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SPECIAL ISSUE: GLOBAL HEALTH

The work of the WFSA

Project India: Making a difference at both ends

Obstetric anaesthesia and maternal mortality

Editorial

Welcome to September's *Anaesthesia News*, which this month focuses primarily on Global Health; an important reminder that for all our challenges and problems in the UK healthcare system, we live in a very well resourced and regulated country.

The WFSA estimates that more than 70% of the world's population do not have access to safe anaesthetic and surgical care, resulting in avoidable harm and death; we are fortunate to be some of the lucky 30%. This month's issue is also an inspirational reminder that many healthcare workers across the globe still put patient care above all else, and that they are willing to give freely of their own time to help others.

I am writing this in mid-July, when reading national and international news is a confusing and depressing occupation. It seems we are to leave Europe, and Scotland threatens again to leave the UK. Much of the Brexit debate was at best unedifying, and in my opinion failed to show the UK in the best light. Politicians are resigning right left and centre, washing their hands of the whole business and leaving us in a sorry mess. It would appear that the weekly £350 million pounds promised by Nigel Farage will not be making its way to the NHS coffers – did anyone really think it would? – and with the UK economy allegedly crashing, all is doom and gloom.

Hopefully you will find reading this issue uplifting; it gives a refreshing look at the work of some of the individuals and organisations in the international network of selfless people prepared to work hard to improve the lives of those born in countries with fewer resources. I recommend Rachel Collis and Isabeau Walker's inspiring accounts of the SAFE projects, which help local trainers to improve training in anaesthesia, and to improve outcomes. Many UK trainees have contributed by undertaking fellowships, and Nick Owen and Jolene Moore give accounts of their overseas experiences. Sanjay Deshpande *et al* describe the admirable work they are involved with concerning rural healthcare in India.

On a larger scale, many organisations, including the AAGBI, OAA and WFSA, have pulled together to progress the United Nations Millennium Development Goals, and Nuala Lucas and Rachel Collis reflect on the improvements in maternal health in low- and middle-income countries, though there is still much needing to be done. The global work of the WFSA is explained, and their huge contribution to improving global access to safe anaesthesia and surgical care. In particular they work hard to raise awareness of the importance of anaesthesia to so many aspects of patient care, and in promoting improvements in the education of anaesthetic trainees across the globe.

I hope you find this month's issue as inspiring and thought provoking as I have. And as I sign off I hear that UK politics may be stabilising...for now. We have a new Prime Minister, and an interesting choice of Foreign Secretary. And – the icing on the cake – Andy Murray won Wimbledon. I feel better already.

Elizabeth Mcgrady
Elected Member, AAGBI

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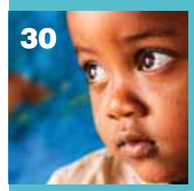

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Lifeboxes for Rio
– the journey ends (almost)

'Tell us why you started *Lifeboxes for Rio*, and a brief timeline of events' said the email. This, the resulting article, might have been shorter if *Lifeboxes for Rio* had become *Lord of the Rings*, and my surname changed from Hartle to Tolkien. Just like *Lord of the Rings*, *Lifeboxes for Rio* began as a spoken story, repeated often, before being written down, and I'm sure each version was different. Perhaps the two most accurate versions are my oral history interview for the Anaesthesia Heritage Centre, and 'All stations from Edgware Road to Rio; an Olympic Journey', the JD Robertson Memorial Lecture, of the Edinburgh and East of Scotland Society of Anaesthetists which it was my privilege to give in 2014.

The short version is: 'Experiencing 7/7 the day after London wins 2012 Olympics, leads to participation as a London 2012 Gamesmaker, a *Sliding Doors*/*Brief Encounter* with Seb Coe on the Tube, newspaper headlines, a name check in Seb's 'Made in Britain' speech, and autobiography, becomes AAGBI President Elect (fundraising idea needed)'.

So was born *Lifeboxes for Rio*, combining the themes of volunteering, international, equality in excellence, training and practice with the target of 600 – my best (almost random) estimate three years ago of how many athletes Team GB would send to the Olympics and Paralympics of Rio 2016, and so the number of Lifebox pulse oximeters we set out to buy. We only needed to raise £96,000!

Lord Coe lent his support and a quote, and the campaign has also benefited from the support of Baroness Jan Royall (then opposition leader in the House of Lords) and David Nott (renowned trauma surgeon). The primary aim was 'do good things' but from the outset this was partially an experiment. No current member of Council or staff was involved in AAGBI's only previous fundraising campaigns, which had been to buy new buildings. This 'toe in the water' was as much to learn as earn. Fundraising costs money, if at any stage it would be cheaper to write a cheque for the whole amount, I would have stopped the campaign. So *Lifeboxes for Rio* launched at Annual Congress 2014 in Harrogate, to immediate confusion: #LifeboxesForRio or #Lifeboxes4Rio on Twitter? The latter. Would athletes take one Lifebox each? How do you know Rio needs 600 pulse oximeters? As I explained (again, and again) '*Lifeboxes for Rio* is allegorical'.

And then it all just happened. We let the idea fly, and money began to roll in. Anaesthetists (their friends, family, colleagues) are often bonkers, they certainly do bonkers things, particularly for charity – for *Lifeboxes for Rio* all we asked was that it was legal. As well as what were already 'stock' anaesthetic charity activities (cake baking, selling, eating, riding bikes) were added static bikes, half-marathons (Lifebox costume optional – Guy Jackson) swimming, driving Minis, rowing to the Channel Islands, donations from pension lump sums, or in lieu of a decade of (my) birthday and Christmas presents (Thanks, Mum and Dad).

Lifeboxes for Rio has already raised over £70,000, equivalent to almost 450 pulse oximeters. We handed money over to Lifebox as soon as we could. If not a penny more came in, that sum would be fantastic. But the campaign hasn't finished; it runs until I stand down as President during Annual Congress in Birmingham, and we'll accept donations via MyDonate **www.aagbi.org/lifeboxesforrio** until 1 November. Will we raise £25k before then and reach the target? Who knows? Richard Griffiths and mates will do the 'Second City Cycle', this year's bike ride (the fourth) from AAGBI Headquarters to the Congress venue. I still owe what I've saved stopping smoking (approx. £2,000) and my Mum and Dad have found more money I owe them, which will buy pulse oximeters instead.

£25k is a lot of money. But there are lots of you. 11,000 of you, members of the AAGBI, who receive *Anaesthesia News*. If every one of you, gave up just one coffee from your hospital coffee shop, for just one day and gave that money instead to *Lifeboxes for Rio* we'd achieve our target without a single cake, or cycle jersey. AAGBI Board members did just that at the last meeting, and raised £53. If you don't cycle, or bake cakes (or eat them), please consider holding a '(No) Coffee Morning for Rio' in your department.

Whatever happens next, thousands of patients have already benefited from hundreds of pulse oximeters and training provided by Lifebox, funded by *Lifeboxes for Rio*, and many more will benefit as we continue raising money. The AAGBI and staff have learned valuable lessons about fundraising. Anyone involved in 7/7 has demons that will never completely disappear, but time heals and nightmares fade, to be replaced with new memories; of the sheer joy of London 2012, of cyclists in AAGBI jerseys, and of cakes. But most of all, the moving testimonials from anaesthesia providers around the world to whom the beep of a pulse oximeter is now as familiar and re-assuring as it is to us.

Dr Andrew Hartle
President, AAGBI

PRESIDENT'S REPORT

This report, my last, is late – delayed a month by the publication of *Age and the Anaesthetist* in the August issue, and begins with sad news; the death of Dr Thomas B Boulton OBE TD FRCA, AAGBI President 1984–1986, former Editor of *Anaesthesia* and author of the definitive history of the Association and development of our specialty. I knew Tom solely as senior Past President; but many fulsome tributes spoke also of his warm good-natured support for colleagues of all ages, and his contributions to teaching, science and leadership. Tom shaped the history of anaesthesia, and then wrote it.

Delight at more writing time became disbelief then despair; my 'bonus' weeks filled with a bewildering, seemingly endless succession of events, each so significant, the cumulative impact (whenever that is, they've not stopped) will be momentous. The UK's future is less certain, less secure, less united than at any time I can remember. All of our lives changed.

President's reports vary – event reviews, rants, homilies, tributes, and personal views. My personal view is the only view I can give, when reporting to members the background or relevance of an issue. This final report posed a 'Brexit' dilemma: should I note, narrate, describe or dissect? Or ignore? Events evolved quickly (what was: 'Mr Cameron's term ends a month after mine' is now: 'new PM, Theresa May…') so my view will soon be out-of-date, not all will share it (never did, never will), but I have only this chance. The AAGBI is political but not party political; I may mention parties but will comment only on politicians. I tried pretending nothing happened; it didn't help.

My term began with one referendum; another has dominated my last months. A President's comments on a Prime Minister carry risk, but with little time left/now he's gone (delete as appropriate) I throw caution to the wind; David Cameron and referendums…not a good mix!

Electoral success by the Liberal Democrats forced the first referendum (proportional representation - PR); a condition of the coalition agreement. Vested interests of the Government and main opposition parties in Westminster gave PR no chance (which one party might now regret). Electoral success by the SNP forced the second referendum (Scottish Independence); if you must have one, keep control in Westminster. Government and main opposition parties from Westminster ended their campaign(s) with a fortnight's panic, last minute promises, and a clear vote to remain in the UK. Unexpected electoral success by the Conservatives in 2015 left Mr Cameron with a working majority to deliver his party's manifesto. Two 'bargaining chip' pledges – the EU referendum and NHS seven-day services – hijacked the PM's agenda and then forced his early exit from office. Mr Cameron may regret at leisure how his short-term 'success' in the first two referendums led to the third, but we'll pay the price for years. The PM should have known the Rules of Referendums: 1) Don't hold one unless you have to/you know the result/it doesn't matter; 2) Don't leave it all to the last minute/anything to chance; and 3) Don't forget to have an escape route. He does now.

The EU referendum result is history; the result of the referendum is yet to be written. A new geopolitical map of the UK groups London, Scotland and Northern Ireland together, but changes again if the Kingdom is no longer united. The economy lost trillions of pounds in a night, and the political careers of a Prime Minister, cabinet ministers and others faltered or failed. The EU, adept at survival and compromise, feels threatened; will it lash out? With no precedent, it's frightening that so much is unknown, particularly 'the plan'.

