INSIDE THIS ISSUE:

A YEAR IN REVIEW 2013 - 2014

Managing the psychological impact of a fire in an intensive care unit

Spinal surgery in Uganda

Burnout in anaesthetic trainees
One look and the difference is clear:

X-Porte delivers a type of image clarity never before seen in point-of-care ultrasound systems.

X-Porte’s Extreme Definition Imaging (XDI) was specifically created to meet the challenge of unwanted phantom echoes from side-lobe beams. Using XDI proprietary beamforming technology, visual clutter is substantially reduced while significantly enhancing clarity.

• Onboard Education: Watch 3D learning animations concurrently with live scans for real-time comparisons and guidance.

• Fully customisable: Multi-gesture touch-screen interface. Sealed to facilitate cleaning and infection control.

• Industry-leading five-year warranty.

Learn more about X-Porte today by downloading our X-Porte iPad app. Or, better still, request a demonstration to experience X-Porte yourself. Email us at uksupport@sonosite.com

www.sonosite.co.uk/products/x-porte

From my own perspective, I have watched GAT, the trainee committee of the AAGBI, go from strength to strength. GAT has consolidated links with Irish colleagues, taken up the cudgel on behalf of trainees and contributed to debate on many issues, including the shape of the future anaesthetic workforce and the impact of the European Working Time regulations. By the second month of her presidency, Sarah Gibb, GAT Chair, had a response from the Secretary of State for Health, by month 4 she was off to the GMC to talk about credentialing – will she be meeting the Queen by the end of the year? At the other end of the scale, I also had the privilege of working with one member who was very downhearted when he came to see me, having lost his job and been reported to the GMC. With the help of some insightful colleagues he has worked his way back, getting well first, checking this with the Occupational Physician, taking up a clinical attachment and finally moving to paid work.

Mistakes are an inevitable part of the human condition. What’s important is that we acknowledge and learn from them. This edition includes a reflection from a trainee about a drug error, the various factors that may have led up to it and the impact it had. Of course this trainee is not alone – many readers will recognise the holes in the ‘Swiss cheese’ lining up as we go about our daily work. Reflecting on my own practice this year, my worst error was in obstetrics. I gave the usual ‘recipe’ of antibiotics but, embarrassingly, recorded that I had given cefuroxime and metronidazole rather than what I had actually given – cefuroxime and metaraminol. In my defence, I did this at about 2.30am. But, of course, this is no defence – if my brain no longer works at night the NHS should not be using it!!

Two of my most valued colleagues have retired this year. One, Val Bythell, is known to many of you, the other is my erstwhile clinical director. A quiet man by nature, he did much to enhance the profile of anaesthesia in the trust and protected us from the worst excesses of corporate politics. Val is missed for different reasons – a wonderful self-deprecating sense of humour, an ability to cut to the chase and stupendous knowledge and experience. Her first comment on making a drug error was ‘damn near killed the patient’. The piece in this issue about the psychological impact of a fire in an ITU points to the importance of the team and an organisation’s culture in responding to serious events. Our team’s culture was the richer for both of these colleagues.

The contribution from ‘Scoop’ proposes that every day should be Monday in the NHS. There’s something in this. Paul Aylin, in his lecture at this year’s Annual Congress, (available via link at AAGBI: http://www.learnaagbi.org) points out that people who have operations on a Monday have better outcomes than those done on a Friday. He uses Monday as his benchmark and looks for reasons why performance on a Friday is poorer. There is another way of looking at this; people deliver better care when well rested and are fresh after the weekend. So if you are taking a few days off over the festive season remember that this will benefit your patients as well as you.

The AAGBI wishes you a good festive season and a happy new year.

From my own perspective, I have watched GAT, the trainee committee of the AAGBI, go from strength to strength. GAT has consolidated links with Irish colleagues, taken up the cudgel on behalf of trainees and contributed to debate on many issues, including the shape of the future anaesthetic workforce and the impact of the European Working Time regulations. By the second month of her presidency, Sarah Gibb, GAT Chair, had a response from the Secretary of State for Health, by month 4 she was off to the GMC to talk about credentialing – will she be meeting the Queen by the end of the year? At the other end of the scale, I also had the privilege of working with one member who was very downhearted when he came to see me, having lost his job and been reported to the GMC. With the help of some insightful colleagues he has worked his way back, getting well first, checking this with the Occupational Physician, taking up a clinical attachment and finally moving to paid work.

Mistakes are an inevitable part of the human condition. What’s important is that we acknowledge and learn from them. This edition includes a reflection from a trainee about a drug error, the various factors that may have led up to it and the impact it had. Of course this trainee is not alone – many readers will recognise the holes in the ‘Swiss cheese’ lining up as we go about our daily work. Reflecting on my own practice this year, my worst error was in obstetrics. I gave the usual ‘recipe’ of antibiotics but, embarrassingly, recorded that I had given cefuroxime and metronidazole rather than what I had actually given – cefuroxime and metaraminol. In my defence, I did this at about 2.30am. But, of course, this is no defence – if my brain no longer works at night the NHS should not be using it!!

Two of my most valued colleagues have retired this year. One, Val Bythell, is known to many of you, the other is my erstwhile clinical director. A quiet man by nature, he did much to enhance the profile of anaesthesia in the trust and protected us from the worst excesses of corporate politics. Val is missed for different reasons – a wonderful self-deprecating sense of humour, an ability to cut to the chase and stupendous knowledge and experience. Her first comment on making a drug error was ‘damn near killed the patient’. The piece in this issue about the psychological impact of a fire in an ITU points to the importance of the team and an organisation’s culture in responding to serious events. Our team’s culture was the richer for both of these colleagues.

The contribution from ‘Scoop’ proposes that every day should be Monday in the NHS. There’s something in this. Paul Aylin, in his lecture at this year’s Annual Congress, (available via link at AAGBI: http://www.learnaagbi.org) points out that people who have operations on a Monday have better outcomes than those done on a Friday. He uses Monday as his benchmark and looks for reasons why performance on a Friday is poorer. There is another way of looking at this; people deliver better care when well rested and are fresh after the weekend. So if you are taking a few days off over the festive season remember that this will benefit your patients as well as you.

The AAGBI wishes you a good festive season and a happy new year.

Nancy Redfern

Anaesthesia News December 2014 • Issue 359

Nancy Redfern

The Association of Anaesthetists of Great Britain and Ireland
25 Portland Place, London W1B 1PY
Tel: 020 7631 4352
Fax: 020 7631 4353
Email: info@aagbi.org
Website: www.aagbi.org

Anaesthesia News
Chair: Editorial Board: Nancy Redfern
Editors: Phil Bewley and Sally El-Ghazali (GAT), Nancy Redfern, Richard Cuthbert, Sean Tribe, Tim Woodcock, Mike Neville, Rachael Collins, Urmia Mehta, Policy Platt and Gerry Keenan
Address for all correspondence: aagbi@e-lighthouse.org
Website: www.aagbi.org/publications/anaesthesia-news
Editorial Assistant: Rona Ging
Website: www.aagbi.org
Design: Chris Steer
Email: anaenews@aagbi.org

The Association of Anaesthetists of Great Britain and Ireland
25 Portland Place, London W1B 1PY
Tel: 020 7631 4352
Fax: 020 7631 4353
Email: info@aagbi.org
Website: www.aagbi.org

Anaesthesia News
Chair: Editorial Board: Nancy Redfern
Editors: Phil Bewley and Sally El-Ghazali (GAT), Nancy Redfern, Richard Cuthbert, Sean Tribe, Tim Woodcock, Mike Neville, Rachael Collins, Urmia Mehta, Policy Platt and Gerry Keenan
Address for all correspondence: aagbi@e-lighthouse.org
Website: www.aagbi.org/publications/anaesthesia-news
Editorial Assistant: Rona Ging
Website: www.aagbi.org
Design: Chris Steer
Email: anaenews@aagbi.org

The Association of Anaesthetists of Great Britain and Ireland
25 Portland Place, London W1B 1PY
Tel: 020 7631 4352
Fax: 020 7631 4353
Email: info@aagbi.org
Website: www.aagbi.org

Anaesthesia News
Chair: Editorial Board: Nancy Redfern
Editors: Phil Bewley and Sally El-Ghazali (GAT), Nancy Redfern, Richard Cuthbert, Sean Tribe, Tim Woodcock, Mike Neville, Rachael Collins, Urmia Mehta, Policy Platt and Gerry Keenan
Address for all correspondence: aagbi@e-lighthouse.org
Website: www.aagbi.org/publications/anaesthesia-news
Editorial Assistant: Rona Ging
Website: www.aagbi.org
Design: Chris Steer
Email: anaenews@aagbi.org
One of the best parts of the ‘job’ is being able to say thank you to people for remarkable achievements either at work, volunteering for charitable activities, acts of bravery or many other things. I never cease to be amazed, and rather humbled, by what astonishing and varied things anaesthetists get up to.

In October I attended Anesthesiology™ 2014 in New Orleans. Such a contrast to the AAGBI’s meetings, not least because there were more delegates than we have members and with so many simultaneous activities that the pocket guide was more like a Eurorail timetable. The American Society of Anesthesiologists (ASA) is pushing its new concept of the Surgical Home, with the anaesthesiologist taking the lead in peri-operative management of the surgical patient. This is a fairly logical ambition and mirrors much of the current work in the UK and Ireland, with the focus on Enhanced Recovery and the work of the National Emergency Laparotomy Audit and National Hip Fracture Database. What is so very different are the drivers for these changes. Although safer, more effective patient care is a shared goal, in the US influence and income are as important, if not more so. The topic of non-physician anaesthesia providers is a much hotter political potato in the US than it will ever become here.

At the same meeting I was able to present the results of NAP5, sharing the podium with Ellen O’Sullivan. Ellen was speaking as President of the College of Anaesthetists of Ireland and I was ‘double hatted’ as a member of Council of the Royal College of Anaesthetists and the AAGBI. Turnout was good, and there were very positive comments about such impressive large-scale national audits in this and other sessions. As the ASA focuses much more on quality, I hope there are possibilities for future collaboration. Certainly it was very satisfying to demonstrate to our bigger cousins how effective the specialty can be on this side of the Atlantic, especially when the major organisations unite to achieve a common objective.

The next challenge for the two Colleges and the AAGBI will be to come together to consider the recommendations of NAP5 and how best to implement them. I think most of us are still digesting the results and the implications. I want to take this opportunity to congratulate all those involved (and there are far too many to name) on such a successful project.

It would be easy to assume from the pages of Anaesthesia News that cycling is the official pastime of the AAGBI, so I thought a request from a member for the AAGBI to support a safer cycling project would be a ‘no brainer’. Quite the opposite, with some Board members feeling it was not an issue on which the AAGBI should comment. After a vigorous debate, what swung the Board in favour of support was the AAGBI’s role as an employer, based in central London, which encourages its staff to cycle to work through a cycle purchase scheme. The AAGBI has nearly 30 staff, and it’s their efforts that underpin everything we do for patients and members.

