was insulting to them; and a few consultants involved in PAA training and who work with them also complained that the article was harsh and untrue in its analogy. The letters emphasised the fact that PAAs work under the supervision of anaesthetists. To quote some snippets from the letters:

*'Would I be anaesthetised by a PAA working alone?*
*The answer from my above points is a clear NO.*
*Would I wish my anaesthetist to have his workload burden offset by a competent trained helper when looking after me or my family – DEFINITELY'*

*'Our PAAs are meticulous in informing patients of who they are and that they are fully supervised.'*

A formal response from the President of the AAGBI, Dr Andrew Hartle, has been sent to each correspondent.

As I read some of the letters, I realised it was important that we provide some context and background to this article. Over the past year the RCoA, via its Anaesthesia Related Professionals Committee (ARPC), and the AAGBI have been in discussion over an updated scope of practice for PAAs. Proposals defining the extent of role extension in experienced PAAs (in the absence of registration) remain controversial and the basis for ongoing strong debate within the AAGBI and the RCoA. The PAAs are as yet not under a regulatory body; the Association of Physicians' Assistants Anaesthesia holds a voluntary register for them but not all PAAs are registered. It was these facts, in particular, that alarmed our lay member and he repeatedly voiced his concerns to us at our board meetings. He is indeed not alone in these concerns. Both the College and the AAGBI are working closely to ensure that regulation of our PAA colleagues becomes a reality in the near future.

As regards the article, it was sent to a number of key people for their comment before publication. In past issues, we have published an article on PAAs, and a letter from a PAA and an AAGBI response to that letter in the October 2015 issue. The AAGBI has respect for the work that PAAs do in supporting anaesthetists and would encourage them to join the AAGBI as associate members.

On a separate topic, Scoop O'Lamine is back this month with a hilarious account of a very difficult case. If it upsets any anaesthetists, I would just say that once upon a time Dr Thikster was very much like Dr Keenster…

There are some other thought-provoking articles including one about the power of suggestion when we speak to our patients, as well as one by an anaesthetist doing OOPT in South Africa, which inspired the front cover of this issue. The giraffe on the cover should also remind you to book your leave for summer and plan your holidays in good time.

We would love to hear from you. If you have anything to say please submit an article or letter, the guidance for authors is on our website and also on page 5 of this issue.

**Upma Misra**
*Managing Editor, Anaesthesia News*



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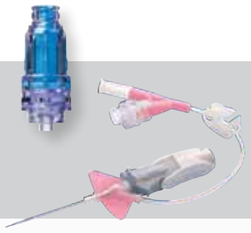

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# ANAESTHESIA NEWS

SUBMIT AN ARTICLE TODAY

**Anaesthesia News reaches over 11,000 anaesthetists every month and submitting content is a great way of sharing your experiences and information with fellow members.**

# Guidance for authors

## Anaesthesia News welcomes submissions and correspondence

Articles and letters should be submitted, together with any declaration of interest, to the Editor at **anaenews@aagbi.org**, as an email attachment in Microsoft Word; we are unable to accept submissions on paper. We are interested in articles on a wide range of topics be that OOPE, safety, innovation, wellbeing etc. Articles submitted for publication will be accepted on the understanding that they are original and have not been submitted elsewhere, including to websites or other journals/magazines, or copied from other sources.

Single page articles should not normally exceed **600 words** (including any headline, references, further reading, tables, figures or graphs). Double page articles should not normally exceed **1400 words** (including any headline, tables, figures or graphs). Obituaries of **300 words** will be considered.

Please insert references as numbers within square brackets and list in numerical order at the end of your submission in Vancouver format. References should be limited to six where possible; if more are necessary then they will be published online on the *Anaesthesia News* website as supplementary material.

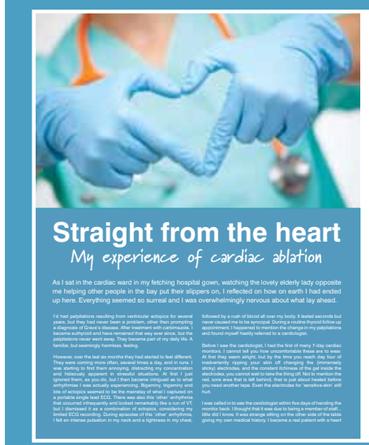
We strongly encourage the use of images, tables and figures. Colourful images will make your article more aesthetically pleasing to the reader. We may source stock library images to enhance your article.

Digital images, figures, graphs or photos should be at least 300dpi in resolution. Preferable file formats are JPEG or PDF. Please send images as separate files and not embedded in your Word document. Please note that the explicit, written permission of patients or third parties is required prior to submission of such images. Many images are subject to copyright; please state whether images are free of copyright or not. If not, please indicate who holds the copyright, and whether permission to reproduce the images has been sought/granted.The full name(s) of all authors, and their position, grade and hospital must be included together with a contact address and email address.

**PATIENT CONSENT**
If a patient is featured within an article, written consent must be obtained prior to submission. We do not need to received the consent forms but we need to know it has been obtained. Consent is required even if the patient is not identifiable and the author must provide a statement mentioning that the patient has given his or her informed consent for the article to be published. The assent for publication must be sought from their next of kin if the person described in the article has died. If the individual in the article is a minor, or unable to provide consent, then consent must be sought from their parents or legal guardians. If consent is not obtained then the Editor reserves the right to decide what information is printed.

***The Editor of Anaesthesia News reserves the right to edit articles for reasons of space or clarity***

We will confirm receipt of all submissions and keep you advised of progress. We will inform you within 4–6 weeks if your article has been accepted or rejected. If you have not heard from us in that time, please do not hesitate to get in touch via anaenews@aagbi.org



Straight from the heart

My experience of cardiac ablation

As I sat in the cardiac ward in my fetching hospital gown, watching the lovely elderly lady opposite me helping other people in the bay put their slippers on, I reflected on how on earth I had ended up here. Everything seemed so surreal and I was overwhelmingly nervous about what lay ahead.

I'd had palpitations resulting from ventricular ectopics for several years, but they had never been a problem, other than prompting a diagnosis of Grave's disease. After treatment with carbimazole, I became euthyroid and have remained that way ever since, but the palpitations never went away. They became part of my daily life. A familiar, but seemingly harmless, feeling.

However, over the last six months they had started to feel different. They were coming more often, several times a day, and in runs. I was starting to find them annoying, distracting my concentration and hideously apparent in stressful situations. At first I just ignored them, as you do, but I then became intrigued as to what was causing them and what was happening. I had had a couple of bits of ectopics examined to be the mundane of what I captured on a portable single lead ECG. There was also this 'other' arrhythmia that occurred infrequently and looked remarkably like a run of VT, but I dismissed it as a combination of ectopics, considering my normal ECG recording. During episodes of this 'other' arrhythmia, I felt an intense pulsation in my neck and a tightness in my chest, followed by a rush of blood all over my body. It lasted seconds but never caused me to be syncopal. During a routine thyroid follow-up appointment, I happened to mention the change in my palpitations and found myself hastily referred to a cardiologist.

Before I saw the cardiologist, I had the first of many 7-day cardiac monitors. It scared me a bit (you're uncomfortable that's one to note). At first they seem alright, but by the time you reach day four of inadvertently ripping your skin off changing the immensely sticky) electrodes, and the constant itchiness of the gel inside the electrodes, you cannot wait to take the thing off. Not to mention the red, sore area that is left behind, that is just about healed before you need another tape. Even the electrodes for 'sensitive skin' still hurt.

I was called in to see the cardiologist within five days of handing the monitor back. I thought that it was due to being a member of staff... bits did I know. It was strange sitting on the other side of the table giving my own medical history. I became a real patient with a heart problem, and was aware that I was using discretely un-medical terms, like 'fluttery' and 'funny turns' to describe my symptoms, and we didn't really write in when I heard the words "non-sustained VT". I had to have an echo and an exercise ECG, before being allowed to go home armed with bisoprolol. This was the first of several anti-arrhythmic drugs I was given over the next few months - flecainide and verapamil soon followed. After having a cardiac MRI and a further three 7-day monitors, my right ventricular outflow tract was diagnosed as the source of my ectopic. Apparently it's not uncommon in thirty-year old females.

It was fairly evident that drugs were not going to be a long-term solution and the option of cardiac ablation was suggested to me. Having researched it, I decided that I was keen to proceed. After a verapamil (very useful during the cold and snow in December), the prospect of a potential cure was too tempting and I agreed to have a cardiac ablation under local anaesthetic with sedation.

### Feeling of impending doom

This brings me back to the reason I was in the cardiac ward. Having been consented for the ablation, (including the 1:300 risk of death), I was taken down to the lab at 1pm. I was greeted by a lovely scrub nurse with whom I have worked on many occasions before. It was nice to see a familiar face. After 3mg of midazolam, that made me feel slightly drunk for about 15 minutes, the only procedure began. The ECG screen displayed an array of wiggly lines, and I had no idea what anything meant, except for a cannot say that what followed was the most pleasant experience of my life, as such a small dose of Midazolam meant I remembered everything, but I can now sympathise with patients having an MI or an aortic dissection, as I think I experienced similar pains during the procedure. I had local anaesthetic injected into my groin in need for three anaesthetists who anaesthetise for this procedure on a regular basis, so I'm told it can be quite a boring anaesthetic to give). Every time the pacemaker probe poked around under my pulmonary valve I had an intense unpleasant feeling of heartburn radiating up into my jaw and down my left arm. As soon as the probe was retracted into my ventricle, the sensation went away. I was told that I would feel a sensation of heat, then freezing cold, then a while, and then the burning began. Each burn took 60–70seconds. I had five burns in total and the majority were bearable, but the last was at double the intensity and was really searing. I lay there and bore the pain and it was only afterwards that I questioned why I hadn't asked for it to be stopped. I think that I was concentrating on the worst bum as I said it was agony, but as the burning hadn't stopped and I was told "it will only be 20 more seconds if you can bear with it", I somehow just relaxed and gave into the pain, but those 20 seconds felt like a lifetime. After 3 hours and four doses of isoprenaline, I was pleased the procedure was nearly over as I'd had enough. Then came the 10.5mg of adenosine. I knew how to say it, but I'd never had it before. I was told to expect a flush and a feeling of impending doom as this was pretty much a given. What I did notice however, was an intense spasm of my neck muscles, and I felt like my neck was curling up into a ball. It lasted a few seconds and I felt myself gasping for air. Everything then returned to normal very quickly.

Post-procedure, I stayed in overnight on telemetry and it felt so strange not to have a single ectopic. I hadn't been in normal unintterrupted sinus rhythm for years. My groin was really sore, and I had to lie completely flat for six hours and was told to rest for 3 days to sleepless. I had my procedure two months ago now, and I can still feel a pea-sized lump which catches occasionally when I bend my leg. I had 3 weeks off work to recover. Most importantly I'm pretty much fixed. I have had a few isolated ectopics since but I'm not bothered by them and they don't affect my lifestyle, and am on no medication. I am now back at work but obviously several things had to change during my treatment period.

The main change was that from the time I was diagnosed with non-sustained VT, I was taken off all on-calls under advice from the cardiologist and also occupational health. I was still allowed to do my 'normal' shifts, which didn't include any high risk or provoking situations, including nights. This seemed like a novelty at first, but working Monday to Friday is actually equally tiring. I was concerned about the effect this would have on my training, but I have tried my best to keep my hand in on-call duties during the daytime and have been pleased to maintain my DOPS and CBD list every week. I am still not back to normal on-calls as having been off them for 6 months, I'm in the process of a staged return, but I'm almost there.

I was not used to having time off being ill and felt immensely guilty for causing so much upset to the rota. I was completely engulfed by being "ill" and although I was very grateful to all my friends and colleagues for asking how I was all the time, as time went on I longed for someone to talk to me about something else other than my heart. Life still goes on whether you are at work or not and looking after yourself is not a bad thing.

I also tried to do my final FRCA written exam in the middle of all this and unsurprisingly I failed it. In fact it was almost detrimental to me, as it was like being tortured - going through a hugely exaggerated stress response for 6 hours, and I seriously thought that I would die in the exam. I was relieved to get it out of the way the whole thing and annoyingly only failed by 1.2%! I re-took the exam last month, after my ablation, had a much more pleasant experience and passed this time. So the moral of the story is - if the boat is already rocking, don't rock it anymore!

