THE SCOTTISH SOCIETY OF ANAESTHETISTS

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Editorial

Another year passes and what a year. for the society. For any organisation, it's Centenary is a huge event, a badge of longevity, validating its purpose and aims. It suggests we've been doing something right to have survived 100 years. You'll not be surprised that there's a fair bit of the content of these Annals devoted to this subject. The society started in a different world. I'm uncertain whether the the 11 Anaesthetists who met in the Balmoral Hotel in Edinburgh in February 1914 knew that the world was on the brink of three decades of cataclysmic strife, change and turmoil.

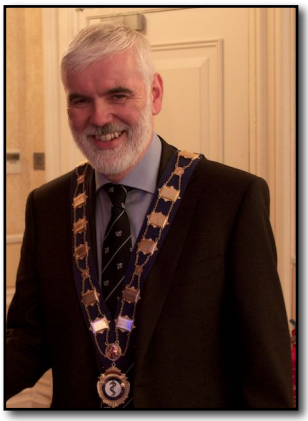
The Scottish Society of Anaesthetists has survived and thrived for 100 years because it serves a vital function. Educational, supportive social and a wee bit political. We function as a charity carrying out these activities and rely on the unfunded hard work of a large number of people to do this. So I'd like to take this opportunity to recognise the contribution of the various office bearers, Presidents, VPs, executive and council members who have helped run the society over the years. Meetings don't organise themselves and Annals don't write themselves. I'd therefore, on your behalf, like to thank all those who have contributed so much over the years.

Here we are, 100 years later. Well done!!

Brian Stickle

Presidents Message

Dr Neil Mackenzie



It is a huge honour and privilege to serve as the Society's President its centenary year and I have to thank the previous President, Charlie Allison, the Executive and members for their generous invitation, notwithstanding the daunting prospect of following Charlie's tour de force of a Presidential Address.

I need hardly remind you that the Scottish Society is the oldest national anaesthetic society in the world. 100 years ago, a small group of 14 far-sighted anaesthetists from across Scotland met to form the Society. They realised the value of sharing experience, promoting best practice and establishing anaesthesia as a separate medical specialty. Their early aspirations have been well and truly vindicated over the intervening century. Anaesthesia has grown and flourished, incorporating many new advances, rising to the challenges of two world wars and embracing wholeheartedly the inception of the National Health Service. We have now become the largest hospital specialty and overseen the emergence of intensive care and pain medicine as separate disciplines in their own right, although still retaining strong links to their parent body. The Royal College and Association of Anaesthetists have also evolved into strong representative organisations.

The Scottish Society has similarly grown and flourished. It has been intimately involved with all of these developments and I would particularly highlight the role of two distinguished Past-Presidents in this respect: John Gillies and Sir Donald Campbell. The former was hugely influential in establishing anaesthesia as an equal status medical specialty at the introduction of the NHS and the latter with the evolution of intensive care. Both are suitably remembered by the Society; one with

the Gillies Memorial Lecture and the other by the Donald Campbell Prize for trainees. The Society remains involved with current anaesthetic issues, but the Centenary provides an ideal opportunity to take stock and look to the future. The specialty is very much as crossroads; intensive care and pain are already going their own ways and there is an increasing emphasis on our role as peri-operative physicians. Service demands expand inexorably, budgetary constraints tighten, patient and surgical complexity increase, while public expectation rightly rises in respect of quality and safety.

Consultant morale is at a low ebb and there is a general feeling of disaffection and being undervalued. Increasingly rigid job plans with reduced SPA time, more out of hours and resident call duties, suspension of merit awards, pay freezes, pension changes and reduced take home pay all contribute to the malaise. There is a worrying shortage of applicants for consultant posts and more importantly ST3 training posts, with a significant number of CCT holders leaving Scotland at the end of training.

I sense a general feeling of professional disempowerment and unhappiness about a perceived target driven system of health care delivery, with only lip-service paid to quality and safety. We see huge amounts of public money spent on locums, waiting list initiatives and the private sector, insidious pressure put on consultants to give up essential SPA time for service and patients and their relatives being shipped across the country for routine elective surgery. I think most of us have major misgivings about this direction of travel and the inherent risks of cutting corners and losing quality, despite superficially appearing able to tick the patient safety boxes.

It is time for proper professional dialogue with Government, working constructively to devise sensible ways of providing affordable, safe, sustainable, high quality health care across Scotland, free from petty, party political interference. Professional engagement and medical leadership is essential and the Scottish Society, together with College and Association Scottish representative bodies and the Academy of Scottish Medical Colleges, are vital in this respect.

Currently we have a large workforce of talented, well trained and motivated consultants, practising to high standards, and continue to attract excellent applicants for core specialty training. The key is to raise morale and re-energise enthusiasm to meet the changing health care needs of the 21st century. John Gillies has provided us with an excellent role model and I would encourage you to follow his example and engage in the process.

On the domestic front, the Society held its traditional Spring Meeting in May, now for the third time in Crieff after a 25 year sojourn in Peebles.

It began on the Friday with a superb Trainees Meeting organised by John Allan and Sabah Munshi. Once again, this was a great success with 65 attendees, a full and

varied programme and excellent speakers. 45 posters were submitted with the best 5 selected for oral presentation on the Saturday. The winner of the Greg. Imray Salver for the best poster on display was Peter Paisley, while the Donald Campbell Quaich for best oral paper went to Chris McDonald. Of note, 4 out of the top 5 papers were submitted by medical students which bodes well for future recruitment to the specialty.

Saturday followed the customary format with a mix of educational talks, trainee presentations and politics. Kathleen Ferguson kept the audience as well as her neurosurgical patients awake during her review of awake craniotomy with asides to quantum physics. J.P. Van Besouw gave a comprehensive review of College activities while John Colvin and Alastair Michie updated us on political issues in the open forum. Charlie Allison presided over a lively AGM with extended discussion on the future of the Spring Meeting, following concerns about falling attendances. Many differing and impassioned opinions were expressed from the floor on issues such as venue, timing, format, content and target audience. All stressed the uniqueness of what we have and the valuable social element, but many questioned the costs, educational value and poor publicity. Everyone agreed on the need to make changes and Council undertook to circulate members for their views before embarking on radical surgery. The evening was rounded off with the traditional ceilidh- by common consent the best for years with a crowded dance floor all night.

The 2013 Winter Scientific Meeting and Gillies Lecture were deferred until February 2014 because of the Centenary celebrations.

On a sadder note, I have to record the deaths of two Past-Presidents, both from Glasgow, Alick Reid (President 1988) and Maggie Stockwell (President 2006) and a former editor, Ian Armstrong (1995-1999) from Edinburgh. All three were strong supporters and gave sterling service to the Society. They will be sadly missed.

I must finish my thanking Council for their tremendous support over the past year and particularly the Aberdeen Secretariat. Andrea has ensured that we are on a strong financial footing as we approach the next 100 years, Brian has done a great job with the Annals and the website and Gordon has been a huge help, particularly with the Centenary organisation. I am sure he is looking forward to some respite and enjoying his NESSA Presidency. Finally, I must thank Alistair Baxter for his tireless hard work behind the scenes with the Centenary Meeting.

The Celebrations have been a wonderful opportunity for the Society to look back over the achievements of the past 100 years, but more importantly provides us with the ideal springboard for the future. I would encourage you all to re-engage with the Society and support it into its next phase, starting with the re-vamped May Spring Meeting in Crieff and the November Winter Scientific meeting in Glasgow. Our new President, Ian Johnston, will be at the helm and I wish him all the best as we move into the new era.

Neil Mackenzie. February 2014

Presidential Address

Dr Neil Mackenzie. Crieff, May 2013

The Walk of Life

It's a great honour and privilege to take over the Presidency of the Scottish Society of Anaesthetists, especially at such an auspicious time. It's an organisation I've always supported since SHO days and I well remember presenting at Registrars' meetings in the 80s and long Council meetings in Perth on Sunday afternoons. As Honorary Secretary at the turn of the century, I was involved in major changes to anaesthetic representation in Scotland following Devolution, with the establishment of the College Scottish Board and Association Standing Committee. Inevitably the Society had to shift its focus away from political and advisory towards a more educational and social role, which I believe it has done so successfully while still providing input and advice to the new bodies.

Stuart McGowan, Sandy Forrest, Bill Bisset, Iain Gray, Farquhar Hamilton, Alf Shearer and Tony Wildsmith

I began my anaesthetic career like many others at Leith and the Eastern General hospitals in Edinburgh in the late 70s under the direction of Lesley Morrison, Teddy Norman and Keith Dodd and I couldn't have had a better trio of role models from whom to garner the basic principles of anaesthetic practice including paediatric and regional. I then moved to Dundee as a registrar in 1980 to join a flourishing department under Ian Lawson's leadership. It was an excellent environment for training and research, with an exceptional group of consultant mentors - Stuart McGowan, Sandy Forrest, Bill Bisset, Iain Gray, Farquhar Hamilton and Alf Shearer – all bar one past-presidents of the Society. Of course, we were joined a bit later by Tony Wildsmith as Foundation Professor (the Magnificent seven. Above)

All trainees were expected to carry out clinical research and my first publications were with Ian Lawson, demonstrating the superiority of the newly introduced midazolam over diazepam for intra-venous dental sedation, and with Sandy Forrest looking at patient monitoring in the operating theatre. 30 years ago less than half of our patients undergoing minor or intermediate surgery had ECG monitoring and only one third had blood pressure measured. Oximetry and capnography were unheard of.

My research really took off with Ian Grant's arrival from Glasgow as a new consultant and ICI's experimental new anaesthetic agent, propofol. In 1985 we published the first paper to show propofol's major advantages in day case anaesthesia over the two standard agents methohexitone and thiopentone. We then went on to explore its potential for infusion both for IV anaesthesia and sedation – techniques which have now become incorporated into routine anaesthetic practice. Unfortunately its versatility and ease of use has led to some definitely non-standard, non-anaesthetic practice eloquently outlined by Steven Schafer at Conrad Murray's recent trial over the death of Michael Jackson (below)

(Clockwise) Conrad Murray, Steven Schafer, Michael Jackson.

The spin-off was great with many opportunities for overseas travel, presentations, workshops etc. Looking back at some of the educational videos we made at the time, I am however, impressed by today's improved standards and safety, particularly in the practice of regional anaesthesia. We definitely didn't have ultrasound visualisation, purposed designed

equipment and the newer, safer local anaesthetic agents.

Towards the end of my training I arranged a 4 month secondment to the Queen Victoria Hospital, East Grinstead, the South East of England Regional Plastics and Burns Unit. This remarkable unit was set up during the 2nd World War to deal primarily with burned aircraft crew under the direction of Sir Archibald McIndoe, the pioneering plastic surgeon. Fittingly for a plastics unit, it was grafted on to an existing cottage hospital in rural Sussex. McIndoe carried out an amazing amount of innovative plastic surgery, particularly to the hands and face and developed the pedicled tube graft to reconstruct damaged tissues before the advent of microvascular surgery. As well as surgical reconstruction McIndoe emphasised the importance of reintegration of patients back into normal life after treatment and to that end the Guinea Pig club was set up for ex-patients. It continued to meet regularly with survivors returning to reunions from all over the world, although sadly just a handful of the original members now remain.

The hospital still had a military feel to it when I worked there. A suite of 4 operating theatres opened off a large communal anaesthetic room where all patients were induced. This was very much the domain of the Senior ODA, Cyril Jones, a splendid character complete with RAF style moustache

Above: Cyril Jones, the chief orderly at Queen Victoria Hospital, oversees the saline bath of one of the patients in 1942.

who had worked in theatres since McIndoe opened the unit in 1939. He also doubled up as barman in the staff mess where medical staff adjourned at the end of a day's work. Cyril had seen it all before and was a past-master at teaching blind-nasal intubation. He would move from patient to patient, effortlessly guiding the tyro's tube into place. Virtually all intubations were done in this way – a skill I've been thankful for in several tricky situations over my career.

East Grinstead was also my first real exposure to hypotensive anaesthesia, although I can't really say that I was as convinced. Hale Enderby, the senior consultant anaesthetist, had developed his own unique mode of hypotensive anaesthesia to match the demands of McIndoe, Gillies and their successors. He had published widely on the topic and had refined and honed the East Grinstead technique to a fine art which was impressive to witness. Patients had a characteristic, death-like pallor

and major head and neck surgery would be done quickly without bleeding – surgeons expected this and woe betide you if there was blood in the surgical field. This state was achieved with long forgotten agents and techniques.

Anaesthesia was induced with a generous dose of thiopentone, paralysis established with decamethonium followed by blind nasal intubation with a red rubber tube. Then pentolinium (a ganglion blocker) was administered and the patient hand ventilated with a high concentration of halothane, PEEP and a 25° head-up tilt with a generous dose of IV opiate for good measure. Monitoring was rudimentary by today's standards, consisting of a finger on the pulse and continuous oscillotonometer BP recordings, with or without ECG (there being 2 ECG monitors for the 4 theatres). The aim was for a systolic blood pressure of 60 to 70 mmHg.

Post-operative care was of a high standard with slow return of blood pressure and careful nursing and patient positioning to avoid reactionary haemorrhage. Indeed East Grinstead had, I believe, the UK's first dedicated 24 hour recovery ward. Enderby always maintained that the technique, if performed properly, was safe and the anaesthetic office certainly was stacked with thousands of punched Nosworthy cards recording details of previous patients, their anaesthetic management and any complications which were apparently minimal. Even at that time, hypotensive anaesthesia was controversial and others were reporting complications. Over the next decade it was largely abandoned.

Paediatric anaesthesia has until very recently been my other major interest, stemming from my first exposure at Leith Hospital Children's Theatre with Teddy Norman and his red feather flickering at the end of the Ayre's T-piece.

Again it's remarkable how practice has changed over the years. As an SR, I spent 3 months at Alder Hey Hospital in Liverpool, the busiest paediatric hospital in the UK and still very much under Jackson-Rees's influence. Not surprisingly the Liverpool Technique reigned supreme. All children were admitted the day before surgery and seen by the on call trainee who wrote them up for a premed of vallergan syrup followed by IM morphine and atropine an hour later. They were then wheeled along to theatre almost comatose and no parents were allowed anywhere near. Virtually all had an intravenous induction (before the days of EMLA cream) with a 27 gauge needle left open on to a gauze wick. Thiopentone was given followed either by suxamethonium or curare depending on the length of procedure and the child intubated and hyperventilated with a nitrous oxide/oxygen mixture, often without a volatile agent, using Jackson Rees's modification of the Ayre's T-piece. Monitoring was largely clinical,

but usually involved a pre-cordial stethoscope, regional techniques were discouraged and no real thought was given to awareness or post-op analgesia.

Although undoubtedly safe and well suited to the huge numbers of cases passing through theatres, it was hardly humane. Contrast this with today's more enlightened approach where everything is geared towards making the whole anaesthetic/surgical experience as child-friendly and pleasant as possible with careful psychological preparation, day case surgery, parental and play-leader involvement, EMLA cream, regional blocks, short acting anaesthetic agents and detailed attention to post-operative pain relief.

As a younger consultant, I'd always been encouraged by senior colleagues to become involved in the wider aspects of the specialty. I was Regional Advisor for eight years during major changes to training with a formalised post-graduate curriculum and regular local trainee assessments for the first time. Until then the fellowship exam was the only benchmark and with Willie Macrae's support I enjoyed a 12 year stint as a college examiner as the exam evolved from two to three and then back to two parts, again becoming more structured, carefully audited and ultimately fairer with a significantly higher pass rate. The Association Scottish Standing Committee and College Scottish Board also allowed me opportunities for wider involvement and I'll always be grateful for Peter Wallace's and Tony Wildsmith's encouragement in this respect and, in turn, I would strongly encourage younger colleagues to get involved and contribute to current issues around the wider health care agenda.

So much for the past 40 years – what of the future? Well 2014 promises to be a momentous year for Scotland and the Scottish Society of Anaesthetists. But what of my personal plans?