As is traditional, the AAGBI headquarters at 21 Portland Place will be closed between Christmas and
New Year. However, we are aware that the festive season may not be so festive for some and we were concerned that members who needed help or support might not be able to find it. So this year a limited online service for members who needed help or support might not be able to find it. So this year a limited online service for healthcare. I look forward to seeing many of you at WSM London from 14–16 January and, until then, wish you all happy holidays and best wishes for 2015.

Andrew Hartle
President, AAGBI

For the latest news and event information follow @AAGBI on Twitter

Managing the psychological impact of a fire in an intensive care unit

On Tuesday 21st November 2011, just after 7pm, a fire broke out on our intensive care unit (ICU). An oxygen cylinder caught fire while lying on a patient’s bed, resulting in the patient catching fire and flames spreading to the bedding, mattress and curtains around the bed, plus the ceiling tiles and flooring. The patient was dragged to safety while two doctors extinguished the fire; this took about five minutes and required five fire extinguishers. Ten other ICU patients were evacuated within seven minutes of the fire starting, and a further patient (in a side room not immediately affected) was evacuated 30 minutes later. The ICU was filled with smoke within seconds, reducing visibility to less than a metre and making breathing very difficult. The patient on the burning bed very sadly died five weeks later but, remarkably, no other lives were lost.

Psychological aspect – the consultant’s perspective

The vast majority of the staff working on the night of the fire suffered a severe post-traumatic stress reaction after the event. Our clinical psychologist attended the hospital on the night to debrief staff and to speak to those most badly affected. While I was in front of the Emergency Department observation ward, he warned me I would experience an intense and severe reaction that would make me never want to go back into the ICU ever again. He was absolutely right. I suffered nightmares and flashbacks in the week after the fire and for many months afterwards. Loud bangs, fire alarms, the smell of burning plastic, turning on oxygen cylinders and working in the bed space on our ICU where the fire started all made me feel sick and dizzy. Staff were followed up by the psychology team, and the consultants and senior nurses involved organised a number of informal meetings and a series of email updates for those staff who had been working that night. Most staff needed time off work, with one member of staff still unable to work two years later. Getting psychological input at such an early stage had an enormous beneficial effect for us all and I feel that plans for major incidents, including internal emergencies, such as ours where inpatients and clinical staff are victims of the emergency, should include psychologist involvement.

Patients and their families and friends on the ICU at the time of the fire were followed up by our ICU outreach team and referred for additional help when required.

Psychological aspect – the clinical psychologist’s perspective

It is well established that the experiences of patients on ICUs can trigger post-trauma stress symptoms, and this is likely to increase in the future as medical practice promotes greater survival and our patients have experiences that have, so far, been unavailable to us. Trauma-stress is not the only psychological symptom of anxiety or depression that can emerge but, due to the very acute and threatening nature of the experience, it is often the most common. Similarly, the impact on hospital staff of working with traumatised patients has also been acknowledged. The acute symptoms of trauma-stress include physiological hyperactivity, internalisation of the event, flashbacks, avoidance of anything with the incident and (sometimes) a general numbing or flattening of all emotions. Quite quickly this level of threat and arousal can lead to fatigue and a range of secondary physical, emotional and behavioural difficulties. It can be difficult to function in this state and we are more prone to making errors so it is a significant occupational issue in the health service. Fortunately, trauma-stress symptoms are manageable, most usually resolve, and the risk of developing full-blown post-traumatic stress disorder is small.

The incident on an ICU mentioned above does not relate directly to the mainstream literature on trauma-stress in the ICU setting. It was not about vicarious trauma for staff, nor the patients’ experience of critical illness and treatment. Both staff and patients were caught in a fire and were in immediate danger. The lives of patients and staff were at extreme risk; they felt the heat of the fire, were blinded by the smoke and struggled to breathe. Coupled with this was a need not only too aware that the fire threatened the rest of the hospital. This incident was an unambiguous critical incident. There was no need for a debate about whether or not a staff welfare response was required, not least because all the survivors needed to be treated and assessed medically. It was both a full blown incident and a near miss, leaving all those involved in an acute trauma-stress state.

As the clinical psychologist attached to the major incident welfare team at the Royal United Hospital (RUH), Bath, I received a call at home from the medical director. People ringing me up tell me that something has happened is something I am used to but this case was exceptional and even while driving to RUH I was in a state of

On Tuesday 21st November 2011, just after 7pm, a fire broke out on our intensive care unit (ICU). An oxygen cylinder caught fire while lying on a patient’s bed, resulting in the patient catching fire and flames spreading to the bedding, mattress and curtains around the bed, plus the ceiling tiles and flooring. The patient was dragged to safety while two doctors extinguished the fire; this took about five minutes and required five fire extinguishers. Ten other ICU patients were evacuated within seven minutes of the fire starting, and a further patient (in a side room not immediately affected) was evacuated 30 minutes later. The ICU was filled with smoke within seconds, reducing visibility to less than a metre and making breathing very difficult. The patient on the burning bed very sadly died five weeks later but, remarkably, no other lives were lost.

Psychological aspect – the consultant’s perspective

The vast majority of the staff working on the night of the fire suffered a severe post-traumatic stress reaction after the event. Our clinical psychologist attended the hospital on the night to debrief staff and to speak to those most badly affected. While I was in front of the Emergency Department observation ward, he warned me I would experience an intense and severe reaction that would make me never want to go back into the ICU ever again. He was absolutely right. I suffered nightmares and flashbacks in the week after the fire and for many months afterwards. Loud bangs, fire alarms, the smell of burning plastic, turning on oxygen cylinders and working in the bed space on our ICU where the fire started all made me feel sick and dizzy. Staff were followed up by the psychology team, and the consultants and senior nurses involved organised a number of informal meetings and a series of email updates for those staff who had been working that night. Most staff needed time off work, with one member of staff still unable to work two years later. Getting psychological input at such an early stage had an enormous beneficial effect for us all and I feel that plans for major incidents, including internal emergencies, such as ours where inpatients and clinical staff are victims of the emergency, should include psychologist involvement.

Patients and their families and friends on the ICU at the time of the fire were followed up by our ICU outreach team and referred for additional help when required.

Psychological aspect – the clinical psychologist’s perspective

It is well established that the experiences of patients on ICUs can trigger post-trauma stress symptoms, and this is likely to increase in the future as medical practice promotes greater survival and our patients have experiences that have, so far, been unavailable to us. Trauma-stress is not the only psychological symptom of anxiety or depression that can emerge but, due to the very acute and threatening nature of the experience, it is often the most common. Similarly, the impact on hospital staff of working with traumatised patients has also been acknowledged. The acute symptoms of trauma-stress include physiological hyperactivity, internalisation of the event, flashbacks, avoidance of anything with the incident and (sometimes) a general numbing or flattening of all emotions. Quite quickly this level of threat and arousal can lead to fatigue and a range of secondary physical, emotional and behavioural difficulties. It can be difficult to function in this state and we are more prone to making errors so it is a significant occupational issue in the health service. Fortunately, trauma-stress symptoms are manageable, most usually resolve, and the risk of developing full-blown post-traumatic stress disorder is small.

The incident on an ICU mentioned above does not relate directly to the mainstream literature on trauma-stress in the ICU setting. It was not about vicarious trauma for staff, nor the patients’ experience of critical illness and treatment. Both staff and patients were caught in a fire and were in immediate danger. The lives of patients and staff were at extreme risk; they felt the heat of the fire, were blinded by the smoke and struggled to breathe. Coupled with this was a need not only too aware that the fire threatened the rest of the hospital. This incident was an unambiguous critical incident. There was no need for a debate about whether or not a staff welfare response was required, not least because all the survivors needed to be treated and assessed medically. It was both a full blown incident and a near miss, leaving all those involved in an acute trauma-stress state.

As the clinical psychologist attached to the major incident welfare team at the Royal United Hospital (RUH), Bath, I received a call at home from the medical director. People ringing me up tell me that something has happened is something I am used to but this case was exceptional and even while driving to RUH I was in a state of...
disbelief. By the time I arrived, the ICU staff and patients were safe and it was important to prepare the welfare response. All staff had been checked over by the Emergency Department staff and had been asked not to leave; they had gathered in an area which had been set aside for them to defuse, wind down and reflect upon the incident. It is important to guard againstmania in an adrenaline setting and ensure staff do not rush home to relax, but unwind a bit first and then go home.

The ICU at the RUH had prepared for incidents like this (to some extent) and a project of trauma-stress awareness and management had been running for some time in collaboration with the Employee Assistance Programme (EAP). Similarly, in relation to the major incident plan, a brief Trust-wide trauma-stress awareness educational programme had been running and hospital management were well informed of the principles involved. As a consequence, many of the RUH ICU staff understood acute trauma-stress reactions, the value of a defusing process and the need to be prepared for the psychological impact of their experience. From my perspective, this was crucial and a huge relief as I didn’t have to explain why I was there, what would help or what we needed to do. We had a therapeutic alliance from the start. I was part of a broader response too, as senior off-duty ICU staff seemed to appear from everywhere with the intention of supporting their colleagues and caring for patients. The senior chaplain also arrived and other hospital managers and department heads stayed on after work to be helpful. There was no shortage of cooperation and concern for staff and patient welfare.

Fortunately, only two staff members needed observation in the Emergency Department and the key issue was to help staff collect their thoughts, compose themselves and get ready to go home. There was a palpable degree of psychological ‘concussion’ among everyone and people varied as to how much they talked and what they focused on. Feeling dazed, shocked and a state of disbelief were the main themes and there was a collective concern to make sure that everyone was accounted and cared for in these circumstances, as a psychologist, you are only too aware that you need to keep things simple and prepare the ground for the following few months. How much people remember of what you say at this point is debatable and probably minimal, but they remember how you relate to them and that is important for all follow-up contact and support. It felt very important to be present and composed, but not intrusive or too pushy as people vary as to how much attention they can tolerate in these situations.

The senior ICU staff who were not on duty during the incident assumed a very helpful role in coordinating the welfare response and I liaised mainly with them. We ensured we knew how everyone was, listened to those that needed to talk and tried to make sure that no-one was missed. You worry most about those who slip away or appear withdrawn and that’s where it really helps to coordinate with the senior staff who know their team. We compiled a list of all those involved, reminded everyone of what to expect over the coming days and offered simple advice and guidance to remember the first principles of self-care and wellbeing. No attempt was made to impose any structured debriefing procedures as that would have been inappropriate and counter-productive. I was impressed at how well-informed the staff were about psychological trauma-stress reactions, and could see how this was having a helpful, innoculatory effect. I’ve learned to worry about the long-term effects on senior staff in these situations as, for them, the incident can go on for many months and they often feel responsible for the welfare of their team.