My practice as an anaesthetist has also been influenced by my experience. When I use sedation now, I am far more conscious about making sure the patient is comfortable and offering extra analgesia if necessary. I also now hesitate to say "just bear with me for two more minutes," as I know that two more minutes of severe pain seems like a lifetime.

On a final note, there are some perks to the job... post ablation I was given a DVD player to watch in the ITU (which I hadn't used), with a plasma screen and a comfortable bed. Ironically, I could have done with that lovely elderly lady to help me with my slippers.

**Dr Laura Tompsett**
ST4 Anaesthetics
Poole Hospital



Example of a double page article - 1400 Words

My first experience of going to theatre (not the play kind!) was in Bristol Children's Hospital when I was 11 years old. I had just been diagnosed with Acute Lymphoblastic Leukaemia. I was extremely scared as I had never been to theatre before. I remember being taken down the corridors by a nurse who was pushing my wheelchair. I was carrying 'Floppy Dog', my cuddly teddy, and my Mum & Dad were walking behind me.

GOING TO THEATRE

By BEA HOLMAN-BROOKS

I had to choose who to take in with me as I wasn't allowed any more than one adult with me – I chose my Mum. When we got to the theatre room, the anaesthetists were very friendly, so I felt a bit better. They told me that they were going to put me to sleep, and that they had a team of pixies living in the room behind us. I can't remember how many times I went to theatre, but it never got easier as it was a new experience for me and I seemed to go to different theatres and meet different anaesthetists each time. I had to have my arms strapped down with bandages on the sides and top.

After three weeks in Bristol I was transferred to the Royal Devon & Exeter Hospital. During my treatment for leukaemia I have to go to theatre quite often for lumbar punctures, so I got to know the staff and know the people in theatre, and we always have a laugh, but it wasn't always like that.

My Mum remembers one time when I felt really sick, and we put it down to nerves. I used to get very moody and bossy with the anaesthetist, telling him that he wasn't allowed to touch Winnie (my Pokman bear). Mum had to reassure me that I would be just in case they did something to me, and I wasn't ready. Mum says that I used to say in a loud and bossy voice "I'm not ready yet, I'm not ready." I am very chatty in the theatre room – probably nerves, but it makes me feel better and we always have a laugh.

Since my theatre trips began in January 2009, I have got a lot better about going to sleep. I have found that if you go to theatre in a happy mood, you wake up feeling better. It is also nice to see the same anaesthetist when you wake up in the scene. I have my own little routine before going to theatre – I always write my Mum a note with a shopping list for some nice food for when I wake up. That is one hard thing about having to go to theatre – not being able to eat – and whenever you get you can smell food.

Going to sleep is a strange feeling – when the anaesthetic is put into the line you get a funny feeling' and you have a funny feeling in your ears. I like the feeling of going to sleep, but I always try to say 'Night Night' to everyone in the room before I close my eyes – I always tell my Mum that I love her.

In recovery – where you wake up – the nurses there are really kind and they usually shout my names to wake me up! Then they stroke my hair. What I have learnt in my experience of going to sleep is that if you go to sleep feeling happy, not worried or upset, you wake up feeling a bit better.



Example of a single page article - 600 Words

NIAA

National Institute of Academic Anaesthesia

# The John Snow Anaesthesia Intercalated BSc Awards 2016

The National Institute of Academic Anaesthesia (NIAA) is pleased to announce details for the 2016 John Snow Anaesthesia Intercalated BSc Awards. Awards will be offered by the Association of Anaesthetists of Great Britain and Ireland (AAGBI)/*Anaesthesia*, the *British Journal of Anaesthesia* (BJA)/Royal College of Anaesthetists (RCoA), the Obstetric Anaesthetists' Association (OAA) and the Neuroanaesthesia and Critical Care Society of Great Britain and Ireland (NACCSGBI).

- The scheme has been designed to encourage medical student interest in anaesthesia and its related disciplines.
- The AAGBI/Anaesthesia, BJA/RCoA and OAA are offering awards of £2,000 and the NACCSGBI an award of £1,000.
- Each institution can submit a maximum of four applications, so some co-ordination between supervisors will be required.
- Awards go to the student and not the supervisor/institution and are meant to contribute to living costs. Project running costs will be funded by the supervisor/institution.
- Applications are welcomed for suitable clinical projects.
- Assessment criteria: (1) quality of the student, (2) quality of the research project and (3) supervisor and teaching environment. Unfortunately we are unable to provide detailed feedback to applicants.
- Applications should be submitted for projects that have not yet commenced and applicants may only apply for one funding stream.
- Funding should be acknowledged in any publications (i.e. funded by AAGBI/*Anaesthesia*, BJA/RCoA, OAA or NACCSGBI via the NIAA as indicated in the award letter) and a final report will be required.
- Intercalaters may be asked to present their work at a meeting.

**The closing date for applications is 5.00 pm on Thursday, 31 March 2016.**

For further information and an application form please visit the NIAA website at: www.niaa.org.uk/JohnSnow2016.

To read about some of the successful iBSc projects that have been funded in the past, please see: http://www.niaa.org.uk/John-Snow-Anaesthesia-Intercalated-BSc-Awards

These awards are annual, so if your department misses the deadline for 2016 please do consider applying again next year.

Best of luck!

Association of Anaesthetists of Great Britain and Ireland

Anaesthesia Journal of the Association of Anaesthetists of Great Britain and Ireland

Royal College of Anaesthetists

BJA British Journal of Anaesthesia

Obstetric Anaesthetists' Association

naccs Neuro Anaesthesia & Critical Care Society of Great Britain and Ireland

# FULL OF BEANS

The coffee room at last. I had the first patient on the table and the surgeon was happily buzzing and scraping. Time for a coffee. And Big Joe was already there and the kettle was boiling – job half done and an audience in one.

'Well Ginge',' says Joe, 'And what's worst today?'

I decide to ignore that one and ask about his list instead. 'Got the first one on the table and the ST is holding onto a face mask, like old times eh?' says he.

'Don't talk to me about masks!' I reply. For the record, I have had a bad time with masks of late. In the past, you used to get a mask that fitted. It was compliant, yet firm, tight, yet flexible. Joe smirked and chuckled a little at this and so I gave him a disapproving glance over the top of my glasses. 'Plus ça change, Ginger, plus ça change,' he said with a touch of melancholy.

'Truth is, I have had trouble with masks,' I said. 'These disposables they give us now don't fit. They are too big or they leak. They're cheap right enough but they are also no use! I go through stacks of them, trying to get one that works. Trouble is, the sats are starting to fall and the whole thing is going pear-shaped before you finally manage to get a seal. It's just not good enough!'

'It's what you get when them that buys things don't know what they're for,' says Joe handing me my first cup of nerve-calming caffeine-laden tar. (When did this stuff last approximate a bean?)

I have to agree with him. 'You're so right, Joe!' I say as the coffee begins to raise my chin like provocation.

'I suppose I feel sorry for these poor pen-pushers in procurement,' he continues, content at his alliterative aplomb. 'It's hard for them, not knowing what it is they're buying, or what we do with it.'

'You are too generous, Joe!', I continue. 'I long for the day when it was quality in your grasp when you were handed staples. Tubes that didn't bend, tape that stuck...'

'Ginger, you were always such a romantic!' he twinkles at me.

'Yes, but the stuff we have is so poor – the masks are an example, surely, but there's more to it.'

'You'll be coming on all educational next and telling me we need to get a junior to do a project on it!'

'Well, actually, that's not a bad idea. Quality deterioration would be novel! I suppose we could call it 'Quality improvement – the mask of discontent'. There's a publication title for the AAGBI'.

'Don't be cynical,' he comes back, with a slightly superior look which I know is part of the fun. 'The hook is safety, Ginge – how many patients need to go blue before we see it as a risk?'

'How do we get them to quantify that risk though?' Maybe we can use the financial angle to show we use so many of the wretched things we cost them more. The mantra of cheapness being next to godliness needs dissent. Could we quantify mounting panic?'

Joe has a paper towel in his hand as he sits down again. 'Let's just sketch it out so we a have plan for your trainee.' His bleep goes off. 'They can't have finished already unless old scissor-hands has another engagement for the afternoon – never let's on' says Joe as he gets up to wash his cup and trundle off downstairs.

I contemplate the conversation, glad we have the space to have it. Will I have another cup? Better not. Better go back to theatre...

**Ginger Snappe**

# A South African adventure

**One of the great privileges we are afforded as doctors is the opportunity to travel and use our skills in different countries. It was during the dark autumn evenings when revising for the Primary FRCA that I decided I was ready for a change. I wanted a challenge where I would regularly be pushed outside my comfort zone, with a completely different case mix to the UK. An abundance of outdoor and adventure activities was also a prerequisite! South Africa seemed to fulfil these criteria perfectly. I chatted to a number of helpful colleagues and friends who had worked in South Africa. I was issued with warnings of understaffed rotas, lack of teaching and supervision and the obvious threat to personal safety posed in South Africa. Despite this, the benefits to me seemed to hugely outweigh the risks.**

The process of gaining a post and registration to work in South Africa is done through the charity African Health Placements. The necessary paperwork took around 8 months to process, but it can take a year or more. I wanted to work as an anaesthetist in a large referral hospital at a training grade between CT2 and ST3, rather than as a 'generalist' in a small rural hospital where many UK doctors often work. After talking to others who had worked out there, I settled on Ngwelezana Hospital in KwaZulu-Natal. Ngwelezana Hospital is 170 km along the coast from Durban. It has around 550 beds, eight ICU beds and is a tertiary referral centre with a catchment area of 4 million people from 22 peripheral hospitals. It is linked to a nearby maternity and neonatal hospital.

The anaesthetics department had one consultant and around 15 juniors, the majority of whom had less than one year's anaesthetic experience. There were two general surgery theatres, two orthopaedic theatres, and one theatre rotating between eyes and burns/plastics. There were no printed theatre lists and no pre-operative assessment. 'How will this ever work?' I thought. There was, however, an ultrasound machine and a video laryngoscope. Theatre lists were constantly changing and could include patients of any age or ASA grade. The patients would arrive in theatre and a brief anaesthetic history and examination would be undertaken. This was usually with the nursing staff translating.

On my first day, I was with a junior anaesthetist who had only been in training for a year. He competently managed laryngospasm in a 6-month-old, and later anaesthetised a patient who had suffered a chest stab wound. In the afternoon, we were called to help on a ward. A patient was hypoxic with stridor from an expanding carotid artery aneurysm secondary to arteritis (a sequela of HIV). She was intubated and transferred to Durban. This proved to be one of the few times I would visit the wards as we were normally busy running lists in theatres.

The learning curve over the first month was exponential. With minimal senior support and guidance I found myself with many unanswered questions. Everything was so different to the UK. I witnessed unsafe practice and deaths on the table. I found it important to reflect with my colleagues and housemates after particularly difficult days. It was also useful to discuss cases by email with my senior colleagues from the UK to reassure me that my practice was safe. There were very few safety systems in place and I felt uncomfortable with the lack of structure. There was no EWS system or a cardiac arrest team to cover the wards and the resuscitation attempts were often chaotic and too late. To improve care I helped teach Basic Life Support to the nursing staff, and carried out an audit of the resuscitation equipment on the wards.

Over the next 8 months, I would become used to anaesthetising patients with major trauma, severe sepsis and children down to one year of age. As one of the more senior members of the department, I was responsible for the running of an operating list each day. I had to prepare the anaesthetic machine and circuit, change cylinders, prepare drugs and the airway equipment. I quickly had to become more independent and resourceful. Anaesthetic nurses would usually assist by holding an airway but they were of mixed ability.

