Royal College of Anaesthetists | Cymru Wales

A newsletter for anaesthetists in Wales

October 2022

Dr Abrie Theron

In February 2020 we had contributions for a newsletter ready to be published in March. Needless to say, events lead us to shelve it all, as the College's focus shifted towards supporting its members to deal with the pandemic. We have now finally reached the point where we could review the articles and publish the next RCoA Welsh e-Newsletter!

The landscape has completely changed during the last two years and there is now an even bigger realisation of how important the anaesthetic and intensive care workforce is for the delivery of both emergency and elective care. Prior to the pandemic Sarah Harries, our Head of School, led a Task and Finish group assessing the need for training more anaesthetic associates in Wales. For those of you who have not worked with anaesthetic associates we have asked Craig Hughes in Hywel Dda to provide us with a piece on how anaesthetic associates contribute to the anaesthetic services there. Sarah Harries has also provided us with an update of workforce and training plans in Wales taking into account the workforce surveys conducted by the College.

Following the heatwaves and low rainfall over the summer, you may well wonder how we can limit our environmental impact at work. Charlotte provided us with an updates on Nitrous Oxide. Helgi Johannsson, has recently been appointed as the RCoA's new Sustainability Lead. You can also have a look at the College's sustainability strategy here. We have also included an article from Kevin Draper the WAB SAS representative on activities SAS doctors can get involved in and an article on the Glostavent draw over anaesthetic machine used in Cardiff prior to the pandemic to facilitate exposure.

A Healthier Wales called for a national clinical plan for specialist services. This framework was finalised and published in 2021. The hope is that this framework will empower delivery organisations to produce plans aligned to the principles and strategic aims set out in a Healthier Wales.

This will be my last newsletter as chair of the Welsh board as I am about to step down. We are in the process of electing new health board representatives to the board. Our Vice Chair and Regional Advisor, Simon Ford, has written a piece on how we have changed our terms of reference and constitution to reflect the geography of the Welsh NHS better as well as how we will go about electing new representatives. Please consider putting yourself forward to represent your health board.

Dr Abrie Theron, RCoA Council Member
atheron@rcoa.ac.uk

Being a part of the Welsh Anaesthesia Board

The Welsh Anaesthesia Board (WAB) is made up of working anaesthetists from across Wales to represent all aspects of anaesthesia.

It's aims are:

- to support high standards in anaesthesia training and practice across Wales in line with the Royal College of Anaesthetists (RCoA) strategy
- promote a cohesive and consistent approach across all Health Boards and ensure that specific challenges in each health board are recognised and supported
- to represent the specific views and concerns of Welsh anaesthetists at the RCoA Council and to put forward a voice to Welsh Government.

The increased devolution of Healthcare strategy across the four nations means challenges need a different response regionally. The Welsh Anaesthesia Board provides a collective voice for Welsh anaesthetists to ensure that the College is able to effectively represent our views and respond to regional differences. It is also well placed to highlight concerns to Welsh government and Health Education Improvement Wales (HEIW) with the support of the College. Recent work by board members has meant Wales has steadily increased training numbers over the past three to four years in recognition of workforce deficits and built on early work to support the training of Anaesthesia Associates with the support of HEIW.

WAB has updated its representation structure in an attempt to better represent the diversity of anaesthesia departments across Wales. We are looking for three representatives each from the three hospitals of Hywel Dda, three hospitals of Betsi Cadwaladr and the three hospitals of Cwm Taf Morgannwg making a total of nine representatives to join the three representatives from Swansea Bay, Cardiff and Vale and Aneurin Bevan Healthboards. It is hoped this greater representation will allow the WAB to better reflect anaesthesia practice across Wales. Representatives can be Consultants, Specialist or Associate Specialist in recognition of the key roles all grades of anaesthetist play in Departments. WAB meets twice yearly and is attended by HB representatives and statutory members in conjunction with senior members of College to understand RCoA Strategy and discuss local implications.

If you are interested in becoming a representative please discuss with your local CD and put your name forward. If a department has multiple candidates then the College will hold elections on behalf of WAB. The new WAB will be in place for our Spring meeting.

Anaesthesia services are under real challenges to provide more with what seems like less resources. It is important to share the local challenges and successes to ensure a safe and sustainable way forward is found to best respond to these demands. It is by working together and recognising the diversity of challenge we will be best able to effect change and put anaesthetic depts in the vanguard of development plans.