The intensity of the incident meant that the reactions of those involved was quite sustained and pronounced. Acute trauma-stress in these circumstances is a very physical reaction, and there is a real blurring between what is a physical sensation, an emotion or a thought. You tend to feel fatigue and hyper-arousal at the same time, feeling both winded and run down. It is a cliché, but still true, that each person’s experience of a critical incident is unique to them and this can give rise to very different reactions at times. I think some staff were surprised at how intense their reaction was and how long it lasted, but this is understandable given they were primary victims, not carers or observers. Despite the diversity of experiences it also confirmed to me that exposure matters and the longer you were involved, the closer you were to the fire, the more smoke you inhaled, then the stronger the primitive, physical trauma reaction tended to be.

We all vary as to how we respond to symptoms of stress and trauma. We vary according to how comfortable we are both experiencing symptoms of trauma-stress and asking for help. Any staff welfare response needs to address this diversity and observe the right timescale, so it was helpful that the welfare team and EAP could remain available on an ongoing basis. Formal and organised services were put in place but, more importantly, the ICU team organised their own informal and social meetings and initiatives to help themselves recover from the event.

The immediate incident had passed and the dust had literally settled it was necessary to help staff manage the return to work. Support those who kept a temporary ICU going and help support staff over the longer term. It is important when staff return to work that they are supernumerary for their first few shifts and that they observe a graded return to work. Similarly, for those staff who come in to work after the incident in a make-shift, temporary ICU, it is important not to underestimate the impact on them and the need to make sure they feel safe from a clinical perspective. I don’t want to give the impression that this was a perfect process as many staff remain affected by the incident to some degree.

On reflection, the ICU incident was a real education in the subjective intensity of our reactions to threat, our capacity to endure incidents like this and the profound protective value of preparatory education, awareness and acceptance. The more people know about the acute trauma-stress reaction as a normal phenomenon, the easier it will be for them to manage and less effort will be wasted trying to control it, conceal it or deny it. The first principles of good healthy living, self-care and wellbeing are possibly more important than any formal debriefing response.

This incident confirmed to me that good preparation and establishing the right psychologically literate culture on a hospital unit really pays off when something traumatic happens. If staff can make sense of what they are going through, don’t feel the need to be defensive about it and know the best way to care for themselves, then a considerable number of problems can be averted. If not, then staff retention, morale and efficiency are all jeopardised.

FE Kelly
Consultant in anaesthesia and intensive care medicine

M Osborn
Consultant Macmillan clinical psychologist
Royal United Hospital, Bath

References

26th Anaesthesia, Critical Care and Pain Update
Val d’Isere, 2-5 February 2015
Centre de Congrès
Multidisciplinary meeting
Lectures | Workshops
Joint and Satellite sessions
Short paper competition
Guest speakers

www.doctorsupdates.com
education in a perfect location
Spinal surgery in Uganda

My journey started when I received an email from Health Volunteer Overseas, a UK-based charity seeking an anaesthetist to go to Uganda with a spine team for 10 days at the end of July. Recognising this unique and rare opportunity, I replied quickly, forwarding my CV and stating my availability — then I went on the internet to research the Uganda Spine Surgery Mission to find out more about what I would be involved with. The Uganda Spine Surgery Mission is a Texas-based charity that has been doing annual trips to Uganda for the last 10 years. I was slightly apprehensive at first as it looked like the charity were doing complex, specialist scoliosis surgery — something that is bread and butter to me and they were doing it in Uganda. I had a flashback to the last time I was in Kampala, five years ago, attending the Anaesthesia for Developing Countries course and visiting the main hospital to team about halothane and ether with a basic anaesthetic machine and limited monitoring. I have worked in this environment before, dealing with mainly emergency trauma patients and obstetrics, but this was different kettle of fish.

A Skype conversation with the lead surgeon, Dr Lieberman, was informative but led to more questions and anxiety. He would be taking a neurophysiologist and would be doing some procedures that required an anterior approach, i.e. a thoracotomy. His position, involving one lung ventilation, provide anaesthesia without muscle relaxation, avoid volatiles, deal with potential blood loss and postoperative pain relief? Being a typical orthopaedic surgeon, Dr Lieberman could not tell me much about the anaesthetic side of things, just that the local anaesthetists usually cope. I spoke to my colleagues with experience in paediatric surgery and picked up some useful tips. I was pleased to meet the local anaesthetic team consisting of three consultant anaesthetists and three trainees, some sponsored by the AAGBI. Dr Ttendo, the head of department, was a remarkable character who was a vital help in getting things moving and was a fountain of knowledge. He accomplished what we struggle with in our own hospital — a prompt morning start and a smooth patient flow which were both critical in maximising our short time there. He epitomised situational awareness — always appearing at the right time, in a calm manner with a solution to whatever the problem was. The Aestiva anaesthetic machine was something with which I was very familiar. There was even end-tidal anaesthetic agent monitoring which, from my previous experience, is a luxury in the developing world. It was too good to be true — I later discovered the end-tidal anaesthetic agent was a random number generator probably due to calibration issues. The machine often ran out of oxygen but a quick phone call for someone to change the manifold over was all that was required so extra vigilance was necessary. There was a double lumen tube but unfortunately the size was too big for the small patients we cared for. Without a bronchial blocker, one lung ventilation consisted of intubating the right main bronchus with a normal endotracheal tube. Thankfully, the surgeons were very accommodating. Although there was a Montreal-like mattress and a head cushion for prone positioning, this was often unsuitable for the paediatric cases we dealt with so we used a lot of improvisation. The Ugandans are generally very slim so extra padding was needed.

The right to Kampala was followed by a six hour bus ride to Mbarara where we worked for the week. We arrived at 6am and, after freshening up, headed straight to the hospital to set up the operating rooms and screen patients for surgery — most had congenital scoliosis and degenerative disease as a result of TB. The theatre was all that was required so extra vigilance was necessary.

I was delighted to discover the availability of propofol, remifentanil and an infusion pump but there was a caveat. I had to master the art of making 50ml of propofol and 3mg of remifentanil last for the duration of a 6 hour case (with some help from a volatile of course). Imagine how much money I could save if I continued this practice in the NHS! I was using low flows only to be told that we were running low on soda lime and had just had a delivery of isoflurane. I needed to preserve the CO₂ absorber rather than the iso which was less popular among the local anaesthetists who still prefer halothane as it is more familiar and readily available.

The surgeons were impressive and blood loss was never more than 500ml from a multilevel procedure. They were modest too, crediting the tranexamic acid for the haemostasis. Blood was available and could be stored in a theatre fridge if needed. It was really refreshing to see surgeons who communicate well and give accurate estimates of surgical times. This allowed for effective planning, although there were days when we were operating into the night, usually as a result of unavoidable circumstances. We managed to fit in a couple of big spine cases a day. A particularly challenging case was a 3-year-old who had TB of the spine and had suffered from lower limb weakness since the age of 18 months. He was scheduled for a two stage procedure starting with a multilevel thoracic decompression. At induction I noted him to have poor reserve and he would drop his saturations quickly without oxygen supplementation. The 5 hour surgery was uneventful and I decided to extubate him after some suctioning and recruitment manoeuvres. He cope well but was again struggling with his oxygen saturation on air. I was ready to transfer him to the ICU only to be told that there was no portable oxygen or simple paediatric Hudson mask! Plan B consisted of pre-oxygenating him and doing a hypoxic sprint down the corridor to ICU with a circuit and oxygen ready on the other end. Luckily he was fine and only needed oxygen via a nasal cannula overnight. It never failed to amaze me how robust children are. He was the sickest patient the next morning and the first to be discharged to the ward. He had his second procedure a couple of days later, a thoracotomy this time, and he was ventilated overnight.

One of the most important lessons I learnt on this trip was not to make assumptions. The anaesthesia was more advanced than I expected but I was sometimes caught out by the lack of basics. For example, there was no post-op recovery, just a deserted ‘post-anesthesia’ room as there were no provisions for trained recovery nurses. Another lesson was to be wary of power surges. It cost us our X-ray C-arm on day two and the neurophysiology monitoring on our last day. A surge protector is essential but does not always work. I cannot emphasise enough how impressed I was with the Uganda Spine Surgery Mission. They live up to their mission statement to provide the best possible spine care to Ugandan patients. The dedicated team ensured a high quality service in a challenging setting, achieving what would be difficult to do even within the NHS.

Dr Nur Lubis
Consultant Anaesthetist, Whips Cross Hospital

For further details:
http://www.ugandaspinesurgerymission.com
http://www hvoua.org
We are pleased to report a healthy 93% retention rate and a total of 10,681 members including 812 new members joining during the year.

Progress in providing services and communicating with members online has been a key focus this year. The website, our eNewsletters and activity on social media offer members’ news and updates quickly and easily.

New member benefits for the year include:
• Discounts on UltraScan courses. This is an educational initiative for those who want further expertise and competency in medical ultrasound and echocardiography for clinical practice.
• Mentoring sessions at AAGBI meetings with trained AAGBI mentors. This gives delegates a confidential opportunity to discuss career options, work-life balance, opportunities or dilemmas.

We are pleased to report a healthy 93% retention rate and a total of 10,681 members including 812 new members joining during the year.

Progress in providing services and communicating with members online has been a key focus this year. The website, our eNewsletters and activity on social media offer members’ news and updates quickly and easily.

New member benefits for the year include:
• Discounts on UltraScan courses. This is an educational initiative for those who want further expertise and competency in medical ultrasound and echocardiography for clinical practice.
• Mentoring sessions at AAGBI meetings with trained AAGBI mentors. This gives delegates a confidential opportunity to discuss career options, work-life balance, opportunities or dilemmas.

Environment
The AAGBI continues to make progress in its drive to become more environmentally friendly. Last year we established the Environmental Task Group to promote green healthcare in the profession.

21 Portland Place
Our Grade II listed building in London has attracted around 300 visitors a week and hosted numerous meetings, events and seminars during the year.

We continue to offer office space to the World Federation of Societies of Anaesthesiology (WFSA) and Lifebox, the international charity of which AAGBI is a founder member.

Working together with specialist societies
The AAGBI staff provide secretariat and event management services for 18 specialist societies. We organised events for the Difficult Airway Society (DAS), the Association of Paediatric Anaesthetists of Great Britain & Ireland (APAGBI), the Obstetric Anaesthetists’ Association (OAA) and Regional Anaesthesia UK (RA UK), as well as seven one-day conferences and six study days for others. There were also upgrades to IT systems to enhance the service provided.

In-house at 21 Portland Place, we recycled a 5.8 tonnes of paper. This equates to a saving of 8.0 tonnes of CO2 and 78 trees. This is an improvement of 24% on the previous year.