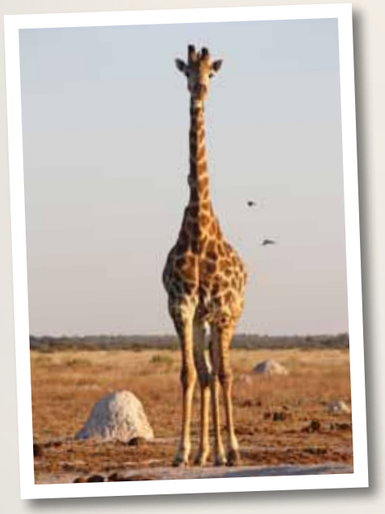
The Zulus were warm and friendly to work with. Every shift was full of laughter. The sound of the beautiful harmony of the nurses singing prayers at the start of their shift will remain with me. The Zulus are also renowned for being incredibly stoical people. Paydays and public holidays would always be associated with increased levels of alcohol-related violence. Christmas and Easter shifts were hectic. They carried out a number of laparotomies for gunshot wounds to the abdomen and thoracotomies for stab wounds to the heart. Burns and snakebites in children commonly required repeated visits to theatre for debridement. Every day I was dealing with patients who had only seen a sangoma (traditional healer), or had poorly controlled chronic conditions such as diabetes, HIV and tuberculosis.

Other than trauma most of the work was in obstetrics. Oedematous, drowsy parturients with pre-eclampsia and eclampsia would be placed in a queue outside theatre, day and night, awaiting a caesarean section. The hospital had a caesarean section rate of around 50%; in an average 24 hour shift on obstetrics I would do 10 to 15 caesarean sections. High teenage pregnancy and pre-eclampsia rates resulted in many premature deliveries. I was often required to assist in the resuscitation of the neonate while also looking after the mother. Without a portable monitor or ventilator, I relied on clinical parameters when transferring intubated obstetric patients to the ITU on the other side of the hospital.

There was a national blood shortage, especially in the government hospitals. In obstetrics in particular, many women were anaemic from acute blood loss or from chronic disease. The emergency supply of blood would sometimes become exhausted and further blood supplies would take around an hour to arrive from the off-site blood bank. Maternal haemorrhage was not uncommon and deaths occurred.

An important part of my role was training junior anaesthetists. Interns spent two months in our department, after which they would have to provide anaesthesia for minor surgery and obstetrics independently in a rural hospital as a community service officer. They were on-call from day one and as a result I found myself being called to various emergencies ranging from failed intubations to high spinals. The importance of good training for these interns has been highlighted in the country's Saving Mothers Report 2008–10, which found complications related to anaesthesia were the most clearly avoidable deaths [1].

I was often working with junior surgeons who were performing major surgery. Within a few weeks of starting, my UK surgical colleagues, having just completed their F2 year, were quickly trained up to perform amputations and trauma laparotomies. The large trauma workload meant that regional anaesthesia was used extensively. Having a particular interest in regional anaesthesia, I developed my skills in ultrasound guided nerve blocks. There



was no expert supervision, so the internet and the books I had taken with me were invaluable sources in my self-directed learning. There were no facilities or resources for patient-controlled anaesthesia or epidurals. Once back on the ward, postoperative pain from major surgery was managed with paracetamol and intramuscular morphine. Despite the large amounts of opiates used in the hospital, postoperative nausea and vomiting was rare.

Outside of work, KwaZulu-Natal was a treat. I lived in the small village of Mtunzini, along with many other South African and UK doctors working at the hospital. Touch rugby on the beach, mountain biking in the forests and the (almost) daily braai (South African BBQ) made for some wonderful evenings. Within reach for an off-duty weekend were famous game reserves such as Hluhluwe-Umfolozi, some of the world's best diving sites, the Drakensberg Mountains and the historic battlefields of Zululand and a little further afield there was Mozambique and Swaziland.

From the departmental meetings led by a spirit-banishing prophet, to the power cuts and fires I witnessed in the operating theatres, working in South Africa never failed to surprise me. I feel incredibly fortunate to have had the opportunity to immerse myself in this country's healthcare system, population and culture. My time in South Africa has impressed on me the importance of good training programmes in anaesthetics, which we are fortunate to have in the UK. For those in search of an action packed year, both in and out of work, I would highly recommend fitting some time in KwaZulu-Natal into your FRCA revision timetable.

**Thomas Nightingale**
*ST3 Anaesthetics, Musgrove Park Hospital, Taunton*

*Reference*

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# SAS AUDIT POSTER PRIZE 2016

The AAGBI invites abstracts for the SAS Audit Poster Prize. The prize is open to all SAS grade anaesthetists.

A preliminary review of the abstracts received will determine which ones are accepted for poster presentation at the Annual Congress in Birmingham.

Prizes will be awarded to authors of the best posters and the abstracts will be published in *Anaesthesia* in the form of a fully referenceable online supplement (NB Editor-in-Chief reserves the right to refuse publication, e.g. where there are major concerns over ethics and/or content).

The deadline for submission is **23:59 on Monday 18 April 2016** and full instructions can be found on our Annual Congress microsite: www.annualcongress.org/content/oral-poster-presentations

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For further information, including the job description, person specification and application form, please see the NIAA website: www.niaa.org.uk under 'News & Events'. Further information about the HSRC is available here: www.niaa-hsrc.org.uk

Those who are interested are strongly advised to discuss the role with the existing post-holder Dr Ramani Moonesinghe: rmoonesinghe@googlemail.com

**Closing date for applications: Friday 29 April 2016 at 12 noon**
**Interview date: Please refer to the NIAA website**


# *Anaesthesia* Digested

## *Anaesthesia* March 2016

### The measurement of adult blood pressure and management of hypertension before elective surgery

Joint Guidelines from the Association of Anaesthetists of Great Britain & Ireland and the British Hypertension Society

In Europe, hypertension occurs in about 30–45% of the population and is even becoming relatively common in adolescents. Consequently it is probably the most common co-morbidity that we see in surgical patients. Despite this, inconsistent and injudicious peri-operative management of hypertension causes a lot of confusion, unnecessary cancellations and avoidable laboratory testing. The economic consequences, never mind patient inconvenience, are considerable and, therefore, it is great to see some clear direction on this matter in this very well presented and practical guide.

### Funnels for publication bias – have we lost the plot?

**Choi SW, Lam DMH**

The lottery is a tax on people who don't understand statistics. If you want to refresh your knowledge, every month this year we have asked one of our statistical advisors to address and demystify a common statistical topic. Presented in an entertaining and engaging fashion, these articles are essential and thought provoking reading for anyone interested in clinical trials.

### The influence of target concentration, equilibration rate constant ($k_{e0}$) and pharmacokinetic model on the initial propofol dose delivered in effect-site target-controlled infusion

**Glen JB**

Propofol-based intravenous anaesthesia has significant advantages over the use of volatile anaesthetic drugs. Unfortunately, the development and acceptance of this technique has been inhibited to some extent by the perceived complexity of administration and inadequate training in most anaesthetic curricula. Target controlled infusion (TCI) allows propofol to be titrated accurately to the desired clinical effect and, subsequently, maintain stable blood concentrations. Effect site targeting makes this process even easier but the current TCI models do not accurately reflect the effect site concentrations because the rate constant ($k_{e0}$) used is probably not correct. This innovative study used computer simulation to help determine the appropriate $k_{e0}$ values with three well known TCI pharmacokinetic models. Anaesthesia has published several articles looking at this issue in recent years, including an excellent editorial by Cortinez which explains this concept very clearly.

N.B. the articles referred to can be found in either the latest issue of *Anaesthesia* or on Early View (ePub ahead of print)

**M.G. Irwin**
Editor, *Anaesthesia*

# Nitrous oxide. The good, the bad (and the ugly)

L0002835 © Wellcome Library, London. Administering nitrous oxide gas. From: The discovery of modern anaesthesia. By: Nevius, L. W. Published: Nevius New York 1894

**Nitrous oxide is ubiquitous in our delivery rooms, our theatres, our kitchens and in the atmosphere. Non-medical use of nitrous oxide even outside of the food industry, where it is known as the additive E492, is also surprisingly widespread. The power output of the internal combustion engine can be greatly enhanced by modification to allow the injection and ignition, in short bursts, of nitrous oxide in the manifold – NOS modified cars, as they are known, are technically legal for street use in the UK. Nitrous oxide gas can act as the oxidiser in amateur and commercial rocket engines, although it is thankfully considered too unstable for military use.**

Nitrous oxide is an important contributor to climate change. However, unlike chlorofluorocarbons, it has always been present in the atmosphere, since 70% of its production is unrelated to human activity being from bacteria in the soil and oceans. Among greenhouse gases it ranks fourth in order of importance. Weight for weight it is 300 times more harmful than carbon dioxide over a 100 year time interval but its concentration in the atmosphere is much lower. It is also a potent cause of ozone depletion. Non-agricultural human-based emission of nitrous oxide has diminished but agricultural production of nitrous oxide represents about 65% of the total and remains almost unchanged in quantity since 1970. Obviously a discussion of the causes of climate change is beyond the scope of this article, but it will be apparent that medical release of nitrous oxide in to the atmosphere while not insignificant is just a small fraction of total emissions.

Until 1772 nitrous oxide was quite unknown, for that was the year that Joseph Priestley first isolated it at Lord Shelbourne's private laboratory in Calne, Wiltshire. This was three years earlier than Priestley's still more famous discovery of oxygen, a distinction he shares with Antoine Lavoisier and Carl Scheele. No-one claimed co-discovery of nitrous oxide. That was his feat alone when Priestley heated moistened iron filings with sulphur (brimstone) and nitric oxide (nitrous air). But what are we to make of his naming it 'diminished nitrous air' or 'dephlogisticated nitrous air'? Priestley, a natural philosopher and dissenting preacher, was not quite a pure scientist in the mould of Lavoisier, and adhered unswervingly to the soon to be disproved phlogiston theory, but at least in his seminal publication *Observations of Different Kinds of Airs* he finally laid to rest the principle of Four Elements.

It was not until a further 25 years had elapsed that nitrous oxide was harnessed in any way to take advantage of its properties. A certain Dr Mitchell had not advanced it much when he stated that it was the primary cause of contagion and fatally harmful even in tiny quantities. Keen to disprove such nonsense, the physician Thomas Beddoes, in his Pneumatic Institute at Bristol, had the idea of investigating the possible medical uses of nitrous oxide, particularly as a treatment for tuberculosis. Beddoes is perhaps less well known now than his son, the poet Thomas Lovell Beddoes. However Beddoes Senior was certainly more than a country quack, and his ideas for pneumatic medicine, though misguided, showed evidence of his willingness to challenge the status quo.

Beddoes employed a young Humphry Davy, his fame and a baronetcy some distance in the future but fresh from an apprenticeship in his native Cornwall, to be his assistant. Much is made of the book which Davy published in 1800 entitled *Researches, Chemical and Philosophical*. Deep inside the closely printed pages of that tome, Davy refers to the analgesic effects of nitrous oxide and later to the possibility that it might be used for surgical operations. Davy did not pursue this any further and left for the Royal Institution shortly thereafter to follow different avenues of investigation. Some historians regard this as a missed opportunity to herald the discovery of anaesthesia. But just how unsafe an anaesthetic might it have been given its extremely weak ability as an induction agent unless given to the almost total exclusion of room air? Perhaps it was a blessing in disguise that it was not taken up at this time. It is worth remembering that after Horace Wells' failed demonstration of nitrous oxide anaesthesia in 1845, it was barely used even as a dental anaesthetic until championed by Gardner Colton in 1862 and subsequently in London in 1868 by an American dentist from Paris, Thomas Evans. Even though Andrews of Chicago had stated that same year it should be given in combination with at least 20% oxygen, in 1910, McKesson of Toledo, Ohio, was a firm proponent of its use as an anaesthetic with no more than 5% oxygen and designed a very popular anaesthetic machine for that purpose. Thus it earned the grim sobriquet of the 'black gas'.

Remarkably, Paul Bert, the French physiologist and protégé of Claude Bernard, devised the answer to all of this in 1880. He had the extraordinarily clever idea of building a hyperbaric chamber in which patient, surgeon and anaesthetist, and anyone else who happened to be inside it (for it was quite large), were subjected to a pressure of two atmospheres. He knew that as nitrous oxide is effective at a partial pressure of one atmosphere, it could at such an ambient pressure be given in a concentration of 50% with air. The surgical anaesthesia was said to be superb, skin colour excellent and patient recovery very swift. However, even though the chamber was mounted on wheels and could thus be moved around Paris from hospital to hospital, it was not a practical solution.