Words may matter more than facts. Today, couples in a civil partnership walk into Register Offices to emerge married an hour later – same people, same rights, same responsibilities, same address, same costs, just the words changed (and £45, thanks to Mr Cameron!). We may yet be grateful if the only change in our EU relationship is the name (and £45); 'affiliated with', not 'Member of', the EU perhaps? Both parties in this unhappy marriage might agree to separate; a 'trial' which in 20 years continues, with neither party prepared for final, absolute divorce. The plan is not just unknown, it's not accepted. No-one disputes that more votes were cast for Leave, but the effect of that is not clear and is disputed. Those are just the facts. Take two referendums, two clear results, one victory margin wider on lower turnout, report as fraction of eligible voters. Now add spokesmen and spin; 37.5 % rejecting the EU is a 'clear mandate', 39% rejecting the junior doctors' contract is 'just a third', and neither 'winning' vote meets the threshold for a public sector strike!

Predicting what Brexit means for anaesthetists, the AAGBI or the NHS is difficult, with waters muddied by both sides. Except for the notorious '£350m/week NHS dividend', (disowned as 'a mistake' within hours of the result) there are few positives for the NHS – our biggest employer depends on staff trained abroad, who may cost more or no longer find the UK attractive. The EWTR, drugs and device regulations all derive from the EU. RCoA President, Liam Brennan, and I wrote recently 'the single biggest challenge facing the NHS is…an ageing population'. That was before the Brexit vote. Both main Westminster parties turned inwards. While the Tories new leader was acclaimed mercifully fast and her reshuffle/cull was as quick as it was radical, Labour showed yet again its preference for internal struggle, 'traitors' pursued with more enthusiasm and vitriol than any government failing.

The EU is not our only link to Europe. The ESA is our WFSA regional group, with many non-EU members, so relations need not change, but UEMS-EBA membership depends on EU/EAA status. Three of my seven ICU consultant colleagues are from EU countries other than the UK and Ireland, so too half the nurses and many anaesthetists. I've yet to talk to colleagues in Ireland, but will the AAGBI survive? Yes, but the name might reflect geography not members. Whatever your vote, we probably agree our population is more angry and divided than before, more alienated from the chattering class and politicians. Did our own year-long course in statistical duplicity numb doctors to both campaigns? I can't imagine hurting more than I did walking home from the Westminster count. [Before moving on, let me stress that the

AAGBI represents anaesthesia and all its members, irrespective of their political views (or mine) the turmoil of referendum, on which it remains neutral, or the aftermath].

Another referendum, of BMA junior doctors, played out to less fanfare. Junior doctors rejected the contract so Jeremy Hunt imposed it. How bad is that? This rejected contract is much improved over last year's; following intense negotiation and the first all out strike action by UK doctors. Anaesthetists are probably better off, most safety concerns addressed, staffing/rota gaps on Board Agendas, fewer lose out UNLESS you take a service break or work LTFT time THEN YOU LOSE. Theoretically anyone, but it's really women, carers, those with disabilities. That's discrimination, that's not fair, and it's not legal, under UK and EU law. In my first report I wrote:

'I know what discrimination feels like, and I know how important a non-judgemental, supporting voice can be.'

I had no idea then that I'd provide that non-judgmental, supporting voice, for over a year. If the AAGBI or I helped even a little I leave office happy. When junior doctors stood up for themselves and each other, and rejected an unfair contract, I was so proud. The future here is uncertain; the dispute continues, doctors will have the contract enforced and the 'Brexit-effect' may mean no negotiations for years; years when the UK Prime Minister is a woman for only the second time, but the gender pay gap widens.

AAGBI did more than just deal with referendums and strikes for two years, (they were 'extras'); we delivered more CPD in anaesthesia than anyone, made revalidation easier with Learn@AAGBI and the VideoPlatform. The National Essential Anaesthetic Drugs list was updated, we reached out to Europe and the ESA first in Berlin, then welcomed Euroanaesthesia to London (who says irony is dead?). We published joint position statements with the RCoA on contracts, welfare, CPD, PA(A)s, and anaesthetic room cupboards – better together, our two organisations now enjoy a more cooperative and effective relationship. Guidelines on blood pressure, blood products, monitoring, vascular access, hip cement, controlled drug storage/administration, new NIAA Terms of Reference, and ketamine protected; cakes baked, sold and eaten, Lifeboxes bought.

My report lands on your doorstep as we fly back to the UK from this year's Common Issues Group, and the WFSA World Congress in Hong Kong. Soon Paul Clyburn becomes President; Hon Secretary Samantha Shinde hands over to Mike Nathanson, Kathleen Ferguson and Nancy Redfern remain Hon Treasurer and Hon Membership Secretary. Sean Tighe's term as Vice President ends; he leaves Council, as will Felicity Plaat, Immediate Past Hon Membership Sec (and next President of the OAA – huge congratulations). Behind the scenes of Annual Congress, AAGBI staff will be in control in Birmingham, under Executive Director Karin Pappenheim. Thanks to each and every one for your support.

Two years have flown by; without my diary, I'd not believe we actually packed so much in. Those two years have changed my personal and political priorities, live for today as much as tomorrow, but yesterday has gone. Plan for the future but don't rely on it.

Being President wasn't always 'my plan'; it's very hard work, mostly great fun, occasionally sad, but always an honour. Nothing can match the smiles on the faces of people you thank, award, congratulate or just say 'well done' to. I'm going to miss it, but the time is right to hand over. It's all downhill now…Pension – 15 years, 9 months, 9 days, and counting…

Dr Andrew Hartle
President, AAGBI

Ninadini Shrestha, from Nepal, was awarded a WFSA Pain Fellowship in Kamineni Hospital, Hyderabad and was a Fellow there from 1 July–31 December 2015.

The work of the WFSA

In 2015, The *Lancet* Commission on Global Surgery's findings [1] confirmed a huge shift in global health. More than 70% of the world's population does not have access to safe and affordable anaesthesia, and people are dying as a result. Specifically, 16.9 million people every year, which is three times the number of people dying from tuberculosis, HIV/AIDS and malaria combined.

We are moving into a new era in global health. Deaths from non-communicable diseases (e.g. cancer and diabetes) are higher than deaths from communicable diseases (e.g. malaria and HIV) and new health challenges are becoming increasingly clear. These challenges have a much wider impact on populations, societies and economies, and must be tackled head on. Non-communicable diseases deliver a double blow to development; the cost from losses of national income pushes millions of people below the poverty line.

More than 30% of the Global Burden of Disease stems from conditions that could be treated through surgical intervention and each year at least 77.2 million disability-adjusted life-years could be averted by providing basic, life-changing surgical care. Just three operations – for compound fractures, laparotomies and obstructed labour – would meet most of the demand.

The World Federation of Societies of Anaesthesiologists (WFSA), as the world's foremost global alliance of anaesthesiologists, is ideally placed to intervene and improve access to safe and affordable anaesthesia and surgical care. Through our network of hundreds of thousands of anaesthesiologists in more than 140 countries, we deliver programmes that facilitate learning and promote the highest standard of anaesthesia care around the world.

Improving access to education

In low- and middle-income countries, high mortality rates in the operating room and immediately after are often related to a lack of infrastructure, essential equipment, monitoring and drugs, as well as a shortage of trained personnel.

The WFSA began offering fellowships to young anaesthesiologists from low- and middle-income countries in 1996 as part of a wider mission to improve patient care and access to safe anaesthesia. Twenty years later the programme has successfully trained more than 250 fellows from countries across Africa, Asia, Europe and Latin America.

Laerdal baby

Julian Gore-Booth, Chief Executive Officer of WFSA (UK), explained: 'Supported by leading hospitals and dedicated WFSA volunteers, the WFSA is able to offer fellowships to anaesthesiologists from lower income countries at no cost to themselves. But successful applicants can only access these opportunities if their travel and living costs are supported. It is essential that we make these opportunities available to anaesthesiologists who are already working in the countries that need their expertise and leadership the most.'

The WFSA is expanding its Global Fellowship Programme in order to help tackle the shortfall in skilled anaesthesiologists, with the goal of training 500 fellows and reaching over 1 million patients by 2020.

Raising the profile of anaesthesia

In the August 2014 issue of *Anaesthesia News*, then-President Dr William Harrop-Griffiths so eloquently explained the large and varied role of the anaesthetist:

'Anaesthetists are not only excellent at the administration of straightforward anaesthetics, but we are also very good indeed at a number of other things. We can bale others out of simple anaesthetics that go rapidly and disastrously wrong. We can give highly complex anaesthetics to the sickest of patients. We are good at resuscitation, pain relief, fluid management, pre-operative assessment, pre-optimisation, postoperative care, high dependency care, and the recognition and management of sick ward patients. In fact, if you look at the surgical patient pathway as a whole, we are pretty damn good at every single bit of it bar the easiest bit: the knife work, which we can readily leave to the surgeons.'

One of the biggest challenges is educating decision makers on the huge role anaesthesia plays, or should play, in a hospital setting. As an essential element of universal health coverage, the WFSA continues to work with the World Health Organization as an official liaison, as well as with governments and other decision making bodies to ensure the voices of anaesthesiologists are heard at the highest level.

WCA 2016 HONG KONG

From 28 August to 2 September 2016, the WFSA, along with the Society of Anaesthetists of Hong Kong, will host the 16th World Congress of Anaesthesiologists, the foremost global gathering of our specialty for those interested in learning, networking and engaging in open dialogue on important topics in the field of anaesthesia. The high profile nature of the Congress will be an opportunity to openly discuss the role of anaesthesia in relation to global health. Dr Atul Gawande, surgeon, bestselling writer and public health researcher, and Tore Laerdal, Director of the Laerdal Foundation and Managing Director of Laerdal Global Health, will give the Harold Griffith lecture on Wednesday 31 August 2016 on this topic. As two innovators in the field of medical care and global health, their insights will be invaluable in promoting our profession on a world stage.

In 2015, the World Health Assembly in Geneva unanimously approved a resolution entitled 'Strengthening emergency and essential surgical care and anaesthesia as a component of universal health coverage,' [2] in a landmark decision to address this previously ignored global health crisis. The WFSA addressed the 193 Ministries of Health who make up the Assembly saying, 'We can address the combined elements of workforce, drugs, equipment and infrastructure that not only ensure a safe provision of anaesthesia, but contribute to strengthening health systems and improving health outcomes in a manner that is affordable, life-saving and an outstanding return on investment.'

The WFSA was an integral part of the support for this resolution and is committed to ensuring access to safe anaesthesia. We will be launching a global campaign entitled 'Safe Anaesthesia For Everybody – Today' 'SAFE-T' at the World Congress of Anaesthesiologists in August, ensuring safe anaesthesia is an international priority for individuals, organisations and industry in the years to come.