Dr Simon Ford, Consultant Anaesthetist, Morriston Hospital, RAA Wales
Simon.Ford@wales.nhs.uk

Workforce challenges in Wales

Without doubt, addressing the workforce challenges in both anaesthesia and critical care medicine in Wales must be NHS Wales' greatest priority. Whilst the demand for both services within every Health Board has increased unprecedentedly over the last 20 years, the additional need to address the waiting list of >680,000 planned surgery and procedures in Wales post COVID-19 has intensified the pressure to act.

The RCoA published The Anaesthetic Workforce: UK State of the Nation Report in February 2022, where a current shortage of at least 1,400 Consultant and SAS anaesthetists is reported across the UK. Data from the last five-yearly RCoA Census 2020 shows in the 14 year period of RCoA census data collection (2007–2020), the number of Consultant Anaesthetists in Wales has increased from 319 to 433, a growth rate per annum of 2.7%. Despite this growth rate, there remains a significant Consultant workforce gap of 11.8% in Wales, which is much higher than the other three nations; England – 7.7%, Scotland – 7.7% and NI – 4.8%. This workforce gap is severely limiting the ability of the NHS to perform operations and address the additional backlog in surgery from COVID pandemic disruptions to elective surgery services.

The number of SAS and non-training grades in Wales has also increased but at a lower growth rate. However, as a nation Wales is heavily reliant on SAS grades and non-training grade doctors as they make up 28% of the anaesthetic workforce. Again, this is significantly higher than all the other UK nations; England – 21%, NI – 15% and Scotland – 13%. The current workforce gap in SAS grade is also very significant, with a funded gap of >32 vacant SAS posts across departments in Wales.

The funded gap is useful data, however it does not convey the full workforce shortage. Additional demands are frequently placed on departments without identified or adequate funding, eg annual leave cover or new/increased service demand, which is often covered by locum costs or extra sessional payments. When Clinical Directors were asked how many Consultants or SAS grades do they need to actually cover the service they provide, the 'real' workforce gap of funded plus aspirational posts is much higher as illustrated below.

For Wales the 'real' workforce gap is 17.8% for Consultant Anaesthetist posts and 28.9% for SAS grades.

To date the demand for Consultant Anaesthetists in Wales has been broadly matched with a consistent 20-22 CCT holders from the training programme each year, plus a willingness from permanent staff to take up extra clinical work for payment. However, we are approaching a critical nadir as the demand for anaesthesia services continues to increase, plus a significant workforce gap looms from expected retirements of senior Consultant and SAS grades, and a reduction in PAs due to the punitive tax imposed on NHS pension growth.

Age profiling data from the NHS Wales electronic staff record and RCoA Census shows the extent of Consultants aged over 50 years, who will be expecting to retire in the next 5–10 years. Wales has the greatest proportion of Consultant Anaesthetists from the four nations in the 50+ age group, who are closer to the retirement age of 60, ie ~177 Consultants in Wales. Retirements plus service growth modelling in Wales predicts a greater than 20% workforce gap in every department in less than five years. The age profiling for SAS grades mirrors that of Consultant Anaesthetists in Wales.

One in five SAS anaesthetists plan to leave the NHS within five years, which will have a massive impact on the Wales Anaesthesia workforce, ie a further 34 SAS grades retiring.

So what could be the potential solutions? To ensure we continue to deliver a safe and high quality service in anaesthesia in Wales, the considered options need to be multi-factorial. Firstly, departments should be making every effort to retain senior Consultants and SAS grades within the workforce peri-retirement, with job plans and flexible arrangements that suit their work life balance.

Secondly, it is widely accepted that we need to train more anaesthetists to CCT. With predicted growth and planned retirements, there is a potential deficit in CCT output of between 7-16 CCTs per annum in Wales. It will take time to produce the necessary CCT output, however that process has long been underway in Wales. There has been a sustained funded increase from Welsh Government of 15 additional training posts in Anaesthesia from August 2020, with a further bid in place for 6 more training posts from August 2023. This growth in training numbers to increase CCT output by 2025 has been further offset by the increased demand for less-than-full-time training, which is evident in every School of Anaesthesia in the UK. In Wales >35% of Specialist Trainees and 15% of Core Trainees are training LTFT, therefore extending their time to CCT date, which must be built into future workforce planning bids.