Humphry Davy's study of the effects of nitrous oxide owed a great deal to self-experimentation, even to the point where it has been suggested that he was briefly dependent on the drug. He risked his life and might well have paid a high price but for good fortune. There is little doubt that at times he experienced pronounced hypoxia and breathed harmful concentrations of carbon monoxide and of impure oxides of nitrogen. The effect of breathing nitrous oxide recreationally is the production of a state which some users describe as no more than dizzy and others as nothing less than a psychedelic experience. That was certainly the effect that Davy's friends from the world of the arts were hoping to experience and by all accounts did. Peter Roget, of Thesaurus fame, and poets Samuel Taylor Coleridge and Robert Southey were particularly effusive. The normally sober Southey, Lord Nelson's biographer, described it rapturously as 'the air in heaven, a wonder working gas of delight'. Coleridge had already written his extraordinary metaphysical poem *The Rime of the Ancient Mariner*, and would later become a habitual user of laudanum and opium, as was typical of this period. Their friend Thomas De Quincey, in his celebrated book *Confessions of an English Opium Eater*, laid bare this drug-addled artistic life. Of all the romantic poets only William Wordsworth is known to have abstained.

Inhaling nitrous oxide from balloons was a popular pursuit amongst hippies on America's West Coast in the 1970s and has gained popularity in Britain over the last 10 years. The key to this is the ease with which it may be obtained and administered. Nitrous oxide has a place in the food industry as a preservative and is also used by restaurants in the making of whipped cream, for which purpose it is ideally suited. For this application it is supplied in very small pressurised canisters which when broken open will readily fill a small balloon. The party goer breathes in and out of the receptacle until some desired effect is obtained. This is not by any means a particularly clever thing to do, but surprisingly is not against the law. For the time being it is classed as a legal high, an anomalous situation that may well change if proposed government legislation reaches the statute books. Most British outdoor festivals already have zero tolerance of nitrous balloons.

There is not a great deal of evidence that occasional inhalation of nitrous oxide as a leisure pastime is overly hazardous. Compared to the known harmful effects of alcohol and tobacco it is relatively safe. Without doubt a great deal more harm was wrought by its cavalier use as an anaesthetic in the first half of the 20th century. The problem lies in the paradox that the success of nitrous oxide as a sole anaesthetic is dependent on using as little oxygen as possible. That this was done without ill effect on thousands of occasions cannot be disputed. As for how many patients were rendered neurologically compromised or dead remains a matter for conjecture, but it is a stain on the history of anaesthesia. Why did this hazardous practice persist for so long? There are many reasons. The skill of the experienced anaesthetist was a factor but so was hubris. The need for fast surgery, especially in dentistry was also an issue. However the widespread use of nitrous oxide as a sole anaesthetic agent for laparotomies and other prolonged procedures was reprehensible given the safer alternatives available at the time. As late as 1959, that doyen of British dental anaesthesia Victor Goldman was writing at length on nitrous oxide and air anaesthesia in chapter 17 of *General Anaesthesia*. This two volume book edited by Frankis Evans and Cecil Gray was published by Butterworth to popular acclaim so it will have reached a wide audience. Dr Goldman, of the eponymous vaporiser fame, espoused the so-called '4th breath technique'. The patient inhales 100% nitrous oxide until asleep and deeply cyanotic, and then air is given every fourth breath for no more than 2–3 minutes. To avoid 'the damaging effects of cerebral hypoxia'

it is recommended that oxygen should be judiciously added for longer procedures or if there is an increase in respiratory rate indicating marked hypoxaemia. Even as recently as 1973, in the 7th edition of that wonderful book *Synopsis of Anaesthesia*, this technique is briefly mentioned but there is, the authors state, 'little justification for its use in modern anaesthesia'.

Harm from the use of nitrous oxide did not result just from its overzealous administration, but sometimes from its inadvertent delivery to patients. Deaths occurred all too frequently as a direct result of gas cylinder connection errors prior to the adoption of the pin index safety system, a continuing state of affairs which, in 1945, *The Lancet* considered deplorable and demanded action. Even more contemporarily, right up until the 1990s in fact, the use of obsolete Boyle's machines which did not prevent hypoxic mixtures being delivered has resulted in inadvertent prolonged administration of 100% nitrous oxide with catastrophic results.

In recent years a more insidious attack on nitrous oxide in anaesthesia has come from Australia and some parts of the USA, where loud voices have claimed poorer outcomes following use of the agent in anaesthesia for major surgery. Their case has been overstated and the evidence is contradictory. Medical use of nitrous oxide has survived all of this and it seems likely that it will continue to be available for many years to come. The black gas may yet have a bright future.

**Matthew Down**
*Sunderland Royal Hospital*

*Further reading*


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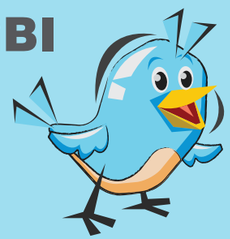


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| OSA in children – Anaesthetists perspective | 2A01, 3A02 |
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**NEW: Chronic Pain Challenges: community & hospital** - Half-day multi-disciplinary, 09.30 - 12.30 16th September. Lectures, discussions, practical challenges & cases. Cost £50. Early bird £40.
**NEW: ALS Resuscitation Council Courses 2016, led by Harry Stevens**: 13th-14th June; 5th-6th September; 5th-6th December. Cost £370. Early bird £350.

**Simulation Courses**

**Training the Trainers** - Two-day, Simulation Education. 26th-27th May. Cost £280. Early bird £240.
**Resuscitation Update** - Half-day, 18th April. Cost £70. Early bird £60.
**Neuroanaesthesia: learning through simulation** - One-day, 26th May. Cost £140. Early bird £120 .

**Venue: Mountain Ash, near Cardiff, very easy transport links, masses of free parking.**
**Refreshments provided. CPD points applied for. All early bird rates apply to 21 days before course date.**

**To register: https://form.jotformeu.com/cmhabc/BMC. For information, contact Catherine Hough: (029) 20743108; Email: HoughC@cardiff.ac.uk**

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# AAGBI PATIENT SAFETY PRIZE 2016

## The AAGBI would like to offer a Patient Safety Prize to showcase examples of improved safety in anaesthesia.

The prize is open to members of the AAGBI. The project could involve an individual, department, medical students or allied health care professionals, provided the project lead is a member of the AAGBI. Applicants may like to consider projects based on themes identified in SALG patient safety updates.

**You will need to demonstrate:**

- Clear aims and objectives
- An innovative idea(s)
- How the project was introduced and implemented
- How performance was measured and benchmarked
- How information about the project was disseminated
- The sustainability of the project
- Transferability of the project to other departments

**Amount:** Up to £500 (at the discretion of the awarding Committee). There may be more than one prize.

**Awarded:** At the AAGBI Annual Congress, Birmingham

**Format of submissions:** Poster presentation

**The winner will be expected to:**

- Make a five minute oral presentation during the prize giving at Annual Congress

**The deadline for submissions is 23:59 on Monday 18 April 2016**

Please visit **www.annualcongress.org/content/aagbi-patient-safety-prize** for further details. If you have any queries, please contact the AAGBI Secretariat on 020 7631 1650 (option 3) or secretariat@aagbi.org

AAGBI FOUNDATION
Association of Anaesthetists of Great Britain and Ireland

## New award for excellence in sustainability

## Developing a green anaesthesia agenda

Barema & AAGBI ENVIRONMENT AWARD FOR ANAESTHESIA

The AAGBI recognises that our actions have an impact on the environment and regards global warming and climate change as pressing issues. In 2013 the Environmental Task Group of the AAGBI was formed to develop the idea of sustainable practice and to promote greener anaesthesia. The Task Group and the Association have linked with Barema, the Association for Anaesthetic and Respiratory Device Suppliers (representing companies that manufacture or supply anaesthetic and respiratory equipment in or to the UK), to establish the **Barema & AAGBI Environment Award**. This will recognise excellence in sustainability within the speciality and engage with industry partners to further develop a greener anaesthesia agenda.

**The award will be for the single best initiative or project and will consist of £200 to the individual(s) or body(ies) concerned, in addition to a grant of £800 for support and development of the initiative or project.**

**The deadline for applications is 29 April 2016** with the winners being announced at the AAGBI Annual Congress in Birmingham, 14-16 September 2016.

## Apply for the NEW Barema & AAGBI Environment Award!

Applicants will have to demonstrate how their activity, project, campaign or other work (including original research), related to anaesthesia, intensive care or pain management, has had (and will continue to have) a measurable beneficial effect on the environment. The wider applicability (to other departments) and the sustainability of the initiative are important parts of the award and will be assessed by the judges.

**To find out more about the award and the application process visit**
**www.aagbi.org/about-us/environment**
**or email secretariat@aagbi.org**

barema

The Association of Anaesthetists of Great Britain & Ireland

# Euroanaesthesia

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European Society of Anaesthesiology
ESA

# Hypnotic suggestions

*'Meow' means 'Woof' in cat – George Carlin*

Politicians, advertising agencies and salespeople are highly familiar with the persuasive power of hypnotic language patterns. Eriksonian, or 'indirect' hypnotic communication, is often used to frame an idea so that the recipient is guided to perceive an issue in a certain way. While this approach may be misused for marketing goods or ideas, it can also be employed to help a patient alter, diminish or eliminate an unwanted negative emotional association. This can be achieved quite simply through careful word selection or via more sophisticated subliminal communication techniques.

Medical training in communication focuses on a conscious understanding of stated feelings and facts and the doctor's observable communication skills. This necessary and valuable training isn't geared towards an appreciation of a patient's subconscious perceptions and behaviour. Therefore health professionals will often make inadvertent errors which may worsen a delicate situation.

Some basic principles from Cyna et al. [1] are worth noting:

1. Enable your patient to become an active participant in their care and allow them to maintain control whenever possible. Loss of control is often at the heart of the problem.

2. Patients do not have to consciously understand or believe in what is communicated to get benefit. When a patient is highly stressed they will tend to focus their attention inwards as a protective mechanism. This makes subconscious suggestion much more likely to be effective.

3. Language aimed at eliciting non-volitional responses works to different degrees in different people and success also depends on the skillset and experience of the doctor. As those great thinkers of the 1980s, the Fun Boy Three (featuring Bananarama) wisely and repeatedly proclaimed, ad nauseam, 'It ain't what you do it's the way that you do it!'

Let's start with some wooden spoon award scenarios:

## 1. Inadvertent negative suggestions

a) The 'helpful' paediatric ward nurse:

Nurse: 'Hello Johnny, this is Dr Rushed. He's going to put you to sleep this afternoon'
*[Poor Johnny had his dog put to sleep a month earlier and bursts into tears]*
Dr Rushed: 'Johnny, when you come down to the operating theatre I'll be giving you some medicine to allow you to have a short sleep so that clever Mr Bonehead can fix your broken arm and make everything better and more comfortable for you. And you'll be back here on the ward for something nice to eat and drink soon afterwards.'

b) The over-zealous recovery nurse:

Nurse: 'Nora, if zero is 'no pain' and ten is the worst possible pain you can imagine right now, what score would give your pain'
Nora: 'Urghh, 10'
Nurse: 'Why is your pain always 10 when I ask you?'

c) Anaesthetist prior to cannulation:

'Sharp scratch!' The anaesthetist makes a similar error to the recovery nurse who prompts the patient to spontaneously create an internal sensation of unpleasantness thereby priming their brain for a bad experience. The anaesthetist's intention is to give the patient due notice that cannulation is about to occur, but inadvertently describes this as 'sharp' and 'scratchy' when in truth, the anaesthetist cannot know what the patient will experience. There are many alternatives to this over-used warning.

Other similar phrases include:

'Don't worry' – hint: If you don't think of a blue elephant then you won't have a blue elephant in your mind right now, will you?

'Can you try to keep your eyes open for me?' Implies failure. What if the patient soon finds they can't?