Seven years ago we acquired an old fisherman's cottage in Portgordon in Moray and future plans involve spending a lot more time there. Last year the National Geographic Magazine placed the Moray Firth in the top ten of the world's most beautiful coastlines and Portgordon is exactly half way along its southern border. It was founded in 1797 by Alexander, 4th Duke of Gordon and developed rapidly as the main port for the fertile Moray hinterland. Over a hundred boats were registered here in 1880 but since then it has gone into gentle decline and only a handful of boats use the partially silted up harbour. Its situation, however, makes it ideal for exploring the coastal scenery.

Turning right as we leave the cottage, the Speyside Way follows the old railway line to Buckie, still an important fishing port with boat building and repair yards. The local museum "The Buckie Drifter" chronicles the fishing heritage and particularly the rise and

subsequent fall of the herring industry. At its peak, early last century, nearly 300 steam drifters (one third of the Scottish fleet) operated out of Buckie, employing large numbers of locals (men on the boats and women with the processing). Crews followed the annual herring migration up and down the East coast from Shetland to Great Yarmouth, followed on land by the fisher quines who gutted and packed the fish at a phenomenal rate, working extremely hard in primitive conditions but also enjoying the change of scenery and social opportunities on offer.

We continue Eastwards through a string of attractive fishing villages with their distinctive houses colourfully painted and pointed, each clustered around the harbour, at one time central to their existence and livelihood, but now almost all given over to leisure craft and related tourist activities: Findochty, Portknockie, Cullen, Portsoy, Banff and Pennan.

You've probably seen the film "Local Hero" set in Pennan with its famous red telephone box and in the news not that long ago when a landslip threatened its continued existence. Just round the corner from Pennan is Crovie which, if anything, is even more picturesque. Surrounded by high cliffs, and consisting of a single row of cottages perched precariously on a narrow sea-threatened strip of land with no vehicular access and where the residents have to rely on wheelbarrows to deliver goods to their homes.

The trail finishes at Fraserburgh, the site of Scotland's first proper lighthouse at Kinnaird Head.

I've always had a fascination for lighthouses which is difficult to explain. Primarily, it's probably their unique and immediately recognisable architecture – a cluster of religiously whitewashed buildings dominated by a central high tower, romantically placed in remote and spectacular settings on Scotland's edge, and steadfastly defying everything the elements can throw at them. But it's also to do with their history – the altruistic origins, the almost insurmountable challenges to their construction, the scientific and engineering ingenuity adopted to meet these challenges and also their overall simplicity and constancy of purpose despite the ravages of the past 200 years.

It is interesting that the American Society of Anesthesiologists adopted the lighthouse as its seal in 1932, designed by Paul Wood, the distinguished New York anaesthetist. In his words,

"The patient is represented as a ship sailing the troubled seas with clouds of doubt and waves of terror. During a voyage through the realm of the unknown, the patient is guided by the skilful pilot (the anaesthetist) using his dependable knowledge (represented by the lighthouse) to a safe and happy outcome". As you know, safety has always been a priority of the ASA and it has championed several important

Crest of the ASA

patient safety initiatives for our specialty over the years.

Turning back to lighthouses, 200 years ago Scotland was a very different place. Sea traffic was escalating considerably – trading with France, Scandinavia and the Baltic and the New World of the Americas and there was major expansion of the British Navy. Shipwrecks were commonplace – more than 2 a day on average and the Scottish coast was notorious in this respect – not surprising as it constitutes some 6,000 miles or nearly 70% of the total UK coastline. In 1799, for example, 70 vessels were lost in the Firth of Tay alone.

Something had to be done and in 1786 a bill was passed in Westminster to establish the Northern Lighthouse Board which continues to this day, operating from its headquarters in 84 George Street, Edinburgh. Its first duty was to construct 4 lighthouses in what were deemed the most dangerous shipping areas of the time: The Pentland Firth, Mull of Kintyre, the Minch and Kinnaird Head.

They appointed Thomas Smith as their first engineer – the son of a Broughty Ferry ship's captain who served his apprenticeship in Dundee as a tinsmith before moving to Edinburgh as a manufacturer of oil lamps and street lights. Kinnaird Head was the first lighthouse to be built in 1787, a relatively straightforward conversion of the disused Kinnaird Castle tower. Smith also designed and built the original oil lamps, fuelled by whale oil. He recruited a keeper, James Park, a retired local sea captain at one shilling per night plus free lodging and pasturage for one cow, to clean, light and maintain the lantern. He was also granted pasturage for one cow.

Within 2 years, the other 3 lighthouses were built and fully operational – Mull of Kintyre, North Ronaldsay and Scalpay. Dues were raised from passing ships (½p per ton for British ships, 3p per ton for foreign traffic).

Demand grew for more lighthouses and Smith took on an apprentice, Robert Stevenson, the 19 year old son of a widowed family friend who gradually assumed more and more responsibility for the lighthouse side of the business. The twice widowed Smith married Stevenson's widowed mother and Robert in turn married Thomas's daughter by his first wife cementing the family ties and establishing the Stevenson dynasty, the most famous being the author Robert Louis

Stevenson, Robert's grandson. Between 1790 and 1940, eight members of the Stevenson family planned, designed and built 97 manned lighthouses surrounding the Scottish coastline in conditions that even modern engineers would find daunting.

"Whenever I smell salt water, I know that I am not far from one of the works of my ancestors" wrote Robert Louis Stevenson in 1880.

He, himself started to train as a lighthouse engineer but much against his father's will gave up at 21, for Law and writing but remained convinced until his death that somehow his writer's life was less noble or worthy than the practical achievements of other family members, pre-eminent among them being the Bell Rock Lighthouse on Inchcape Rock, 12 miles off Arbroath, guarding the approaches to both the Firth of Tay and Forth. It was a legendary hazard to shipping, being underwater most of the time and only partially revealing itself at low tide. In the late 18th century, 6 ships a year were being wrecked on it, including the warship, HMS York, which foundered here with full loss of life in 1799.

Robert Stevenson was asked by the board to erect a lighthouse and work started in 1807 taking 3 years to complete. A dormitory ship was used for the first year with workers and materials being rowed back and forth each day, severely limiting the available construction time. Then an iron beacon was built, subsequently acting as a barracks to speed things up. The work had to stop over the winter months and only 22 working days were possible in the whole of 1808 but the full tower of 110 feet was finished in 1810 to great public acclaim and Stevenson's engineering work flourished.

His 3 sons succeeded him as lighthouse engineers and between them were responsible for building all the 19th Century Scottish lighthouses, including the spectacular 137 feet high Skerryvore, 25 miles west of Mull, Muckle Flugga lighthouse on Unst - Britain's most northerly light, and Dubh Artach on the Torran Reef 12 miles off Mull – where David Balfour and Alan Breck were shipwrecked in 'Kidnapped'. As well as building the lighthouses, they also introduced prism lens magnification to replace the old glass reflectors, hugely increasing beam visibility for up to 30 miles. These rotated around the central paraffin lamps, driven by clockwork with a unique pattern for each allowing its easy identification.

Three keepers were required to man a light, working a 4 hour shift system through the night akin to ships' watches to ensure that the light remained constantly lit – a never-ending routine of winding the weights, trimming the wicks, replenishing the paraffin and religiously maintaining the log book. Daytime duties involved a great deal of cleaning and polishing. The total working week was 78 hours – no European Working Time Directive here!

In the early years most lighthouses had gardens and grazing for cattle to support the keepers and their families. Social change through the 19th century led to most families being moved to shore stations in nearby towns and villages with the men rotating out to the lights for their 4 week stints, often prolonged because of bad weather. The jobs were popular and the incumbents and their families well looked after by a benevolent N.L.B.

Electric power and new technologies removed the need for constant manning of the lights and automation began in the 1960s, progressing gradually at 3 or 4 stations per year until the last one at North Ronaldsay was demanned just 15 years ago in 1998. With it, a unique way of life which had lasted 200 years more or less unchanged – that of the lighthouse keeper – sadly came to an end.

The Kinnaird Head Lighthouse Museum provides an excellent insight into all aspects of Scottish Lighthouses and is well worth a visit.

Returning to the cottage and heading West we walk a couple of miles along the beach or golf course to the mouth of the River Spey – Scotland's fastest flowing and second longest river at just under 100 miles – and Tugnet ice-house, a reminder of the past salmon fishing industry. It consists of 3 huge underground chambers dating back 200 years, which were once packed with ice from frozen rivers and lochs, and where locally netted salmon would be packed and stored prior to dispatch all over the UK by sailing vessels.

The ice-house is now home to a wildlife centre from where you can watch the famous Moray Firth dolphins. The region is the most important area in the UK for dolphins and porpoises with a resident population of over 100 bottlenose dolphins and Spey Bay is one of the best vantage points to watch these magnificent animals up close as they leap out of the sea.

Across the shifting Spey estuary and shingle banks lie the douce Villages of Garmouth and Kingston, once home to a thriving ship-building industry 200 years ago, using timber from the forests of Upper Strathspey in the Cairngorms. Felled Scots Pine logs were floated down the river – up to 20,000 at a time – roped together to form rafts which were then crafted into boats in the yards. In their 100 years of existence over 600 vessels were produced but no trace remaining now.

Continuing Westwards the path traverses a stunning mixture of beach, forest and cliffs through Lossiemouth, Hopeman, Burghead and Kinloss to reach Findhorn. Today Findhorn is an idyllic, peaceful village of 18th century cottages clustered around the sheltered bay and home Royal Findhorn Yacht Club and the Findhorn Spiritual Foundation and its eco community.

But just across the Bay is an impressive reminder of the changing face of nature; the Culbin Sands, a 30 square

Km area once known as the granary of Moray because of its fertile farming lands and now completely covered by blown sand, obliterating the houses and communities that once stood there. The final great sandstorm of 1694 left a landscape reminiscent of the Sahara desert – total desolation with hills up to 100 feet high and valleys of sand. The Forestry Commission have now reclaimed the area with a major tree planting exercise going back 80 years and today it's a haven for wildlife and popular leisure attraction with miles of forest tracks.

Retracing our steps to Spey Bay, an alternative option is to follow the river inland, reaching Craigellachie after 10 miles or so with its iconic iron bridge, built some 200 years ago by Thomas Telford.

Telford was a truly remarkable man whose legacy endures to this day but sadly remains relatively unknown in his native Scotland. He is probably responsible, however, for building more bridges than anyone else in history, both in stone and iron and 6 of his engineering creations are included in the American Society of Civil Engineers top 100 World heritage sites. His genius stems as much from the elegance and artistry of these creations as from his engineering vision. Without exception his achievements – roads, bridges, canals or harbours - softened over time, enjoy an extraordinary affinity with the landscapes of which they form a part and nowhere is this better seen than at Craigellachie.

Born 250 years ago in remote Eskdale, the son of a border shepherd he was brought up in poverty, serving his apprenticeship as a stone-mason in Langholm before setting off for London at the age of 24 to further his career. His talents were soon noted and by the age of 30 he had been appointed as Public Works Surveyor for Shropshire, followed 5 years later as engineer and architect to the Ellesmere Canal Company. At that time, before railways, transport was difficult and dependent on poor quality roads often only passable by pack horse in winter. The Industrial Revolution was underway with a pressing need to transport raw materials and finished goods across the country and water was the only practicable solution via the rapidly developing canal network.

Shropshire with its abundant iron ore supplies needed a link to the Mersey and Severn and Telford was asked to produce one. No attempt had been made before to drive a canal through such difficult, hilly country with deep river valleys. His solution was at once novel and inspired – the construction of high level aqueducts made of cast-iron troughs supported on stone columns. His structure at Pont Cysyllte was breathtaking – 1000 feet long and 130 feet above the River Dee far below. Indeed Sir Walter Scott called it the greatest work of art he had ever seen. The "magical stream in the sky" as he

called it is just as impressive today as it was 200 years ago and remains the tallest navigable aqueduct in the world.

The Industrial Revolution was also taking hold in the Central Belt of Scotland but the situation in the north was dire. After Culloden and the collapse of the Clan system, poverty was extreme and emigration on such a scale that Westminster, yet again, was forced to act lest the Highlands became completely depopulated. Roads were primitive and not designed for commercial use. It was impossible to travel from Edinburgh to Inverness without using ferries either across the Tay at Dunkeld or the Spey at Fochabers. Telford was asked to review and report on the problem. In what was really Britain's first foray into social engineering, he proposed a grand scheme of new harbours and bridges, a canal through the Great Glen uniting the East and West Coast fishing grounds and new roads North and West from Inverness. 920 miles of new roads were built with over 1000 new bridges including those spanning the Spey, Tay, Beauly and Dee. The vast majority remain in use today and lasting testament to his skills.

His other major project was the creation of the Caledonian Canal through the Great Glen from Inverness to Fort William. It was the obvious route, linking 3 freshwater lochs by 23 miles of canal, 20 feet deep, 100 feet wide and with 29 locks. It took 18 years to complete, dug out by hand by teams of Highland navvies, opening in 1822.

He was also asked to improve connections to Ireland from the UK by building a road across North Wales to Anglesey for the ferry including a bridge across the Menai Straits high enough to allow naval vessels with their masts fully erect to pass underneath. Again his solution was innovative and inspired – a suspension bridge. This was a quite untested concept at the time, but he went ahead, constructing a bridge 600 feet wide, 100 feet above the water suspended from 16 iron chains running over 2 masonry piers and anchored into solid rock at each side. A similar but lower bridge was built over the Conway at the same time both opening in 1826.

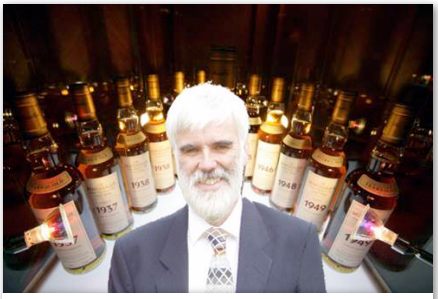
Further projects were undertaken throughout the UK and Ireland. One of his last and finest stone bridges will be familiar to all of you but is too easy to take it for granted as you drive into Edinburgh along Queensferry Road – the Dean Bridge over the Water of Leith 110 feet below completed in 1831, just 3 years before his death. He was elected first President of the Institute of Civil Engineers and is buried in Westminster Abbey.

Up on the hill above Craigellachie Bridge stands another icon – the Macallan Whisky distillery – and perhaps if I'm honest the real reason for my love of the region. Speyside is the undisputed home of Scottish Whisky. The four best selling malts worldwide all come from around here and there are

more distilleries along the valley of the Spey and its tributaries than anywhere else in the world. What better accompaniment to the “walk of life” than usquebae the “water of life”.

In conclusion, to repeat what I said at the start – it’s a great honour and privilege to take over the Presidency of the Society, but what has been an even greater privilege is the opportunity given me over the past 35 years by countless patients and their families to practise what has been a continually fascinating, challenging and rewarding career. To entrust your or your child’s life completely into a stranger’s hands, let them render you unconscious and insensate, rely on them to protect and support your vital functions from surgical onslaught and pain, and then restore you to normality – what a responsibility when you think about it. It is testament to our training, professionalism and insistence on high standards that modern day anaesthesia is so safe and well accepted by the public – often indeed to the point of being taken for granted.

Over my career, I’ve seen major improvements in quality and safety – I’ve alluded to several in my talk, particularly with regard to patient monitoring, the anaesthetic management of children and the practise of regional anaesthesia. All of these improvements have come from within the speciality itself, supported by our national bodies, and not imposed upon us by some external agency.



Your President with much usquebae

It is vital that we continue to build on this work, remain united, and stand up for the specialty, working to and insisting on the highest professional standards with the patient always at the forefront of our minds. It is all too easy to get sucked in to today’s ubiquitous target-driven culture where patients lose their individual identity. Generic pre-assessment clinics, same day of admission surgery, flexible operating lists, rigid protocols and ever demanding cost constraints all militate against the crucial anaesthetist/patient individual interaction.