For more information about the WFSA and its programmes please visit www.wfsahq.org

Julian Gore-Booth
WFSA Chief Executive Officer

Niki O'Brien
WFSA Communications Officer

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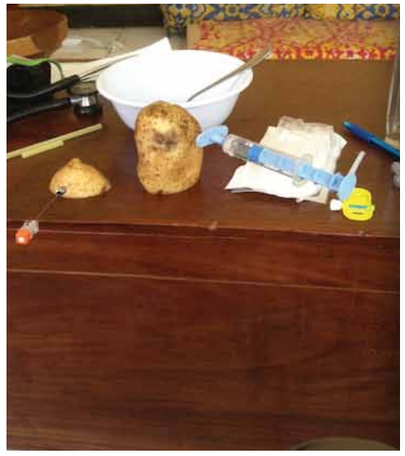
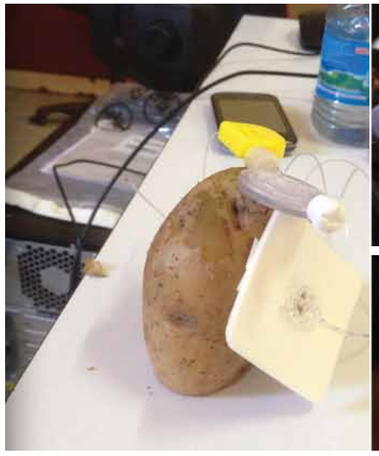
WFSA WORLD FEDERATION OF SOCIETIES OF ANAESTHESIOLOGISTS



Epidural teaching session. The humble potato proved surprisingly effective.



Hawassa Lifebox training and distribution

Spontaneous seminar room cardioversion and theatre-based teaching with a first year anaesthesiology resident

LIFEBOX FELLOWSHIP

On my current rotation, I've been asked a few times which hospital I've just come from. This casual question from consultant colleagues and fellow trainees usually serves as a springboard to other topics fairy quickly. However, my answer to the question has been followed by raised eyebrows and a somewhat longer discussion than is perhaps usual: the answer is Jimma University Specialised Hospital, Oromia, Ethiopia [1].

From August 2015 to February 2016 I worked in Ethiopia as the inaugural Lifebox/AAGBI Fellow. My remit? 50% clinical and education and 50% quality improvement. I had a fairly good introduction to where I would be working some months before I started as I taught on a Safer Anaesthesia From Education (SAFE) Paediatrics course [2] in April 2015, which doubled up as a recce of Jimma and accommodation finding mission for my upcoming placement.

So what is the Lifebox Fellowship and why did I want to undertake it? It is an opportunity for a post FRCA (ST5+) UK anaesthetics trainee to experience developing world anaesthesia in, currently, Ethiopia or Uganda. However, two more SAFE Fellowships have been created this year in Kenya and Malawi, with trainees appointed to all four posts [3]. It is clear that spending professional time abroad is beneficial for both us as trainees and the NHS upon our return [4]. Additionally, I missed the travelling experiences of my pre and immediately post university years that became a distant memory once the rigours of postgraduate medical training and exams took hold of my life. Combining those two points made the decision to apply for the Lifebox Fellowship a fairly easy one.

My role was as previously defined but with the renowned laid back attitude that is characteristic of Africa, it soon became apparent there would be considerable flexibility to pursue any projects I felt suitable. My only strictly defined role was that I was to treat the new anaesthesiology residents as my number one priority. There are only 30 anaesthesiologists in the whole country [5] and only two of those reside outside Addis Ababa; in Jimma. The acquisition of trainees to Jimma was the result of decades of effort on the part of the anaesthesiology department. The flip side of this was that there was no formal curriculum and no structured teaching so I was starting with a blank canvas.

Teaching & Clinical

Striking a balance between teaching what a Western trainee anaesthesiologist might expect, and indeed need, to learn and what is practical and necessary for an Ethiopian anaesthesiologist is difficult. I started teaching practical procedures that might seem like bread and butter to us in the UK but are the stuff of folklore out there. Central lines and epidurals were prime examples. Despite theory and practical sessions, utilising myself for ultrasound practice with part boiled potatoes as makeshift ligamentum flavums, one fundamental problem repeatedly surfaced; the complete lack or inconsistency of equipment and allied health professional training that made implementing these newly taught skills challenging.

Despite the difficulty in implementing newly taught skills, the residents displayed considerable enthusiasm during the teaching sessions. Clinically the experience was highly varied. There was perhaps less hands on clinical experience than I was expecting as my clinical exposure was almost exclusively done in the context of supervising the trainees. However, the advanced pathology caused by the multifactorial delayed presentation means you will see cases you just don't see back home. From advance maxillary facial tumours presenting considerable airway challenges to spontaneous seminar room cardioversions with an ancient defibrillator, and incredibly sick paediatric cases, too often with tragic outcomes.

Procurement

I found that lack of equipment was the single biggest challenge to delivery of care and teaching. It affected everything on a day to day basis. The commonly blocked endotracheal tubes on Intensive Care due to lack of HME filters (with the predictable morbidity and mortality one would expect); the 20G cannulae used to perform spinal anaesthesia for urgent caesarean sections as the three 'reusable' 20G quincke needles were still being cleaned; the central venous catheters so precious they were the product of wandering NGOs with big enough hold luggage allowances and locked away in a cupboard; the epidural packs that fought for the same precious hold luggage space as the CVCs; the two litre reservoir bags attached to breathing circuits, more yellow from the Elastoplast holding them together than green; the (anything but) disposable endotracheal tubes continually cleaned and reused day after day; the one (yes, one) bougie in the entire department that one of the residents kept on her person at all times; the lack of 3-lead ECG monitoring, not through lack of the leads but the absence of simple ECG electrodes (also a problem when teaching neuromuscular monitoring).

It is true that many of these pieces of kit are often somewhere to be found; in a random cupboard or drawer or in a bag compiled of leftovers from the latest NGO mission to visit the hospital. But the sheer difficulty and unpredictability of finding something when and where you want it highly disincentivises its routine use. Thus there becomes little need for that equipment, little or no training in its use and consequently persistent unfamiliarity with it; and so the vicious cycle perpetuates itself.

I decided that for the 50% quality improvement component of the Fellowship I wanted to look into how equipment is procured for Jimma University Hospital. According to quality improvement methodology I should really have been process mapping and formulating driver diagrams to identify bottle necks in the system and perform multiple PDSA cycles to address those issues. This might have been possible but most processes were so ill defined and at the mercy of more fundamental gaps in infrastructure and equipment procurement that these seemed more appropriate starting points. Focusing on procurement of equipment, specifically spinals and epidurals for maternity, became my objective.

One key objective I set was that if we were to obtain spinal packs to distribute into maternity (and theatres), they needed to be cheap, but not free. Donations are warmly received and well-meant but are ultimately not sustainable in the long term. Rather, my hope was to encourage local ownership and establishing a procurement line. I started by looking at Chinese medical supply companies and received sample packs for spinals and epidurals from two. Red tape meant delivering them to Ethiopia was very difficult so I went the slightly less direct route of sending them home to the UK and then bringing them back in my hold luggage. Simultaneously, back in the UK, my educational supervisor was forging links with a well-known medical supply company to supply spinal packs initially free of charge but with potential for a longer term arrangement. Initial trials with the local anaesthetists were enthusiastic so there followed a meeting with the Jimma procurement lead to discuss how to implement this on a sustainable basis. Considerable bureaucracy, beyond which I could ever have imagined, made taking this forward frustratingly slow but I am continuing this project even though I am now back in the UK.

Other activities

Being on placement under the umbrella of Lifebox as well as Operation Smile, which had an overlapping role in organisational aspects of my Fellowship, meant I was exposed to processes and experiences I could not have otherwise hoped for. There is

a bigger picture in the developing world of global healthcare policy implementation and the insight into the considerable complexities of how this is implemented was an unexpected bonus of my Fellowship. Without going into detail, I was introduced to the GE Foundation who kindly invited me as the Lifebox representative to the Health Service Transformation Programme meeting in Adama, just outside Addis Ababa, to witness the unveiling of the next 5-year plan to transform the healthcare sector in Ethiopia. The GE Foundation launched their Safer Surgery 2020 initiative, committing an impressive $25 million to their 5-year project [6]. The implementation of this initiative also involved other policy and strategy firms such as Dalberg [7] and the non-profit health organisation affiliated to John Hopkins University, Jhpeigo [8]. I met representatives from all these bodies and began to realise just how difficult and multi-layered the process of implementing change, let alone improvement, in a developing world healthcare setting is.

One of my early projects was to facilitate the improved utilisation of the WHO Surgical Checklist into Jimma theatres. I was fortunate enough to have regular contact and a flying visit from Tom Weiser, a trauma surgeon from Stanford and one of the authors of the original WHO Checklist paper. Through multiple meetings, draft checklists, repeated feedback and local engagement, a Jimma checklist was introduced and currently has good uptake. As a Lifebox Fellow it was perhaps inevitable I would undertake a Lifebox distribution and education workshop. The opportunity presented itself in Hawassa, an Ethiopian town not far from Jimma. My role was to integrate the components of the Lifebox teaching and evaluation programme into a simultaneously running surgical and anaesthetist training course from a Welsh-based consultant contingent. A lot of improvisation, adaptation and general winging it was required, but ultimately a very rewarding distribution was obtained.

It's difficult to know how to sum up my six months in Ethiopia. In many ways it was exactly what I expected and yet entirely unpredictable. Would I recommend it to others? Categorically yes, but with significant caveats. First you have to be comfortable with the improvisation, and frustrations, that will be necessary to maximise your time in a developing world healthcare setting. Second, your personal circumstances need to fit in; marriage, children and a mortgage could make this a challenging OOP. Third, your financial circumstances need to fit in. Despite offering arguably the most generous stipend of the developing world fellowships that are available, it will still represent a massive pay cut and your financial commitments back home are unlikely to be sympathetic to your change in circumstances. But, I sincerely doubt I will have a more formative six months in my anaesthetic training and I would urge all post FRCA trainees to consider a developing world stint.

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Anaesthesia Digested

Anaesthesia September 2016

We focus here on three articles from the August 2016 issue that adopt a fresh view of established dogmas.

Lipid emulsion for intoxication by local anaesthetic: sunken sink?

Picard J, Meek T

The first of these articles concerns whether and to what extent lipid therapy for local anaesthetic toxicity (LAST) works as a 'lipid sink', as is commonly believed. We are generally told that lipid absorbs or adsorbs the excess local anaesthetic, reducing its free plasma concentration and so reducing toxic effects on the vital organs. Picard and Meek, however, cite several lines of evidence (including that from the laboratories of the pioneers of lipid therapy) that show how plasma concentrations in fact are not affected. Rather the competing, novel hypothesis is that lipid acts as a vehicle transporting away local anaesthetic from better-perfused vital organs to more poorly perfused organs, from where it can also be better cleared from the body.