What does 'Try not to move please' suggest to the patient? How about 'I'd like you to remain really relaxed and still for a little while now' instead.

'Can you open your eyes?' as a test of whether the patient is asleep. What if they can hear but not respond? How do you think that feels as your last conscious thought prior to surgery?

What could you say instead of 'We can give you some medicine into your drip when you're sick after the operation.'?

What could you say instead of 'It's important to let the nursing staff know when you have severe pain.'? Perhaps 'It's important to let the nurses know if you're not as comfortable as you need to be to move and take a deep breath.'

Why might 'Imagine lying on a sun-drenched beach enjoying tequila' not be appropriate? It might be perfectly fine if you had previously elicited that the patient enjoys lying on a sunny beach drinking tequila, but otherwise it's generally a no-no as it's too specific. Be vague with something like, 'As you relax your arms by your sides and take those nice slow deep breaths, you can start to imagine yourself somewhere wonderful and relaxing.'

The next series of suggestions can be weaved into your usual patter:

## 2. Some great verbs that enable 'embedded commands'

Rather than asking a patient during induction, 'Is it working?' you can instead ask 'Have you started to notice the anaesthetic working yet?'

Success would be unlikely if you simply asked the patient to 'Relax completely', but it begins to sound entirely natural when you start to say, 'Allow yourself to...relax completely' as you 'start to...feel the anaesthetic working' and 'begin to...go to sleep'

Realise that...you can make a series of gentle commands while you notice that...you time your phrases and your own breathing... with the desired respiratory rate.

e.g. 'Notice that...you can breathe slowly and easily through the face mask and allow yourself to ...relax...as we begin to give the anaesthetic. It can be a bit cold and sometimes a bit strange as it goes up your arm... that's entirely normal. You may even get a funny taste as it starts to do its magic. Just keep taking nice, slow, easy breaths while you allow yourself to ...go off to sleep. That's right. Well done. Everything's fine.'

## 3. Special words

a) BECAUSE ...

'BECAUSE' is a highly persuasive facilitator

e.g. Patient, 'I don't want paracetamol. Paracetamol is always a waste of time'

Doctor 'I believe you BUT I'd like to give you paracetamol BECAUSE we find that it helps when given regularly as part of a balanced combination of medicines AND it safely complements everything we use to ensure your comfort afterwards'

b) YET – things can happen in their own sweet time

'Have you started to notice the anaesthetic working yet?' indicates that the anaesthetic will work soon (if it hasn't started already) but the exact timing is unknown and that's just fine.

e.g. Patient 'I don't know if I want this procedure given all the complications you've just told me about. I don't think I can weigh things up properly.'

Doctor 'I agree. We wouldn't expect you to make a final decision on this just YET. Allow the information to settle in and after you've talked it through with your family, let us know your decision.'

4. Some language patterns

a) Agreement frame – I AGREE (stating the degree to which you agree) AND/BUT ...here's my advice (see examples above)

e.g. Patient, 'I'm petrified of having an anaesthetic.'

Doctor, 'I AGREE that the thought of a general anaesthetic can be scary, BUT allow me to reassure you that having an anaesthetic is as safe as taking a train journey. By admitting you've been worried by this, you're taking the first step to ensuring it doesn't unduly worry you now and in the future. Is there anything in particular that concerns you?'

Patient 'I'm worried about not waking up at the end or, worse, I've read about people who've been awake in pain all the way through their operation and I don't want that to happen to me.'

Doctor 'I AGREE those stories can be unsettling and it has happened to a few people in the past BUT it is extremely rare for anything like that to happen. I'm with you at all times while you're asleep to ensure that you will stay asleep throughout the procedure AND I'll be doing everything I can to make sure you're comfortable when you wake up at the end of the procedure.'

b) Shifting time linguistically to minimise anxieties – Dr When rather than Dr Who

Anxieties are usually centred on a particular part of the patient's perceived future and can be based on real past experiences or simply be imagined. In the above example the patient expressed their personal worry in the present tense, intimating that it was unwanted and not modifiable without help. In response, the doctor pushed the problem onto a few other people in the past and attempts to help the patient feel differently about this issue from that point in time onwards.

e.g. Patient 'I really don't like needles, doctor. I think I'm needle phobic. Can I have gas instead?'

Doctor 'The issue isn't so much about needles or gas, the issue is about how we can give you the safest anaesthetic. That means, in your case, it is much safer if we place a cannula into the back of the hand and give the anaesthetic by injection. You may have had problems with this in the past, but all I ask you to do right now is to imagine the moment when the cannula is already in and it's all over and done with. Imagine how you'll feel when you look back and realise that it wasn't so bad after all. I promise you it will be different this time and maybe every time after that perhaps. Who knows? What do you think? Are you willing to give it a go?'

c) The Redefine: 'The issue isn't really (x), it's (y), and therefore...'

See example immediately above

e.g. Patient 'By the way doctor, I don't like face masks'

Doctor 'The face masks we use nowadays are nice and clear, not like those horrible old black masks that they used to use. Giving oxygen is really important before an anaesthetic, so the issue isn't so much about plastic masks, it's more about your safety. So if you like you can [hold the face mask yourself], get all the benefit and remain in complete control. I'll ask you to [let me hold the mask only when] you begin to fall asleep and you can then rest your arm down by your side. Is that OK?'

d) Compliance Frame - Pace, Pace, Pace, Lead (Lead, Lead)

Doctor 'Now that we have your monitoring connected and you're sitting back comfortably and all the paperwork is completed, I'd like you to...relax...and rest your arm down here to allow me to place the cannula in the back of the hand. The cleansing wipe might feel a bit odd and numb with the tourniquet on...squeeze it tightly a few times for me. Thank you. Now, let the hand go floppy like a rag doll. OK...done'

I've presented a few ideas for anaesthetists to enhance their language and communication skills in situations where their otherwise effective default patter fails to work. Caution in patients with formal mental health diagnoses is required but I hope you'll be willing to explore these ideas further and see what works for you. This really can be a very useful approach in circumstances where traditional approaches flounder [2].

**David Laws**
*Consultant Anaesthetist,*
*Sunderland City Hospitals NHS Foundation Trust*

***References***

1. Cyna AM, Andrew MI. Communication skills for anaesthetists! *Australian Anaesthesia*, 2007; 95–100. http://www.anzca.edu.au/resources/college-publications/pdfs/books-and-publications/Australasian%20Anaesthesia/australasian-anaesthesia-2007/Cyna.pdf (accessed 11/12/2015).
2. Bigley J, Griffiths PD, Prydderch A, et al. Neurolinguistic programming used to reduce the need for anaesthesia in claustrophobic patients undergoing MRI. *British Journal of Radiology* 2010; **83:** 113–7.



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CALL FOR ABSTRACTS

The Association of Anaesthetists of Great Britain & Ireland

Abstracts for presentation at the AAGBI Annual Congress 14-16 Birmingham 2016

You are invited to submit an abstract for oral (free paper) or poster presentation at the Annual Congress. The deadline for submission is **23:59 on Monday 18 April 2016** and full instructions can be found on our Annual Congress microsite: www.annualcongress.org

After the deadline, a preliminary review of the abstracts received will determine which ones are accepted for presentation at the Annual Congress in Birmingham. Some authors will be invited to present their work orally, under the following three categories: case reports, original research and audit, quality improvement and surveys. The remaining successful authors will be invited to present a poster.

All accepted abstracts will be published in *Anaesthesia* in the form of a fully referenceable online supplement (NB Editor-in-Chief reserves the right to refuse publication, e.g. where there are major concerns over ethics and/or content).

Authors of the best free papers and poster(s) will be awarded cash prizes.

If you have any queries, please contact the AAGBI secretariat on 020 7631 1650 (option 3) or email secretariat@aagbi.org

# GAT ANNUAL SCIENTIFIC MEETING 2016

**Booking fee held at £195 for fifth year running for AAGBI members**

**15-17 JUNE 2016**

**NOTTINGHAM CONFERENCE CENTRE**

# A huge amount on offer!

The GAT Annual Scientific Meeting (GAT ASM) is the largest anaesthetic trainee meeting in the UK and this June comes to Nottingham! Held at the Nottingham Conference Centre, the GAT ASM offers trainee anaesthetists, 1st year consultants and medical students three days of talks, workshops, exam lectures, breakout sessions, drop-in clinics, networking, social events, mentoring and fundraising.

The Conference Centre has excellent air, rail and road links from all parts of the UK: see the GAT ASM 2016 website for all details - www.gatasm.org.

## Scientific Programme

- Scientific programme delivered by national speakers
- New live voting system for audience participation lectures
- Covers all aspects of the College curriculum

The 2016 programme offers themed plenary sessions on Wednesday and Thursday covering *Emergency care, Research in anaesthesia, Anaesthesia at the extremes of age, Challenging clinical cases and Ethical dilemmas in anaesthetic practice.* New audience participation devices will allow real-time delegate voting during lectures. Friday is devoted to three parallel streams of lectures tailored to Primary, Final and Post-Final FRCA trainees.

We are delighted to offer keynote lectures this year from Professor Chris Moran, NHS England National Clinical Director of Trauma, on *Trauma Care in the UK* and Professor Alan Aitkenhead, Professor of Anaesthesia, on *Health care professionals and the criminal law*. Both speakers are recognised leaders in their respective fields with huge experience 'on the shop floor' and at a national level.

## Workshops and other sessions

- All workshop fees reduced to £10
- Free mentoring taster sessions
- Regional anaesthesia and airway workshops
- Neuroanaesthesia hands-on simulation event

Workshops are offered at a newly reduced rate of £10 each this year, as we know trainees are being asked to do more and more with an ever shrinking study budget. Workshops on Regional anaesthesia and airways will cater for all trainees from novice to ST7. The expert faculty will be able to teach you the absolute basics or give you tips to finesse your existing practice. This year, thanks to the support of the Neuroanaesthesia and Critical Care Society of Great Britain and Ireland (NACCSGBI) we will be offering a Simulation workshop, where delegates of different grades will work together to solve in situ clinical simulation problems.

## Social Events

- Complimentary drinks reception and networking event
- Black tie dinner and dance
- Easy access to Nottingham city centre
- Fundraising for *Lifeboxes for Rio*

We are again offering a free drinks reception and networking event on Wednesday, where trainees can relax over a drink and explore the variety of networking stands on offer. Thursday's black tie dinner and dance will be held at the unique Old Museum next to the Conference Centre and will feature music by The Spinal Chords – a band of anaesthetists, surgeons and theatre staff from Nottingham! The ASM is held in the very heart of Nottingham, with the city's hotels, shops, bars and restaurants within walking distance.

### Medical Students and Foundation Doctors

- Medical student reduced booking fee
- Medical student poster competition and prize
- 'Getting into Anaesthesia' workshop

We are offering medical students and foundation doctors a reduced delegate fee for one-day access to the conference on Wednesday. This day will feature some great plenary sessions, a 'Getting into anaesthesia' workshop, and a specific poster prize judging session for medical students to display their work.

### Primary FRCA Trainees

- Exam focused Primary FRCA lectures
- Lectures all closely linked to the curriculum so will feature in Primary exams
- 'How to pass the Primary' lecture for revision strategies and tips

In addition to our main programme, Primary FRCA trainees can attend a specific stream of talks on Friday. These begin with a talk on top tips and exam strategies, followed by lectures on key aspects of the curriculum, each identified as traditionally difficult for exam candidates.

### Final FRCA Trainees

- Final FRCA SOE candidates one-day booking rate for Friday
- Mock Final FRCA SOE
- Exam orientated Final FRCA lectures
- 'How to pass the Final' lecture by a Finals examiner

In addition to our main programme, Final FRCA trainees can attend a specific stream of talks on Friday. After a lecture on tips to pass the Final, there will be talks on important but neglected topics in the curriculum. The NACCSGBI have kindly agreed to give a group of neuro-themed lectures to the Final FRCA group since this is a common area of candidate weakness uncovered by the exam. Friday will also feature a mock Final FRCA SOE examination run in parallel to the lecture programme.

The 2016 ASM falls one week before the Final FRCA SOE exams, so we are offering trainees who are taking their SOEs a one-day delegate fee for Friday so they can attend the mock Final FRCA SOE and the Finals-orientated lectures at reduced cost.