We must decide which interventions are really in our patient’s best interests and which are simply driven by fashionable safety trends and the “tick-box” culture. The recent Francis Inquiry in Staffordshire is a salutary lesson for us all. As a specialty, we are at the very heart of patient care and safety and we must keep that focus whatever other aspects of our job change. If we do so, I am confident that Anaesthesia and the Scottish Society will continue to flourish over its second

Neil Mackenzie. May 2013

Regional Reports

News and updates from around the country

Aberdeen

2013 has been a quiet year from the personnel point of view. We welcomed one new consultant colleague – Prabodh Sasidharan – who has joined the cardiothoracic specialist group after a fellowship in Manchester. Kay Davies also returned from Halifax (the Nova Scotia one!), to boost the paediatric specialist group's numbers. There have been no retirements in the last year, which bodes ill for coming years! Like most departments we have a number of 'baby boomers' 'somewhere' in their fifties, whose replacement will tax secession planners for at least the next five years.

The drive to get even more bodies on (operating) tables has meant that a new four theatre expansion, two in our main suite and two at Woodend Hospital is under way. This is designed to produce yet more orthopaedic capacity as well as provide a robotic surgery suite, which should help to improve the quality of chat during cases. Happily, the build in ARI seems to be going absolutely to schedule

The build has enforced some altered working patterns with a number of theatres having to use their anaesthetic rooms as recovery areas and adopting the transatlantic practice of anaesthetising in theatre. Surprisingly straightforward and it'll be interesting to see if everybody changes back to the old ways when they get their anaesthetic rooms back!

Our department continues to grow and diversify in it's activities. Within Critical Care there are two new consultants, Steven Friar and Andrew Clarkin, with sessions in ICU, anaesthesia and medical high dependency. They're helping in the supporting and running of the new medical HDU within the Emergency Care Centre. Two anaesthetist colleagues participate in a nascent pre-hospital first response team. The sceptics amongst us think they only do it for the chance of driving the Subaru Impreza 'ambulance', but their worth has been proven a number of times with difficult trauma cases in the outer reaches of Aberdeenshire. The main aim will be that patients will arrive at the new Emergency Department properly stabilised and met by a well-briefed major trauma team.

Graham Wilson

Borders

So what's news/not so new in the Borders?

Our Intensive Care and our Critical Care Outreach service continue to impress, ably helmed by Jon Aldridge. Simon McAree is settling well into his relatively new consultant post and has joined forces with our other intensivists - Nigel Leary, Cath Livingstone, David Love and Chris Richard. We have benefitted hugely from the skills of Jonathan Antrobus who is now our guru for regional anaesthesia. Heather Matthews continues in her locum post and has done a thoroughly excellent job of establishing the pre-assessment clinic. Our obstetric lead and rotamaster is Imogen Hayward whose enthusiasm for this has no bounds. Jane Montgomery is a formidable asset as assistant dean for South East of Scotland School of Anaesthesia. Shona Smith leads the chronic pain service which has recently been re-established with several new members and is functioning well as a team once again. Cath Livingstone continues to charm with her tales of husbandry and small holding management (ask her to tell you the one about sending one of her rams packing to a Club 18-30 holiday to Fife).

Our trainee numbers are maintained (most of the time) and feedback suggests we continue to provide good experience in a range of clinical areas for junior and more advanced trainees.

An expanding consultant body is to be expected in the near future due to retirals and development of elective services such as the Pre-assessment Clinic and Enhanced Recovery After Surgery Schemes for colorectal and orthopaedic surgery. Tom Cripps and Nigel Leary will officially be retiring in the spring though will be returning to work shortly afterwards as slightly re-invented versions of themselves due to their enduring love affair with the place (and who can blame them?).

Since our latest arrivals have joined us, a real competitive edge has taken hold of our department. Even our educational cme half days have not escaped this craze, with coffee break being taken over by a fiercely contended Borders Bake - Off which was so successful (and seriously good) that the results of this have been far-reaching. It has spurred almost half the department to take up some form of exercise, running being the most popular with well-placed entries at the Jedburgh 10k (Rob Forbes, Simon McAree, Jons Aldridge and Antrobus, Imogen Hayward), the Tough Mudder and plans to do team events at the Hairy Haggis Relay and Deer Stalker.… great training to get us in shape before we take over the world.

Caithness

There is not much changed for last one year except that we had much milder weather than expected.There are some challenges as being working in remote

and rural hospital like decreasing number of complex cases, less avenue for maintaing CPD in anaesthesia, this creates challenges for the consultant who wish to maintain their skills and knowledge. We are taking these challenges by attending the Aberdeen Royal Infirmary CPD program and visiting other department on regular basis inspite of being working in 1:3 rota.

Dr Macleod presently working whole time in chronic pain along with his role as clinical Lead for the hospital and continue to provide highland wide input in chronic pain and leadership.

Dr Solanska is leading in preoperative assessment, teaching and training for FY2 and VTE prophylaxis.

Dr Kumar playing his role by leading in Acute pain, obstretics, HSMR and clinical supervisor for FY2.

Sunil Kumar

Dumfries

Here are the highlights for our Anaesthesia Department in 2013.

Paul Jefferson left for Warwick, so we advertised for his replacement, and got two - David Christie (Birmingham) and Stephen Wilson (Glasgow) both joined the ITU “Magic Circle”!

Libor Verner retired but rejoined, working an “oil rig schedule” of “two weeks off, two weeks on”, commuting between here and Prague.

Another big development for us is the belated approval to recruit a cohort of staff grades (Khuram Shazad, Thomas Kelgiorgis, Emmanuel Angelakis, Chandana Fernando and Rahil) to join our long-serving David Ballingall. This has finally allowed us to start a labour epidural service, with our lead obstetric anaesthetist David Macnair doing a lot of work to get this going.

Dewi Willlams carries lead for critical care, which is, as usual, busy, but we have got stuck into some multi-centre trials (DESIST, HARP and EPOCH).

David Ball is busy in Africa, working for a noma charity in Ethiopia and teaching in Zambia and Kenya.

Our trainees have done well during their stay with us. Clare McCue is off to Ethiopia as a VSO volunteer, Sadia Ghaffar won best Case Report at the GAT meeting in Oxford, Ally Maddock won the best Case Report at the AAGBI Congress in Dublin and Mike Stallard won this Society’s Centenary Essay Prize on the “Future of Anaesthesia”. All for work here; well done to all.

Thinking of the future, the plans for our new hospital continue, but sometimes it seems we are looking at them down the wrong end of a telescope.

Best wishes to you all.

Anon

Dundee

You know that it’s been a long winter when in mid-March you’re passed by

one of your colleagues skiing to work. Paul Fettes set new standards in commuting when he arrived at work on a pair of cross country skis - apparently great conditions and empty pistes all the way, only the après ski not quite up to Alpine standards.

2013 in Tayside has been the year of the waiting list initiative – while theatres lie dormant during the working week the taxpayer can rest assured that the hospital is buzzing with activity during the weekend, churning out arthroplasty after arthroplasty and attempting to remove every gallbladder in Tayside, whether you need it out or not. Meanwhile during the working week it's a rarity to anaesthetise a patient of less than ASA 3 status and 125kg. And that's just in the paediatric theatre.

If you thought fast track recovery was quick we are now pioneering 'drive-thru' surgery and in order to facilitate this we've extended out into the car park at Ninewells with 3 Portacabin-style operating theatres. Patients can more or less step out of the car and into surgery. Relatives are asked to wait for them as there is probably more room for the patient in the passenger seat of the car than there is in the post-op recovery bay.

The drive toward paperless working continues apace – SOAR, Revalidation and e-portfolio are all well and truly established. All Tayside patients can now be pre-assessed from the comfort of your PC and the old joke about hiding ECGs from anaesthetists just doesn't stand up anymore – it's all there – brilliant! Life as a junior Doc on a surgical ward must be a piece of cake. Electronic job planning and recording every 15 min epoch of the working week looms on the horizon…

People news and it's been a productive year in the department, for babies that is – congratulations to Lesley Crichton, Simon Crawley, Lindsay Foulds, Fiona Anderson and Chris Hoy on their new additions - have I missed anyone?

Guy McNulty, our resident Leodensian, has joined us as the ICU Fellow in 2013/14.

Stephen Humble finished his training and PhD and has taken up a post at Imperial College Hospital in London. We wish him well in the big smoke.

New consultants joining the department are the very capable Claire Wallace, Pavan Raju and Linda Dubiel – welcome to all.

Calum Grant

Elgin

This year Dr Gray's Anaesthetic Department wishes farewell to Dr George Duthie after nearly 30 years as Consultant Anaesthetist at the hospital. George was the second Consultant Anaesthetist in Elgin, and when he arrived in 1814, sorry 1984, the hospital had only one operating theatre. Over the years the hospital has grown and there are now 4 theatres (including the original one) and 9 Consultant

Anaesthetists. George's retiral, which comes at the same time as that of Mr Iain Gunn, Consultant Surgeon, marks a significant turning point in the history of Moray's hospital as the two of them have worked their socks off for many years. Friday mornings won't be the same any more. George has continued to work at the same hectic pace all the way up to his retirement and he will be missed as a colleague, appraiser, ALS instructor and wise counsellor.

This year the average age of the Consultant Anaesthetic staff at Dr Gray's is set to drop as George retires and is replaced by Dr Alastair Ross who has been enticed north from the central belt by the scenery, fresh air, skiing and wonderful coastline that Moray has to offer. We look forward to welcoming him very soon. Dr Judith Kendell continues to lead our service here in Elgin steering us through ongoing threats to our paediatric and emergency department services. Dr Doug McKendrick has been bringing Twitter use at anaesthetic conferences to the masses delivering a lecture on the subject to the AAGBI Winter Scientific Meeting this year.

We now have a dedicated departmental ultrasound machine after a long battle and some new airway equipment including a videolaryngoscope. We even got some Sugammadex. Our new transfer trolley, donated by Baxter's of Fochabers, and organised by Dr Chris Taylor, has been going great guns up and down the road to Aberdeen and Inverness and has made such a difference to transporting the critically ill as everything is secured to the trolley rather than lying on the patient or on the floor. We continue to have FY1s and final year medical students with us and they are a great pleasure to teach. The FY1 anaesthetic month goes down very well and they seem to get a lot out of the placement. Raymond Collie continues as our Acute Pain Nurse and he is greatly missed when he is on leave.

It is 200 years since the Court of Chancery ruled that Alexander Gray's will should stand and the following year the foundation stone of our hospital was laid. While Dr Duthie hasn't been here for the whole 200 years he is very much part of the fabric of the hospital and will be sorely missed when he leaves us this year. Happy retirement George.

Chris Smith

Fife

Increasing service demands have dominated in Fife in 2013. We have largely met the demands of the Treatment Time Guarantee, thanks to a combination of extra lists and WLI. The planned reduction in trainee numbers has hit hard. In common with other DGHs, we are experiencing difficulty in staffing our trainee rotas. We hope to recruit early in 2014, with a number of outstanding candidates already having expressed interest in joining our department.

We have had an eventful year in other areas. We have kept the orthopaedic surgeons busy. A combination of a skiing injury, a cycling injury, a simple fall and, dare I say, increasing age have resulted in a variety of hip and knee replacements, a fractured thumb and a fractured hand. All the victims are now on the mend.

We were joined by Catriona Bentley from the Birmingham deanery in March. Catriona wed one of our general surgeons in September and is now Catriona Bennett. Meanwhile, Andreas Rogowski and Kay Dell were wed in the summer.

There was a new arrival in the Simpson household. Malcolm Broom also became a father again during the year. Affectionately known as Judas within the department, Malcolm will shortly be leaving us to take up the post vacated by the retirement of Willie Frame. Other departures include Fiona Annan who retired in May, while Bridget Podmore returned to Lothian in November.

Other news includes the safe return from Camp Bastion of Marc Hastie, one of our 4 Physician's Assistants. Special mention also to Alasdair Ruthven who won the Gold Medal when passing the Primary FRCA in November.

Finally, I must thank every member of the department for their support over the year. It is only been their hard work in difficult circumstances that has resulted in our relative success with the TTG.

Jill Duguid and John Donnelly

Glasgow Royal Infirmary

Has it been a year already? Surely not…

So what is new at Glasgow Royal Infirmary… probably not a great deal, really. We just about manage (with a few wobbles) to keep the plates in the air spinning as far as trainee rotas are concerned, which given the shortage in numbers is a feat that Dynamo would be proud of- well done, Dr James. They may crash to the floor at any given moment, but so far, they haven't. Dr Bill MacRae continues to steer our ship through troubled waters, aided for the last three years by Dr Ruhy Parris, who has done a great job as Chairman of the department. Dr Susan Geddes has just taken over this role and will carry on the high standard.

Intensive Care remains very busy and this has been a challenge to cope with given an increasingly more junior trainee complement, especially out of hours. But who needs sleep?

The Princess Royal Maternity Hospital does its duty by the expectant mothers of the east of Glasgow, having around 6000 deliveries last year- and with a caesarean section rate of 36%, there is plenty of work for the anaesthetic staff. How this work will be shared out

amongst the day staff and the out of hours workers is a work in progress…

Talking of staff, we are all missing the fantastic Dr Willie Frame, who retired this year. He is unlikely to be missing us much, though he has been persuaded to come back and speak at a couple of meetings. We wish him a very long and happy retirement. Dr Neils Weidenhammer and Dr Malcolm Broom are welcomed as new consultant colleagues.

It seems likely that no one in Glasgow now expects anything about their job to remain the same over the next few months, given the dizzying rate of service movement from one place to the other (and back again, in some cases). This is set to continue with the next big upheaval on the horizon, the opening of the New South Hospital. Now we must all decide whether to try and follow our lists or take new ones on, depending on where everything ends up. The exact shape of things when it all settles down remains unclear, although obviously at this late stage this cannot possibly be because it hasn't been finally decided.....Can it?

Geraldine Gallagher

Golden Jubilee (neé NWTC)

Hmmm! It's been a difficult assignment. I was dismayed when a colleague had pointed out that my previous submissions to the Annals, although amusing, were a little negative. Maybe it was time to develop a new strategy! Maybe it's time to tell the world the truth - that working at the Golden Jubilee Hospital is a dream come true for the people employed there!!!

So here are 10 great reasons to work at the "Jube"

1) The setting is undeniably attractive - well provided you look out southerly and westerly towards the Clyde, the Erskine Bridge and the Kilpatrick Hills. The hospital still looks fresh and new thanks to the copious amounts of rain shed in the Clydebank area which keeps the green roof clean and gleaming, and the lawns and garden beds lush. As an added bonus if you decide to have your wedding in the hotel, which is attached to the hospital, we can supply scantily clad patients puffing on fags in the background to help create the perfect Kodak moment.

2) Parking is not only available but free! A rarity in Glasgow hospitals. Sometimes to amuse myself I drive past a vacant space knowing that in under 10 seconds I'll find another. No screaming, swearing or racing round tight bends to beat a disabled 90 year old granny in a Hillman Imp to the last space 3 miles from the hospital.

3) The anaesthetic department is lovely; plushly carpeted and decorated in muted tones. There are even offices and computers for every Consultant. But the real jewel in the crown is the coffee machine. Built by NASA and weighing 2 tonnes, it has recently been added as an attraction to the Glasgow open-top bus tour. The Research

Fellow, Phil McCall, was appointed when he produced his Barista training certificates and we feel this should be mandated as an essential unit in intermediate ST anaesthetic training.

4) The Intensive Care Units are everything an ICU should be. There is chrome and glass and lots of machines that go "beep". But we also have other machines. Bigger ones! With jaggy bits! And clamps! And with alarms so loud and threatening that your bowels will turn liquid with fear when they sound. Handily we have bathrooms nearby....