Research not research

Yentis SM

This paper challenges some existing dogmas around 'research'. It is based on Yentis' professorial inaugural lecture, and anyone who heard the original will recall how terrific an occasion it was. By subtly placing the emphasis on different aspects of the sentence and words, Yentis explores the many meanings of 'research'. The main discussion revolves around 'big research' vs 'little/garden shed research'. 'Big' concerns the modern-day, multi-centre, highly-funded business-like endeavours that now characterise the bulk of university-based research activity. Yentis is correct in his descriptions: anyone who believes universities are now any different from pharma companies or businesses are living in cloud cuckoo land. These entities are now identical in how they are managed. Yentis makes a strong case for 'garden shed research' – the low-cost, bedside studies that support the training and education of young anaesthetists in well-demarcated projects of tangible clinical relevance. Although inspirational, this paper is also aspirational. The reality is that 'garden shed research' alone cannot sustain a university department: Research Excellence Framework metrics make that impossible. Or, expressed another way: the only way to support 'garden shed research' is in a department that is sufficiently successful in 'big research'.

Pensions, tax and the anaesthetist: significant implications for workforce planning

Pandit JJ

Age and the Anaesthetist

Hutton P, Baker M, Black C, et al. *Anaesthesia News*, August 2016 issue 349

These complementary pieces challenge dogmas concerning how best to approach 'work'. They may cause some readers to undertake a fundamental reassessment of both their career and their financial plans. For those of a certain seniority, the AAGBI Working Party glossy *Age and the Anaesthetist* offers extremely valuable practical advice and resources on how to approach job planning and better achieve work-life balance towards the later years of a career. The accompanying paper on pensions and tax emphasises how we all (regardless of seniority) will need to make careful plans from now, if we are to make the best of our working lives. Unfortunately, the logic of the analysis leads to the conclusion that, for most of us, this almost inevitably will mean *reduced* commitment to the NHS (i.e. the NHS appears to have created disincentives for work). If the logic presented holds, and if the predictions of the paper materialise, then this will have the most profound – and adverse – consequences for NHS service delivery. The response of the readership to both these papers will be fascinating.

N.B. the articles referred to can be found in the August issue of *Anaesthesia*

J. J. Pandit
Editor, *Anaesthesia*

Anaesthetist and pub landlady

There are mornings I wake up and am unsure where I am or what profession I will be practising that day. Some days I dress in whites and others in blues. Since last July I have had two full-time jobs – the first being consultant anaesthetist at Queen's Hospital, Burton-upon-Trent, and the second as landlady of the Crown & Glove pub in Stannington, Sheffield.

As a GP friend of mine said, it's really the same job; handing out drugs and being nice to people! In fact there are a number of similarities between being a doctor and being a publican; the long antisocial hours, working evenings and weekends, working as a small team in a high stress environment and dealing with the general public while they are not in their best state...

So how did I end up running a kitchen one day and anaesthetising for an all-day orthopaedic list the next?

Since I qualified, my career has not exactly been conventional. Throughout my higher training in Edinburgh I had one goal in mind, which was to work for Médecins Sans Frontières. Along the way I got a little side-tracked with pre-hospital medicine and mountain medicine. I spent my penultimate year of training in Dunedin, New Zealand, where ICU registrars also worked on the helicopter. We did both primary trauma work, for example being tasked to RTAs, and secondary retrieval work from community hospitals to the tertiary referral centres. I also completed a Postgraduate certificate in Aeromedical Retrieval and Transport through the University of Otago.

Staff at the IPPG Machermo Rescue Post Spring 2011

On the back of this experience I got a post CCT Fellowship with the newly inaugurated Emergency Medical Retrieval Service in Glasgow. At the same time I was completing the UK UICC Diploma of Mountain Medicine, an amalgamation of my love of the mountains and my work in pre-hospital medicine, and I spent two seasons working as a mountain medic in the Everest region of Nepal. Finally I worked with Médecins Sans Frontières for two missions, in Papua New Guinea and Pakistan. In the five years after I qualified, I never spent more than seven months at one time back in the UK, using this time to locum and catch up with some UK professional development. I probably would have carried on the same path had I not met my partner.

Henry had been managing pubs in London for a few years and was more than ready to take the next career step of running his own place. There were a number of reasons we decided to take the big step of running a pub together. Although I still enjoy anaesthesia, I wasn't getting the buzz from working as a consultant within the NHS. I also did not want to spend my life as a pub widow as he continued to work 100 hours a week, and so came the idea of setting up business together. In November 2014, after a lot of discussion we packed up our place in London and moved to Matlock to look for a pub in the Peak District. While I did locum work and he worked at a local pub we spent all our free days trawling the pub websites together and travelling around the Peak District looking at pubs or meeting with different pub companies.


The Crown and Glove

In March 2015 I got a one year locum contract at Queen's Hospital, Burton-upon-Trent, and we had our first look at the Crown & Glove. Sitting high on a ridge on the outskirts of Sheffield it wasn't the idyllic country pub we had originally had in mind but it possessed many of the features we wanted for our pub. It is a lovely old building, laid out in the traditional way, sitting right on the edge of the Peak but within

Kitty and Henry


At work in theatre on the MSF project in Tari, Papua New Guinea

a village. It has great views, real fires inside with a history of selling real ale and being an important community hub.

The process from the first viewing to signing on the dotted line was long and stressful especially as I had no previous experience in the business world. There were numerous meetings with the Regional business manager, we had to write and present a business plan and then attend more meetings until we were accepted as 'partners' for Punch Taverns. Then the really hard work started. My job was to set up the kitchen. I wanted our kitchen to be about fresh, homemade, good quality pub grub. To this end I spent a lot of time researching local suppliers in the area. I visited butchers, farms and vegetable wholesalers, talked to other publicans in the area and got some samples which I tested on friends and family and eventually came up with a list of quality local suppliers that didn't break the bank. My next job was to devise an initial menu, which involved not only coming up with a balanced menu but also costing out all the dishes to see if they would be economically viable. My search engine on my laptop was constantly asked questions like 'how much does an average potato weigh?' or 'how much juice do you get from an average lemon?'!

I was also putting in my clinical hours at the hospital and using my SPA time to contribute towards the running of the department. After years of doing locum work, it was satisfying to be part of a department again. Over the eight months we were setting up and opening the pub I led a prospective clinical audit on our orthopaedic enhanced recovery programme and, using my previous experience, wrote a set of site-specific guidelines on transfer and overhauled our transfer paperwork and equipment organisation. There has been no such thing as a day off for the last year!

In mid-July 2015 we moved out of our house in Matlock and ended up semi-squatting in our pub, which was still a building site while it was being renovated. Having had no experience of the private sector before, I was shocked at the poor communication and inefficiency I witnessed during the refurbishment process – despite the fact it was being done by a large group of so-called experts – it made the NHS look efficient!

To add to the stress, by opening night we still had been unable to find a chef or a suitable locum so for the first couple of weeks I was the chef. It was a very steep learning curve. In the space of six months I have gone from being completely stressed out in the kitchen to being able to do a dinner for 30 with relative calm and efficiency. A few months after we opened, an anaesthetist friend asked me what was more stressful – running a dinner service or running an emergency list. I said the first – after all, I trained for seven years to do the second!

As someone who went straight from school to medicine, and who previously never had any interest in business, the whole thing has been a massive challenge from start to finish. From writing a business plan to making planning applications, finding suppliers to interviewing staff, learning how to run a busy Friday night service to handling cash it was all way out of my comfort zone. The first six months were probably the most stressful of my life. On the upside, reading a good review from a recent diner, working alongside my partner and standing behind the bar as the pub buzzes with happy punters is extremely satisfying.

There are a number of transferrable skills from medicine that have really helped me:

- Experience in dealing with the public and communicating with those from all walks of life
- Planning and organisational skills, for example keeping the kitchen supplied and services running smoothly especially at busy times like Christmas
- Problem solving
- A basic understanding of health and safety and the need for a paper trail and the tenacity to just keep going no matter how knackered and stressed you are!

These days things are more settled but I am generally still working seven days a week. Most weeks the days at the hospital are less stressful than those in the pub. Even when I am at the hospital in the evenings you will generally find me on my laptop paying the wages, ordering food or trying to design a poster or Facebook post. I have recently gone part-time in the hope Henry and I can finally get the odd day to go out and enjoy the area around us. Setting up a business with your partner is challenging but I don't think we've done a bad job!

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Project India:

Making a difference at both ends

During a holiday to India in 2005, Dr Sanjay Deshpande visited BKL Walawalkar Hospital in Dervan. He was astounded at the dedication and commitment of the medical staff despite the relative poverty of the surrounding area and difficult working conditions.

The following year, he started work on the India project and it has gone from strength to strength, acquiring charity status in 2009. Project India is a group of UK healthcare professionals who volunteer for 10 days each year to provide a surgical camp in Walawalkar Hospital in Dervan. Over the past 10 years, the UK team has provided expertise across a range of specialties including anaesthesia, surgery, orthopaedics, urology, ophthalmology, maxillofacial surgery, radiology, intensive care, pain and midwifery. In addition, a team of biomedical engineers accompany the group. Their presence is invaluable as they support local staff in the maintenance and servicing of anaesthetic and surgical equipment, promoting patient safety.

BKL Walawalkar Hospital

Dervan lies almost at the midpoint between Mumbai and Goa, in the state of Maharashtra. BKL Walawalkar Hospital strives to provide modern medical facilities and high quality medical care to the poor local population in Konkan region, at highly subsidised rates.

Until the 1970s, having the lowest per capita income, Dervan had many of the stereotypical features of a neglected Indian village: a lack of basic necessities such as food, clean drinking water and educational opportunities. The population mainly consists of landless labourers and their families who have chosen to stay in the village. Many younger male family members have migrated to cities for employment.

BKL Walawalkar Hospital is a 300-bed multi-specialty hospital, owned by Shree Vitthalrao Joshi Charities Trust and aims to provide the best treatment for patients with health issues across a broad range of medical specialties. During the ten years that the UK team has been visiting, the hospital has developed and expanded its range of services. It is equipped with locally manufactured anaesthetic and monitoring equipment, as well as equipment donated by hospitals in the north-east of England, and has recently invested in two new anaesthetic machines. In the past three years the visiting team included a Pain Sister who provided education to the local staff and developed guidelines on the management of acute postoperative pain.

January 2006 – the first visit

The team who made the first visit to Dervan in 2006 consisted of two consultant general surgeons, two consultant anaesthetists, two senior theatre nurses, two ODPs, two recovery nurses and a consultant ophthalmic surgeon.

The team from the first visit in 2006

They performed and supervised a total of 114 operations, which included 63 cataract excisions and 24 general surgery cases, with the remainder being gynaecology and urology operations. There were interesting anaesthetic challenges – equipment, environment and patients who had been refused by local anaesthetists owing to their comorbidities. The surgical and nursing staff experienced challenges too, but were motivated by the enthusiasm of the local staff and outcomes from the surgery performed. Overall the team felt hugely satisfied with the work and received great appreciation for the quality and standard of their work.