### Post-FRCA Trainees

- Post-FRCA talks to prepare senior trainees for life as consultant

On Friday, post-FRCA delegates can look forward to a day preparing them for consultancy, with lectures on important topics for your life as a consultant. These include NHS finances, consultant interview and CV tips, how to handle complaints, and independent practice.

See the GAT ASM 2016 website for all details and booking information – www.gatasm.org.

We look forward to seeing you in Nottingham! Remember to follow the conversation in the run up to GAT ASM by following us on Twitter @AAGBI #GATASM16.

**David Hewson, Victoria Cooper, Simon Denning, Jon Lewis**
*Local Organising Committee, GAT ASM 2016*

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## Panel of Quality Assurance assessors for Learn@AAGBI videos

Learn @AAGBI

The AAGBI makes videos from its three major annual conferences (Winter Scientific Meeting in January, GAT Annual Scientific Meeting in May/June, and Annual Congress in September) available online on Learn@AAGBI as a powerful educational resource.

The AAGBI has a rigorous Quality Assurance process that includes on-site assessment by a member of Council. In addition, all videos are checked and undergo further Quality Assurance before being added to the Learn@AAGBI platform.

The Education Committee is now seeking to appoint a Quality Assurance Panel, consisting of 15-20 members, to assist with this process. We anticipate 1-3 videos to review per Panel member during the few weeks following each conference, using a standardised assessment template. Training/support will be available as appropriate/required.

Interested candidates must be AAGBI members and can be of any grade; they should have a clear interest in medical education. Applications should be by email to learn@aagbi.org and should include a brief (< 300 words) personal statement describing their suitability for the position. Appointment to the Panel is for one year renewable.

**For further information please contact Professor Steve Yentis, Chair of the Education Committee, via learn@aagbi.org. The closing date for applications is 30th April 2016.**



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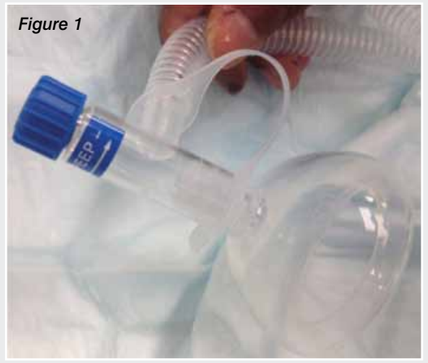
# SAFETY MATTERS

**A recent meeting of the Safety Anaesthesia Liaison Group (SALG – a joint AAGBI-RCoA committee) reviewed the following patient safety incidents. These are included in *Anaesthesia News* to achieve as wide a readership as possible.**

SAFE ANAESTHESIA LIAISON GROUP

Invasive arterial lines are a routine part of anaesthesia and critical care practice, used for monitoring patient condition and sampling arterial blood for analysis. A recent Coroner's inquest identified the arterial flush system as the source of air in a case of fatal air embolism. An expert witness raised concerns about the consistency of priming of arterial lines; some centres part-fill the drip chamber permitting observation of a working flush system while others fill the chamber completely by inverting it when preparing the line for use. The exact cause of the air embolus is not known and the MHRA has no record of similar incidents to date but suggest this is unlikely to be a design fault and is more likely to be user error. Regular visual inspection and documentation of the preparedness of the flush system is recommended.

*Figure 1*



Equipment safety features can occasionally lead to confusion and further problems. The addition of a clear cap to prevent intrusion of foreign bodies into the patient end of a neonatal breathing system was mistakenly left in situ and a facemask was squeezed over the top in preparation for emergency bag mask ventilation. Following the delivery of an obtunded neonate, facemask ventilation could not be achieved and the breathing system obstruction was not identified until after successful emergency tracheal intubation. A two-bag check would have ensured that the breathing system was fit for purpose.

The NRLS has received several reports of patient harm (obstructed ventilation) following the combined use of heated humidifiers and heat membrane exchange humidifiers. This situation may arise when patients are transferred to ICU with the HME used in theatre still attached. Accumulation of excess water has led to obstruction of the breathing system.

Reports of patient harm from paracetamol overdose continue to appear in the incident database. A thematic review of the database highlights the following potential causes:

- overdose in low body weight adults < 50 kg; errors include failure to weigh patients or estimating weight
- overdose in paediatric patients
- overdose in patients with reduced liver function
- doses given too close together; commonly occurring when patient entering theatre and after transfer to ward
- prescribing and administering concurrent IV and oral paracetamol (including paracetamol containing preparations such as co-codamol)
- prescribing of paracetamol orally/rectally/IV, leaving the risks of using oral dosage regime for IV administration

Readers are referred to SALG guidance on the safe use of paracetamol: http://www.rcoa.ac.uk/system/files/intravenousparacetamol.pdf

NAP4 coined the phrase 'mind the gap' to highlight the risk of awareness when the vaporiser wasn't turned on following transfer from the anaesthetic room into theatre. Another apt time to use the phrase is during bypass surgery when there is opportunity to forget to reconnect the breathing system and restart positive pressure ventilation as the patient comes off bypass. SALG received a reminder of this unfortunate incident in its latest reports.

For details and further information on safety incidents in anaesthesia please refer to the Patient Safety Updates available from the AAGBI (http://www.aagbi.org/safety/salg/salg-incident-summaries) and RCoA websites.

**Kathleen Ferguson**
*Honorary Treasurer, AAGBI*

# Particles

Brueckmann B, Sasaki N, Grobara P, et al.

## Effects of sugammadex on incidence of postoperative residual neuromuscular blockade: a randomized, controlled study

*British Journal of Anaesthesia* 2015; **115:** 743–51

**Background**
Neuromuscular blocking agents (NMBs) are routinely used in abdominal surgery and 20–60% of patients have residual NMB on arrival in the post-anaesthesia care unit (PACU) [1,2]. There is an increased incidence of postoperative hypoxaemia, atelectasis and pneumonia in these patients [3,5]. NMBs are commonly reversed with neostigmine, which may cause cholinergic side effects [6,7]. Also, neostigmine is associated with postoperative de-oxygenation and atelectasis [8-10]. The authors therefore investigated whether a newer agent, sugammadex, might decrease the incidence of residual NMB in PACU.

**Methodology**
This was a single centre, randomised single blind trial. Subjects selected were undergoing elective open or laparoscopic abdominal surgery under general anaesthesia with rocuronium. Patients were randomised to receive neostigmine or sugammadex for reversal. Administration of further doses of rocuronium and timing of administration of reversal was at the clinician's discretion. A TOF count was performed within five minutes of arrival in PACU. Quantification of TOF was by acceleromyography at the adductor pollicis. Residual NMB was classed as a TOF ratio < 0.9. The secondary endpoint was time from reversal administration to time of readiness for discharge from theatre.

**Results**
A total of 77 patients received neostigmine and 74 received sugammadex. Residual NMB was found in 33 (43%) patients of the neostigmine group vs 0 (0%) of the sugammadex group ($p < 0.0001$). Eight patients (10.5%) had a TOF ratio ≤ 0.7. Mean time (95% CI) to discharge from theatre was 14.7 (13.1–16.4) minutes in the sugammadex group vs 18.6 (16.6–20.8) minutes in the neostigmine group ($p = 0.02$).

**Discussion**
The authors concluded that sugammadex eliminated residual NMB. They noted that reversal with neostigmine has been shown to be associated with postoperative oxygen desaturation, and that this may be due to incompletely antagonising deep NMB [8,9]. Indeed the maximal effect of neostigmine has been shown to decrease by 25% after one hour [11]. The authors speculated that this may have been responsible for postoperative respiratory distress in one subject in the study who was reversed with neostigmine.

**Conclusion**
This paper is highly relevant, as abdominal surgery is a major part of the elective workload. It highlights the frequency of residual NMB, and the importance of NMB monitoring. It also demonstrates the value of using sugammadex, which is sometimes discouraged because of cost. TOF counts were performed in awake patients, which can sometimes be inaccurate because of voluntary movement. The authors also noted that anaesthetists administered neostigmine according to their normal practice, but were advised to administer sugammadex according to a formula. This may have reduced the likelihood of inadequate dosing of sugammadex, while a third of neostigmine was administered either without a TOF count or a TOF of ≤1. Overall, despite its limitations, this paper contains valid learning points regarding NMB that are relevant to everyday practice.

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## Optimising oxygenation and intubation conditions during awake fibre-optic intubation using a high-flow nasal oxygen-delivery system

*British Journal of Anaesthesia* 2015; **115:** 629–32

**Background**
The introduction to this study describes the risks associated with awake fibreoptic intubation (AFOI) for anticipated difficult airway management. These include (as shown in NAP4) airway obstruction, bleeding and over-sedation, all potentially causing desaturation and hypoxaemia [1]. Conventional methods of supplying supplemental oxygen, for example nasal cannulae, provide insufficient flow rates to prevent entrainment of room air.

The authors, based at a major head and neck oncology and maxillofacial centre in London, felt that high-flow humidified nasal oxygen therapy (up to 70 l/min) could 'optimise oxygenation, prevent desaturation and hypercarbia' during AFOI in anticipated difficult airway patients. They also wished to observe the potential effects on overall intubating conditions and its feasibility for use in routine AFOI.

Thus far, there have been no studies regarding the use of high-flow oxygen delivery for oxygenation during AFOI, so this is of particular interest to anaesthetists.

**Methodology**
This was a prospective observational study of 50 adult patients judged clinically to have anticipated difficult airways, who underwent AFOI. They received high-flow humidified transnasal oxygen (HFNC) via an 'Optiflow' device. All patients had standard AAGBI monitoring and were sitting upright, spontaneously ventilating. Oxygen was delivered at 50–70 l/min for 'preoxygenation' until sedation commenced, with the 'total transnasal oxygenation time' judged from application of HFNC to connection to anaesthetic breathing circuit once intubated.

Nasal or orotracheal intubation was performed, and target controlled infusions of propofol and remifentanil used for conscious sedation. Local anaesthetic was administered according to a standard local protocol to nasal passages and oropharynx.

**Results**
Of the 50 patients, 46 were elective, two urgent and two immediate and, of these, 39 were nasal intubations with 11 oral. Median baseline $SpO_2$ was 98%, improving to median of 100% post procedure. All patients improved on their baseline $SpO_2$ values post procedure, with zero incidence of desaturation below baseline, despite one patient becoming apnoeic during fibrescope passage, due to over-sedation.

There were no incidences of airway trauma or other complications and all patients reported a comfortable AFOI postoperatively.

**Discussion**
This study demonstrated an improvement in $SpO_2$, a reduced risk of desaturation and a potential optimisation of intubating conditions in AFOI. These positives can improve the safety of the procedure. It has also shown that nasal intubation is still possible with HFNC in situ, due to soft nasal cannulae, with no impairment of oxygen delivery.

**Conclusion**
This paper demonstrates the positives associated with HFNC in AFOI for predicted difficult airway patients. It is well-written and designed, albeit with only 50 patients. It openly suggests the need for future larger scale comparative studies to further analyse the value of this technique in order to improve patient safety. Promisingly, no negative effects have been shown by this study.

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## The offering of family presence during resuscitation: a systematic review and meta-analysis

*Journal of Intensive Care* 2015; **3:** 41

**Background**
Family presence during resuscitation (FPDR) is a contentious issue with arguments for and against. Guidelines produced by the Resuscitation Council UK recommend that relatives are offered the opportunity to be present during resuscitation [1], however those opposed often cite the potential of interference, as well as possible psychological harm to witnessing family members [2]. The purpose of the study was to review whether FPDR affected patient mortality, quality of resuscitation, or the psychological health of relatives.

**Methodology**
A systemic review of a series of randomised controlled trials (RCTs) was conducted, including both adult and paediatric cases. The studies chosen compared cases of FPDR with those without, looking at aspects including mortality, resuscitation outcomes, as well as post-traumatic stress disorder (PTSD) and anxiety-related symptoms of family members.