5) We're fortunate to work with heroes on a daily basis. These unassuming folk are often known by other names such as interventional cardiologists or cardiothoracic surgeons. Kind of like firemen but without the long hoses or large helmets. And it's certainly character building trying to be part of a team where the personalities fluctuate between Kim Jong-un and Mother Theresa.

6) The department is blessed with numerous attractive and debonair individuals, for instance, Drs Church and Lal. No-one can work an animal print like Jackie - not even a real leopard- and Adarsh is sublime in his pastel cashmere sweaters. The edict that all men appointed to the hospital since 2008 had to be over 6 foot, as was the case with Drs Mark Stephen, Andrew Sinclair and David Reid, was temporarily suspended to allow the recent appointment of Dr Tony Vassalos. At his interview he successfully demonstrated classic Mediterranean fashion and it is hoped that his collection of brightly coloured trousers will gain acceptance amongst the more conservative men of the department. Colin Runcie would simply look lush in plum....

7) Our colleagues working within orthopaedics continue to work at both phenomenal pace and maximum efficiency. Currently churning through more joints than a Rastafarian at a Justin Bieber gig they are a hive of activity in the dark recesses of the theatre complex.Last year Dr Nick Sutcliffe left the hospital to rekindle his bromance with the "other Nick" in Qatar, and we wish him all the best for the future. We also wish the Middle East well....

The lovely Dr Neela Desai was appointed in his stead , boosting the percentage of females in the department to a dizzy 25%, but she sadly refuses to adopt a loud Northern accent and baggy trousers!

8) We are fortunate to work with trainees that are bright and enthusiastic (and increasingly youthful!!) who manage to convince me that they enjoy the rotation. I'm starting to think that Oscars should be handed out instead of CUT forms but the department appreciate their hard work and effort. It's been a pleasure seeing the ST 6/7 trainees again for their higher rotation and certainly they seem to remain unfazed by all that goes on- or maybe

they're too traumatised by what's happening in GG&C??

9) OK. So the on-call can be a little taxing sometimes, but on the plus side you get to see some very lovely sunrises over Glasgow at all times of the year!! And you can Facebook weather updates in the early hours so your pals can dress appropriately when they leave for work themselves!

10) Scraping the barrel to get to reason number 10 but our canteen does a lovely takeaway afternoon tea package with a selection of itsy-bitsy sandwiches and teeny-weeny cream cakes for the bargain price of £3.95.

So there you have it. A positively upbeat message from Clydebank fuelled by sleep deprivation and too much caffeine.

Isma Qasim

Institute of Neurological Sciences

In the last 12 months, we are delighted to welcome Dr Robbie Thorpe and Dr Kathryn Simpson as Consultant colleagues making us an 18-strong Consultant department. Kathryn's post is a replacement for Dr Jim Borthwick, who retired in September 2013 after 26 years of service at the Institute. We wish Jim all the best in his retirement . He is missed by all at the INS but not by the grouse population in Scotland (which we believe has significantly decreased since his retirement)!

After a highly successful year, Chris Hawthorne will finish his advanced neuroanaesthetic post in February 2014 to be replaced by Ryan Campbell. Chris will not become a stranger to us though as he will be continuing with his research project in ICP analysis in Traumatic Brain Injury. The four 3-month Maxillofacial / Advanced Airway modules that we provide for senior trainees remain permanently oversubsc ribed.

Two successful training courses are currently run at the INS - the Brain Injury Transfer (BRIC) and the Glasgow Airway Skills Lab (GASLab). Both continue to prove popular with anaesthetic trainees. The INS presented the West of Scotland Anaesthesia Study Day in May 2013 entitiled "Update from the Institute: Neuro and Airway Tips for the Generalist" with a programme and speakers from the department put together by Dr Linda Stewart. The day was a great success and was well received by all.

Of note, the OMFS/Head and Neck Service is continually expanding having taken on Oncology from Forth Valley and Ayrshire and Arran and is the centre for major free flap reconstructive surgery in the West of Scotland with 3 cases per week carried out. An Enhanced Recovery Programme started on this group of patients in January 2013.The Managed Cancer Network plan is to centralise all free tissue transfer to the INS. An increase

in activity in this area is already apparent with the increased referrals from the North of Glasgow Head and Neck.

The INS theatres participated in a Kaizen week as part of a Theatre Redesign and Improvement Project from October 2012 to April 2013 which resulted in an award in the overall winner category of the Greater Glasgow and Clyde's and NHS Chairman's 2013 Facing the Future Together Award.

Urmila Ratnasabapathy has been Clinical Lead for over 12 months now and is doing an excellent job in this Management Role.

From a personal point of view I am getting used to and enjoying the role and responsibilities of being College Tutor at the INS.

Kevin Fitzpatrick

Inverclyde

A year in which not very much has happened. The main reason is the rapidly growing but still to open New Southern General Hospital, everything and everyone is concerned about the NSGH. It is opening in 2015, post Commonwealth games, post Election. How different the landscape could look from a medical and political point of view. We wait and see.

We are patiently awaiting the publication of the strategy which will hopefully show what is going to happen. At present, nobody knows, or they are not telling. Not a very satisfactory way of working but we have been assured we won't have to wait much longer.

As to the department, apart from a couple of rotations of trainees, we have had no personnel changes. We are all as happy or unhappy as we were last year. Maybe a bit more grey or less hair, or both in my case.

Next year will be different.

It’s the waiting we can't stand….

Duncan Thomson

Orkney

2013 in Balfour Hospital has been well spent in furthering development of acute services with the Anaesthetic Department taking a very active role in this, as always. One of our significant achievements was to survive until appointment of the new Consultant Anaesthetist, Paul Cooper taking our establishment to 3.4 WTEs. Networking with the Anaesthetic Department in NHS Grampian is thriving with Michelle Lamont and Calum McDonald joining Anne Wake in this project, thanks to continuous and welcome support from Brian Stickle.

Colin Borland has been able to continue his input in the Anaesthetic Department as a part time Consultant; he completed his training as an appraiser and has started to appraise colleagues in primary and secondary care. We have recruited another fully

trained anaesthetic assistant from Norfolk and have been continuing with our core competency training for the anaesthetic theatre staff. Aneta Sowinska managed to complete all of the acute pain service procedures and guidelines and has made them available on our anaesthetic blog. She has made progress in establishing some of the SOPs in theatre e.g. awake intubation. We managed to introduce into our daily practice some of the emergency diagnostic ultrasound procedures (e.g. FAST, eFAST, FEEL) in both Emergency department and in HDU. Marek Wolanski has been busy outside of his normal departmental activity taking part in the ''Leading for the Future'' leadership training. He hopes to complete this programme by the end of February 2014. He has been also taking an active role in the NoSPG and ScotSTAR project.

Through the Senior Clinicians Forum we have supported implemention of a Consultant led model in all of the core services in Balfour Hospital. It has resulted in successful recruitment of Izabela Bodzioch, and Tomasz Waszyrowski who both are Consultants Physicians and Cardiologists. Andreas Laut and Sujan Sen, Consultants Obstetricians and Gynaecologists have been also appointed to create new quality into the service and to repatriate more surgical procedures back to Orkney. There is an expectation that a third Consultant Surgeon post will be created in 2014 so our new hospital with its second Theatre cannot arrive too soon.

Marek Wolanski

Paisley

Here in Paisley, we observe with interest the rising of a new star in the east – the Death Star, aka the new Southern General, which is taking shape rapidly near the M8. Initial negotiations are under way about service reconfiguration, and since we are the nearest site geographically we keep an eye on things, but at present we seem to only be lightly within the Death Star's orbit. I am sure reports from other sites will have more to say on this topic.

We remain as busy as ever – older staff will remember times of the year when things seemed to slacken off a bit, but there no longer seems to be any down time. Our weekend trauma rota has been running for several years now, staffed by the six most senior (euphemism for "oldest") consultants in the department. We are beginning to feel very much ahead of the curve, as a consultant-delivered, weekend service for frail emergency patients seems to be the very latest thing in government circles. As someone* once said "Keep your eye on Paisley". The trauma weekends are pretty full-on, with no trainee, but curiously satisfying – there's nobody with a clipboard telling you what you can and can't do, as there tends to be during the week, and you just crack on with the work. We have noticed that when you get to be an

older orthopaedic surgeon, you get to stop doing trauma, whereas in anaesthetics, you get to do more… The big plus is of course, that they are daytime sessions with no night cover, a model other departments locally are beginning to examine for their oldies – imperative with the move to a later retirement age. All the acute specialties are going to have to look at developing ways of using their older staff which maximise benefit to the patients, the department, and the individuals concerned.

Paisley anaesthetics is also meeting a Government target on fitness in the workplace (I just made that target up, but I bet there is one), what with marathon, ironman and triathlon runners, cycling, and most recently, metafit classes (no idea what that is) held in our recovery area for staff - at 7.30 am. Amazingly, people turn up for these (so I'm told). A lot of this activity is spearheaded by our trainee Brian Lafferty. Brian is due to rotate to another site in August, so if any West of Scotland departments are feeling sluggish and in need of a shake-up, apply to the training programme director now to get Brian, and he'll soon knock you into shape. At the other end of the health spectrum, we had another successful bake-off on Comic Relief day, which raised several hundred pounds. Modesty forbids this author from mentioning who won the best tasting cake category…. I note the AAGBI has gone big on Bake-Offs for their Lifebox appeal. Once again, Paisley ahead of the curve!

Our mini baby boom continues, with Al May's wife Clare producing Fraser, and Michael Brett's wife Lyndsey producing Benjamin this year. Claire Burnett, one of our Staff Grades, is about to go on maternity leave, so I will have another new addition to report next year!

Hilary Aitken

* It was Disraeli

Perth

"Major happenings in 2013?" I asked my colleagues. "Scotland 12, Ireland 8" chuckled Jo Doughty gleefully. Rhona Younger grimaced "Ewan Ritchie's Movember moustache." Both unpleasant aberrations, I hope. More pleasant was the arrival of Judith Nieman, who took up a vacant Specialty Doctor post in the summer. And Simon Scothern, an additional Consultant appointment from New Zealand, is joining us soon. We wish them well for many happy years in PRI.

Our "anaesthetic estate upgrade" is ongoing, with varied success. The eco friendly light tubes definitely project only eco friendly darkness. The air conditioning units now make a noise, which is surely a start. But the library's new video link works remarkably well, which might mean less pollution on the road to meetings in Dundee.

The pre-assessment unit is now well established, but a functioning Day of

Surgery Admission Unit is sadly lacking. Whilst I can proudly boast that all patients are now admitted on the day of surgery, the next step will be to get them admitted on the day of their own surgery!?! Our varied workload continues. Perth's aging population swamps our medical colleagues, and keeps us busy in HDU and ITU. The elective throughput across the specialties increases, and unused theatre slots will soon be a thing of the past. This year's plans for the future seem to put our local services in a stronger position than for many years, but coherent longterm planning still plays second fiddle to short term politics.

Our trainees continue to be fantastic, and value their PRI experience. The future will be in good hands.

Our departmental fish tank remains well, and some would say mirrors the goings on in the department. Over the years, some fish have moved on, while new ones arrive. They are each a bit different, like us, but get on well together. And a bit of effort and work needs to be done to keep them healthy and happy. With increasing pressures from management for anaesthetists to be here, there and everywhere, and increasing expectations from anaesthetists to tailor individual job plans, the challenge is to keep everyone in an enlarging department engaged, and contributing to the running of the department. The alternative might be a series of individual fish bowls, with isolated and lonely fish looking out. Long live the fish tank.

Major happenings to look forward to in 2014? Hopefully this will be the year when Stephanie Sim finally builds her house. And sadly, it seems that May Mok will be leaving us, to follow her husband to Singapore, with the promise of an unlimited shoe and handbag budget reportedly having clinched the deal. The Ryder Cup will happen close by, and we will enjoy the Commonwealth Games. But not as much as I will enjoy a resounding Ireland victory in the six nations, and a clean shaven Ewan Ritchie.

Michael Forster

Raigmore

In the last year the burst of new consultant recruitment of recent years has slowed down and we have had a chance to digest the fresh-faced intake. As ever the workload inches upwards and we look likely to cross the threshold of 20 consultants soon.

In the triennial Titanic deckchair shuffle, Ken Barker has bowed out as Head of Service without having been too damaged, Ross Clarke has been frogmarched in by his colleagues as the 'volunteer' to replace him, and Dan Baraclough has taken over as college tutor.

Hamish Hay has swapped his customary smart suit for fatigues and gone off to Afghanistan to train the local

Afghan medical teams that will take over when the UK/US troops fully withdraw. As this is all outwith the security of Camp Bastion there is an increased need to search patients before treatment (and being the army, an excuse to consume an inordinate number of paintballs)

Lisa Handcock and Charu Agrawal have both returned to the department for a bit of respite (from the real work of new parenthood). Sandy Hunter has recently added to his growing tribe and seems remarkably sanguine about dispensing with any residual notion of a sound night's sleep. Not to be out-exhausted Mario Fernandes has an imminent arrival in the wings.

Making the most of our Northern Wilderness, Gordon Bathgate and Jonathan Whiteside continue to make up the bruised backbone of a mountain biking team competing nationally. Other than the usual anaesthetic dept cycling obsession, we have as ever provided the medical support team for the Highland Cross -and Ken Barker is still a little traumatised and in dispute about whether sports massage counts as immediate medical care.....

Dan Baraclough

Shetland

With the appointment of Beatrix Weber to the Department of Surgery in 2012, and Petr Tuma to the Department of Medicine this year, all three acute specialities finally have a full complement of consultant staff, and we all now hope for a period of stability. There are however anticipated increases in our workload in the foreseeable future as the Board tries to repatriate services wherever possible. A clinical staffing review is ongoing and it is expected that two new consultant posts will be created for the departments of Anaesthesia and Medicine.

Shetland has continued to see a considerable influx of people required to help oil and gas firms fulfill their ambitions to develop a series of major projects offshore. This year has been sadly memorable for the tragic loss of four lives in the Super Puma crash off Sumburgh on 23rd August. The way that NHS Shetland staff responded to this major incident was a real credit to the Board, and left us all with a sense of how fortunate we are to work here.

The main social news of the year belongs to Jack and Dorota. We are very pleased to say that Dorota is expecting twins in May! I anticipate that it won't be too long before Jack will be asking to do extra nights on call so he can get a bit of rest!

There are a couple of significant birthdays coming up in 2014, so hopefully more exciting news on the social side in the nextedition of SSA Annals!

Brodyn Poulton

Stracathro

I am delighted to report that Stracathro has had another very successful year with the employment of a number of new nursing staff in theatre, recovery and the wards to cope with our increased operating sessions. We are now operating regularly on seven days a week with either two or three theatres working on Saturday and Sunday. The patients come from Tayside, Grampian and Fife and, despite the fact that some of them have to travel a significant distance, the feedback is how impressed they are with the service on offer which is very gratifying considering most of them did not even know where Stracathro was. It has also meant an expansion in numbers of surgeons and anaesthetists working in Stracathro.

This year we have been joined by Pavan Raju on a Tuesday to do the Grampian orthopaedic list as part of his consultant appointment. Pavan is no stranger to Stracathro and as ever his expertise in regional anaesthesia is much appreciated.

Next month we are saying goodbye to Dianne Mitchell. Dianne was appointed Charge Nurse in charge of the recovery department in 1999 and will be sorely missed by all the anaesthetists.

Although not exclusively a Stracathro surgeon we are going to lose Derek Byrne – Consultant Urological Surgeon – when he retires this month. Derek has been a delightful colleague to work with and we wish him all the best in his retirement. Next month is also going to see the retirement of Neil Mackenzie but much to everyone's delight he is going to continue doing a couple of days a week some of which we hope will be in Stracathro.

We still have the three NESSA meetings and this year our President is Gordon Byers from Aberdeen who gave his presidential address in November entitled "Size Matters". As usual a well attended and interesting talk and a most enjoyable evening.