A YEAR IN REVIEW 2013-2014
2013-2014 was another successful and progressive year for the AAGBI: here we share a few highlights

Council
At the Annual Members' Meeting in Dublin in September 2013, we were pleased to welcome three newly elected Council members:
• Dr Paul Barker, Consultant Anaesthetist, Norfolk & Norwich University Hospital.
• Dr Umap Misra, Consultant Anaesthetist, Sunderland Royal Hospital.
• Dr Mike Nathanson, Consultant Anaesthetist, Queens Medical Centre, Nottingham University Hospitals NHS Trust.

GAT Committee
The GAT Committee had one new elected member at the Annual General Meeting in Oxford in April 2013:
• Dr Emily Robson, Hillingdon Hospital.
They raised just under £10,000 for Lifebox, and contributed to safer surgery in developing countries.

Raising ‘dough’ for safer surgery

In April, the AAGBI launched the Great Anaesthesia Bake challenging departments around the country to show their skills in the kitchen and raise funds for the Lifebox Foundation. Departments from all round the country took up the challenge and since its inception, the Great Anaesthesia Bake has raised over £20,000 for Lifebox.

Gubblin’ to Dublin

In September, eight intrepid cyclists (including the AAGBI’s President, Honorary Secretary and Treasurer) braved rain and gale-force winds riding almost 400 miles from London to AAGBI’s Annual Congress in Dublin.

The e-SAFE DVD

The e-SAFE DVD was formally launched in April 2013 by HRH The Princess Royal at the e-SAFE (Safer Anaesthesia from Education) event held at The Royal College of Anaesthetists. The event served to highlight how the Anaesthetic community are working together to improve healthcare for under-resourced countries.

The DVD contains over 100 interactive e-learning sessions and an e-library with over 500 articles covering basic science and clinical anaesthesia.

SUPPORTING COLLEAGUES OVERSEAS

The AAGBI Foundation maintains an active programme of support for anaesthesia worldwide, including grants towards educational projects in lower resource countries, book donations and funding of educational resources. This year 43 grants were awarded towards work in 17 countries.

Fundraising for Lifebox

AAGBI is proud to be a founder member of the international charity, Lifebox. Lifebox is a not-for-profit organisation saving lives by improving the safety and quality of surgical care in low-resource countries by ensuring that every operating room in the world has a pulse oximeter.

www.lifebox.org

Lifebox UK-registered charity (No. 1143018)

SAFETY MATTERS

One of the AAGBI’s principal activities is the advancement of patient care and safety in the field of anaesthesia.

Safety Initiatives

National Audit Project 5 (NAP5)

The AAGBI and the Royal College of Anaesthetists have been working together for the past two years on the 5th National Audit Project on Accidental Awareness during General Anaesthesia (NAP5). In March 2013 an interim report of the NAP5 findings were published in the British Journal of Anaesthesia. Over 7,000 anaesthetists were surveyed. The report attracted media coverage including BBC News, LA Times and OnMedica.

Hip Fractures – Anaesthetic Sprint Audit of Practice

The Anaesthetic Sprint Audit of Practice (ASAP) was commissioned by the Healthcare Quality Improvement Partnership (HQIP) as part of the National Clinical Audit programme. ASAP marks a successful collaboration between several professional organisations. The NHS Hip Fracture Perioperative Network (HipPen), British Orthopaedic Association (BOA), British Geriatrics Society (BGS), Royal College of Physicians (RCP) and the AAGBI have worked together to explore anaesthesia within hip fracture care using data collected by members of the HipPen.

The audit showed that 44% of hip fracture patients do not receive a peri-operative nerve block for pain relief and recommended that this type of pain relieving anaesthetic should be offered to all hospital patients who suffer hip fracture.

e-SAFE DVD

The e-SAFE DVD was formally launched in April 2013 by HRH The Princess Royal at the e-SAFE (Safer Anaesthesia from Education) event held at The Royal College of Anaesthetists. The event served to highlight how the anaesthetic community are working together to improve healthcare for under-resourced countries.

The DVD contains over 100 interactive e-learning sessions and an e-library with over 500 articles covering basic science and clinical anaesthesia.

Supporting colleagues overseas

The AAGBI Foundation maintains an active programme of support for anaesthesia worldwide, including grants towards educational projects in lower resource countries, book donations and funding of educational resources. This year 43 grants were awarded towards work in 17 countries.

Fundraising for Lifebox

Raising ‘dough’ for safer surgery

In April, the AAGBI launched the Great Anaesthesia Bake challenging departments around the country to show their skills in the kitchen and raise funds for the Lifebox Foundation. Departments from all round the country took up the challenge and since its inception, the Great Anaesthesia Bake has raised over £20,000 for Lifebox.

Gubblin’ to Dublin

In September, eight intrepid cyclists (including the AAGBI’s President, Honorary Secretary and Treasurer) braved rain and gale-force winds riding almost 400 miles from London to AAGBI’s Annual Congress in Dublin.

The e-SAFE DVD was formally launched in April 2013 by HRH The Princess Royal at the e-SAFE (Safer Anaesthesia from Education) event held at The Royal College of Anaesthetists. The event served to highlight how the anaesthetic community are working together to improve healthcare for under-resourced countries.

The DVD contains over 100 interactive e-learning sessions and an e-library with over 500 articles covering basic science and clinical anaesthesia.
The AAGBI wants to connect members together for peer-to-peer learning. This will be done through a pilot scheme for the (Training Encounters) Project

Parents can now bring their little ones to the majority of AAGBI meetings!

In 2013-2014 the AAGBI ran a number of successful events and conferences. Over 3,000 visits a month were made to Learn@AAGBI, with their CPD and in the revalidation process. Our comprehensive video library now offers over 233 lectures and CPD content from our conference and seminars. It attracts around 3,000 visits a month and keeps revalidation simple and user-friendly.

Further steps to provide e-education and associated CPD services online have been taken in converting the video platform to an online learning zone for members. Learn@AAGBI actively supports members with their CPD and in the revalidation process. Our comprehensive video library now offers over 233 lectures and CPD content from our conference and seminars. It attracts around 3,000 visits a month and keeps revalidation simple and user-friendly.

The AAGBI is committed to providing opportunities for anaesthesia professionals to keep up to date with their professional development and continues to develop and grow resources for its members.

The Heritage Centre, accredited by the Arts Council, received 1,776 visitors last year, an increase of 30% from the previous year and the most successful year to date for the Heritage Centre. The exhibition ‘Out of Our Comfort Zone: Providing Pain Relief in a Crisis’, proved to be extremely popular. The exhibition honoured the work of doctors, especially anaesthetists, in treating injuries caused by wars and terrorist attacks.

“If you can’t face another shop, leave the other half for an hour’s worthwhile diversion here”.

“Even if you have the best shopping in the world, you can’t visit it twice in the same year”.

The AAGBI Foundation is one of the UK’s largest single grant providers for anaesthetic research. In the past year we allocated nearly £100,000 in research funding for nine awards through the National Institute for Academic Anaesthesia (NIAA).

AAGBI’s annual Award for Innovation in Anaesthesia, Critical Care and Pain is open to all British and Irish based anaesthetists, intensivists and pain specialists, with the emphasis being on new ideas contributing to safety, high quality clinical care and improvements in the working environment. Last year’s winner devised SAFIRA - Safe Injection System for Regional Anaesthesia.

The AAGBI is committed to producing opportunities for anaesthesia professionals to keep up to date with their professional development and continues to develop and grow resources for its members.

Parents and baby room facility

Parents can now bring their little ones to all our major meetings! Lectures from the main auditorium are streamed into a separate room so parents can catch up on CPD whilst looking after their babies in an informal setting.

Anaesthesia, the official journal of the AAGBI, is international in scope and comprehensive in coverage. The journal has a very high impact factor of 3.846 (compared to 2.958 last year) demonstrating the relevance of articles to the anaesthesia community.

This year the journal’s publishers, Wiley Blackwell, developed an iPad app for the Anaesthesia making it easier for our members to access the journal on the move. The app was downloaded 3,336 times last year.

The AAGBI wants to connect members together for peer-to-peer learning. This will be done through a pilot scheme for the (Training Encounters) Project

Parents can now bring their little ones to all our major meetings! Lectures from the main auditorium are streamed into a separate room so parents can catch up on CPD whilst looking after their babies in an informal setting.

The AAGBI wants to connect members together for peer-to-peer learning. This will be done through a pilot scheme for the (Training Encounters) Project

Parents can now bring their little ones to all our major meetings! Lectures from the main auditorium are streamed into a separate room so parents can catch up on CPD whilst looking after their babies in an informal setting.

Further steps to provide e-education and associated CPD services online have been taken in converting the video platform to an online learning zone for members. Learn@AAGBI actively supports members with their CPD and in the revalidation process. Our comprehensive video library now offers over 233 lectures and CPD content from our conference and seminars. It attracts around 3,000 visits a month and keeps revalidation simple and user-friendly.

The AAGBI is committed to providing opportunities for anaesthesia professionals to keep up to date with their professional development and continues to develop and grow resources for its members.

The Heritage Centre, accredited by the Arts Council, received 1,776 visitors last year, an increase of 30% from the previous year and the most successful year to date for the Heritage Centre. The exhibition ‘Out of Our Comfort Zone: Providing Pain Relief in a Crisis’, proved to be extremely popular. The exhibition honoured the work of doctors, especially anaesthetists, in treating injuries caused by wars and terrorist attacks.

“If you can’t face another shop, leave the other half for an hour’s worthwhile diversion here”.

“Even if you have the best shopping in the world, you can’t visit it twice in the same year”.

The AAGBI Foundation is one of the UK’s largest single grant providers for anaesthetic research. In the past year we allocated nearly £100,000 in research funding for nine awards through the National Institute for Academic Anaesthesia (NIAA).

AAGBI’s annual Award for Innovation in Anaesthesia, Critical Care and Pain is open to all British and Irish based anaesthetists, intensivists and pain specialists, with the emphasis being on new ideas contributing to safety, high quality clinical care and improvements in the working environment. Last year’s winner devised SAFIRA - Safe Injection System for Regional Anaesthesia.

The AAGBI is committed to providing opportunities for anaesthesia professionals to keep up to date with their professional development and continues to develop and grow resources for its members.

The Heritage Centre, accredited by the Arts Council, received 1,776 visitors last year, an increase of 30% from the previous year and the most successful year to date for the Heritage Centre. The exhibition ‘Out of Our Comfort Zone: Providing Pain Relief in a Crisis’, proved to be extremely popular. The exhibition honoured the work of doctors, especially anaesthetists, in treating injuries caused by wars and terrorist attacks.

“If you can’t face another shop, leave the other half for an hour’s worthwhile diversion here”.

“The little museum is a gem”.

“If you can’t face another shop, leave the other half for an hour’s worthwhile diversion here”.

As well as the travelling exhibitions, the BMA hosted an exhibition celebrating the founder of the Anaesthesia Heritage Centre, A. Charles King.