**Results**
Three RCTs [3,4,5] were analysed examining adult cases. No statistically significant differences were established for mortality across these three studies between FPDR and standard resuscitation. PTSD symptoms were assessed using the Impact of Events Scale [6], with lower scores noted of the FPDR group in the 'intrusion' subscale (mean difference (MD) = −1.0; 95% CI −1.96 to −0.03, p = 0.04). Anxiety and depression symptoms were additionally assessed using the Hospital Anxiety and Depression Scale [7], with lower scores for both the anxiety (MD = −0.99; 95% CI −1.77 to −0.22, p = 0.01) and depression (MD −1.0; 95 % CI −1.78 to −0.23, p = 0.01) subscales for FPDR.

Only one RCT [8] was reviewed for paediatric cases that met the study's criteria. This did not demonstrate evidence of family interference regarding intervention or mortality during FPDR. Due to a lack of published data, however, it was not possible to conduct meta-analysis. Psychological outcomes of family members were also not reviewed in this RCT.

**Discussion**
This study suggests that mortality of patients or resuscitation quality is not impacted by FPDR, and can improve symptoms of anxiety and depression in relatives. Allowing family members to be present during resuscitation can thus provide potential benefits to their psychological outcomes following the event.

**Conclusion**
The paper covers a particular aspect of medical care which affects all doctors – not just those in intensive care or anaesthesia. The authors claim to have conducted the only study to systematically review patient mortality and psychological effects on family in FPDR cases. The paper suggests that the presence of relatives during CPR can help with their mental wellbeing after the event. Use of psychological questionnaires were used to assess this, however the authors did recognise that although scores improved in the FPDR group, the clinical significance of the assessments used are not fully known. The authors also noted that the systemic review was additionally limited by the number and quality of available studies on the topic.

Reservations may persist among members of the healthcare profession, but by highlighting the potential benefits of FPDR as in this study, doctors may be more likely to offer relatives the opportunity to attend future events.

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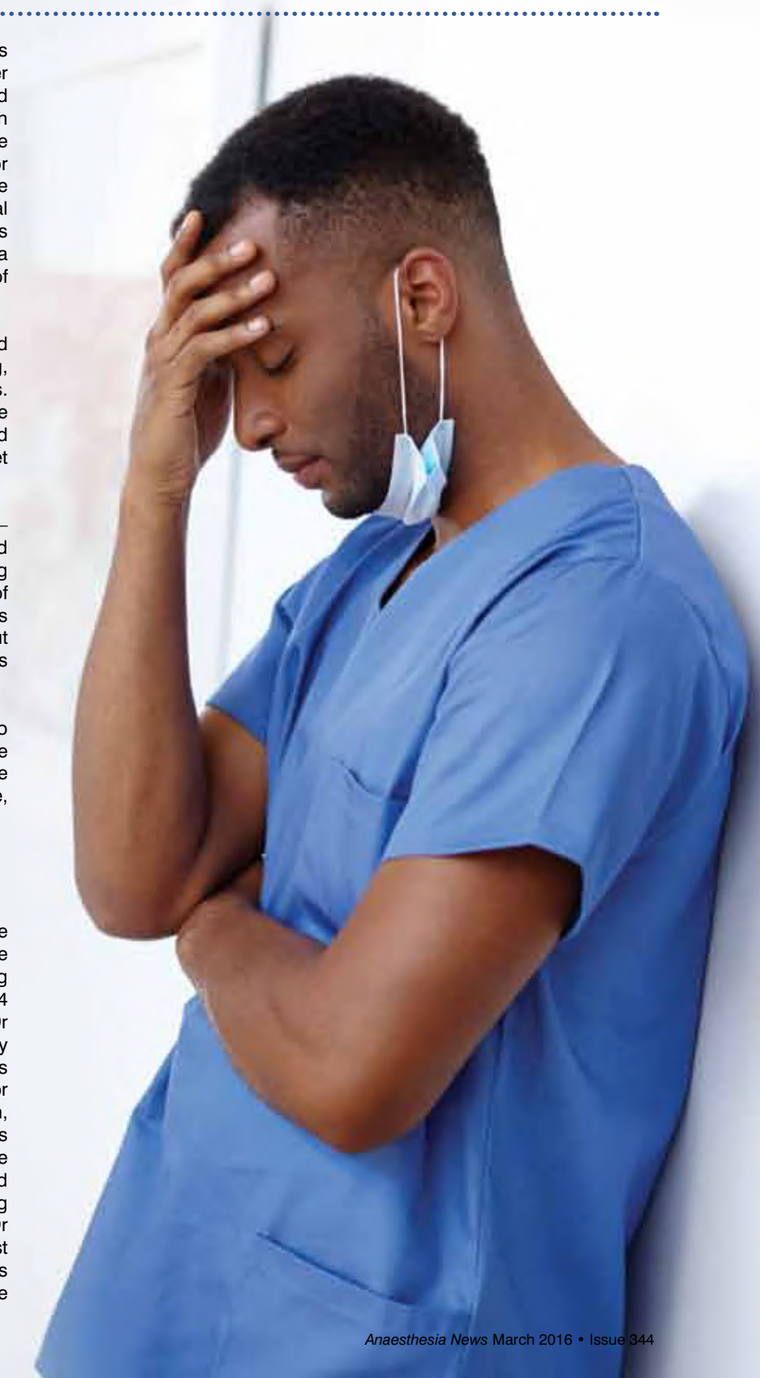
# Fatigue, stress and death in training



Each generation of doctors has its own set of challenges that seem insurmountable. The privilege of a career in medicine asks us to meet the most dramatic and significant moments in the lives of strangers with unfailing compassion, intelligence and skill. The anaesthetist must meet this task at any time of day or night. Added to this core responsibility, doctors have been asked to provide healthcare in a shifting political and organisational landscape. The trainee anaesthetists we represent frequently do this while managing a nomadic existence providing a service to a series of different trusts as they undertake their training.

The last few issues of *Anaesthesia News* have featured some fascinating articles discussing fatigue, wellbeing, depression, substance misuse and mindfulness. This perhaps alludes to the fact that these issues are percolating in many minds. The recent proposed changes to the junior doctors' contract have added yet more stress to an already burdened workforce.

Many things contribute to stress in the workplace – increasingly complex patients, increased turnover and expectations, critical incidents, complaints, challenging exams, differing and dynamic shift patterns, lack of coherent team working, and isolated working. As clinicians we seek to analyse data and evidence but actual hard data on incidence of stress among medics are difficult to obtain.

Medics are high performing individuals by nature who often struggle to tolerate their own imperfections. While this contributes to fatigue and stress, our response to human error is not the main subject of this article, although undeniably has an effect.

***'You lack the season of all natures, sleep'***
**(Lady Macbeth)**

Even one of literature's key antagonists recognised the effects of lack of sleep. Much has been written on the subject of fatigue and shift work, with the AAGBI updating guidance on fatigue and anaesthetists in October 2014 [1]. Work done by the GAT committee representative Dr Cathy Lawson and colleagues in the Northern Deanery has highlighted a problem that faces many trainees (and indeed SAS doctors/consultants) who do shift or on-call work overnight. Across 11 hospitals in the region, representing up to 34 shifts, less than 50% of trainees have an on-call room available (with a few of these having to be shared among trainees). The rest have ad hoc arrangements, ranging from a couch to reclining chairs and the majority unavailable during the day [Dr Cathy Lawson, personal communication]. This isn't just a problem that affects trainees. As working patterns continue to change, more and more consultants are taking up resident on-call posts.



As anaesthetists we are fascinated by extremes – extremes of physiology, extremes of age, extremes of altitude. Horrifically, the extreme of fatigue and stress may be death, be it accidental or deliberate. Few of us need stray far from home to think of cases where this has occurred.

Seven and a half years ago a final year anaesthetic trainee in Manchester, Robbie McKendrick, died driving home after a night shift over an hour away from his home. His wife Jess described how he just really wanted to come home after almost making a mistake overnight and being really bothered by it. He had returned from doing 17 long days of charity work in India before starting nights. Robbie managed to control his own fatigue so no patient was harmed but fatigue still likely contributed to his death, augmented by a long commute and a near miss at work.

These are themes we can all relate to – frequently changing rotations, long distance from home while rotating, solitary working and 'get home-itis' [2]. The GAT committee surveyed anaesthetic trainees in the East of England Local Education and Training Board (LETB) about fatigue, post call facilities (similar to above) and driving home after nights. This LETB has had one fatality and five further road traffic accidents to date. These have occurred alongside a downtrend in on-call rooms for anaesthetists. Three trainees have written their cars off post call, with one requiring time off work secondary to a neck injury. One trainee has 'fallen asleep at the wheel waiting at a roundabout' and another 'woke up…when my car hit the kerb of the pavement of the central reservation' [Dr Ben Fox, personal communication].

It seems that a cultural change surrounding our own attitudes to fatigue and indeed stress or difficulty is required. Long shifts are here to stay but our approach to our own vulnerability can be addressed.

GAT is working towards producing a tool for assessing one's own fatigue and suitability to work or drive. This is developed from the Federal Aviation Authority's I'M SAFE checklist [3], taking clinicians through a list designed to encourage recognition of fatigue pre or post shift which threatens to put doctors and patients in danger. It is hoped that use of such a tool will improve safety but it would require practical measures such as rest areas for anaesthetists to use if they have identified a concern about driving home safely. With uncertainty over future working patterns and intensity, the need for anaesthetists to assess and manage fatigue and stress may become even more critical.

If all of this seems cause to despair, fret not. The AAGBI have people you can talk to; get in contact via **wellbeing@aagbi.org** or via Twitter at **#askGAT**.

We've collated some of our top tips for battling stress and fatigue (some adapted from AAGBI guidance, some merely the authors' anecdotal wisdom!).

- Speak to someone – this can be a colleague, a loved one, a professional or even anonymously online. Get in touch with the AAGBI via the email address/Twitter hashtag above
- If you feel overwhelmed by tasks, making a list with achievable outcomes can focus what needs to be done and what can wait
- Fitting exercise into your routine can help clear your mind and aid sleep
- Be careful with alcohol intake
- Take rest where you can. Even a short nap can be energising
- If you feel tired due to frequent change of shift patterns, tell your supervisor/colleagues
- Nap before driving home post nights
- Consider using public transport to travel home from work after a long shift
- Try and be mindful of your own fatigue levels, especially if taking on extra locum shifts above and beyond your usual rota

**Deirdre Conway**
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With many thanks to Jess McKendrick for sharing Robbie's story with us. If you want to support the work of Robbie and other anaesthetic colleagues making smiles in India please visit www.northerncleftfoundation.co.uk or text to donate - **TEXT NNCF37 £2/£5/£10 to 70070**.

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GAT AAGBI GROUP OF ANAESTHETISTS IN TRAINING

## Dear Editor

**Development and implementation of a teaching programme for recovery nurses**

The care of a patient following an anaesthetic is extremely important. Recovery nurses play a vital role in the care and management of these patients; as anaesthetists, we should ensure they are supported and encouraged in their role and that knowledge and skills are updated.

In Broomfield Hospital we canvassed opinion among the recovery nurses regarding any knowledge or skill updates that they thought might be useful. There was a very enthusiastic response and we were presented with a list of topics. These included topics such as 'Care of the deteriorating surgical patient', 'Management of invasive lines' and paediatric topics. We decided to develop a teaching programme to run weekly for a three month period.

There was a keen response from the senior anaesthetic trainees who volunteered to teach. Questions were encouraged and grey areas cleared with the teaching being a mix of didactic as well as practical components. We were impressed by the attendance to these informal drop in sessions. There was an eager response and appreciation of the teaching programme by the nurses.

After the sessions, recovery nurses were asked to grade the content and presentation of the teaching on a scale of 1–5 (1 being the lowest grade). A toal of 83% of the nurses gave a grade of 5 for the content and 81% gave a grade of 5 for content. Each anaesthetic trainee who took part received an acknowledgement letter with their feedback. They felt that it was an important proof of teaching for their portfolio.

Teaching of all staff is part of improving NHS culture to contribute to patient safety. Our teaching programme contributed to this and also enhanced team building between the recovery staff and the anaesthetists as well as contributing to improved patient care in the post anaesthesia care unit. We hope to make this an ongoing process and the start of truly multidisciplinary teaching in theatres in our trust.