Jan Beveridge

Glasgow Western / Gartnavel

2013 saw the Western / Gartnavel Department trudging across the blasted plains of GG+C resource allocation towards the Dunkirk of the New South Hospital. The struggle will intensify in 2014 and we have started to draw the wagons into a circle. It is not clear how many will survive.

As ever, many young people visited with our group in 2013. New consultants appointed here included Som Gangiah, Dmitrij Sokolovs, Diana Raj and Usman Bashir. Som and Diana were West Sector trainees while Dmitrij came from a locum job in the South Sector and Usman will join us from Edinburgh shortly. The magma chamber that is our training programme launched excellent trainees in all directions throughout 2013. Moutaz Burwaiss has joined the Pain team (and twilight rota) in GRI and Al May has moved to RAH. Pam Deans became an

ICU consultant in Monklands. Niels Weidenhammer will shortly also move into the shadows of the GRI twilight rota and Raul Karve starts soon in the Institute. David Reid moved from a consultant post here to a cardiac job in the Golden Jubilee.

This is probably the penultimate report from the Western Dept before we are subsumed in the monumental entity that will be the New South Hospital Anaesthetic Dept. Meantime, our prodigious out-of-hours workload has served to intensify the cohesive nature of our group. The resulting warmth and support will continue to sustain us, hopefully to 2015 and beyond.

Colin Runcie

Western General Hospital, Edinburgh

Colin Baird and Prit Singh have taken up consultant posts with an interest in chronic pain. Margaret Cullen has relinquished her pain sessions so she can concentrate on university work. She is now Senior Tutor for the undergraduate curriculum. Joyce Stuart has also taken on an educational role and has become Associate Director of Medical education. Kirsteen Brown is the new Training Programme Director for South East Scotland. Irwin Foo is currently president of the Age Anaesthesia Association. Talat Aziz has been reappointed as Clinical Director. Alisdair Waite has taken over from Dougie Duncan as CAR. Dougie developed a clever computer programme which demonstrates which theatre lists are likely to overrun. We are all hopeful that this can be used to bring the offenders into line. At the end of September Lynda Lord, our departmental secretary, retired and moved to Portugal. Her very large shoes have been filled by Sandra Murray.

The move of neurosciences to Edinburgh Royal Infirmary looks likely to be 2017. Work is expected to be started on the new building in the Autumn of 2014. There are huge implications for the Western with the loss of the neuro anaesthetists and also the trainees on their neuro block who help maintain the out of hours rota. We live in interesting times with the likelihood of evening and possibly night time sessions for consultants.

Finally, on a sombre note we were all saddened by the sudden death of Ian Armstrong on 1st January. Ian latterly had been a consultant at Edinburgh Royal but originally had worked at the Western. He was one of the three consultants (with Ian Grant and David Wright) who established the ICU at the Western in 1988.

Sue Midgley

(Continued on Page 37)

William Harrop-Griffiths President of the AAGBI and J-P van Besouw, President of the RCoA present our President with a commemorative salver at the Centenary Dinner

The impressive auditorium of the Scottish Museum lecture theatre, Location of the Centenary meeting, fills up prior to a session.

Neil Morton receives the Gillies Bpwl following the delivery of his very well received Gillies Lecture

Neil Mackenzie and Alistair Baxter who between them carried a huge proportion of the work organising the Centenary Meeting

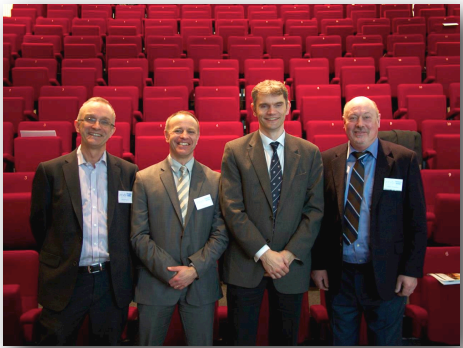
Commemorative Salver, presented to the Society jointly by the Royal College of Anaesthetists and the Association of Anaesthetists of Great Britain and Ireland at the Centenary Dinner. Appropriately made from 100 year old melted down coins

The Certificate of Appreciation presented by The World Federation of Societies of Anaesthesiologists

Neil MacKenzie receives the World Federation of Societis of Anaesthesiologists Certificate of Appreciation from their president David Wilkinson

Are You in the Crowd?

The heaving throng at the reception prior to the Centenary Dinner. A fantastic turn out. It was wonderful to see many old acquaintances being renewed



The Four Professors who filled the first session on the Friday morning, Scottish academic Anaesthesia.

L to R Professors John Kinsella, Tim Walsh, Tim Hales and Nigel Webster

John Allan and Saba Munshi, Trainee reps and organisers of the very successful trainees meeting at Crieff.

Whirligig Definition: A process or activity characterized by constant change or hectic activity:

A good description of the energetic dance floor at the dinner at Crieff .

Hugh Neil's forty Stableford points were enough to win the Scott Trophy on a beautiful day at Pitlochry Golf Course.

Winning team from the afternoon Old Guys Vs youngsters Texas Scramble competition. The Younger members, appropriately led by Bob Young, were victorious.

(Continued from Page 32)

Yorkhill

Greetings again from the Royal Hospital for Sick Children, Yorkhill. This year has seen us edge closer towards our move to the Southern General campus and the all singing all dancing exemplar of an establishment that will be the new home of children's acute services in Greater Glasgow and Clyde. As I have mentioned in previous reports there is an ever present fear that the new build will be inadequate for a number of reasons and despite these views being voiced by many people on many levels it appears they have all fallen on deaf ears. There are concerns around a significant increase in workload with care being provided to children up to 16years old but fewer beds and no more theatres than we presently have. We are already landlocked in our current site and without evening and weekend working on the new site operating theatre demand will undoubtedly outweigh supply. We can add to this offices which, if they are granted, will be offsite, offsite catering and the inefficiencies which have arisen from the implementation of Trakcare and the Electronic Patient Record. It's not looking rosy. It would not be unreasonable to be optimistic about the future given a shiny new hospital built in the 21st century. However I have not met any clinician here who is. This should surely be a great opportunity should it not?!

Two further afflictions have affected us this year. Firstly August saw us hit with a significant reduction in trainee numbers albeit much later than in other units across the city. We are currently in the midst of developing a long term plan to accommodate this reduction but undoubtedly this will involve a degree of investment from Greater Glasgow and Clyde. Secondly we have been battling some of the edicts set out by the Scottish Patient Safety Program in relation to the management and dressing of peripheral cannulae in children. Thankfully unlike concerns over the new hospital the feeling is that the message is hitting home with this one and with a bit of luck we will be left alone to use what we believe is suitable, safe and secure rather than do what we are told by the infection control police.

On a much brighter note the Department welcomed the birth Of Rob Ghent's daughter Niamh at the end of the summer.

Ross Fairgrieve

Meetings

Summaries of the past years meetings.

Trainees Meeting

The trainees meeting took place, as is now traditional, on the Friday before the Spring meeting. This years trainee reps produced a fine, varied program which attracted a very good attendance.

The meeting was kick-started by Dr Dave Ball from Dumfries with a highly entertaining and energetic but practical exploration of difficult airway problems. Some very good sensible advice and a summary of some recent developments and innovative practice such as the use of ultrasound to locate the cricothyroid membrane.

Next up, Paul Harrison gave a very good overview of EVAR (**E**ndo**V**ascular **A**neurysm **R**epair in case you didn't know). While it's indisputable that this is the way to have your elective AAA repaired if possible (not always so) the jury is still out on the role of EVAR in emergency aneurysms.

Phil Korsah then spoke about medical management, a subject close to my own heart. He presented a mixture of crowd pleasing "what do I put on my CV?" information and then explored some of the more more wide-ranging aspects of the Francis report. Diffusion of responsibility is a Socio-psychological phenomena in which an Individual is less likely to take responsibility because "someone else will do it". Role of leadership here is to set standards and assign responsibility and roles and prevent diffusion of responsibility as happened with such awful effect in North Staffordshire.

Next, Ros Burns spoke on the background for and the development of Antenatal anaesthetic pre-assessment clinics. The driving factors are the identification of preventable, treatable or manageable factors identified in the maternal mortality reports. Obesity predictably plays a role but cardiac disease of various flavours is also a huge risk factor.

The impact of obesity in maternity was then echoed and enlarged upon (no pun intended) in the general population by Ewan Shearer. Ewan gave a highly practical review of the challenges of bariatric anaesthesia with numerous examples from his own practice and and a plethora of bon mots and handy hints.

Captain Andrew Rooney (a pilot!) gave a fascinating overview of the aviation industry's approach to safety and in particular the practice of Crew Resource Management. This is their equivalent of Human factors analysis

but is delivered in a far more practical and widespread way. there are clearly some very good lessons to be learned from the aviation industry but the single mindedness and collective will with which these changes have been implemented is incredibly impressive.

The day was brought to an end by Richard Appleton, who discussed sepsis in the maternity unit. He produced a very good overview of the problems of sepsis in the obstetric population, covering the why's and wherefore's of the problem. The problem of sepsis has been tackled in a number of environments and it was interesting to hear that despite the rather unique characteristics of the pregnant population the methodology of the "Sepsis Six" can be imported to good effect. Indeed the data presented showing a stark inverse relationship between time to first antibiotic and survival forced home the point that sometimes what we need to do to help save people in medicine and anaesthesia is simple - we just need to be thorough and organised and do it!

Throughout the day the judges were scoring the poster competition for the Imray Prize which was won by Dr Paisley from Wishaw whose poster was appropriately enough, given the content of Captain Rooney's presentation, on safety and checklists.

An election was also held for a third trainee rep for council. The cunning plan being to switch over the next two years from two trainee reps with synchronous terms of office to having their terms overlapping so there is always one in post providing continuity. The third rep elected was Dr Moira Hendrie from Aberdeen. Congratulations to her.

I'd like to say thank you and to congratulate Saba and John for the excellent job they've done with this years meeting.

Annual General Meeting

The AGM was held the following day and attracted a very good attendance. The program included the usual AGM section with the business and accounts of the Society reviewed. The Society continues in rude health with a positive balance. The Future of the Spring meeting was debated and the plan to survey the members on this topic, endorsed. There was also the now well established and informative session with reports from the RCoA Advisory Board and the AAGBI Scottish Standing Committee, presented by John Colvin and Alistair Michie. The Trainees prize was again a hugely impressive contest with the winner, I'm very pleased to tell you, Dr Chris McDonald from Aberdeen. The abstracts of the finalists and the winners of the poster competition with a few of the other highest rated abstracts are printed below.

Kathleen Ferguson from Aberdeen gave the Keynote lecture, "Awake Craniotomy (an eye opener)". This was a very interesting review of the process of setting up the service for, and

delivering anaesthesia for awake craniotomy. Kathleen had an interesting approach in that to persuade us that neurosurgery is relatively simple she began with a discourse on elementary particle physics! It worked for me, and this was an excellent review of the scientific, pharmacological, clinical and practical factors involved in carrying out awake craniotomy. There would seem to be so many people involved or just interested in these procedures that crowd control is a significant issue. The anaesthetic approach required is significantly different to that for any other form of surgery. Being able to control the depth of consciousness precisely and achieve controlled awakening requires a modified approach with meticulous planing and attention to detail.

The Guest Lecture which, as is normal, closed the meeting was delivered by J-P van Besouw, President of the Royal College. Entitiled "College & Professional Affairs" J-P gave an extremely interesting insight into the workings and current direction of travel of the RCoA. This covered four main areas: Regulation, Accreditation & Safety, Remuneration and Communications. This was necessarily then a very wide ranging discussion of the issues facing our Profession and the College.

While the first area, regulation, related largely to the well recognised role of the College in assuring the quality and completeness of training the Accreditation & Safety theme has taken on new and profound importance with the Mid-Staffordshire enquiry and the Francis report. The College have clearly taken to heart the recommendation in the Francis report that "Professional bodies take, responsibility for improving the quality of care and are proactive, not reactive". The development of the Colleges Anaesthetic Clinical Services Accreditation (ACSA) initiative is therefore timely indeed.

It is impossible to relate here all the topics in detail. I'd summarise by saying that our College seem to be working very actively to ensure that anaesthesia reacts effectively to changes in the UK health service and is indeed proactive in developing services and importantly assuring their safety and quality.

Centenary Meeting

The Centenary Meeting was held on the 20th and 21st of February 2014 to coincide as closely as possible with the date of the inaugural meeting (well dinner) of February 20th 1914 at the Balmoral Hotel, Edinburgh. The original Balmoral Hotel is gone not, replaced by a chain store. So the Society did the next best thing and used it's modern namesake for the dinner, which is handily, geographically pretty close to the original.

The academic meeting was held at the National Museum of Scotland on Chambers Street which proved to be an absolutely excellent venue.

The meeting comprised seven sessions over two days with 23 individual speakers and presentations. There was a very well balanced feel to the program with a good mixture of the historical, hard science and research, politics, some blue skies topics speculating where we'll be in the future. I'm not going to attempt to fully summarise every one here but will try to give an indication of the content of the meeting.

Session 1 was dedicated to history and opened with Alistair McKenzie with an incredibly in-depth and comprehensive, history of the Scottish Society of Anaesthetists. Alistair took us through the past 100 years almost year by year. Far too much to recount, but some interesting points were:

- 1924- First admitted women
- 1931 - First female president -
- Only five female presidents in total.
- 1st Gillies lecture 1978
- Registrars prize started in 1950.
- The early presidential addresses were all anaesthesia related topics. Lawson Davidson gave the first non-clinical address in 1979.
- Neck tie launched in 1969!

Ann Robertson gave an account of the conditions and process of medical care in first war. This was tied in with the tale of developments in anaesthesia and physiology, particularly of shock and the development of blood transfusion (despite an incomplete understanding of blood grouping). Iain Glen gave us a fascinating insight into the discovery of propofol and some of the process involved in the development of new anaesthetic drugs, including a fascinating account of the ways we assess their effects on mice and rabbits! Tony Wildsmith then summarised the history of local and regional anaesthesia in Scotland.

The second and third sessions, "State of the Art", comprised a series of reviews of the bleeding edge of a number of areas. In the first, ITU was tackled by Martin Hughes , Acute pain by Ewan Jack and Anaesthetists Non-Technical Skills (ANTS) by Rona Patey. If I was to draw a common theme from all these it would be that an appreciation of the value of doing the simple things well is organising good practice into the way we work is proving more effective in waiting for new drugs to come along and change outcomes.

The next session covered Paediatric Anaesthesia with Graham Wilson, Obstetrics with Liz McGrady and Airway management was dealt with by Barry McGuire. All spoke of the changing problems we face as populations change - i.e. get fatter, older and surviving childhood with more ever complex problems. Graham dealt with some of the challenges in training in paediatric anaesthesia and supporting peripheral services for children. Liz Made us all feel better by pointing out that (only) the Americans and Welsh are fatter as nations than the Scots!

The first day was closed with the Gillies lecture delivered by Neil Morton on

"Developmental harm and anaesthesia" A detailed abstract is included below.

The evening was spent with the Centenary Dinner at the Balmoral hotel. There was a fantastic turnout of the great and the good of Scottish and British Anaesthesia. The drinks reception was an great opportunity to catch up with old friends& colleagues. (See Gallery, Page 35) There was a very popular guest appearance by Jim Dougal and John May, our perennial past presidential piping pairing. They brought in the top table and were rewarded with bottle of quite nice whisky which completely failed to survive the evening. An excellent meal was then followed by a variety of entertaining speeches. We managed (with considerable difficulty - herding cats comes to mind) to prize the 18 past presidents present from their socialising for a rather special commemorative picture reproduced on the cover. There was a great balance of trainees, young consultants, older ones and retired members. Testimony to one of the societies great strengths, namely the friendliness and warmth of it's members. All in all a great evening which I'm sure will be remembered fondly by all who were there.