The AAGBI is committed to providing opportunities for anaesthesia professionals to keep up to date with their professional development and continues to develop and grow resources for its members.

The Heritage Centre, accredited by the Arts Council, received 1,776 visitors last year, an increase of 30% from the previous year and the most successful year to date for the Heritage Centre. The exhibition ‘Out of Our Comfort Zone: Providing Pain Relief in a Crisis’, proved to be extremely popular. The exhibition honoured the work of doctors, especially anaesthetists, in treating injuries caused by wars and terrorist attacks.

“If you can’t face another shop, leave the other half for an hour’s worthwhile diversion here”.

“The little museum is a gem”.

“If you can’t face another shop, leave the other half for an hour’s worthwhile diversion here”.

As well as the travelling exhibitions, the BMA hosted an exhibition celebrating the founder of the Anaesthesia Heritage Centre, A. Charles King.

The AAGBI is committed to providing opportunities for anaesthesia professionals to keep up to date with their professional development and continues to develop and grow resources for its members.

The Heritage Centre, accredited by the Arts Council, received 1,776 visitors last year, an increase of 30% from the previous year and the most successful year to date for the Heritage Centre. The exhibition ‘Out of Our Comfort Zone: Providing Pain Relief in a Crisis’, proved to be extremely popular. The exhibition honoured the work of doctors, especially anaesthetists, in treating injuries caused by wars and terrorist attacks.

“If you can’t face another shop, leave the other half for an hour’s worthwhile diversion here”.

“The little museum is a gem”.

“If you can’t face another shop, leave the other half for an hour’s worthwhile diversion here”.

As well as the travelling exhibitions, the BMA hosted an exhibition celebrating the founder of the Anaesthesia Heritage Centre, A. Charles King.
A VOICE OF THE PROFESSION

Anaesthesia workforce in the Republic of Ireland

The AAGBI’s Irish Standing Committee released a statement on the ongoing national workforce crisis in the Republic of Ireland. The statement gave support and advice to anaesthetists at local, regional and national levels in ensuring an adequate supply of appropriately trained doctors to provide safe anaesthetic services.

The Berwick Report

The Berwick Report highlights the main problems affecting patient safety in the NHS and makes recommendations to address them. Professor Don Berwick, an international expert in patient safety, was asked to carry out the review following the publication of the Francis Report into the breakdown of care at Mid Staffordshire Hospitals. The AAGBI released a statement welcoming the publication and supporting its recommendations.

Responding to private healthcare investigation

For the past two years, the AAGBI has been involved in the ongoing investigation by the Office of Fair Trading and Competition Commission (now the Competition and Market Authority) into private healthcare in the UK. This work has been led by the AAGBI’s Independent Practice Committee, which called for an investigation of the restrictive conditions placed on consultants by private medical insurers.

The Shape of Training Review

The Shape of Training Review looked at potential reforms to the structure of postgraduate medical education and training across the UK. The AAGBI’s Group of Anaesthetists in Training (GAT) Committee participated actively in the review. Written evidence was submitted followed by attendance at an oral evidence session, informed by a survey of our membership. Several members of the committee also participated in a workshop for doctors in training. The Shape of Training Review’s final report “Securing the future of excellent patient care” was published in October 2013, and GAT submitted a response that raised questions and concerns.

As a professional association, the AAGBI is constantly active in representing the interests of anaesthetists and acting as a voice for the profession.

Association of Anaesthetists of Great Britain & Ireland, 21 Portland Place, London, W1B 1PY
Tel: +44 (0) 20 7631 1650 Fax: +44 (0) 20 7631 4352
Email: info@aagbi.org

www.aagbi.org

We would like to say a huge thank you to all our members for their continued support!

Association: Main sources of income

<table>
<thead>
<tr>
<th>Source of Income</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Membership</td>
<td>42%</td>
</tr>
<tr>
<td>Publications</td>
<td>16%</td>
</tr>
<tr>
<td>Exhibitions</td>
<td>11%</td>
</tr>
<tr>
<td>Services and other income</td>
<td>9%</td>
</tr>
<tr>
<td>Investments</td>
<td>2%</td>
</tr>
<tr>
<td>Other revenue</td>
<td>1%</td>
</tr>
</tbody>
</table>

% = Total of expenditure, cost of sales and finance costs

Association: Expenditure & costs of sales

<table>
<thead>
<tr>
<th>Expenditure Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Membership</td>
<td>£34,288</td>
</tr>
<tr>
<td>Publications</td>
<td>£1,408</td>
</tr>
<tr>
<td>Exhibitions</td>
<td>£6,300</td>
</tr>
<tr>
<td>Services and other</td>
<td>£29,469</td>
</tr>
<tr>
<td>Other revenue</td>
<td>£1,922</td>
</tr>
<tr>
<td>Investments</td>
<td>£299</td>
</tr>
<tr>
<td>Other income</td>
<td>£394</td>
</tr>
</tbody>
</table>

Foundation: Main sources of income

<table>
<thead>
<tr>
<th>Source of Income</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Membership</td>
<td>43%</td>
</tr>
<tr>
<td>Educational grants</td>
<td>21%</td>
</tr>
<tr>
<td>Scientific grants</td>
<td>17%</td>
</tr>
<tr>
<td>Other income</td>
<td>19%</td>
</tr>
</tbody>
</table>

Foundation: Expenditure

<table>
<thead>
<tr>
<th>Expenditure Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Membership</td>
<td>£14,327</td>
</tr>
<tr>
<td>Educational grants</td>
<td>£19,450</td>
</tr>
<tr>
<td>Scientific grants</td>
<td>£15,728</td>
</tr>
<tr>
<td>Other income</td>
<td>£6,000</td>
</tr>
<tr>
<td>Other revenue</td>
<td>£3,924</td>
</tr>
</tbody>
</table>
The Association of Anaesthetists of Great Britain & Ireland

Core Topics

Nottingham
04 December 2014

Dublin
04 February 2015

Newcastle
25 March 2015

Exeter
24 April 2015

Full 2015 dates will be available online soon

For further information and prices please visit: www.aagbi.org/education

Research Grants

The association of anaesthetists of great britain & Ireland and anaesthesia will be awarding research grants in February 2015.

The associations’ research aims are:

- Patient safety
- Innovation
- Clinical outcomes
- Education and training
- Related professional issues (e.g. standards and guidelines, working conditions, medico-legal issues)
- The environment

On this occasion the AAGBI wishes to offer particular support to projects that address the research ideas identified by NAP5. http://www.nationalauditprojects.org.uk/NAP5report

Applications must describe how the proposed project meets the above aims. Suitable projects may be large research studies, small clinical/benchtop projects, idea (innovation) development, observational studies/data collection, quality improvements or clinical audits (although the latter are unlikely to receive AAGBI funding if they are small, ‘routine’ local audits).

Funding up to £50,000 may be sought, but applications will be judged on ‘value for money’ as well as scientific credibility. Awards will be made via the NIAA and, if appropriate, will be eligible for NIHR portfolio status.

For further information and to apply please visit the AAGBI website http://www.aagbi.org/research/aagbi-research-grants

The deadline for applications is 5pm Friday 16 January 2015.
Burnout in anaesthetic trainees

What is burnout?

The concept of burnout originated in the US during the 1970s. It described the draining of emotion that can occur in members of staff whose occupations require frequent, client centered interactions. This type of staff-client relationship forms the basis of any patient-doctor relationship and is seen throughout the healthcare profession.

Many medical specialties, including anaesthetics, are involved with complex patient groups that require significant psychological support or care in acute stressful settings. Doctors who are frequently involved in the care of these patients have a high risk of developing stress, fatigue and burnout.1

As well as a significant negative impact on an individual’s quality of life and mental health, burnout has also been linked to impaired cognitive performance in the workplace. It is therefore important to assess current levels of burnout in anaesthetic trainees, identifying and providing support to those most at risk.

The Maslach Burnout Inventory

Research on burnout has led to the creation of the Maslach Burnout Inventory (MBI).1 Now the most popular tool to assess the syndrome, it is a questionnaire that assesses three aspects of burnout:

• Emotional exhaustion
• De-personalisation
• Personal achievement

The MBI consists of 22 questions, each scored on a Likert scale (Figure 1). Nine questions relate to emotional exhaustion, five to de-personalisation and eight concern personal achievement. For each of the three components the scores are summed and then mapped to a normal distribution curve based upon historic controls. The subscale scores can then be categorised into low, average and high risk of burnout. A high degree of burnout is seen when an individual is in the high risk range for all three subscales.

Burnout amongst trainees in the East of England School of Anaesthesia

Despite the current NHS climate of austerity, there is limited research assessing burnout levels in anaesthetic trainees. Recent studies in the US have used modified versions of the MBI and found a high prevalence of burnout amongst trainees.14 In Belgium, emotional exhaustion was seen in over 40% of anaesthetists, with the highest rate seen in trainees under 30. Interestingly these levels were comparable to other professional groups.

We invited 193 anaesthetic trainees in the East of England (EoE) School of Anaesthesia to complete the MBI. We received 88 responses from a wide range of grades (CT1 - ST7). For all three components the risk fell into the average range of burnout. This compared well to other professional groups for which data are available (Table 1). Only 4 (5%) of the 88 trainees were categorised as being at high risk of burnout (high burnout in all three components). On the opposite side, 16 (18%) of trainees had a low risk of burnout overall.

In the EoE School there are the several resources available for trainees experiencing difficulties:

• Local mentoring system. This is normally provided by the College Tutor and is Excellent use of staff time.
• Those with more significant concerns can be seen by the senior school executives (i.e. regional advisor, deputy regional advisor etc.). They can offer additional mentoring support, time away from the programme or transfer to an alternative hospital if required.
• For significant problems the Dean and/or their Deputy can be informed. This would lead to a meeting aimed at further exploring any difficulties and trying to find a solution.
• The Deanery has funding to provide a limited number of appointments with a clinical psychologist. The school has used this service in the past with great success.
• Since many trainees struggle to discuss confidential personal matters with a consultant, a trainee-trainee mentoring scheme is an excellent alternative option. The EoE Deanery is now running a mentor development programme for trainees and consultants.

Conclusion

Burnout is a potentially harmful syndrome that occurs in many professionals, including doctors. It is found that in the EoE the anaesthetists’ levels of burnout compared with other professional groups. Despite only a few individuals being at high risk of burnout, over one-third of trainees reported feeling burnout at least once a week.

What is burnout?

It is important to recognise that anaesthetic trainees are at risk of burnout, particularly when multiple life events coincide (starting a family or buying a house for example). We must be vigilant, both of our own risk and that of our peers and be willing to engage with help at an early stage. Anaesthetic schools should have robust systems in place for trainees facing difficulty, including encouraging development of peer mentoring schemes.