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**C Wright**
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*Mid Essex Hospital Services NHS Trust*

## Dear Editor

**An apparently blocked epidural catheter**

There have been reports from time to time of blockages related to older designs of catheter holders [1,2].

We would like to draw attention to an apparent blockage that occurred within our Maternity Unit. After uneventfully siting an epidural for labour analgesia, we placed the epidural catheter into the connector in what appeared to be the conventional fashion but it could not be flushed.

We discovered the catheter was trapped between the plastic sides of the clamp just adjacent to the proper placement site. The connector was removed, the catheter inspected, correctly assembled and subsequently worked as normal.

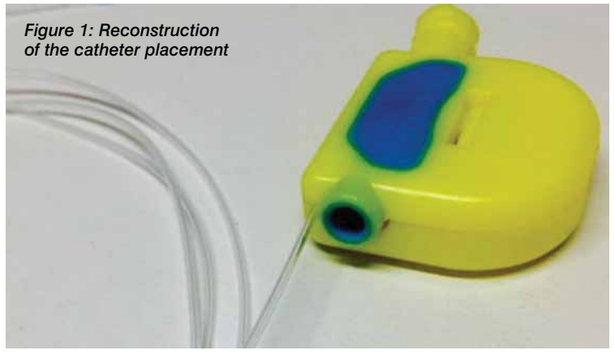

*Figure 1: Reconstruction of the catheter placement*

It is important to note that in this situation it was not possible to inject through the connector and it may be confused for a more distal blockage. It is important to highlight this problem as it was easily corrected but if not noticed could result in an otherwise functional epidural being removed and the patient being subjected to additional risk and delay in analgesia.

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**Ian Anderson**
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## Dear Editor

The article in January's *Anaesthesia News* gives an account of a patient's (an anaesthetist!) experience of prolonged neuromuscular block and a subsequent comment by Dr Rodney [1]. This brought back memories of over 20 years ago when lectured frequently on the new relaxants. One lesson I tried to communicate was that a standard dose (as mg or mg/kg) of any of the drugs would produce widely varying durations of action as assessed by the responses to ulnar nerve stimulation. Thus, in my hands, a standard dose of 0.1 mg/kg vecuronium produced a block (until a return of a detectable first twitch of a train-of-four sequence) of between 16 and 45 minutes. With rocuronium at 1mg/kg recovery to the same endpoint took between 26 and 85 minutes. The lesson was always to use a nerve stimulator.

There is a second debatable point as to how to assess adequate antagonism of the block. Train-of-four ratios of at least 90% seem to be the accepted standard. I had a preference, with a suitable stimulator, to produce a sustained contraction of the hand muscles with 50 Hz shocks for 1 second. I only used this while I was sure the patient was still unconscious – it hurts if you are not ready for it.

One final comment – the anaesthetist records that despite a second dose of neostigmine he experienced feelings of muscle weakness for several hours. I was once involved in paralysing a distinguished respiratory physician until he could not breathe while he was still conscious. Despite 7.5 mg of neostigmine and apparent full recovery of respiratory muscle performance, he still told us next day how much effort he needed to ride his bicycle home.

Please use the nerve stimulators when you paralyse patients.

**John Norman**
*Emeritus Professor of Anaesthetics, Southampton*

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# *your* Letters

SEND YOUR LETTERS TO:

The Editor, *Anaesthesia News* at anaenews.editor@aagbi.org
Please see instructions for authors on the AAGBI website

## Dear Editor

**Emergency keyhole surgery**

We write to you to highlight the danger of running with car keys.

A previously well 2-year-old was admitted to hospital after falling while running with a car key in his hand. The child was relatively calm despite the Ford car key being lodged in his left maxillary sinus (antrum of Highmore), but the key was unable to be removed in the emergency department.

Fortunately, a skilled paediatric nurse had gained IV access, as due to the location of the key a gaseous induction would have been challenging. The child underwent an uneventful intravenous induction and an endotracheal tube was placed to facilitate ventilation. The key was removed (with some force) and the child made a full recovery. The key was cleaned and returned to the child's parents. It is unclear whether they drove home.

**Joel Swindin**
*ST3 Anaesthesia*

**Frank Aldridge**
*Consultant Anaesthetist*

**Nahla Awad**
*Consultant Anaesthetist*

*Lincoln County Hospital*

## Dear Editor

**A novel method of inner tube repair**

During a recent commute to work I punctured the rear wheel of my bike and discovered that not only had I forgotten my usual battery of ways to fix this, but it was also about to rain and there were no taxis to be seen. The subsequent 4 km walk to work resulted in the scuffing of a brand new pair of white road shoes...

On arrival at work I could find no fellow cyclists and there were no spare tubes or patches in the hospital. The weather was even worse on completion of the day's list and so the following list of materials was hastily cobbled together:

- 1 x fork
- 3 x nitrile gloves in your preferred size
- 1 x Dermabond skin adhesive (Ethicon, USA)
- 1x Opsite dressing (Smith & Nephew, UK)
- 1 x pump
- 3 x anaesthesia textbooks (the heavier the better)

Two of the gloves ensured clean hands throughout the procedure and the end of a fork made for an excellent lever to remove one edge of the tyre from the rim. I discovered the location of the puncture by partially inflating the inner tube, then deflating it and using a patch cut from the third glove. Next a liberal amount of the skin adhesive was applied around the puncture site before the nitrile patch was applied, weighed down with a stack of textbooks to ensure proper bonding, and left to dry for several minutes. I noted there was some lifting of the nitrile material around the edges and so an Opsite dressing was applied around the patched area to ensure the patch did not lift off when inflating. The repaired inner tube was then reinstalled on the wheel, where again the fork came in handy. The resulting repair lasted for nearly 110 km of riding, including over gravel surfaces, before it finally failed and was exchanged for a new inner tube.

**Jakob Mathiszig-Lee**
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Editor's note: **Readers are reminded that unauthorised personal use of hospital supplies may place them at risk.**

## Dear Editor

I read the piece about the depiction of anaesthesia in the movies, and the follow up letter in the January issue of *Anaesthesia News* just as I was booking my tickets to see *The Danish Girl*. This film depicts the story of the first transgender surgery performed in the 1930s in Europe. The film company contacted the AAGBI Heritage department for advice regarding the delivery of, and equipment for, anaesthesia at that time, and as one of the volunteers to the Heritage team I was asked to provide guidance to the set directors and producer, spending a total of three days on set with the actors and set designers. The props department had acquired some strange pieces of early 20th century equipment from a props hire company, but it was unlike anything I had any knowledge of, and I suspect was a props manager's concept construction. With the help of the props team I was able to turn this 'bastard' device into a more honest bit of equipment, and was able to advise further on the construction of the set which was used to represent an operating theatre of the era. During the day devoted to filming the operation, I was also asked to brief the extras playing the part of the theatre team, and was called to the dressing room of the surgeon, Kurt Warners, played by Sebastian Koch, to advise on how a surgeon behaves during an operation when under high pressure! I restrained myself, and hope that your readers may enjoy *The Danish Girl's* operating theatre sequences. I suspect much of what I did fell victim to the editors electronic scissors, but hope that what is left will not cause too much offence to the members of the AAGBI who see this potentially Oscar winning film.

**Michael Ward**
*Retired Consultant Anaesthetist, NDA, Oxford*

# Anaesthesia for the very difficult patient

By our correspondent

## Scoop O'Lamine

Once upon a time in the year of 2016 at Lazingbrook NHS Teaching Hospital, Mr R Swipe, consultant colorectal surgeon, scheduled a very difficult patient (VDP) for surgery. Being an impeccably careful surgeon, he entered into correspondence about the VDP with his recently appointed anaesthetist, Dr Gilbert Keenster.

All the theatre staff reckoned Dr Keenster was one of the most enthusiastic anaesthetists they had ever met and generally most of them admired the considerable caution used on each day of the working week. One of Dr Keenster's recent accomplishments was to lead the department through the College inspection, gaining a 5 star rating. One of the reasons given for this outstanding assessment was that Gilbert had arranged that every part of anaesthetic practice now had a lead anaesthetist who could liaise with the relevant specialist societies ensuring that Lazingbrook was at the cutting edge for protocols, policies and practice.

The VDP had a range of problems – elderly, obese, potential difficult airway, sleep apnoea, hypertension, renal impairment, diabetes, chronic pain and a history of medico-legal complaints.

Gilbert decided with such a VDP, that the only way forward was to convene an anaesthetic Single Disciplinary Team (SDT) meeting to discuss his care. At that meeting all the relevant lead anaesthetists within Lazingbrook met to debate the care that the VDP would need for his anaesthesia.

After some two hours of discussion at the SDT, it was decided that Gilbert would coordinate the team, but that several colleagues would be needed on the day to anaesthetise the VDP. The Pre-Op lead and Elderly Patient Liaison lead agreed to coordinate pre-assessment and CPEX and, on the day of surgery, Gilbert would induce anaesthesia with the Airway lead performing the intubation. The Regional Anaesthesia specialist would then insert regional blocks under ultrasound and the lead for IV Fluids would write a fluid regime. The Monitoring lead would insert an arterial line and check all monitoring was applied correctly. The Acute Laparotomy lead would be on hand in case the planned laparoscopic procedure was converted to open. The Diabetic lead would supervise the insulin management, the OR Patient Temperature lead coordinate warming and the TIVA lead would work with the remifentanil infusion pump to tailor the dosing for an obese patient outwith the algorithm. After surgery was completed, Gilbert would reverse the patient and the Airway lead would extubate the patient after getting the go-ahead from the ICU lead. The Acute Pain specialist would review the VDP in recovery.

On the day of surgery, the 11 members of the anaesthesia team, along with 3 ODPs, assembled in theatre for a pre-briefing briefing. 'This is the future of anaesthesia' exclaimed Gilbert, 'all expertise concentrated within one theatre for one very difficult patient'. The others agreed – peri-operative medicine at its best! There was even a suggestion for a local policy for future VDPs and maybe even a new specialist society at the AAGBI – Society for Anaesthesia for the VDP. Perhaps the patient could become the lay member?

Mr Swipe arrived looking utterly frustrated. 'I just can't believe it', he shrieked.

'What do you mean?' asked Gilbert.

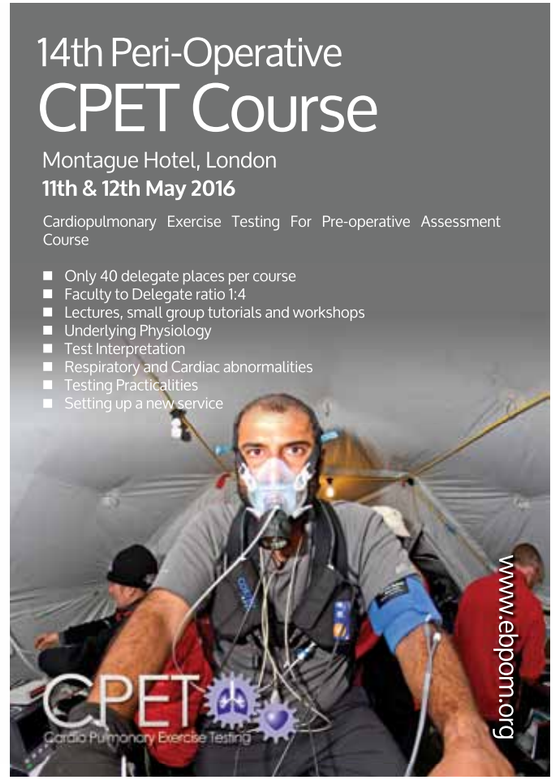
'They've only gone and done this guy yesterday because they had space at the end of Harry Slick's list!'

'But who on earth could possibly have anaesthetised such a VDP on their own?' shouted Dr Grimteeth (Airway lead).

'Harry Thikster – he's back from his retirement doing a few lists and just asked the ODP to get out the 'usual' and went ahead.'

'Where is he now – is he even alive?'

'Well he's sitting up having his breakfast on the ward – says all the planning worked a treat and sends his thanks to the anaesthesia team. Best anaesthetic he's had apparently!'



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