Jim Dougal and John May - the societies resident pipers

The Morning session on day two was dedicated to "Academic Anaesthesia" and comprised four presentations by the four professors from the four teaching centers, Aberdeen, Dundee, Edinburgh and Glasgow. Each gave an outline of their regions' research interests. Nigel Webster of Aberdeen described his departments sepsis research and the recent interest in Melatonin as an effective anti-oxidant (none of the endogenous ones seem to be any good). It might even work a bit for jet lag too. Tim Hales from Dundee spoke about opiate receptors and the potential for manipulating the opiate receptor mechanism by switching off it's endogenous inhibition - a mechanism which shouldn't produce dependence. Tim Walsh spoke about Edinburgh's research programs which encompassed a very wide range of hard lab science to assessing the discharge and care pathways for patients leaving ITU. Finally John Kinsella reviewed the output of the academic departments in Glasgow. There was again a remarkably wide range of subjects including, computing and data analysis and through the psychological impact of severe burns to the utility of ITU for the management of cancer patients. It was very impressive indeed to hear of the wide range of leading research being carried out in

anaesthesia and its related fields all across Scotland. It would be very interesting to see which of these strands of enquiry come to fruition and form the subject of lectures at our 150th or 200th year meetings.

The Big Beasts were rolled out for the penultimate session on "Professionalism, Service Provision and Regulation". J-P van Besouw from the RCoA, William Harrop-Griffiths from the AAGBI, Sir Peter Rubin of the GMS our own CMO Sir Harry Burns all took part in a session devoted to the above aspects of our work and specialty. It's easy to puff our chests out and make bald statements about how effective and responsible we are as a specialty but one thing that came over was very much that there are issues of professionalism we still need to deal with. For instance, the fact that disproportionate numbers die in hospitals at weekends suggests that services are still delivered to suit staff rather than patients. However, despite the constant assault on the profession from the media and politicians and the rising number of complaints to the GMC, doctors are still the most trusted profession amongst the british public by a long way. This is probably because essentially, we are professional in the truest sense of the word. Our instinct is to seek to improve what we do to serve our patients, and the public at some level recognise this. We are not perfect by any means and much of the discussion in this session covered ways we should be improving and evolving as a specialty and, more broadly, a profession.

The final session, "The Future" comprised four sessions on Anaesthesia, Intensive Care Medicine, Pain Medicine and regional Anaesthesia, presented respectively by Mike Grocott, Graham Nimmo, Lesley Colvin and Stuart Grant (a Scottish professor from South Carolina). This session necessarily comprised some fairly blue skies content speculating on the future directions. However not all was to do with fantastical technological or pharmacological advances but rather the message that in many ways what we need to do to improve the care we deliver is to be better organised and through about how patients are assessed and treated.

This was an absolutely excellent meeting and a fitting commemoration of the societies 100 year milestone. Huge congratulations and thanks are due to Alistair Baxter and Neil McKenzie for organising it so well.

Gillies Lecture 2014

Developmental Harm and Anaesthesia

Neil S. Morton MD, FRCA

Reader in Paediatric Anaesthesia, University of Glasgow

It is a great honour to be invited to give this lecture in memory of Dr John Gillies and to be asked in this Centenary year of the Scottish Society of Anaesthetists is a unique privilege. John Gillies was a great man who promoted the scientific basis of anaesthesia and had a major influence in establishing the equal status of the specialty of anaesthesia. He would have been proud indeed of the excellence and incredible advances summarised at the Centenary Meeting. This lecture has, by tradition, a safety theme. I have always been fascinated by the developmental aspects of medicine, and so I decided to try in this talk to elucidate the potential harmful effects that anaesthesia and analgesia might have on the developing infant's brain and spinal cord.

Paediatric anaesthesia can be a risky business but has become safer with improvements in training, monitoring, drugs and a better understanding of physiology. Many very small preterm babies and those with complex congenital anomalies and multisystem

disorders are now surviving and need to undergo surgery. Infants usually have one problem that needs fixing and that's it. The very small, complex or sick infant often needs multiple procedures and outcomes are now being scrutinised very closely. Survival is not enough and quality of survival is rightly to the fore, particularly quality over time as the child grows and develops. We know that unrelieved pain in early life causes adverse physiological, genetic and behavioural changes that can be long lasting. We also know that neonates are particularly vulnerable to the adverse effects of analgesic techniques with a ten fold increased risk of serious adverse events compared with older children and adults. Anaesthesia mortality in children has fallen by two-thirds in the past fifty years but the perioperative mortality for surgical neonates is still some seventy times greater than that for older children. Small infants and neonates have a high anaesthetic requirement but are quite sensitive to the adverse haemodynamic effects of anaesthetic agents. Indeed we do not know what the safe limits of blood pressure, biochemistry and perfusion are during anaesthesia in the preterm neonate. If a baby is harmed in early life and survives, then the consequences for the baby and family can be lifelong and litigation settlements are extremely expensive.

Animal research in the last ten years has raised concerns that anaesthesia and pain management techniques may have the potential to harm the developing brain producing neuronal apoptosis (programmed cell death) but is this is a real concern in humans? The pre-clinical studies that alerted us to this issue have been alarming to anaesthetists, surgeons and families and do indeed give cause for concern. The agents implicated include all the volatile anaesthetics in current use, nitrous oxide, ketamine, propofol, barbiturates and benzodiazepines. The mechanisms of injury and a summary of the research to date have been detailed in a recent special online edition of the BJA (1). Initial studies in rodents often involved prolonged exposure to relatively high concentrations or doses of anaesthetic agents in combination with poor control of physiology and poor monitoring of vital signs. This is not surprising given that a neonatal rat pup is only a couple of centimetres in length! More recent primate studies have tried to emulate a conventional human anaesthetic delivery and monitoring standard of care and although apoptosis was clearly demonstrated, the exposure durations were quite long. Extrapolation of animal data to humans is difficult and this encouraged retrospective

Rat pup and mother

epidemiological studies in children and also recently some prospective studies.

The early epidemiological studies gave cause for concern to the profession in suggesting that anaesthesia and surgery in early life could be linked to an increased risk of autism spectrum disorders, attention deficit hyperactivity disorders and learning difficulties and also implying that multiple exposures further increased the risk. However a metaanalysis in 2012 (2) concluded that there was a "modestly elevated risk due to exposure to anesthesia and surgery…….evidence is considerably uncertain".

Some reassurance has been found in the results of an ingenious study of identical twins, of whom one had surgery in early life, as both achieved the same educational milestones. A cohort of children who had had an infant hernia repair and a further group who had had a pyloromyotomy were found to have equivalent educational attainments at age 15-16y to a matched control population However, these cohort studies do have limitations and so prospective approaches have been developed and are in process now in the form of the GAS Study (GA v RA for neonatal hernia repair), the PANDA trial (Pediatric Anesthesia Neurodevelopmental Assessment) and the MASK study (Mayo Anesthetic Safety in Kids). Also major research initiatives have been triggered and funded to explore the issues further such as SmartTots in the USA www.SmartTots.org and EuroSTAR www.esahq.org in Europe (3).

Awake regional anaesthesia may be feasible for some neonatal surgical procedures and spinal anaesthesia, caudal anaesthesia and spinal-caudal combination blocks are possible in skilled hands. Such techniques can be technically difficult with failure rates up to 20% but they have great benefit in reducing postoperative apnoea. The safety of neuraxial analgesia in neonates and infants has recently been reviewed in detail (4). The preliminary results from the GAS study suggest general anaesthesia results in a 5-fold increased risk of early significant apnoea compared with awake regional anaesthesia. General anaesthesia was also associated with significantly more intraoperative hypotension needing active intervention.

Some of the media coverage of these results has worried parents and so what do we tell the parents about the risks of anaesthesia in early life? The APAGBI and SmartTots group have each produced a balanced explanation of the risks and benefits of anaesthesia and surgery and also of the risks and benefits of postponing surgery (5). Many paediatric anaesthetists are either avoiding use of the implicated agents (eg. nitrous oxide) or are minimising the exposure by use of "sparing techniques" with use of remifentanil, high dose opioids or regional anaesthesia. Some surgeons are postponing non-essential

procedures such as non-medical circumcision, removal of skin lesions, accessory digits and accessory auricles where safe to do so. Conservative management of hernias needs to be individualised as there are risks of delay such as the potential for incarceration or impaired testicular development.

If developmental harm is proven, what can we do to prevent it? There are agents such as the alpha-2-agonists clonidine and dexmedetomidine and more recently xenon which have neuroprotective properties. Xenon looks particularly promising for neonatal anaesthesia and is not prohibitively costly if administered using a modern closed circuit delivery system. Already in neonatology a trial of xenon added to induced hypothermia has demonstrated a doubling of the rate of good neurological outcomes in babies with birth asphyxia from 35% to 70%, an impressive result. In this trial, the cost of the xenon was approximately £100 per patient so it is an extremely cost-effective intervention.

In conclusion, my opinion is that a cautious approach to this issue is warranted. The implications for clinical practice are that in neonates it is wise to postpone unnecessary procedures under general anaesthesia, use awake regional anaesthesia if feasible, and to use “sparing” techniques to minimise exposure to agents implicated in neurotoxicity.

As John Gillies would have said: we should minimise the physiological trespass upon the baby.

References for further reading

1. British Journal of Anaesthesia 2013; 110 (S1): i1-120
2. Journal of Neurosurgical Anesthesiology 2012; 24: 376-381
3. British Journal of Anaesthesia 2013; 110 (S1): i53-i72
4. Anesthesia and Analgesia 2012; 115: 638-662
5. Pediatric Anesthesia 2014; 24: 120-126

Trainee Prize Competition

For The Donald Campbell Quaich

This year produced another excellent entry for the trainees prize competition. Pleasingly, the standard of the papers entered was at least as high as previous years and the Donald Campbell Quaich continues to be a very highly prized trophy amongst our trainees.

This years winner of the Trainees Prize, Dr Chris McDonald receives the Donald Campbell Quaich from the newly installed President, Dr Neil Mackenzie

A novel method of airway assessment

C. McDonald, B. Stickle

Aberdeen Royal Infirmary, Foresterhill, Aberdeen, UK.

Difficult intubation is a rare but potentially life threatening complication of endotracheal intubation. Current techniques are poor at predicting difficult intubation. We investigate a novel technique to predict difficult intubation and compare it to the Modified Mallampatti (MMP) technique.

Methods

The experimental technique involves extending a straight line from the tip of the upper to the inside of lower incisors and assessing its relationship to the larynx with the patient sitting, mouth open with head in maximal extension. A MMP grade was also recorded. The local Ethics committee advised that ethical approval was not

required. Seventy two patients admitted to Aberdeen Royal Infirmary for elective surgery under general anesthesia requiring endotracheal intubation were assessed by a single team member not involved in the patient's intubation. Anaesthetists were blinded to the predicted difficulty. Cormack & Lehane grade of laryngeal view was recorded at intubation. Difficult intubation was defined as Grade III and IV. An additional subjective measure of the difficulty of intubation, judged by the intubating anaesthetist, was recorded on a 10cm visual analogue scale. Likelihood ratios were chosen as primary outcome measure.

Results

Results are shown in table 1 and compare favourably with a recent meta-analysis [1]. The average difficulty score measured on the visual analogue scale (VAS) was 2.25. VAS of difficulty when easy intubation was predicted by the experimental technique (grade 1) was 2.1 and for MMP (grades I and II) was 2.0. The VAS when difficult intubation was predicted (experimental technique grade 2 and MMP grade III and IV) was 6.0 for the experimental technique and 3.6 for MMP.

Table 1. –

Comparing data collected in this study to a recent meta-analysis[1]. LR+ positive likelihood ratio. LR- negative likelihood ratio.

* denotes results from current study, + denotes results from [1]

DIAGNOSTIC TEST	**Sensitivity**	**Specificity**	**LR+**	**LR-**
EXPERIMENTAL*	50	97	16.6	0.52
MMP*	50	86	3.5	0.58
POOLED MMP+	49	86	3.7	0.5
POOLED THYROMENTAL+	20	94	3.4	0.8
POOLED STERNOMENTAL+	62	82	5.7	0.5
POOLED WILSON+	46	89	5.8	0.6
POOLED COMBINED MMP & TMD+	36	87	9.9	0.6

Discussion

Our experimental technique showed a stronger association with difficult intubation than previously published techniques. Visual analogue scale is a valid measure of subjective difficulty of intubation and correlates with Cormack & Lehane grade. Further investigation is warranted.

References

Toshiya S, Zenicho W, Tetsuo I, Atsushiro S. Predicting difficult intubation in apparently normal patients. A meta-analysis of bedside screening test performance. Anaesthesiology 2005;103:129-37

Preoperative echocardiograms: are they always indicated?

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Neck of femur fracture (NOFF) patients have echocardiograms to help guide management. We questioned if we request needless echos, with a low incidence of abnormality.

Methods

Retrospective audit of NOFF patients who received echocardiograms pre-operatively. Why echocardiograms were requested, severity of abnormalities, incidence of abnormalities, correlation between ECG and severity of echo findings were recorded. We also assessed if ECG's could be a predictor of echo abnormality or aortic stenosis. We assessed how many echos were done in sub-optimal conditions (due to pain, trauma trolleys) and could be giving erroneous results.

Results

2007-2012. Forty-seven patients had a preoperative echocardiogram, nine patients per year. Forty (85%) females and seven (15%) males.

Reasons for request:

- 14 reason not documented
- 6 known valve problem
- 4 left ventricular function assessment
- 1 history of previous CABG
- 13 murmurs discovered pre-op
- 6 pre-op MI
- 3 new AF

Severity of findings: severe LVH or aortic or mitral lesion three (6%), moderate nine (19%), minor 20 (43%), negligible finding 15 (32%). Incidence of severe aortic stenosis two (4%). Echos performed for new murmurs demonstrated: one patient (8%) severe valve problem, five (38%) no valve abnormality detected, five (38%) had a mild lesion, two (15%) had a moderate valve problem. In patients audited greater than one year postoperatively the death rate was 23%, which is below the national rate (30%) for NOFF deaths one year postoperatively [2].

Table2: Echocardiogram abnormality correlated with ECG findings

Degree of echo abnormality	Normal ECG	Significantly abnormal ECG	% abnormal
Normal	11	4	27%
Mild	11	9	45%
Moderate	5	4	44%
Severe	1	2	66%

ECG sensitivity for mod/severe echo lesions was 50% and specificity was 73%. A normal ECG has a 65% negative predictive value for a normal echo. An abnormal ECG has a 60% positive predictive value for an abnormal echo. (See table 1)

Discussion
Echos performed to investigate new murmurs have a low incidence of severe abnormalities 8% (4 patients). Thirty-six patients (76% of all echos) demonstrated no or a minimal abnormality. We have demonstrated that we are discovering moderate and severe cardiac lesions which could change anaesthetic practice. However, incidence of abnormal echo is low, and we could screen patients more rigorously to reduce the high percentage of normal examinations.

References
Parker MJ, Handoll HHG, Griffiths R. Anaesthesia for hip fracture surgery in adults. Cochrane Database of Systematic Reviews 2004.

Ascertaining the relative value attributed by midwives to analgesic options for labour

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Midwives are in a privileged position at the point of care when discussing appropriate analgesic options for labouring women. Their individual training, experience and opinion has been shown to influence maternal choice and management of labour [1,2]. We ascertained how much our midwives value the various modes of labour analgesia available.

Methods
We recruited midwives from two obstetric units in the West of Scotland. Each was asked to attribute a monetary “value” to the quality of analgesia provided by the various modes. The hypothetical question posed was if the midwife themselves were in labour, how much would they be willing to pay for the analgesic quality delivered by the mode available. This surrogate marker was used to aid numerical comparison. They were also asked to consider success/failure rates, side-effects and complications in their valuation. Mean values were calculated and compared using the two sample t-test. Ethics approval was not required.