Acknowledgements

Dr Helen Hobgibber, Regional Advisor, EoE School of Anaesthesia, and Ms Kerri Brundie, Administrator EoE School of Anaesthesia, for help in the assistance with the project. Also special thanks to the EoE Anaesthetic trainees who took the time to complete the burnout assessment.

Ben Fox
StT, Norfolk & Norwich University Hospital
Emma Stewart
StT, Frimley Park Hospital

Table 1 - Burnout among professionals

<table>
<thead>
<tr>
<th>Subscales</th>
<th>Emotional exhaustion</th>
<th>Depersonalisation</th>
<th>Personal achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human services professionals</td>
<td>20.99 average risk</td>
<td>8.73 average risk</td>
<td>34.58 average risk</td>
</tr>
<tr>
<td>Medicine</td>
<td>22.19 average risk</td>
<td>7.12 average risk</td>
<td>36.53 average risk</td>
</tr>
<tr>
<td>East of England anaesthetists</td>
<td>21.45 average risk</td>
<td>7.3 average risk</td>
<td>37.5 average risk</td>
</tr>
</tbody>
</table>

One question specifically asks individuals how frequently they experienced burnout:

1. I feel burned out from my work

Over 35% of trainees reported feeling burned out at least once a week, with 4% feeling it every day.

Burnout was not found to be clustered around any particular training grade. Also exam re-sits did not statistically correlate with the incidence of burnout. However, we do not doubt that exams are a source of stress, clearly evident from the written response of a trainee:

‘I feel burnout/lack of energy almost daily through the extra work I have to do at work and at home for the exam. Patients are not as understanding and I feel like I can’t do my job properly. I feel that I am not able to help patients and that I am not doing my job properly. This makes me feel really frustrated and I feel that I have let patient and colleagues down. I am really hoping for the best and I want to pass my exams to get where I want to be. In the future I will try to think positively and do my best. I really hope I pass my exams…’

Following our assessment, we contacted trainees and informed them of their individual burnout risk and how this compared with the trainee group as a whole, and with larger groups of professionals. Note that the authors who developed the MBI state:

‘...neither the doing (MBI) or the original numerical score should be used for diagnostic purposes.’

In spite of this, we felt it prudent to provide individuals with information on the help available. Both the AAQBI and the BMA have a wealth of resources for professionals who are experiencing burnout as well as a range of other difficulties.15 These include links to wellbeing schemes, counselling helplines and literature on topics ranging from fatigue to substance misuse.

An increasingly popular source of support can be found in mentoring; particularly between colleagues at similar stages of training.1 This can help doctors to face burnout and also a whole range of other difficulties. Success with mentoring depends upon the relationship between the mentor and the mentee. The mentor needs to be aware of what exactly is involved in the process and open themselves up to it. The mentor on the other hand needs to be suitably trained and use appropriate frameworks (e.g. the GROW or Skilled Helper models). Over-ambitious mentors with limited training can be unhelpful or even harmful.

References

1. Maslach C, Jackson SE, Leiter MP, Schaufeli WB, Schwab RL. Maslach Burnout
2. Maslach C, Jackson SE, Leiter MP, Schaufeli WB, Schwab RL. Maslach Burnout
   Inventory: Instruments and Scoring Guides. Palo Alto, CA: Consulting Psychologists
3. de Bruijn J, Ebmeier KP, van der Does MW, Laerder D, van der Does W. 
   Predictors of burnout and depression and their association with adherence to safety and practice 
   standards: a survey of Dutch, American and Australian anaesthetists. 
   being/about-doctors-for-doctors (accessed 22/09/2014).
7. AAGBI. What is Mentoring? http://www.aagbi.org/professional/wellness/mentoring
   (accessed 06/10/2014).

Figure 1 - Example of questions from the Maslach Burnout Inventory

<table>
<thead>
<tr>
<th>Reference</th>
<th>Name of question</th>
<th>Likert Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I feel emotionally drained from work</td>
<td>0 - never, 1 - once a year or less, 2 - once a month or less, 3 - a few times a month, 4 - once a week, 5 - a few times a week, 6 - everyday</td>
</tr>
<tr>
<td>2.</td>
<td>I feel used up at the end of the workday</td>
<td>0 - never, 1 - once a year or less, 2 - once a month or less, 3 - a few times a month, 4 - once a week, 5 - a few times a week, 6 - everyday</td>
</tr>
</tbody>
</table>

1. Maslach C, Jackson SE, Leiter MP, Schaufeli WB, Schwab RL. Maslach Burnout
2. Maslach C, Jackson SE, Leiter MP, Schaufeli WB, Schwab RL. Maslach Burnout
   Inventory: Instruments and Scoring Guides. Palo Alto, CA: Consulting Psychologists
3. de Bruijn J, Ebmeier KP, van der Does MW, Laerder D, van der Does W. 
   Predictors of burnout and depression and their association with adherence to safety and practice 
   standards: a survey of Dutch, American and Australian anaesthetists. 
   being/about-doctors-for-doctors (accessed 22/09/2014).
7. AAGBI. What is Mentoring? http://www.aagbi.org/professional/wellness/mentoring
   (accessed 06/10/2014).

I do feel exhilarated now that I have passed it but also physically drained and low as I feel I have abused my body with poor activity and poor eating habits. 1 EoE Anaesthetic Trainee
What happened?

I was on-call over a weekend and anaesthetised a fit patient for an emergency procedure. Intra-operatively, the surgeon asked me to give 1.2g of co-amoxiclav. While preparing the antibiotic, the patient’s blood pressure dropped; I picked up the diluent metaraminol, which I had prepared previously in a 20ml syringe, and gave a small bolus to the patient, achieving a good response. Towards the end of the operation, I realized I still hadn’t administered the antibiotic, so picked up the 20ml syringe in the drug tray and started giving it. I realized it wasn’t the antibiotic that I had administered but the remaining 20ml syringe of metaraminol. I informed the ODP and the other members of the theatre team that I had made a drug error and needed help. Immediately increased the sevoflurane concentration to a maximum in order to deepen anaesthesia and cause vasoconstriction, and took serial, frequent blood pressure measurements. The senior anaesthetic registrar, who was next door, came very quickly and suggested giving 50mg boluses of propofol to control blood pressure. The maximum blood pressure reading recorded was 198/77mmHg and I gave a total of 300mg of propofol. By the time we transferred the patient to recovery, the patient was haemodynamicaly stable with a normal saturation. After an uneventful recovery the patient was discharged home the next day.

Shortly after the event

I discussed the events clearly in the anaesthetic records. I informed the recovery nurses and the night shift team of my error and completed a critical incident form.

I felt absolutely devastated. It is hard to describe the feeling when I realised I had given the wrong drug and could have harmed the patient. I felt a mixture of fear, regret, guilt, embarrassment, disappointment, with myself and loss of self-confidence.

Factors contributing to my drug error

I spoke to and reflected with numerous people after the event, including different consultants, my peers, friends and even my non-medical family. Reflecting helped me to identify the contributing factors that led to the incident.

It was my first day on-call in a new and unfamiliar environment and I understandably felt anxious. The shift started with a disagreement with a senior colleague, the theatre nurse told me off for wearing my ID wrong. I was torn between competing tasks, felt pressurised to do the case quickly was frequently distracted by unnecessary bleeps and did not have adequate breaks. I felt stressed all day. The incident occurred at the end of the shift when I was tired and hungry, and in a noisy theatre.

Conclusion

I describe myself as a dedicated, motivated and vigilant anaesthetist. I have always had positive feedback. But, I am also human and I make mistakes. I kept calm and acted appropriately; thankfully my patient did not suffer an adverse outcome. I was lucky. My error could have caused morbidity, increased the length of hospital stay or costs, or even caused death. Talking and reflecting helped me to cope with the event. I started to confide in colleagues and learnt that I was not the only person to make a mistake and learn from their experiences. It was as if I had joined a ‘drug error gang’.

I have learnt a great deal from this event about myself, and it has definitely changed my practice. I became part of the Swiss cheese model. I don’t want to enter the theatre tunnel again. I communicate more with my team and my prioritisation skills have improved; that day, I wanted to be everywhere but I was nowhere. I am equally important to stand up to nurses. It is the anaesthetist who should prioritise the patients, not them. I realise rest periods during busy-on-calls are vital; they are necessary to be safe, no matter how many cases are booked.

Most importantly, I learnt it is vital to be open and honest to patients and inform them of what has happened. This is a standard set by the GMC. However difficult it may be, that is our duty.

If this happens to you...

It is important to seek help, to inform the consultant on-call and complete a critical incident form, to reflect and learn from the event, and to make a note of what it is you have learned. This should be in your portfolio for discussion at your annual appraisal (and ARCP for trainees). Making an error can be personally devastating; colleagues are there to help – we are all only as good as our next anaesthetic.

The GMC requires doctors to provide an apology and explanation to patients when things go wrong (Good Medical Practice para 55), and NHS providers (the organisations) now have a statutory duty of candour. This requires that any errors in treatment that resulted in moderate or severe harm, or death, must be investigated and reported to the patient, within 10 days.

"Reflections on a drug error"
In September 2014, the AAGBI launched Lifeboxes for Rio. A two year fundraising campaign aiming to raise funding for 600 Lifebox pulse oximeters, one for each British athlete attending the next Olympic and Paralympic Games in Rio de Janeiro (5 - 21 August 2016). That’s £96,000 to save thousands of lives around the world in countries where patients are at risk of death from oxygen starvation during surgery.

Join the campaign and become a Lifeboxes for Rio fundraiser

The AAGBI wants to involve its members all over the UK and Ireland in the Lifeboxes for Rio fundraising campaign. There are lots of ways to take part:

Bake, bike ride, run or walk – or devise your own fundraising concept.

www.aagbi.org/about-us/aagbi-fundraising

AAGBI Foundation: registered as a charity in England & Wales no. 1143018
AAGBI: Registered as a charity in England & Wales no. 293575 and in Scotland no. SC040697
Lifeline: Registered as a charity in England & Wales (1118164)

Every day is Monday for the NHS

By our correspondent
Scoop O’Lamine

A dramatic new policy for the NHS was announced recently, following research carried out by the Head-Bangor consultancy, which demonstrated Monday to be the most efficient day of work within the NHS week.

External and, highly rewarded, Consultant Jeremy Finepoint explained that the DoH had asked for analysis of efficiency within NHS hospitals and also mortality rates by day of the week.

‘We found that staff worked most effectively on Mondays, with efficiency dropping gradually over the week by Friday lunchtime. Apart from some waiting lists, activity levels, efficiency and safety were lowest at the weekend.’

The DoH pursued a full analysis of this data, consulting a number of external statistical providers to deep dive into the fine detail provided by Head-Bangor. A number of academic departments also contributed to the analysis including Professor Rubix Kube provided by Head-Bangor. A number of academic departments also contributed to the analysis including Professor Rubix Kube.