January 2015 visit

This time, the team was made up of

- Anaesthesia: 2 consultants, 1 SAS, 1 CT2 trainee, 4 anaesthetic ODPs
- Orthopaedics: 1 consultant surgeon, 1 SAS surgeon, 1 nurse practitioner
- General Surgery: 1 professor, 1 ST5 trainee, 2 theatre sisters
- Urology: 4 consultants, 1 ST4 trainee
- Ophthalmology: 1 theatre sister
- Specialist Nurses: 1 Pain Sister, 1 Specialist Nurse in Organ Donation
- Radiology: 1 consultant
- 2 biomedical engineers
- 1 medical student

The team was supported by two consultant plastic surgeons from India. Between the team visit in 2014 and their return in January 2015, BKL Walawalkar Hospital had upgraded to a new building adjacent to the old hospital. This included a new theatre complex with five modern operating theatres. In addition, the hospital built a medical school and gained permission from the Government of India and the Medical Council of India to open for admission from September 2015.

Patient journey

The concept of healthcare in a rural setting is very different from that in the UK. Patients are often suspicious of hospitals and initially try local remedies to treat a surgical condition and will only visit a hospital as a last resort. Patients generally do not have money for travelling long distances so invariably present in the late stages of illness.

Over the past ten years, the UK team has built a good rapport and trusting relationship with the local villages. Word of mouth has been key in promoting the annual visits and this is enhanced by local publicity campaigns. This allows potential patients to visit the hospital in advance of the surgical camp and discuss treatment options. Patients pay for procedures in proportion to their income. The administrative staff at the hospital assess each patient and calculate how much each patient will contribute to their treatment costs. A large proportion of patients are entitled to free treatment.

The patients mainly speak the local language Marathi, so local medical and nursing staff provide translation services in order to obtain patient history, allow examinations and to explain treatment plans. Patients are also pre-assessed by the individual junior surgical team the day before surgery. All specialised blood tests and scan reports are available at the time of the examination

Consent

The concept of going to the hospital is different from that in the UK. Most patients do not know much about their illness, their treatment options or any risks involved with either the surgery or the anaesthetic. Patients tend to be deferential and assume that what the doctor says is correct. Often local doctors do not spend a lot of time discussing the material risks associated with the surgical procedures but written consent is the norm. Over the years, a lot of training has

been done with the local teams and continued improvements in communication and consent has been seen. The UK team introduced the WHO surgical safety checklist for all theatre cases to improve patient safety and this is now used routinely

Anaesthetics

The hospital pharmacy stocks the most commonly used anaesthetic drugs – propofol, fentanyl, atracurium – in addition to emergency drugs. During the 2015 visit, it was noted that the emergency resuscitation trolley was disorganised and lacking essential equipment for management of cardiorespiratory emergencies. Although a biphasic defibrillator was available, there was little airway equipment present and no emergency drugs. The trolley was reorganised into an ABC arrangement, similar to that of an NHS hospital, and theatre staff given training on the new layout and content. A biphasic defibrillator was available in theatres to deal with emergency situations.

The practice of regional anaesthesia is developing within the hospital and this was built on during the 2015 visit. Neuraxial blocks are commonly used for orthopaedic procedures. Nerve stimulators are available for performing nerve blocks and it has become common practice for lower limb blocks to be performed for all major joint replacements to supplement general anaesthesia. Ultrasound is available at limited intervals. Wound infiltration and local anaesthetic techniques are often utilised for surgical procedures such as laparoscopic cholecystectomy, hernia and appendectomy surgery. Over the last few years, a Pain Sister from the UK team has worked with local nursing staff to promote education on the management of postoperative pain. This has greatly benefited patients by facilitating early physiotherapy and rehabilitation.

January 2016 and the future

Over the last 10 years, 2,029 operations have been carried out during visits to the hospital. The UK team departed from Newcastle on 29 January 2016 to begin another surgical camp in BKL Walawalkar Hospital. Consultant and trainee anaesthetists within the Northern School of Anaesthesia collected textbooks for donation to the local students.

Another new initiative is the Medical Projects. This is aimed at aspiring UK students who wish to pursue a career in medicine or nursing.

It allows them to witness healthcare in a developing country and see cases that are not often encountered in the UK. More details can be found at http://www.medicalprojects.co.uk/

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2009 UK team

PFA UK Team 2015

Government Medical School, Dervan, established August 2015

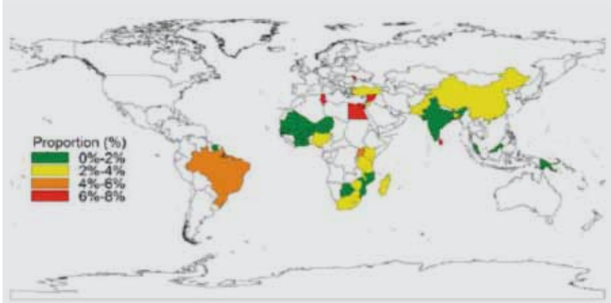
Obstetric anaesthesia and maternal mortality

The United Nations Millennium Development Goals (MDG) were launched in 2000 and MDG 5 specifically addressed the importance of tackling inequalities in maternal health. Its aim was to improve maternal health and reduce maternal mortality by 75% between 1990 and 2015. While not completely successful in meeting this goal, there have been dramatic improvements in maternal health, with a significant reduction in maternal mortality since 2000.

The global maternal mortality ratio has fallen from 330 per 100,000 live births in 2000 to 210 per 100,000 live births in 2013. In southern Asia, the maternal mortality ratio declined by 64% between 1990 and 2013, and in sub-Saharan Africa it fell by 49% [1]. However, there are still a quarter of a million maternal deaths every year and 99% of these occur in low- and middle-income countries [2].

In September 2015, the United Nations announced a follow on project to the Millennium Development Goals, the '2030 Agenda for Sustainable Development' [3]. This new universal agenda seeks to build on and complete what the MDGs did not achieve. This project contains 17 'sustainable development goals' and 169 targets to 'stimulate action over the next fifteen years in areas of critical importance for humanity and the planet.' Within these targets, the aim for maternal mortality is to reduce the global maternal mortality ratio to less than 70 per 100,000 live births by 2030.

World map depicting the burden of anaesthesia-attributed maternal mortality in low- and middle-income countries



From [4] © Sobhy et al. Open Access article distributed under the terms of CC BY. http://dx.doi.org/10.1016/S2214-109X(16)30003-1

Despite the relative success of the MDG 5, the challenges of obstetric care in the under-resourced world are enormous. The focus usually falls on the major direct causes of maternal mortality, particularly haemorrhage and pre-eclampsia. The provision of appropriate anaesthesia services in these situations is of international concern. But what of anaesthesia-related mortality itself? Although widely and comprehensively studied in the resourced world, till now there have only been estimates available for maternal mortality attributable to anaesthesia in low- and middle-income countries. Earlier this year the first systematic review and meta-analysis of anaesthesia-related maternal mortality in low- and middle-income countries was published [4]. The authors found that anaesthesia accounts for 2.8% of all maternal deaths in these settings and 13.8% of deaths after caesarean section. The highest rates were seen in sub-Saharan Africa but there were significant regional differences (Figure 1) and unsurprisingly the risk of death from anaesthesia was higher in rural than urban settings. Compared with neuraxial anaesthesia, administration of general anaesthesia tripled the odds of maternal death with mortality rates of 5.9 per 1,000 for general anaesthesia and 1.2 per 1.000 for neuraxial anaesthesia. The authors highlighted that there were fewer studies included in their analysis from low-income countries outside sub-Saharan Africa. Therefore the actual rates of anaesthesia-attributed deaths are probably even higher than their estimates because of scarce data from other low- and middle-income countries with high maternal mortality and poor healthcare resources.

Although numerical analysis is strikingly different from the resourced world, what of the underlying causes of anaesthesia-related maternal mortality? The authors were able to identify the underlying causes in 24 of the included studies. The themes are the same wherever you work, with maternal deaths occurring due to airway complications (difficult or failed tracheal intubation, oesophageal intubation, bronchospasm, ventilation difficulties, and hypoxia), pulmonary aspiration and high spinal anaesthesia. Issues related to staff competency, pre-assessment, the lack of intra-operative monitoring and equipment failure were also highlighted.

In recognising that anaesthesia contributes disproportionately to maternal mortality in low- and middle-income countries, it behoves us to seek ways to effectively reduce anaesthesia-related maternal mortality. The success of the UK Confidential Enquires into Maternal Death over the last 65 years underlines the value of careful and systematic analysis leading to changes in care. This approach has proved to be effective in South Africa where it has also been adopted. Differences in the quality and reporting of outcomes will potentially limit the effectiveness of international initiatives and a standardised approach to the definition and classification of anaesthesia-related maternal deaths should be a priority. Other important aspects include education and training for both physician and non-physician anaesthetists. The review highlighted that administration of anaesthesia by non-physicians, especially those with no formal training, was a significant risk factor for maternal deaths related to anaesthesia. It has been estimated that worldwide, there are approximately 550,000 anaesthetists [5]. However the distribution of this workforce is stark; low- and middle-income countries represent 48% of the global population but have only 15% of anaesthetists, with Africa and south-east Asia particularly underserved. Dependence on anaesthesia delivered by non-physicians is therefore inevitable but must be accompanied by adequate training.

Although the study by Sobhy *et al* [4] is the first to highlight, with scientific rigour, the significant contribution of anaesthesia to the maternal mortality figures in low- and middle-income countries, this is a truth that is well understood by any anaesthetist who has worked or taught in this environment. However, highlighting the problems relating to anaesthesia can help in a number of ways, particularly to inform grant-giving bodies of the importance of safe anaesthesia. Investing in education through courses such as SAFE and providing equipment such as pulse oximeters through the Lifebox charity, with an educational package and basic checks prior to anaesthesia and surgery with the WHO checklist, can further assist. How much of this can help it is very difficult to say, when so many of the problems start well before an anaesthetist or anaesthetic practitioner may have seen the patient in these settings. The dissemination of knowledge, learned through the UK Confidential Enquiries into Maternal Death, that skilled airway management and the safe practice of neuraxial anaesthesia are *core* skills that *every* anaesthetist must have, can only be positive. The commitment of the AAGBI and partner organisations, including the OAA, WFSA and DAS, to improving anaesthesia in low- and middle-income countries will continue and hopefully in time will have a positive and measureable impact on the contribution of anaesthesia to maternal mortality in these countries.