Results
55 midwives were recruited (30 from Unit-1, 25 from Unit-2). The results, displayed in figure.1, show epidural was the most highly valued mode of labour analgesia and TENS the least. Unit-2 midwives valued all analgesic options more highly than their

Unit-1 colleagues with a statistically significant difference (P<0.05) in analgesic value attributed to the pool, hypnobirthing and remifentanil PCA.

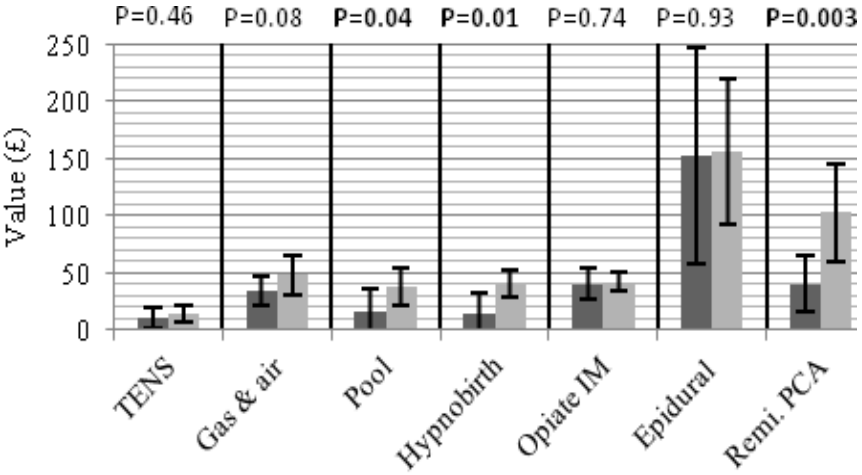

Figure. 1 - The Value of Modes of Labour Analgesia (dark = Unit-1, light = Unit-2, error bars represent one standard deviation of the mean, P-values are listed above)

Discussion

This study allows us to compare the usefulness of labour analgesia modes relative to each other as observed by our midwives. Absolute monetary values are less important. As advocates of maternal choice midwifery opinion can influence maternal uptake rates. Results are also influenced by local service provision. For example, Unit-2 has an active midwifery-led unit, a programme of hypnobirthing training and offers open access to remifentanil PCA as a first-line. Midwives are empowered with these techniques, experience is high and as a result they are more highly valued.

References

Mead M, Kornbrot D. Influence of maternity units' intrapartum intervention rates and midwives' risk perception for women suitable for midwifery-led care. Midwifery 2004; 20: 61-71

McNiven P. Midwives' Belief in Normal Birth: The Canadian Survey of Maternity Care Providers' Attitudes Toward Labour and Birth. Canadian Journal of Midwifery Research and Practice 2011; 10: 11-21

Investigating Intraoperative Cuff Pressures in Laryngeal Mask Airways

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The Laryngeal Mask Airway (LMA) is now being used in over 50% of general anaesthetics. Major complications are rare, with patient satisfaction generally high, however, the incidence of post-operative sore throat is high and nerve palsies have been reported. There was a strong evidential correlation amongst published data between high cuff pressures and post operative morbidity and evidence that, despite this, cuffs are routinely overinflated.

Methods
LMA cuff pressures were audited in Ninewells Hospital, Dundee and Perth Royal Infirmary. We sampled 68 adult patients undergoing non emergency surgery to ascertain whether intraoperative LMA cuff pressures exceed both manufacturers' recommendations and literature recommendations and whether pressure limiting techniques were being used.

Results
Fifty five (81%) of the measured cuff pressures exceeded the 60mmH2O suggested as the threshold pressure for post operative complications. Where cuff pressure limiting strategies were used, cuff pressures were reduced by a significant amount, regardless of the strategy employed ($p<0.001$).

Discussion
We would therefore recommend that pressure limiting strategies are universally adopted and that LMA cuff pressures are routinely measured. We propose to increase recognition of this cause of post operative morbidity amongst anaesthetists and anaesthetic nurses, as well as making them aware of the range of pressure limiting techniques available and to look at increasing the availability of cuff manometry. We plan to re-audit in 4 months to assess the impact that these measures have had on practice.

Hip Fracture – Comparing standards and investigating the role of critical care

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Hip fracture is a common, serious and costly condition of the frail and elderly, in whom co-morbidity is common.[1] We audited patients with hip fracture admitted to

Glasgow Royal Infirmary over a one-year period to compare against national standards and explore post-operative ICU/HDU utilisation.

Methods
Ethical approval was sought and deemed unnecessary. Data for patients undergoing hip fracture repair between 01/08/11–31/07/12 were collated and compared against those reported by the Hip Fracture Peri-operative Network 2010 (HipPeN) [1], and other databases [2, 3] where appropriate. Patients admitted to ICU/HDU were also examined. Statistics were performed using Minitab v15.

Results
Three hundred and ninety-three patients underwent hip fracture repair within the one-year period. GRI patients were younger (GRI 76 [SD 14] vs HipPeN 81 [SD 11], p = 0.001), with a greater proportion of ASA III/IV patients (GRI 70%, HipPeN 62%), though this was not statistically significant. Sixty-four percent of GRI patients lived in the 25% most deprived areas of Scotland. Method of anaesthesia (regional versus general), was similar between GRI and HipPeN, (p=0.063). Presence of consultant anaesthetist (GRI 94% vs HipPeN 61%) was significantly different (p<0.001). Thirty-day mortality was 6.1% in GRI, lower than reported by HipPeN and other national databases (8-9%), though this was not statistically significant (p=0.179). Seventeen patients (4.3%) were admitted to ICU/HDU, mostly for monitoring due to co-morbidities. Four (24%) required organ support and 3 patients died within 30 days (17.6%). Only 11 patients had been admitted to ICU/HDU in the four years prior to this study.

Discussion
Despite high levels of deprivation evident in our population, GRI data compared favourably with national data. Rates of consultant anaesthetist involvement were high. Critical care facilities are being increasingly utilised for patients at highest risk of complications. A specific, specialised, post-operative care area may be potentially beneficial, though would have resource implications.

References
1. White SM, Griffiths R. Projected incidence of proximal femoral fracture in England: a report from the NHS Hip Fracture Anaesthesia Network (HIPFAN). Injury 2011; 42: 1230–3
2. Scottish Hip Fracture Audit report, 2008. http://www.shfa.scot.nhs.uk/AnnualReport/SHFA_Report_2008.pdf (accessed 28/03/2013).
3. The National Hip Fracture Database. National Report, 2012. http://www.nhfd.co.uk/003/hipfractureR.nsf/0/da44e3a946a14e4180257a6f001eb4db/$FILE/NHFD%20National%20Report%202012.pdf (accessed 28/03/2013)

Poster Prize Competition

The James McGregor Imray Salver for the best poster presentations was won this year from what was again a very strong field by Dr P Paisley from Wishaw General hospital. Drs E Beattie and H Robinson from Glasgow and Aberdeen were 2nd and 3rd respectively. Their abstracts are reproduced below.

Dr Paisley (centre left) receives the Imray Salver from Dr Allison, flanked By 2nd placed Dr Beattie (left) and 3rd placed Dr Robinson (right)

Improving patient safety in theatres: should all theatres contain checklists and guidelines?

P. Paisley, N. Desai and S. Dalchow

Anaesthetic Trainee, Wishaw General Hospital, UK, Glasgow Royal Infirmary, Glasgow, UK and Wishaw General Hospital, UK.

Many anaesthetists will be involved in an adverse event during their career[1]. Following personal experience of a critical incident involving the accidental administration of a mis-labelled drug, the authors sought to prevent recurrences and improve the management of critical incidents in our hospital.

Methods
Human error can be prevented by the use of checklists and guidelines, a practice used in the aviation industry for over 70 years[2,3].A survey was conducted of all 12 theatres in a district general hospital. The presence of safety guidelines and drug labels was recorded, and deficiencies were noted. Staff education via an oral presentation was undertaken, and laminated guidelines[4,5,6,7,8] were produced for every theatre. The audit cycle was repeated eight months later.

Results
In the initial survey, two out of 12 theatres(17%) contained all of the recommended guidelines. Six theatres(50%) had an incomplete assortment, and four theatres(33%) had no guidelines whatsoever. Following our interventions we found that nine theatres(75%) contained all of the safety guidelines and three (25%) contained an incomplete assortment. No theatre was completely devoid of guidelines. Eleven categories of drug label were recorded. These included muscle-relaxants, local anaesthetics, benzodiazepines, saline, anti-cholinergics, opioids, anti-emetics, induction agents, muscle-relaxant reversal, antibiotics and vasopressors. Only labels for muscle-relaxant reversal were present in all theatres. Of the remaining ten categories, seven(63%) were unavailable in three or more theatres. In the repeat audit, six of the eleven categories(55%) demonstrated improvement, three(27%) were static, and two(17%) were worse than when first audited.

Discussion
The AAGBI recommendations for minimum standards of monitoring are well described[9]. The authors propose that five key laminate guidelines should also be present in all theatres to guide the management of anaesthetic emergencies, thus improving patient care. We demonstrated a lack of safety guidelines and drug labels and made measured improvements towards better compliance in our theatres.

References (all urls accessed February 2013)

1. Catastrophes in anaesthetic practice – dealing with the aftermath. AAGBI Guidelines, London 2005. http://www.aagbi.org/sites/default/files/catastrophes05.pdf
2. Human factors of flight-deck checklists. The normal checklist. Degani A. NASA contractor report. California 1990. http://www.skybrary.aero/bookshelf/books/1568.pdf
3. Perspectives in quality: designing the WHO surgical safety checklist. Weiser TG, Haynes AB, Lashoner A et al. Int J Qual Health Care 2010 22(5):365-70
4. Advanced Life Support Algorithm. Resuscitation Council 2010. http://www.resus.org.uk/pages/als.pdf
5. Difficult Airway Society Guidelines. http://www.das.uk.com/guidelines/downloads.html

6. AAGBI Safety Guideline. Checking Anaesthetic Equipment. London 2012. http://www.aagbi.org/sites/default/files/checking_anaesthetic_equipment_2012.pdf
7. Guidelines for the management of a Malignant Hyperthermia crisis. AAGBI Guidelines 2002. http://www.aagbi.org/sites/default/files/malignant_hyperthermia_laminate2002.pdf
8. AAGBI Safety Guideline: management of severe local anaesthetic toxicity. AAGBI Guidelines 2010. http://www.aagbi.org/sites/default/files/la_toxicity_2010_0.pdf
9. Recommendations for standards of monitoring during anaesthetisia and recovery.AAGBI Guidelines. 4th Edition, London 2007. http://www.aagbi.org/sites/default/files/standardsofmonitoring07.pdf

A sticky combination: variation in static frictional resistance of Propofol/Lidocaine mixture with time.

E. Beattie1, C. Rae, R. Stuart2.

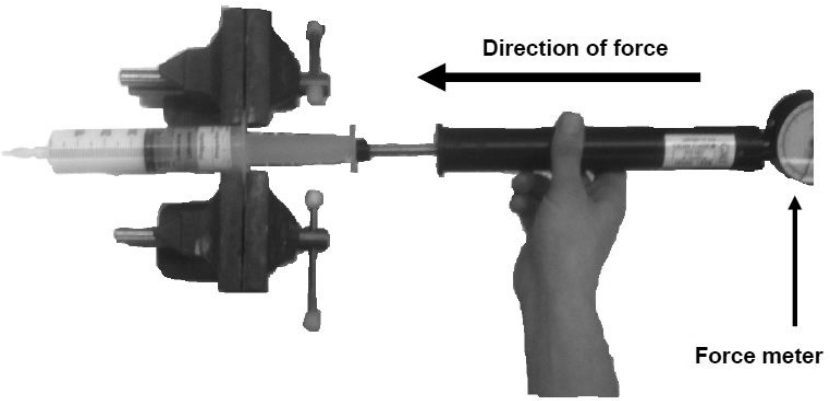
Glasgow Royal Infirmary, Glasgow, UK and Western Infirmary, Glasgow, UK

The addition of Lidocaine to Propofol to reduce patient discomfort on injection is recommended by the manufacturer[1,2]. Various doses of local anaesthetic have been used in clinical practice. We noticed that with increasing time the force required to eject the fluid mixture from a 50ml BD Plastipak syringe increased above that which an Alaris PK Syringe pump could deliver. Static frictional resistance ("stiction") is a measure of the force required to overcome the static cohesion exhibited by stationary objects in contact.

Method

Eight syringes were prepared, each containing different concentrations of Propofol and Lidocaine (see results for details of concentrations used). Each syringe was attached to a 18G cannula by a 200cm manometer line. The force required to eject a steady flow of fluid from the cannula was recorded using a force meter. The experiment was carried out in an anaesthetic room, at 21oC and 70% relative humidity.

The force measured was kinetic frictional resistance (slightly smaller than the threshold of motion). For the purposes of the experiment this value has been considered to represent stiction.



Results

The force required to overcome stiction in syringes containing a Propofol/Lidocaine mixture showed a positive relationship with time. A maximum force of 40N was required at 150 minutes. This increase appeared independent of the concentrations of

Propofol and Lidocaine used. A small increase in static frictional resistance was also noted using Propofol alone.

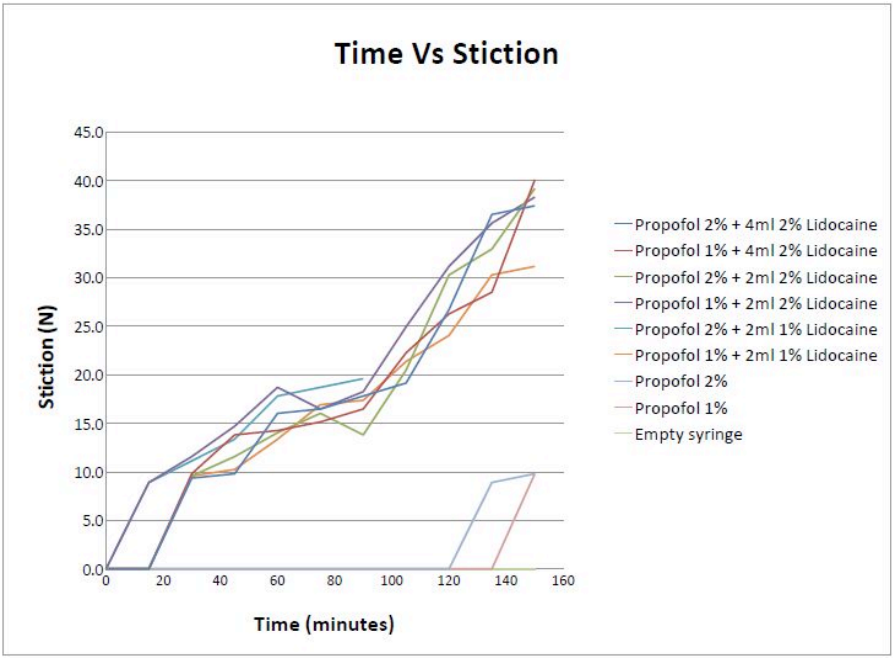


Fig 2: Relationship between time and measured stiction in Propofol/Lidocaine mixture.

Discussion

Our experimental data supports clinical observation. Particular care is needed when using a syringe that has been mixed at the beginning of a case, given the potential failure to deliver anaesthetic agent and risk of awareness. The chemical background suggests that the pH of the solution may change with time, resulting in Propofol becoming less soluble in solution, increasing the force required for expulsion. The product manufacturer was unaware of this phenomenon.

References

1. Propofol-Lipuro 1% product information leaflet, B. Braun Melsungen AG, Germany
2. Propoven 1% product information leaflet, Fresenius Kabi Ltd, UK

Elective operating theatre efficiency at Aberdeen Maternity Hospital

H. Robinson, V. Kartha

Aberdeen Maternity Hospital, Aberdeen, UK

Obstetric operating has expanded to meet growing population demands, with an average of 80 planned caesarean sections per month. Review of current practice is pivotal to providing reliable care despite increased service pressures. This audit assessed elective operating times and examined methods to improve theatre safety and efficiency.(1)

Methods

A prospective analysis of the times of key operative events was collected from patients' entering to leaving theatre for 25 elective cases. Currently a dedicated consultant anaesthetist, obstetrician and theatre team is available for elective procedures from 08:30 to 13:30 with 90 minutes allocated per case.