‘At first I was puzzled by the data, believing only that human factors such as tiredness and reduced staffing were the cause of the issues described. But the more analysis I did using our new Manyur-Bovine statistical package, the clearer it became, following replicated transmogrified psycho-interval analysis, that humans associate the term Monday with efficient working. It was only then a small step to convince the Minister of Health that the NHS should adopt a 7 day working week, with every day being called Monday!’

The DoH were originally sceptical about such a move, but a well funded day-terminology shift trial proved the point over a 7 day period in Cornwallop Regional Foundation Trust run by senior Matron Madita Thrusting. ‘Just lovely – we never forget which day it was, although not everyone understood the concept. We found that we needed extra allowances to work every 6th and 7th Mondays. But I think it has been brilliant, and there is no doubt that we must have transformed the efficiency of our hospitals because Professor Kube said we must have. Just think – no more Friday slow downs or sleepy Sundays.’

The DoH spokesman explained that teething problems were being experienced with outpatient and theatre scheduling since patients were phoning regularly to check dates ‘But this is a small price to pay to get our system in order.’
Dear Editor

The juxtaposition of Richard Griffiths cycling article1 with Paul Fenton’s on safe anaesthetic machines,2 reminds me of the surge in hopefulness that the Lifebox campaign has engendered with me.

I re-introduced in April 2015 and cycled from Lands End to John O’Groats the next month, sporting my red Lyrena AAGBI top. I raised money for Lifebox and the International Nepal Fellowship Medical Camps. This year I have worked in Nepal and then the Gambia, providing anaesthesia for obstetric fistula repairs and cleft lip & palate surgeries. In both places the Lifebox oximeters were being used. In both environments a Paul Fenton design-type machines were available.

The Universal Anaesthetic Machine was excellent, as was the Glostavent. I used the latter on patients from 3kg upwards at low flows of oxygen-concentrator-derived oxygen. In my own hospital our complicated machines are withdrawn for the service engineers if a single fault occurs. The draw-over machines are serviceable with minimum technical help. Following Professor Macintosh’s ‘Plea for Simplicity’, I think the anaesthetic machine manufacturers went in the wrong direction. It serves their budgets if we remain dependent on them for their technological expertise. I was asked to commission a neonatal incubator in the Gambia, a charitable donation from Europe. Sadly it was a non-starter. There was no compressed air available. The Glostavent machine has a capacity for 8L/min of both air and oxygen at any one time. Thanks to Paul Fenton and Robert Neighbour (Glostavent), the patient safety advances with Lifebox monitoring can be carried over to the administration of safer anaesthetics. We need to learn from the poor, they have ideas that can transform and improve our professional world.

Dr Michael Carter
Luton and Dunstable Hospital

References

Dear Editor

It was a pleasure to read the paper by Matthew Down about Winston Churchill.1 The piece refers to Churchill’s hernia repair performed by the surgeon Thomas Dunhill and states that the anaesthetist was unknown. The anaesthetist was, in fact, Christopher Langton Hewer, the first Editor of Anaesthesia, who worked with Dunhill at St Bartholomew’s Hospital. I have seen books in the possession of the family which are signed by Churchill and thank Hewer for looking after him. Hewer was a brilliant clinical anaesthetist who was well used to dealing with severe cardiovascular instability that he found on a regular basis while dealing with the chronic uncontrolled thyrotoxicosis presented to him regularly at Barts. He and Dunhill specialised in the procedure of ‘stealing the thyroid’ and Hewer designed a special thyroid facemask for these operations, as Dunhill believed that tracheal intubation increased intra-operative bleeding! Hewer had perfected his technique and intubated these cases via the nasal route and then placed the facemask over the tube so it was invisible to the surgeon. At the end of the case, the ODA would carry open the anaesthetic room door. Hewer would flick the tracheal tube through the open door which was then promptly shut. Dunhill meanwhile was distracted deliberately each time this occurred and it is said he never knew about the intubation.

With consummate skills such as those I believe Sir Charles Wilson’s description of frequent anxious checking of the pulse’ indicates the challenging problems in our profession in the eyes of certain physicians of that era. Dunhill specialised in the procedure of ‘stealing the thyroid’ and Hewer designed a special thyroid facemask for these operations, as Dunhill believed that tracheal intubation increased intra-operative bleeding! Hewer had perfected his technique and intubated these cases via the nasal route and then placed the facemask over the tube so it was invisible to the surgeon. At the end of the case, the ODA would carry open the anaesthetic room door. Hewer would flick the tracheal tube through the open door which was then promptly shut. Dunhill meanwhile was distracted deliberately each time this occurred and it is said he never knew about the intubation.

We later learnt that the ODP had bent himself on the light source switch. An equipment box had helpfully been stored behind the cooling fan for the light source which had caused it to overheat and cut out. While the ODP was away from the room, the light source had cooled down enough to allow us enough time to intubate.

A lesson to us all! A memo was sent to all the theatre staff.

Dr David Wilkinson
President, WPSA and Emeritus Consultant Anaesthetist, Baddow Department of Anaesthesia, St Bartholomew’s Hospital, London

Reference
BOOKING NOW OPEN FOR THE WORLD’S LARGEST AIRWAY MEETING 2015

TO MARK THE 20TH ANNIVERSARY OF THE DIFFICULT AIRWAY SOCIETY & THE SOCIETY FOR AIRWAY MANAGEMENT

JOURNAL OF THE DIFFICULT AIRWAY SOCIETY & THE SOCIETY FOR AIRWAY MANAGEMENT

Electroencephalogram reactivity to verbal command after dexmedetomidine, propofol and sevoflurane induced unresponsiveness


With NAP5 having just been published, all things related to preventing accidental ventilation during anaesthesia – brain monitoring, anaesthetic mechanisms – are rightly in the forefront of academic interest. This complex paper looks at a parameter of the electroencephalogram (EEG), namely its ability to react to external stimuli (in this study, up to the point when the subject is no longer responsive to verbal stimulation). The authors found that this measure of EEG reactivity persisted, even when subjects were no longer responsive, and also that there were differences in the quantity measured between three different agents (propofol, dexmedetomidine and sevoflurane). This means two things, which practising clinicians may find difficult to accept (but many neuroscientists and psychologists have long accepted as the norm). The first is that, even when our patients are unresponsive to our commands, the brain is still reactive to verbal input (and if this is the case, how do we know that our patients are actually ‘anaesthetised’?). The second is that the same macroscopic end-point at the level of the organism (namely, in this case, unconsciousness where the subject is unresponsive to command) can be attained in neurologically specific ways (‘anaesthetised’?). The second is that the same macroscopic end-point at the level of the organism (namely, in this case, unconsciousness where the subject is unresponsive to command) can be attained in neurologically specific ways with different anaesthetic agents. ‘Falling asleep’ with propofol is simply not the same as with sevoflurane or dexmedetomidine. And if this is the case, how are we able to develop a universal monitor for ‘depth of anaesthesia’ applicable to all these agents?

Comparison of the C-Mac and Glidescope videolaryngoscopes on patients with cervical spine disorders and immobilization


The Difficult Airway Society published its ADEPT guidance for evaluation of airway-related devices in 2011. High quality trials on the relevant airway devices continue as a result of this stimulus and, in this study, Brück et al. focus on the use of two established devices in the critical scenario of tracheal intubation in cervical spine disorder. Reassuringly, they find that both devices are broadly comparable, with any reported differences probably being dwarfed by interindividual differences in practice in the real world.

The effect of needle dimensions and infusion rates on injection pressures in regional anaesthesia needles: a bench top study

Patil JJ, Ford S, Egeler C, Williams DJ.

Successful peripheral neural blockade requires placement of the needle tip close to the nerve; however, breadth of the spectrum and injection of local anaesthetic intrathecally, or worse, intravascularly, may result in permanent nerve damage. Both ultrasound and nerve stimulation can be unreliable and pressure thresholds for injection constitute a third means of identifying this potential complication. The question is then how best to measure this? In a bench study, the authors concluded that injection rates should be no higher than 1–2 ml/min to exclude factors proximal to the needle tip as the cause for high pressures. Very slightly, they have broadened this to mean a rate of no higher than 0.25 ml/s (which clearly helps those practitioners without immediate access to pressure gauges) and they also suggest coupling this with both ultrasound and electrical stimulation.

Transnasal Humidified Rapid-Insufflation Ventilatory Exchange (THRIVE): a physiological method of increasing apnoea time in patients with difficult airways

Patel A, Nouraei SAR

The authors describe a novel method (THRIVE) of maintaining oxygen saturations during intubation. In some respects this does not seem novel or exciting, yet readers would be well advised to take a closer look at this interesting idea. First, Patel and Nouraei’s patients were all difficult to intubate. For many, this had been established at previous anaesthetics. Second, all these patients maintained oxygen saturations >90% for apnoeic periods of >10 mins. Indeed, four of them maintained saturations of >90% for >30 mins; the longest duration being just under 70 mins! It is difficult to conceive of any current method in which one could maintain a patient with a difficult airway apnoeic, while trying to secure their airway, for an hour – yet here is the data. Third – and for many physiologically minded readers this may be the most interesting aspect – the mix of CO2 was just ~0.1 kPa/mm, much lower than the standard 0.5 kPa/min quoted in all reference texts. Indeed, it seems only two other studies have achieved such low rates of carbon dioxide accumulation, both using intratracheal cannulas. The method used by Patel and Nouraei is very simple – a high flow, humidified oxygen delivery system applied to the nose. Just as pressure gradient, useful in patients with difficult airways, is logically therefore applied to all patients (since one cannot always know in advance which patient will be difficult), it begs the question whether THRIVE (or similar techniques) should be logically used in all patients during induction of anaesthesia.

Anaesthesia December 2014

Electroencephalogram reactivity to verbal command after dexmedetomidine, propofol and sevoflurane induced unresponsiveness


With NAP5 having just been published, all things related to preventing accidental ventilation during anaesthesia – brain monitoring, anaesthetic mechanisms – are rightly in the forefront of academic interest. This complex paper looks at a parameter of the electroencephalogram (EEG), namely its ability to react to external stimuli (in this study, up to the point when the subject is no longer responsive to verbal stimulation). The authors found that this measure of EEG reactivity persisted, even when subjects were no longer responsive, and also that there were differences in the quantity measured between three different agents (propofol, dexmedetomidine and sevoflurane). This means two things, which practising clinicians may find difficult to accept (but many neuroscientists and psychologists have long accepted as the norm). The first is that, even when our patients are unresponsive to our commands, the brain is still reactive to verbal input (and if this is the case, how do we know that our patients are actually ‘anaesthetised’?). The second is that the same macroscopic end-point at the level of the organism (namely, in this case, unconsciousness where the subject is unresponsive to command) can be attained in neurologically specific ways with different anaesthetic agents. ‘Falling asleep’ with propofol is simply not the same as with sevoflurane or dexmedetomidine. And if this is the case, how are we able to develop a universal monitor for ‘depth of anaesthesia’ applicable to all these agents?