Finally, complementary workforce models e.g. Anaesthesia Associates (AAs), Acute Critical Care Practitioners (ACCPs) and CPET physiologists to support the current anaesthesia scope of service are an additional option in departments where their role is logistically possible. ACCPs have been widely adopted across critical care units in Wales - they provide an invaluable service to patients and support to doctors in ICUs and HDUs. Workforce re-design using AAs was successfully adopted by Hywel Dda UHB over 10 years ago, with a variety of AA roles in pre-operative assessment, vascular access services and 2–1 theatre work and supervision across three hospital sites. HEIW have supported a nationalised AA training programme with Swansea and Cardiff planning to recruit AA trainees from 2023. No one doubts that the AA role is still an uncomfortable proposition to many medically trained anaesthetists of all grades. However, alongside the first two solutions, the opportunity to consider the skills that AAs can offer to departments should be explored, if a service need is apparent, theatre layout logistics allow and a willingness to train and supervise AAs is evident from the Consultant staff.

Dr Sarah Harries, Head of Speciality School, Anaesthesia & ICM, Associate Dean, Health Education and Improvement Wales
Sarah.Harries5@wales.nhs.uk

Anaesthesia associates in Wales

Anaesthesia Associates (AA) are part of a wider group of practitioners known as Medical Associate Professions (MAPs). The NHS has seen the emergence of these new professional roles working within multi-professional teams as part of the continuing drive to provide safe, accessible high-quality care for patients in hospital and community services. MAP roles have been identified as part of the solution to workforce issues outlined in the NHS People Plan.

My background is an ODP within the anaesthetic specialty, I spent six years at Morriston Hospital in Swansea before deciding on exploring the ODP role further afield. My travels took me to Harefield Hospital in Uxbridge where I spent the best part of 3 years before the call of home brought me back to Glangwili in Carmarthen. It was here that I first encountered the role of the AA or PA(A) as it was then known. The idea of a patient facing role that provided a great prospect for career development was a very exciting opportunity. This year I will have been qualified as an AA for five years and I'm extremely grateful to have been able to pursue a career doing a job that I love. I sit on the board of the Association of Anaesthesia Associates as the Welsh Rep and have worked closely with HEIW on developing the framework for the AA role to be further developed within Wales.

Hywel Dda was an early adopter of the AA role in Wales, and indeed it is currently the only Health Board within Wales that has trained and employed AAs. This is set to change as of 2023 with both Cardiff and Vale and Swansea Bay planning to start training AAs. Hywel Dda currently employs seven AAs working across its four sites and has enabled one of these to take a sabbatical in order to help setup an AA service in an English NHS Trust.

AA's in Hywel Dda, are involved in all stages of the patient journey, in both the elective and emergency setting. As flexible and permanent members of the team we cover routine theatre lists, and support Trauma and CEPOD theatres. We provide a Vascular Access service across all four sites, preassessment clinics, pain management and help with National Audits, eg NELA, SNAP, TARN. We support with the Rota and Quality Improvement projects, and as an established part of the Glangwili and Prince Philip hospital Anaesthetic department, we are involved in teaching, education and clinical governance.

Workforce studies have continuously demonstrated the widening gap between supply and demand across all medical specialties and this is particularly felt within anaesthesia. The pandemic has only worsened this predicament with waiting list times at record highs. While AAs will not be 'the' solution I strongly believe they are part of it. Change within the workplace has always been challenging but we have to adapt to the challenges that lay ahead and embrace new ways of working.

Regulation by the GMC is on its way and this will hopefully allow AAs and indeed other MAP roles to realise their full potential.

For further advice and practical information on the introduction of Anaesthesia Associates – contact the Association of Anaesthesia Associates (AAA) or AA Consultant lead Gordon.milne@wales.nhs.uk

Dr Craig Hughes, Anaesthesia Associate, Hywel Dda University Health Board
Craig.hughes@wales.nhs.uk

Additional activities for SAS doctors

Doctors undertaking additional activities contribute hugely to the running of every department. Participating in other activities can lead to an individual feeling more satisfied with their job, more invested in their department and aid career progression.

Historically SAS doctors have been less involved with these activities than perhaps we could be. SAS doctors now have the same opportunities as any other anaesthetist. Most departments will support you in doing additional activities, especially if they make a direct contribution. Departments should also provide you with adequate time within your job plan.

The implementation of the new specialist contract last year has created new career progression opportunities for SAS doctors. Many SAS doctors already undertake a number of additional activities, but those who wish to become Specialists will have to evidence these additional activities to meet the criteria of the Generic Capabilities Framework.