Results

Values are displayed as mean (±SD). The first case commenced 47 minutes (±0:40) late, delayed on three days by acute labour ward procedures. The list finished 2 hours 8 minutes late (±1:30). Time from entering to leaving theatre was 1 hour 45 minutes (±0:18) with an additional 28 minutes (±0:16) between patients, leading to a total 43 minutes out with the scheduled time. Time to site a spinal from entering theatre was 23 minutes (±0:12). Nine minutes (±0:03) was taken to achieve T4 blockade. Surgeons were present at time of spinal in 7 cases (35%). The surgeon

was scrubbed 7 minutes (±0:03) following adequate spinal and a further 10 minutes (±0:04) elapsed until first incision. Skin incision to closure took 48 minutes (±0:11).

Discussion

The unpredictable nature of the labour ward imparts a barrier to maintaining efficient elective operating; a surgical briefing may provide a forum to discuss strategies to balance management of emergency and elective cases. Increased senior obstetric input, surgical presence at start of anaesthesia and improved communication may reduce delay to skin incision with a view to achieving a 90 minute case duration.(2) Patient co-morbidities, especially high BMI, increase anaesthetic and surgical time and should factor into our operative list management.

References

1. Sevdalis N, Hull L and Birnbach D J. Improving patient safety in the operating theatre and perioperative care: obstacles, interventions, and priorities for accelerating progress. British Journal of Anaesthesia 2012; 109 (S1): 3–16.
2. Ross A J, Kodate N, Anderson J E, Thomas L and Jaye P. Review of simulation studies in anaesthesia journals, 2001–2010: mapping and content analysis. British Journal of Anaesthesia 2012. 109 (1): 99–109.

Centenary Essay Prize

The essay reproduced below is the winning entry in the Centenary Trainee essay competition. It was presented, by its author, Dr Michael Stallard at the Centenary meeting in Edinburgh.

Anaesthesia: the future

"Prediction is difficult.
Especially about the future"
Nils Bohr, Danish Physicist

What's going to happen next?

This is perhaps the most important question in all aspects of our lives, from medical prognosis to meteorology, economics to tectonics.

We use pattern to analyse the sequence of events and extrapolate that into what should logically follow.

Red sky at night, shepherds delight.

Red sky in the morning, shepherd's warning.

Pattern recognition had enabled sailors and shepherds to predict the following day's weather long before we knew about scattering of visible light spectra in the atmosphere.

Although pattern may help with linear predictions, the rate of change and progress in science and technology is exponential. Many big advances of recent years would have been near impossible to predict. When developments occur, their significance is often unclear at first, relying on the emergence of other technology.

The telephone was patented in 1876 by Alexander Graham Bell. Fast forward 130 years and there are five billion mobile phone subscriptions worldwide.

It is only six years since the first iPhone was released. Smartphone technology is advancing at such a rate that it is difficult to predict what a model in another six years will be capable of.

Current developments

Drugs

Doubtless we will continue the pursuit of the ideal anaesthetic agent. Success of drugs like remifentanil with fast and predictable onset and offset have led to

similar attempts with existing hypnotic drugs[1].

The leading candidate is Methoxycarbonyl Etomidate (MOC-etomidate)[2], retaining etomidate's stable haemodyamics but eliminating the adrenal suppression which has limited its use. It is rapidly metabolised by esterases.

There is renewed interest in the inert gases - in particular xenon - as inhalational agents[2,3]. Xenon holds many of the properties of an ideal anaesthetic agent. With improving low-flow anaesthesia, scavenging and near one-hundred percent recycling of waste gases, we are likely to see its increased usage, particularly in high-risk patient groups[3,4].

A new class of drugs based around melatonin, which have both hypnotic and analgesic properties, may also provide interesting developments.[2]

Examination of sodium-channel subtypes may bring novel routes of analgesia.

New short-acting non-depolarising muscle relaxants (NDMRs) such as gantacurium offer rapid onset and offset, with the potential to replace suxamethonium.[2]

Interest in reversibility following the success of sugammadex means further development of selective-relaxant binding agents (SRBAs). With more widespread usage as cost decreases, SRBAs can potentially eliminate residual neuromuscular blockade.

Equipment

Anaesthetic machines operate on a principle of closed-loop feedback, with a human controller making changes at the centre of the loop.

Increasingly, we are likely to see computer-controlled closed-loop systems, making continuous fine adjustments to measured parameters. Recent studies have shown volatile use can be as much as halved with automated end-tidal anaesthetic agent control[5].

Machines incorporating ICU-standard ventilatory options are already becoming widespread. The machine will become smaller and more mobile, enabling provision of anaesthesia more easily in the field and even in patients' homes.

Standard use of video-laryngoscopes will increase as cost falls and safety benefits emerge, vastly decreasing the frequency of the difficult and failed intubation and a resultant decrease in hypoxic events and airway trauma.

Anaesthetist

The job of the anaesthetist will undoubtedly evolve, with increased emphasis on the role of perioperative physician[6,7]. Anaesthetists, with their specialist knowledge of applied physiology and pharmacology may find themselves as the only true generalists

in the hospital, co-ordinating with a variety of sub-specialties in order to provide optimal perioperative care.

The environment in which the anaesthetist works is likely to change significantly. With an ageing population we will see increased pressure on hospitals to perform operations to replace joints and other body parts, as well as long-term pharmacological treatment.

Budgets will come under even sharper scrutiny and will mean that rationing of treatment is inevitable. As the complexity of treatment that can be offered expands, it is highly possible that we will have basic procedures available on the NHS but more complex surgery linked to private schemes.

Paradigm Shifts

Expanding our imagination further, it is possible to try and predict some of the more radical changes that may affect anaesthesia and medicine.

Much of the future of anaesthesia depends on the future of surgery. Development is focused on minimising invasiveness of surgery or devising alternatives altogether. We are likely to see a drastic change in the type of procedure anaesthesia is provided for.

Innovation, personalisation and miniaturisation

Technology

Wireless technology will revolutionise anaesthetic monitoring. The trip to the CT scanner with an intubated patient and the ensuing tangle of wires will be eliminated, with RF wireless monitoring becoming standard. Wireless power supplies will be available in the style of wi-fi hotspots, eliminating the need for wires and cumbersome battery packs[8].

Minimally invasive surgery will become standard. Natural Orifice Transluminal Endoscopic Surgery (NOTES) using 3D computer-aided assistance makes the prospect of scar-less surgery possible. This will be the biggest change in surgical technique since laparoscopic techniques were adopted. Already, this has been used to perform a nephrectomy transvaginally and a cholecystectomy endoscopically. The lack of an abdominal wound means lower blood loss, less impact on respiratory function and immunosuppression and faster recovery, with subsequent shorter hospital stays[9,10].

Telemedicine will mean that anaesthetists can perform pre-assessment from afar and with the aid of advancing robotics, anaesthesia too. Robotics can assist in, or autonomously perform, regional anaesthetic blocks and would allow them to be performed remotely.

Robotics may see the surgeon seated in theatre at remote controls operating from a sophisticated module, incorporating augmented reality overlays to highlight blood vessels, nerves and tumours. Decision support and remote mentoring will mean a

surgeon in New York could advise or assist in an operation on a patient in Inverness.

Robotic Theatre

Personal medicine

We will see a complete shift to the one-drug-fits-all model currently used. All patients react differently to similar dosages of the same drugs – with a multitude of factors at play, including distribution, susceptibility and metabolism.

The Human Genome Project (HGP) sequenced all human genes in an international, collaborative project spanning thirteen years. Since completion, in ten years, the cost of sequencing an entire human genome has fallen from £1.7bn to just £3000[11]. We're not far away from the £50 genome. You can know your entire genetic code - the code of everything that is in your body - for the price of a restaurant meal.

This is going to absolutely revolutionise medicine, changing the way we view disease and the individual. Patients will be able to learn their susceptibility to a wide range of diseases and drugs, allowing preventative lifestyle modification. For example, a patient could learn that flucloxacillin would likely cause them anaphylaxis, that they cannot metabolise suxamethonium or that they are at higher risk of thrombo-embolism.

We may be able to avoid serious drug reactions by knowing precise details of our cytochrome p450 system. Up to eighty percent of medications involved in the most serious reactions are metabolised there. We now know that nearly one-third of people have a genetic variant of the CYP2C19 allele, meaning they are poor metabolisers of clopidogrel.

Pharmacogenetics

This opens avenues for pharmaceutical companies to offer personalised drugs[12]. Patients could have the subtype of disease they are suffering from identified and then have the most appropriate and effective treatment prescribed. Knowledge of a person's genome would have huge implications for our choice of anaesthetic drugs. We could identify the safest and most effective induction agent for example, or the most effective analgaesic.

This will undoubtedly come at a cost, with price linked to efficacy. Having the most effective drugs as the most expensive will place some of these treatments beyond the means of many individuals and risks creating a two-tier scenario, with personalised drugs for

some and “dirty” drugs from the “one disease, one drug” model for the other.

Sepsis as we know it nowadays will become a rare disease. The days of Gram staining and culture of bacteria are limited, with rapid genome sequencing for identification of microbes reducing waiting times from days to minutes. Knowing the responsible pathogen then allows a targeted response, with its susceptibility to certain drugs known by its genome. A drug could then be specifically synthesised for that particular pathogen.

Inspired by the HGP, the ten year, billion-pound Human Brain Project has just got underway, aiming to create a computer simulation of the brain, assimilate all existing knowledge and revolutionise our understanding of how it works[13,14]. This will lead to new targets of anaesthetic drugs, and at the very least, a greater understanding of how our existing ones work. The 2013 Nobel Prize for Medicine was awarded to a group who made advances in our knowledge of cell transport systems[15]. The ability to manipulate these may allow us new routes of analgaesia and anaesthesia.

Most anaesthetic drugs work by disrupting electro-chemical impulses in the brain. Injecting liquids into veins to disrupt the chemical portion is not the only solution. Perhaps we could make the shift to manipulating the electrical pathways non-invasively, for example transcranially.

Nanomedicine: The future is small

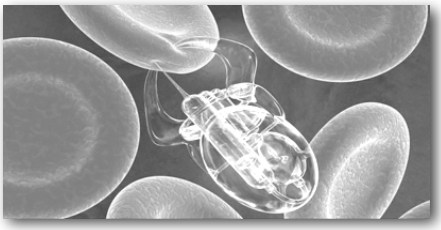
Nanotechnology promises perhaps the most exciting and revolutionary changes to medicine. The ability to manufacture technology at the nano scale offers advances that are only limited by our imagination.

Currently in development are nanoparticles that deliver chemotherapy drugs and other substances directly to cancer cells. Nanoparticles attach to malignant cells and secrete biomarkers, enabling earlier detection. Nanotechnology in Oncology, as well as tumour gene sequencing and targeted therapy may eliminate the need for major cancer surgery.

Implantable technology will mean vital signs can be wirelessly monitored, even at home. This data can be transmitted to smartphones, watches or anaesthetic monitors. Nanowire implants are already in development that will allow us to measure blood pressure continuously. Analgaesia could be dispensed at the touch of a button from implantable deposits.

Nanorobotics will allow surgery to occur at the cellular level, offering incredible levels of precision. Destruction of cancer cells marked by nanoparticles or removal of atherosclerotic deposits within arteries are just two potential uses. Nanorobots could repair individual cells, offering the potential for significantly lengthened human life.

In fifty years we may be able to oxygenate transdermally, signalling the end for the endotracheal tube, the hallmark of anaesthetics.



Regenerative medicine

A range of applications exist for the use of stem cells in regeneration. These include the use of bone marrow cells to treat damaged myocardium in myocardial infarction. An era of stem cell banking is on the horizon, with pluripotent stem cells being used in the replacement of organs.

As an example of integration of exponential technologies, consider the 3D printer. It works by building up layers of ink or plastic to create a 3D shape, from toys to weapons. We could use it to create improved prosthetics. Or, by replacing ink with cells, the possibility even exists to print out organs. The 3D printer could print the fibrous skeleton of a kidney, with stem cells then used as a matrix to regrow it.

Conclusions

The future of anaesthesia will be driven by a combination of change in surgical technique and the rapid progress of our technological means.

The law of accelerating returns means that the pace of change is so great that it is going to create many challenges for our profession in terms of keeping pace with development, adapting to these demands and balancing ever more precarious issues of cost and provision.

It is tempting to predict the decline of major surgery due to advances in nanotechnology and minimally invasive techniques. However regenerative medicine, with the potential to replace entire organ systems, may lead to a necessity for long and extensive surgery and require new ways of anaesthetising patients, including deep hypothermia for prolonged periods.

The future is not a straight line. It twists unexpectedly, leaving us to adapt. With an acceleration of human understanding and technological leaps, we are in the early stages of a sharp incline, with tremendously exciting possibilities for the future of anaesthesia. It will likely involve coffee but beyond that, who knows?

Resources

1. Br. J. Anaesth. (2004) 93 (5): 725-736 Recent advances in intravenous anaesthesia

2. Indian J Anaesth. 2009 October; 53(5): 533–536. The Future of Anaesthetic Pharmacology

3. Br. J. Anaesth. (2004) 92 (6): 786-789. doi: 10.1093/bja/aeh137 Xenon – cardiovascularly inert?

4. Best Pract Res Clin Anaesthesiol. 2005 Sep;19(3):365-79.

5. Inert gases as the future inhalational anaesthetics

6. Br. J. Anaesth. (2013) doi: 10.1093/bja/aes464 – Automated control of end-tidal inhalation anaesthetic concentration using the GE Aisys Carestation

7.

8. BJA Editorial, Vol 108, Number 5, May 2012. Perioperative medicine. The future of anaesthesia? M.P.W. Grocott and R.M. Pearse

9. http://www.beckershospitalreview.com/anesthesia/5-thoughts-from-industry-experts-on-the-future-of-anesthesia.html

10. http://www.wirelesspowersupply.net/

11. Baron TH (January 2007). "Natural orifice transluminal endoscopic surgery". *The British Journal of Surgery* **94** (1): 1–2. doi:10.1002/bjs.5681.

12. Halim I, Tavakkolizadeh A (August 2008). "NOTES: The next surgical revolution?". *International Journal of Surgery* **6** (4): 273–6. doi: 10.1016/j.ijsu.2007.10.002.

13. http://www.theguardian.com/science/2013/jun/08/genome-sequenced

14. BMJ 2013;347:f4549 – personalised drugs

15. http://www.bbc.co.uk/news/health-24428162

16. https://www.humanbrainproject.eu/en_GB

17. http://www.nobelprize.org/nobel_prizes/medicine/laureates/2013/press.html

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Golf Outing – Friday 21 June 2013

Pitlochry proved to be an ideal location for the Society's annual outing with its excellent course, central location, spectacular views of the Tummel Valley and great value attracting 24 golfers on the longest day of the year.

Seventeen Society members played a preliminary round at Dunkeld on the afternoon of 20 June and stayed at the Green Park Hotel in Pitlochry that night.

The Friday morning stableford Scott Trophy was won by Hugh Neill with an impressive 40 points, David Reid was second, Alan Morrison and Kevin Fitzpatrick tied third. After late evening discussion on Thursday, an innovative format was used for the Friday afternoon round. This was a Texas scramble between young and not-so-young teams. I am pleased to report that the younger team (inspirationally skippered by Bob Young) was victorious.

All agreed that the event had been a great success with excellent service and catering. We wish Charlie Allison well in his plans for the Centenary outing to St Andrews next year. Who knows – maybe south-east of Scotland golfers will attend.

A MacLeod, 30/6/13