Comparison of the C-Mac and Glidescope videolaryngoscopes on patients with cervical spine disorders and immobilization


The Difficult Airway Society published its ADEPT guidance for evaluation of airway-related devices in 2011. High quality trials on the relevant airway devices continue as a result of this stimulus and, in this study, Brück et al. focus on the use of two established devices in the critical scenario of tracheal intubation in cervical spine disorder. Reassuringly, they find that both devices are broadly comparable, with any reported differences probably being dwarfed by interindividual differences in practice in the real world.

The effect of needle dimensions and infusion rates on injection pressures in regional anaesthesia needles: a bench top study

Patil JJ, Ford S, Egeler C, Williams DJ.

Successful peripheral neural blockade requires placement of the needle tip close to the nerve; however, breadth of the spectrum and injection of local anaesthetic intrathecally, or worse, intravascularly, may result in permanent nerve damage. Both ultrasound and nerve stimulation can be unreliable and pressure thresholds for injection constitute a third means of identifying this potential complication. The question is then how best to measure this? In a bench study, the authors concluded that injection rates should be no higher than 1–2 ml/min to exclude factors proximal to the needle tip as the cause for high pressures. Very slightly, they have broadened this to mean a rate of no higher than 0.25 ml/s (which clearly helps those practitioners without immediate access to pressure gauges) and they also suggest coupling this with both ultrasound and electrical stimulation.
Associations between active commuting, body fat, and body mass index: population based, cross sectional study in the United Kingdom.

British Medical Journal 2014; 349: g4687

Anaweshita et al. are often considered to be some of the most active members of the medical profession. Beneficial effects of physical activity on obesity and health outcomes are well understood. Active commuting to work has been strongly recommended by the UK National Institute for Health and Care Excellence as a feasible way of incorporating greater levels of physical activity into daily life. Studies consistently suggest that use of active commuting modes translates into higher levels of overall physical activity.2,4 Active commuting should not necessarily be limited to walking or cycling. Research has suggested that travelling by public transport involves significantly more exertion than using private transport, as walking is generally restricted between public transport hubs and journey origins and destinations.3 However, there is limited research on the potential population health benefits of encouraging the use of public transportation.

Objective

The aim of this study was to investigate the relationship between active commuting (walking or cycling for all or part of the journey to work) and two objective measures of obesity.

Design

A cross sectional study of data from the wave 2 Health Assessment subsample of Understanding Society, the UK Household Longitudinal Study (UKHLS), a large, nationally representative dataset. Commuting mode was self-reported and categorised as three categories: private transport, public transport, and active transport.

Participants

The analytic samples (7034 for body mass index (BMI) analysis, 7424 for percentage body fat analysis) were derived from the representative subsample of wave 2 respondents of UKHLS who provided health assessment data (n = 9307). The analysis was restricted to participants aged 18 years or over.

Main outcome measures

Body mass index and percentage body fat (measured by electrical impedance).

Results

Results from multivariate linear regression analyses suggested that, compared with using private transport, commuting by public or active transport modes was significantly and independently predictive of lower BMI for both men and women. In fully adjusted models, men who commuted via public or active modes had BMI scores of 1.10 (95% CI 0.53 to 1.67) and 0.07 (0.40 to 1.50) points lower, respectively, than those who used private transport. Women who commuted via public or active modes had BMI scores of 0.72 (95% CI 0.26 to 1.37) and 0.07 (0.36 to 1.07) points lower, respectively, than those using private transport. Results for percentage body fat were similar in terms of magnitude, significance, and direction of effects.

Conclusions

Men and women who commuted to work by active and public modes of transport had significantly lower BMI and body fat compared to their counterparts who used private transport. These associations were not attenuated by adjustment for a range of hypothesised confounding factors.

Dr Jonny Price

ST6, North Central London School

References


Anaweshita and colleagues

High versus low blood-pressure target in patients with septic shock


Background

Septic shock is defined as sepsis-induced hypotension despite adequate fluid resuscitation.2 The current Surviving Sepsis Campaign Guidelines (SSCG) recommend targeting a mean arterial pressure (MAP) of 85 to 90 mmHg but evidence for this is limited.3 A causal study states that a higher MAP may have a better outcome in patients with hypertension and atherosclerosis and this is reflected in clinical practice where higher target MAPs are frequently set. In this study, the authors investigated whether, in patients with septic shock, resuscitation to a high target MAP of 85 to 90 mmHg (target MAP) might alter 28 day mortality.

Methods

This government funded, 29 centre, open-label, randomised control trial assessed 4098 patients of which 798 were eligible and underwent randomisation. Important inclusion criteria included age ≥18 years, sufficient fluid resuscitation and a minimum vasopressor requirement (noradrenaline was used in all but one centre). The target MAP (85 to 90 mmHg) was maintained for 95 days for the 90 mmHg target group and 5 days for the 85 mmHg target group. Patients were between protocols based on the lowest MAP value reached. The primary endpoint was survival to hospital discharge. The primary endpoint was survival to hospital discharge. Secondary endpoints included 90 day survival, all cause mortality and a composite outcome of death from any cause or graft failure (including death from any cause or renal replacement therapy).

Results

There was no significant difference in 28 or 90 day mortality between the high and low MAP target groups. Within a subpopulation stratified for chronic hypertension, the high target MAP group showed a significant decrease in the proportion of patients having a systolic blood pressure 90 mmHg, or 90 mmHg, or requiring renal replacement therapy (37.1% vs 42.2%, p = 0.09). In the only study with a significant difference in adverse events was a higher incidence of atrial fibrillation in the high target MAP group (0.8% vs 2.9%, p = 0.02).

Discussion

The SSCG target MAP of 85 to 90 mmHg is a strong recommendation based on limited evidence (grade 1C). Through a rigorous shift of renal auto-regulation causes in chronic hypertensive patients, there is a plausible physiological justification for higher target MAPs in these patients. While renal impairment in this stratified population was seen in the high target MAP group, this did not affect mortality. Due to an overestimation of expected mortality, this study was slightly underpowered, meaning that there may be a failure to detect rarer adverse events such as myocardial infarction.

Dr John McMacken

CTI Anaesthesia, Edinburgh

References


Anna Roberts

ST1, Welsh School of Anaesthesia

References

t or further guidance: intravenous-fluid-therapy-in-adults-in-hospital.pdf (accessed 02/06/2016).

Randomised trials of human albumin for adults with sepsis: systematic review and meta-analysis with trial sequential analysis of all-cause mortality

British Medical Journal 2014; 349: g4681

Background

The argument continues on which fluids are beneficial in the resuscitation of sepsis, with colloids largely deserted and continuing uncertainty about the benefits of albumin. NICE guidelines and the Surviving Sepsis Campaign currently recommend using crystalloids for initial fluid resuscitation, with human albumin solutions suggested for patients requiring substantial amounts of crystalloids.4 Evidence from previous RCTs is mixed, with the SAFE study finding a survival benefit with 4% albumin in sepsis, but this was not replicated by the recent ALBIOS study.

Methods

Selam randomised controlled trials were identified comparing albumin to either crystalloid or colloid fluid resuscitation. A total of 410 adults requiring critical care were included, and classified as ‘sepsis’, ‘severe sepsis’ or ‘septic shock’ to allow comparison between studies and subgroup analysis. Mortality at final follow up was the primary outcome measure. The relative risk of death for human albumin compared to other fluids was calculated for each included study and a pooled summary calculated.

Results

All-cause mortality was statistically similar in patients who received human albumin solutions or control fluids (relative risk 0.94, 95% CI 0.87 to 1.01, p = 0.11). Subgroup analysis of disease severity and control fluid did not show any reduced mortality with albumin, although the number of patients receiving colloids was low. No definite signal of harm with albumin was observed.

Discussion

The meta-analysis included a large amount of new patient data, and analysed potential bias of the studies. While it did not include the recent CRISTAL and ongoing RASP studies, models of their potential impact did not change the finding of no overall impact on mortality. The timing, duration and volume of albumin administered varied considerably between studies, and the effect of early albumin administration or secondary outcomes such as morbidity and length of critical care stay were not examined.

While harm has not been detected from the use of albumin in sepsis, this meta-analysis shows no impact on the high mortality. It challenges the current recommendations on using albumin in fluid resuscitation guidelines in sepsis. Given the high cost of albumin compared to the apparently equally effective alternative of crystalloids, it is difficult to support the use of albumin in sepsis on the current evidence.

Anna Roberts

ST1, Welsh School of Anaesthesia

References

Learn@AAGBI
Providing lifelong learning in anaesthesia

NEW FUNCTIONALITY

Reflect on educational videos from Annual Congress 2014 and other recent events with Learn@AAGBI

The template is easy to use allowing you to reflect on the conference as a whole or on individual lectures.

Step-by-step guide on how to reflect using the site:

Step 1. Go to www.aagbi.org/education
Step 2. Click on the ‘Learn@AAGBI’ box
Step 3. Log in: note you will need your AAGBI membership number and password
Step 4. From the search page select AAGBI conferences/seminars
Step 5. From the list select the video that you wish to reflect on
Step 6. After watching the whole video, open the reflective learning form and complete it
Step 7. If you are happy with what you have written, click on ‘Submit form’, or if you would like to add more later on, click ‘save draft’. This will upload into the ‘My CPD Area’ as either a draft or a completed ‘Submitted Reflective Note’.

Go to www.aagbi.org/education and use Learn@AAGBI for your reflections at our meetings, and for your ongoing CPD and exam preparation.
WSM is one of the AAGBI’s flagship conferences. Join us for unmissable keynote speakers:

What next for NICE?
Prof David Haslam, Chairman, National Institute of Health & Care Excellence (NICE)

Do no harm
Mr Henry Marsh, Consultant Neurosurgeon, London

Seeking innovation from variation: Notes on managing and mentoring
Prof Lawrence Tsen, Associate Director, Centre for Professionalism and Peer Support, Boston, USA

Alongside the cutting-edge programme, there are exciting workshops on offer, ranging from ‘Ultrasound’ to ‘Paediatric Emergencies’. This conference is a “one-stop-shop” for all your CPD and educational needs in 2015.

Topics include:
- Anaesthetists in training
- Clinical anaesthesia
- Clinical measurement/equipment
- Contractual/job planning
- Elderly anaesthesia
- Ethics and law
- Haematology
- Human factors
- Independent practice
- Irish anaesthetists
- Obstetric anaesthesia
- Resuscitation and trauma
- SAS anaesthesia
- Wellbeing

AAGBI GUIDELINES APP

Regular updates
Checklist for anaesthetic equipment
Reflective learning tool

FREE FOR AAGBI MEMBERS

Download the app today for Apple and Android devices

www.aagbi.org/guidelines-app