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Rachel Collis
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Particles

Albrecht E , Mermoud J, Fourinier N, Kern C, Kirkham KR

A systematic review of ultrasound-guided methods for brachial plexus blockade

Anaesthesia 2016; **71:** 213–27

Introduction
Brachial plexus blockade using supraclavicular, infraclavicular and axillary approaches are used for surgeries of the distal arm. Ultrasound-guided plexus blocks are more successful compared to injections guided by surface anatomy [1] or electrical neurostimulation [2].

This meta-analysis was carried out to see the relative effects of brachial plexus blockade achieved with these three approaches and the success rates with different numbers of injections under ultrasound guidance.

Methods
The authors meticulously searched MEDLINE, CENTRAL and Embase to January 2015, restricting results to human randomised controlled trials written in any language. All the trials included in the study compared methods of brachial plexus blockade under ultrasound guidance for distal arm surgery: one approach vs another; or one vs multiple injections.

The primary outcome, extracted independently by two authors, was the rate of successful blockade 30 min after the withdrawal of the needle, defined as no supplemental local anaesthetic infiltration or general anaesthesia, or intravenous opioids in excess of limits stated by the authors. Along with this the authors looked for specific secondary outcomes.

Standard statistical methods e.g. RevMan and comprehensive meta-analyses, were used to analyse the results, which make the methodology of the study very robust.

Results
A total of 25 randomised controlled trials were included in this systematic review. It was found that the mean (95% CI) rate of successful brachial plexus blockade was 92%, with no differences between the approaches. One injection was equivalent to a multiple injection technique in all subgroups. The overall rate (95% CI) of postoperative sensory neurological deficit was 1.7% with no postoperative motor deficit in any of the trials.

Discussion
This meta-analysis supports a few significant observations: the success rate with ultrasound guided brachial plexus blockade with the three approaches for distal arm surgery is 92%; all these three approaches have an equivalent success rate; a single injection is as effective as multiple injections, takes less time and causes less paraesthesia; and the risk of major neurological sequel after ultrasound-guided brachial plexus block is low.

Conclusion
There are a few limitations of the meta-analysis: heterogeneity; same group of authors in one quarter of the included studies; only four of the trials describing duration of analgesia; and postoperative pain wasn't reported by most trials.

However, this meta-analysis is the most recent, evidence-based update on brachial plexus blockade. It can now be concluded reasonably firmly that anaesthetists could succeed with the knowledge on any of the three ultrasound-guided approaches to brachial plexus blockade (supraclavicular, infraclavicular and axillary), for distal arm surgeries, with a single injection technique and without any increased risk for major neurological deficits.

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Odor PM, Bampoe S, Hayward J, et al.

Intrapartum epidural fixation methods: a randomised controlled trial of three different epidural catheter securement devices

Anaesthesia 2016; **71:** 298–305

Introduction
Complete or partial epidural analgesia failure occurs in up to 23% of parturients. In those used for peri-operative analgesia, catheter migration is the most common cause of epidural failure [1]. As catheter migration is common in obstetric epidurals [2], minimising it may improve their success rate.

This study compared three epidural dressings (Tegaderm, Epi-Fix and LockIt Plus) to identify which results in the least catheter migration during intrapartum use.

Methods
This prospective, randomised controlled trial included 165 patients between November 2013 and April 2014. All epidurals were inserted by experienced anaesthetists (with 4 cm of catheter remaining in the epidural space) and securely fixed to the patient with the allocated dressing. The length of epidural catheter at the skin (to the nearest 0.5 cm) was recorded both on insertion and on removal of the epidural. Migration distance was defined as the difference between these two measurements. Negative values and positive values indicated inward and outward catheter migration, respectively.

Results
The LockIt Plus dressing resulted in less catheter migration compared to both the Epi-Fix ($p < 0.001$) and the Tegaderm ($p = 0.037$) dressings. The median migration (and range) was 0.5 cm (-1.5–8.0) in the Tegaderm group, 1.0 cm (-2.0–9.5) in the Epi-Fix group and 0.0 cm (-1.0–5.5) in the LockIt Plus group. Magnitude of catheter migration was associated with increased failed block, necessitating epidural re-site or spinal anaesthetic. The Tegaderm and Epi-Fix groups had two complete catheter displacements, compared with none in the LockIt Plus group.

Discussion
Intrapartum epidural migration is a common and potentially preventable problem with significant implications for both patients and anaesthetists. It is caused by several factors, including loosening of the adhesive dressing (by blood, fluid leakage or sweating) or by patient movement.

Outward migration of ≥ 2.5 cm would result in at least one epidural hole exiting the epidural space, potentially resulting in sub-optimal analgesia. Inward migration may result in serious complications such as migration into a blood vessel [3] or the subarachnoid space [4].

The LockIt Plus resulted in the least catheter migration, both outwards and inwards, likely due to its integrated plastic clamp which firmly grasps the catheter. This is less likely to deteriorate or loosen when compared to the Tegaderm and Epi-Fix dressings which rely solely on skin adhesion.

Conclusion
Limitations of this study included the sealed-envelope (rather than central) randomisation and the lack of anaesthetist blinding. However, to avoid delay in epidural insertion and the difficulty of blinding anaesthetists, these limitations were deemed acceptable. Although the LockIt Plus was shown to reduce catheter migration, the authors accept that a larger study is required to compare dressing types to epidural failure, rather than just catheter migration.

David Buckley
ST4, Darlington Memorial Hospital

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Bourdeaux CP, Birnie K, Trickey A, et al.

Evaluation of an intervention to reduce tidal volumes in ventilated ICU patients

British Journal of Anaesthesia 2015; **115:** 244–51

Background
There is a considerable volume of evidence suggesting that lung protective ventilation (LPV) (<6 ml/kg predicted body weight) is associated with a better outcome in acute respiratory distress syndrome as well as in the general ICU population [1–5]. The authors implemented two large screens in their ICU that displayed current ventilator settings and changed colour when these volumes were exceeded. The aim was to investigate whether the addition of these display screens improved the likelihood of maintaining tidal volumes considered to be lung protective ventilation.

Methodology
The study was conducted in a mixed medical and surgical ICU at University Hospitals Bristol over two six month periods (before and after display screen implementation). Furthermore, a qualitative interview was conducted with medical and nursing staff to assess their interactions with the displays and their views on usefulness. All patients requiring > 1 hour of mechanical ventilation (excluding patients on an oscillatory mode) were included. Data for patients were collected and averaged out over three month periods to assess the overall differences in ventilator volumes.

Results
In total, 199 patients were enrolled in the six-month control period accumulating 7,640 hours of ventilation in total. A further 249 patients were enrolled in the six-month intervention period totalling 10,656 hours of ventilation. The authors found that between the two periods, the success rates of ventilating at <6 ml/kg increased on average from 17.5% to 26.8% and ventilating < 8 ml/kg increased from 60.6% to 73.9%. They also found from the qualitative interviews that the screens were acceptable to staff and promoted clinician attendance to the bedside.

Discussion
The authors concluded that the introduction of these screens promoted ventilation with lung protective ventilations. As such, they suggest that there is potential to improve the practice of ICU clinicians in concordance with their own ideas of the volumes their patients receive.

Conclusion
It is quite appealing that an intervention like a colour coded warning screen could increase patients' outcome. However, for other ICUs to implement this they would first require a centralised database linked to the ventilators. The addition of a qualitative interview allowed assessment of whether staff were actively engaging in the intervention. Results looked promising but it is not without its significant methodological flaws. A lack of power calculation at the start leaves the reader confused as to whether the number of patient-hours in each group is sufficient to draw any significance from. Along with this is the absence of p values comparing the patient characteristics of the control and intervention group. While this initial methodology was simple to follow, the paper becomes blurred towards the results analysis with the authors calculating P/F ratios for sub-groups and patient factor odds ratios as predictors of achieving lung protective ventilation as opposed to sticking to their intervention. In summary, this is an interesting idea but no solid conclusions can come from it. A repeat with adequate power calculations and p values of group demographics may yield more convincing results.

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Critical care in East Africa

I had always been keen to pursue overseas work, but had already taken time out of programme and knew it would be difficult to commit to any lengthy period of time, something which many organisations required. I began contacting organisations enquiring as to how I could become involved and this led to my first experience of anaesthesia in East Africa, a clinical placement in Hoima, Uganda. While making enquiries and arrangements I learnt that there were a number of activities at my university and this led to my ongoing involvement in developing critical care services and a multiway partnership with Bahir dar, Ethiopia.

Obstetric anaesthesia in Hoima, Uganda

Hoima Regional Referral Hospital is a busy hospital in the north west of Uganda. I undertook a short placement, focusing on obstetric anaesthesia and organised through the Ugandan Maternal and Newborn Hub, which encompasses a number of UK-Ugandan partnerships. The placement required some preparation prior to going, including obtaining registration with the Ugandan Medical Council and attending the Anaesthesia in Developing Countries course in Oxford to familiarise myself with some rather unfamiliar equipment that I remembered reading about for the FRCA!

There were three nurse anaesthetists in Hoima and two operating rooms with three tables. As far as possible all surgery was performed under spinal anaesthesia. Due to lack of vasopressors, these were often low dose, around 1 ml of 5% bupivacaine, and supplemented with ketamine sedation if necessary – the surgeons therefore had to be quick! There was a Glostavent mechanical ventilator available for general anaesthesia as the power was frequently out, as well as a simple draw-over vaporiser, with halothane and ether as inhalational agents. The anaesthetists often had two patients side by side in theatre, and I soon learned that neonatal resuscitation was also part of the anaesthetists role so four patients at once was not uncommon.

Patients were often very young or grand multiparas and the location meant they frequently presented late and maternal and neonatal mortality was high. One particular day, we had three cases of ruptured uterus, two of which occurred simultaneously. Monitoring was minimal (fortunately there were Lifebox monitors!) but a finger on the pulse was sometimes the only option. There was also a bit of traditional medicine in this area with labour often augmented with herbal remedies and eclampsia sometimes mistaken for cerebral malaria or even spiritual possession.

My time in Hoima was brief but incredibly interesting and I was fortunate that my placement overlapped with a group of paediatricians and midwives who regularly visit Hoima, and a UK obstetrician on a long-term placement. This allowed me to see the benefits of partnerships and repeat visits.

Critical care in Bahir dar, Ethiopia

I became involved with working in Ethiopia during an out of programme teaching fellowship. While researching options for overseas projects I discovered the University of Aberdeen had registered charities undertaking projects in a number of countries. The University was also developing global health within the undergraduate medical curriculum which I was able to become involved with, and subsequently became coordinator on the global health course and a medical elective and exchange scheme which was being developed. Facilitated by The Soapbox Collaborative, my first visit to Bahir dar involved developing the student elective scheme with Bahir dar University and a critical care needs assessment at Felege Hiwot Referral Hospital (FHRH). Over the past two years the partnership has developed and now involves both universities and associated hospitals with bi-directional staff and student exchanges, and I have taken the roles of lead for education and training and critical care. I have now visited FHRH four times and co-ordinate numerous activities remotely.

Operating room, Ethiopia

FHRH is based in the Amhara region of northern Ethiopia and serves as a referral hospital to 7 million people. It has 400 beds and faces a number of challenges typical to a low resource setting serving a high population from a broad geographical area.

There are four operating theatres with nine tables providing general, orthopaedic, urological, gynaecological, ENT and ophthalmic surgery coupled with a large volume of trauma. Over 5,000 operations are conducted each year and there are currently 17 anaesthesia practitioners. There is a 6-bed ICU (currently expanding to 10–12 beds) and a separate maternal and child health facility on site with its own operating room.

Oxygen porters, Ethiopia

Anaesthesia practitioners are usually from a nursing background and have undertaken a 1 year BSc in Anaesthesia, with a small number also completing a MSc. Many procedures are performed under spinal anaesthesia and there are modern anaesthetic machines for general anaesthesia with halothane as the primary inhalational agent. Despite the modern machines, monitoring and airway equipment is in limited supply. Oxygen is all by cylinder supply and power outages are common. Endotracheal tubes are re-used and oropharyngeal airways, laryngeal masks and other adjuncts are limited. The surgeon will usually act as anaesthetic assistant and all surgical residents rotate through anaesthesia during their training. The ICU is physician-led and has capacity for ventilation but no blood gas analyser or functional carbon dioxide monitoring.

Throughout the past two years I have led a number of projects and training at FHRH. In obstetrics we have introduced postoperative care guidelines, have successfully introduced a locally modified obstetric

early warning score system which has been in full use for over a year, have worked with the WHO Safe Childbirth Collaboration to pilot the WHO Safe Childbirth Checklist and implement locally and have provided training in obstetric emergencies and neonatal resuscitation. We are now rolling out early warning scores to the general recovery and ward areas.

In the emergency room we have introduced a sepsis management bundle and provided life support training alongside the development of resuscitation stations containing first line equipment. In the ICU we have provided ventilation training and introduced ventilation monitoring charts. We have also conducted hand hygiene and pain management training across the hospital. Later this year we plan to focus further on postoperative care and airway and trauma management.

The elective scheme allows medical students to partake in projects, particularly auditing for needs assessment, and re-auditing following interventions. They are often able to participate in training sessions too. Repeated visits and continued contact via the partnership allows for follow-up and contributed to the sustainability of interventions. Recently we have assisted with developing a quality department at FHRH for risk management, incident reporting and audit and research.

Practicalities of working overseas

Initially it felt like it was difficult to find opportunities to get involved in overseas projects, but I later realised there were activities locally that I just hadn't heard of. Since becoming involved with global anaesthesia and critical care, I have made contact with many other anaesthetists involved with projects and partnerships overseas. My two experiences have been very different and have enabled me to explore the type of overseas work to which I am most suited.

I've learned that it is entirely possible to become involved in overseas work without having to commit to a lengthy time period, and returning to one place can be extremely rewarding; knowing the set-up and the staff can allow even short placements to be very productive. I have been fortunate to see FHRH develop over time, and recently the hospital won an award for top performing hospital in Ethiopia. Being a part of that has been wonderful. I have also been fortunate to obtain study leave to enable me to undertake this, although I also utilise my annual leave regularly. I've become an avid travel grant seeker to enable this work, applying to multiple societies for assistance, and obtaining project funding from the Tropical Health Education Trust to facilitate a year-long project in a particular area.

I've learnt so much from the overseas work and am exceptionally grateful to all those who have supported me and very proud of all those I've worked with.

Acknowledgments
With thanks to SEA UK, the AAGBI IRC, the Scottish Society of Anaesthetists, the BMA and the Tropical Health Education Trust.

Jolene Moore
STR7 Anaesthesia, NHS Grampian

NIAA Vacancy: Grants Officer

National Institute of Academic Anaesthesia

Applications are invited from clinicians and non-clinicians for the position of Grants Officer for the National Institute of Academic Anaesthesia (NIAA).

This is a three-year fixed term appointment to strategically promote, develop and manage a process that will further the vision of the NIAA to facilitate high profile, influential research.

The post holder will provide specialist advice to grant applicants, liaise with funding partners and specialist societies, and act as the outward face of the NIAA grants scheme including presenting at meetings and representing the NIAA on external panels.

The post is supported by the cost of one period of professional activity (1 PA) per week; back-filled to the post-holder's employing organisation, in order to enable the successful candidate to dedicate a minimum of four hours per week to the role.

You can find out more information and download a full job description and person specification for this role from the NIAA website: www.niaa.org.uk.

Deadline for applications: Monday, 12 December 2016 at 5 pm
Interviews will take place in January 2017

Dear Editor

The Angled-Handle trap!

While performing an emergency endotracheal intubation in the intensive care unit, I was anticipating some difficulty and in such cases I prefer to use a McCoy blade laryngoscope. I asked the ITU nurse to prepare a McCoy Blade 3 and was told we use the single-use McCoy blades on a reusable handle, which he showed me from where he stood at the end of the bed. I could see from my position at the top end, that the bulb of the laryngoscope was well illuminated when the blade was mounted on the handle and the tip of the McCoy blade was functioning (Fig 1).

After placing the blade into the patient's mouth, and while lifting up when the tip reached the epiglottis, the angle between the blade and handle snapped open to an obtuse angle and the lever of the McCoy tip lost its function as there was no space for the lever to move (Fig 2). It was then that I realised I was holding a Polio-style laryngoscope!

I could still intubate the trachea and it wasn't as difficult as I expected. However, using a McCoy blade would have spared a lot of BURP to improve the view.

After stabilising the patient I tried to work out why I ended up with a Polio-style laryngoscope when I asked for a McCoy. These were my conclusions:

- The McCoy blade was mounted on a Heine F.O. Angled-Handle laryngoscope, a piece of equipment which I was unaware of, not to mention its existence on our intubation trolley
- The ICU nurses who were helping admitted that despite adequate training for preparation and assistance in such situations, they seldom had a doctor asking for a McCoy laryngoscope. And, as expected, they were also unaware of the Angled-Handle one
- As both the blade and the handle were fibreoptic, the bulb could be illuminated with minimal contact between both in a 90˚position. Ironically, the manufacturer's recommendations |for Heine F.O. Angled-Handle laryngoscopes state clearly that it can be used with any F.O. blades except the Flexi Tip (McCoy) [1].
- This is an example of equipment misuse that could turn a potentially difficult situation into a definitely difficult one. We had all the necessary equipment for difficult intubation/ventilation available, but using the wrong tool to start with could waste an attempt when every attempt counts. So some things to consider:
- An anesthetist should always keep him/herself familiar with different pieces of equipment in all clinical areas they are likely to work in. Re-orientate yourself after return to a clinical area, especially after a long time off or rotation!
- It is naïve to assume that nursing staff, no matter how experienced, are well trained in setting up all airway equipment; especially rarely used items. Issues with equipment, including lack of training, were identified by NAP4 as other reasons for failed airway management in ICU. Clear communication is vital as well as adopting a critical care intubation checklist [2]

No matter how emergent it is, double-checking never takes time. A plan is worthless if it does not include confirmation of all the necessary resources.

Mona Sallam
Specialty Doctor Anaesthetics, Queens Hospital Burton

Figure 1.

Figure 2.

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Dear Editor

We thank Drs Williamson and Raj for taking an interest in our letter [1]. We are fully aware of the fact that much more work has been carried out on using greengrocery items for epidural simulation. It would be very interesting to compare fruits with root vegetables, as they have suggested. We are indeed planning a study to evaluate this and hopefully will come to know if anything needs to be buried at all!

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P Tamhane
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Reference

1. Williamson R, Raj D. Letter response. *Anaesthesia News* 2016; **348:** 33.

your Letters

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

Dear Editor

SAFE paediatric course in Masaka

At the end of January I had the privilege of being part of the faculty for a SAFE paediatric anaesthesia course in Masaka, Uganda. I know that a number of articles and letters have been written about these courses so why bother writing another one? Well, for a number of reasons:

1. This is an excellent course with well thought out, appropriate content with a helpful facilitators' manual enabling most qualified anaesthetists to deliver the course.
2. The course is dynamic. At the end of every day each session is discussed with all the facilitators to check if any improvements or changes are needed to improve delivery.
3. On this occasion the course was being run for physician anaesthetists, some with paediatric fellowships, from Kenya, Zambia, Malawi, Ethiopia and Uganda. Not only were these doctors participating in the course, they were also discussing what was appropriate to teach to their own clinical officers and anaesthetic nurses in their own environment.
4. The SAFE paediatric course was followed by a one day training of the trainers' course and then became the faculty for 60 Ugandan anaesthetic officers the following week.
5. The course was exciting because not only was it being expanded across Africa but it was being organised and run by an African faculty assisted only by three anaesthetists from the UK and one from the USA.
6. The course ran to perfection. The sessions and lectures ran to schedule, there was time for questions and all the equipment was laid out and easy to access when preparing for a skills session.

Having lived in Uganda for a long time, I have attended and participated in a number of conferences, workshops and courses across Africa and often time can have quite a flexible feel to it, it is made to stretch to fit the speaker or the discussion. This course was remarkable, all facilitators were punctual, the sessions ran strictly to time and all equipment was available and functional. We never had to make do. The whole process was enjoyable and well executed.

I wanted to write this letter to reassure people who donate regularly to the International Relations Committee and wonder what happens to their money. This is money well spent for a useful, well written (by Dr Isabeau Walker and Dr Michelle White) course that has impact on anaesthetic officers' performance but has now been handed over and run impeccably by a well- chosen Ugandan faculty. I would like to congratulate and express my gratitude to all those who made this happen and I appreciate the effect it has had on the anaesthetic officers I work with on a daily basis.

Sarah Hodges
Medical Director, CoRSU Rehabilitation Hospital, Kampala, Uganda

Dear Editor

Patient positioning to perform popliteal fossa nerve block

Having an assistant to hold the leg, the Oxford position, and placing the leg on a chair are some of the techniques described in the literature to enable sciatic nerve block at the popliteal fossa in a supine patient [1,2]. If the block is performed with patient supine, sufficient space must be provided to accommodate the transducer beneath the knee and thigh. This can also be accomplished by resting the foot on an elevated footrest or by flexing the knee while an assistant stabilises the foot and ankle on the bed. Here we describe our practice of using Carter Braine limb support for positioning the leg in a supine patient. While the patient is supine, the leg is placed on the Carter Braine support with 60–900 flexion at the hip and knee to ensure there is no undue stretch on the nerves, muscles or tendons, and that the patient's leg is comfortably positioned. This technique also allows room for the probe to be tilted caudally to bring the angle of incidence to 900 to the nerve. With this positioning technique, both in-plane in-axis and in-plane out-of-axis block can be performed with ease (Figure 1).

Figure 1. Leg positioned in Carter Braine support

We have been using this technique for the last few years with great success and it has proved popular with anaesthetic nurses.

Sudheer Jillela and Ramesh Sadasivan
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What is SAFE?

SAFE (Safe Anaesthesia From Education) was born out of the problems that anaesthetists face across the developing world resulting in maternal death directly linked to anaesthesia. SAFE Obstetrics was launched in 2011 after a discussion between Iain Wilson (past president AAGBI) and Stephen Teindo, a Ugandan anaesthetist, a local leader and champion of anaesthesia in Uganda. Their vision was a short, interactive, but tightly-delivered course that was suitable for physician or non-physician anaesthetists alike. The course that was developed used the 'SAFE' approach which combined UK anaesthetists with local instructors, who were then provided with a 'Training of the Trainers' course to enable them to become the in-country faculty of the future. The course content was written by UK-based experts in the field of obstetric anaesthesia, led by Kate Grady who had experience of developing and writing the MOET course. The content was then evaluated and changed in parts by Ugandan anaesthetists to ensure it was relevant to the developing world context.

SAFE paediatric anaesthesia faculty Masaka Uganda January 2015

The three-day course focuses on small group teaching and maximises interaction between faculty and participants with training material that includes a manual, videos, protocols, a textbook and a drug dose and protocol pocket book of basic skills. The course aims to improve the practice of anaesthesia for pregnant women to a safe standard. It is clinically relevant and addresses the core and extended roles of the anaesthetist. The first three modules cover safe airway practice and spinal anaesthesia. The obstetric content is based on the clinical conditions causing 80% of maternal deaths, namely haemorrhage, sepsis, eclampsia, obstructed labour, the complications of abortion and early newborn care (including resuscitation). As a three-day course there is a lot to cover but it is designed in this way to avoid lengthy periods away from the workplace for the attendees. It allows two back to back courses to be run by travelling faculty and a 'Training of the Trainers' course can be conveniently delivered between the two courses.

It is a remarkable fact that every person delivering anaesthesia to pregnant women in Uganda has now completed the SAFE Obstetric course. Based on the success in Uganda, additional courses have been run in 16 countries including Bangladesh, Colombia, Ghana, Sierra Leona and Kenya. Since its inception, a total of 31 courses have taken place across Asia, Africa and South America, training a total of 899 people, both physician and non-physician anaesthesia providers (and 146 trained in ToT). Despite the course having been run in a wide range of settings, and delivered to anaesthetists with consultant status and non-physician anaesthetists in rural African settings, feedback has been uniformly positive: that the course is highly educational and relevant.

Following on from the success of SAFE Obstetrics, the AAGBI and the World Federation of Societies of Anaesthesiologists (WFSA) developed the SAFE Paediatric Anaesthesia course in 2014 to meet the challenge of providing safe anaesthesia care for children in developing world settings. The need is considerable in low-income countries where more than 50% of the population is under 14 years of age, and it has been estimated that 85% of children will require some sort of surgery before their 15th birthday. In many low-income countries there are few specialist surgeons and anaesthetists, and paediatric surgery and anaesthesia is of necessity the work of the general surgeon and non-physician anaesthetist.

The SAFE Paediatric Anaesthesia course is also run over three days and aims to provide refresher training for both physician and non-physician anaesthetists in the essentials of paediatric anaesthesia which emphasises the principles of safe care for children; in particular, assessment, vigilance and competence in essential skills.

The course has been written by paediatric anaesthetists with relevant experience, and includes sessions on anaesthesia for common elective and emergency conditions in children, pain management, fluid resuscitation, newborn and paediatric life support and paediatric trauma management. The course consists of five short lectures and a series of modular breakout sessions including skill sessions, scenarios, demonstrations, discussions, workshops, DVDs, and interactive lectures. Course materials include the AAGBI/WFSA 'SAFE Paediatric and Obstetric Pocket Handbook' of drug doses and protocols, written by UK volunteers working in Uganda. Like the Obstetrics course, SAFE Paediatric Anaesthesia is supported by a 'Training of the Trainers' course to achieve independence and sustainability for the programme. Based on the success of the SAFE Paediatric courses in Uganda, nine courses, training 320 physician and non-physician anaesthesia providers in Uganda, Kenya, Ethiopia, Zambia, Madagascar and Malawi, have been delivered.

SAFE®
Safer Anaesthesia From Education

The success of the courses is always evaluated through pre-and post-course testing, but the most telling feedback is through the open comments:

'Do this course every year.'

'We would like the 'Chief of Service' to realise that we do not have enough of these types of courses.'

'Very interesting – above all the practical side complimenting the theory.'

'Please organise another conference for our colleagues who could not attend this one.'

'We wish that God would help you to do more training to improve standards in anaesthesia.'

'I really appreciate your kindly response for this conference. Very interesting and knowledgeable.'

'Please continue with this kind of hearty support so that we can apply skills and knowledge to save more life in any situation we are in.'

*Practicing bag-mask-valve ventilation**

Funding for the courses has been through the AAGBI Foundation grants administered through the International Relations Committee, the WSFA and THET who have funded a network of courses across East Africa. The true cost of the courses has also been heavily subsidised by UK volunteers who have given up their time and contributed significantly to their own travel expenses. Wherever SAFE has been delivered there have been requests for more and the AAGBI and the WSFA are committed to continuing their support. However, additional funding will be required in the future due to the demand these popular courses have generated.

Rachel Collis
Chair, AAGBI International Relations Committee

Isabeau Walker
Chair, AAGBI SAFE Steering Committee

with thanks to Nick Boyd, Simulation Fellow, GOSH, for the photo

15th Anaesthesia, Pain and Critical Care Update

Friday 30th September & Saturday 1st October 2016

Royal Armouries, Armouries Drive, Leeds LS10 1LT



REGISTRATION
08:00 - 08:45: Registration, Coffee, Trade Stands
08:45 - 09:00: Welcome address - *Dr Velu Guruswamy, Leeds, Organising Secretary*

SESSION 1 (Chairs – Prof Ravi Mahajan & Dr Mahesh Shah)
09:00 - 09:25: **Management of Critically unwell parturients**
Dr Audrey Quinn , Middlesborough 2B06, 3B00
09:25 - 09:50: **Day to day challenges in Paediatric Anaesthesia**
Dr Stephanie Bew, Leeds 2D02, 3D00
09:50 - 10:15: **Trauma Anaesthesia - lessons learnt & is there a fixed recipe**
Dr Martin Drezner, Leeds 2A02, 3A10
10 :15 -10:30: Discussion
10:30 - 11:00: Coffee break, Trade Stands, Posters

SESSION 2 (Chairs – Prof Rajinder Mirakhur & Dr Ravi Marthi)
11:00 - 11:25: **Paediatric Anaesthesia in India - remembering 'Taare Zameen Par'**
Prof (Retd) Rebecca Jacob, India 3J00
11:25 - 11:50: **Patient safety first**
Dr Liam Brennan, President RCoA 3I00
11:50 - 12:15: **Is Medical profession under threat in UK**
Dr Anthea Mowat, Deputy Chair BMA, London 3J00
12:15 - 12:30: Discussion
12:30 - 13:30: Lunch , Posters, Trade Stands

SESSION 3 A (Chairs – Dr Roop Kishen & Dr Shivkumar Singh)
13:30 - 14:45: Free paper presentation

SESSION 3B (Chairs – Dr Ranjit Verma & Dr Nalini Malarkkan)
13:30 - 13:55: **Acute Brain Injury - Optimum management from DGH to Tertiary Center**
Dr Tonny Veenith, QEH, Birmingham 2F01, 3F00
13:55 - 14:20: **Acute pain in Chronic pain patients**
Dr Barani Ganesan, Leeds 3E00
14:20 - 14:45: **Why people fail in Revalidation**
Ms Tista Chakravarthy- Gannon, Lead Regional Advisor, GMC, London 3J00
14:45 - 15:00: Discussion
15:00 - 15:30: Coffee, Trade Stands and Posters

SESSION 4 (Chairs – Dr Abhiram Mallick & Dr Jayavanth Kini)
15:30 - 15:55: **Peri-operative Medicine**
Dr Ramani Moonesinghe, London 2A06, 2A07
15:55 - 16:20: **Oxygen Insufflation in Difficult Airway**
Dr Anil Patel, President, DAS 1C02, 3A01
16:20 - 16:30: Discussion

SESSION 5 (Chairs – Prof Monsukh Popat & Dr Pawan Gupta)
16:30 - 17:15: **Debate – This house believes consultants being resident on call is the way forward for the NHS** 3J00
Supporting the notion - Dr Simon Tomlinson, Manchester,
Against the notion - Dr Hamish McLure, Leeds

(RCOA Approved 6 CPD points)
Organsied by BAOIA. Charity Dinner with Mr Sunil Gavaskar.
Further details and registration, visit www.baoia.co.uk

Workshops on 1st October 2016

WS 1 - Airway workshop (AW)
Dr Sonal Sonwalkar / Dr Heather Gorton

Regional Anaesthesia (RA)
Dr Sameer Bhandari / Dr Vinay Shanthi

WS 2 UL *(UPPER LIMB / TRUNK)*

WS 3 LL *(LOWER LIMB / CNB)*

WS 4 - Simulation workshop (SW)
Leeds - Theatre emergencies, training the trainers and debrief

	WS1	WS2	WS3	WS4
09.00-12.30	AW	UL	-	SW
13.30-16.30	AW	-	LL	SW

Each delegate can attend 2 of 4 workshops

(RCOA Approved 6 CPD points)


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- The South of Ireland Association of Anaesthetists (SIAA) Annual Scientific Meeting, **Sat 8th October 2016**

Speakers include

Harry Akerman, Southampton, UK
Sol Aronson, North Carolina, USA
Anna Batchelor, Newcastle, UK
George Collee, London, UK
Jim Down, London, UK
Mark Hamilton, London, UK
Henrik Kehlet, Denmark
Denny Levett, Southampton, UK
Mike Margarson, UK
Dan Martin, London, UK
Tim Miller, North Carolina, USA
Hugh Montgomery, London, UK
Mary Montgomery, Birmingham, UK
Ramani Moonesinghe, London, UK
Monty Mythen, London, UK
Ian Welsby, North Carolina, USA

Rodney Armstrong Plenary Lecture 2016
Prof Henrik Kehlet
Copenhagen, Denmark

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- **Dr Jugdeep Dhesi**, London
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- **Dr Gary Minto**, Plymouth
- **Prof Monty Mythen**, London
- **Mr Rob Thompson**, RCOA

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