I would strongly encourage all anaesthetists to do something in addition to your clinical work. This makes a valuable contribution to the NHS; builds on key skills like communication, teamwork, delegation and leadership; but also makes us feel more valued as an employee.

Where do I get the time to do these activities?

The Welsh SAS good practice guide recognises that in the order of 20 per cent of working time should be devoted to SPA. One SPA is dedicated to CPD. If you undertake any more work, this should be recognised by allocating more SPA.

Your employer should release you to perform any trade union duties. We can also use our Professional leave although this does not equate to many sessions. If you do more than 10 sessions for your trust you can choose to reduce your sessions to 10 and use your other time for other activities.

Some additional roles attract additional sessional pay. These particular roles are usually advertised within your trust. Often these roles appear that they are for consultants only, this is rarely the case and I would encourage appropriate individuals to apply anyway.

You may have the opportunity to apply for other roles for a different employer, for example working for the new Welsh Adult Critical Care Transfer Service (ACCTS).

There are various bodies like the GMC who advertise paid roles for doctors. This is a great opportunity to do something different which your department may find very valuable.

What could I do as an additional activity?

The following is just a small list of ideas, ask your colleagues what they do, you may be surprised! Remember SAS doctors have done all of these:

- teaching: national courses, local courses or create your own course!
- committees: RCoA, AAGBI, BMA are always looking your new proactive people to become committee members
- appraiser
- educational supervisor
- examiner
- GMC Associate
- clinical Lead
- lecturer
- researcher
- quality improvement project involvement
- clinical director
- roles in your post graduate department
- anatomy demonstrator
- rota co-ordinator
- national lead
- roles within HEIW
- roles within Public Health Wales

How do I go about it?

Come up with an idea and speak with your colleagues. Apply for the role if it is advertised. Think how it can benefit your department or the wider NHS. Then go and talk to your CD. Make sure it is written in your job plan and make sure you have the allocated time to do it. You may not always be fully supported for various reasons. Don't let this put your off. Most departments will support you if they can. Don't under estimate what an asset you are to your department!

Dr Kevin Draper, SAS Representative, RCoA Welsh Advisory Board
Kevin.Draper@wales.nhs.uk

The Nitrous Oxide Project

Nitrous oxide is a harmful greenhouse gas with more than 265 times the global warming potential than carbon dioxide (CO_2). As part of our commitment to the Wellbeing of Future Generations Act (2015) and as a key component of the NHS Wales Decarbonisation Strategic Delivery Plan, we have been working to reduce emission of this gas.

A multidisciplinary project team in Cardiff and Vale UHB identified substantial wastage from the piped nitrous oxide supply. A small portable cylinder supply was trialled at the Children's Hospital for Wales and demonstrated a significant improvement in efficiency to 74 per cent compared with only 2.5 per cent for the piped supply. The team then scaled the pilot study across the organisation and, to date, the University Hospital Llandough site has fully decommissioned its nitrous oxide manifold and piped supply with plans underway for the University Hospital of Wales to follow soon. The Health Board has projected savings of 1.15 million litres of nitrous oxide or 679 tonnes of CO_2e each year which will play a huge part in making healthcare more sustainable in Cardiff and beyond.

The project has ambitious plans to share insights and encourage change across Wales. Other Health boards are already working towards similar goals with plans to decommission the nitrous oxide manifolds at St Woolos, Ystrad Mynach and Nevill Hall Hospitals in the near future and we hope eventually to see the majority of nitrous oxide manifolds in Wales decommissioned.

We are now looking at how we can reduce Entonox emissions and, in a first for Wales, Anne-Marie Leaman recently gave birth to baby Hudson using new climate-friendly gas and air technology. In Cardiff and Vale, the use of Entonox is equivalent to emitting 4,495 tonnes of CO_2 every year which is comparable to driving 930 times around the world in a petrol car. Entonox Carbon Reduction Units, developed in Sweden, collect exhaled nitrous oxide and 'crack' it into nitrogen and oxygen.

Patients and staff have demonstrated great enthusiasm and commitment towards reducing environmental impacts and embracing new methods of care. We are really proud of the hard work the team has put in to get us to this point, challenging norms that have been around for decades and allowing us to bolster our commitment to reducing our environmental impact.

Dr Charlotte Oliver, Consultant Anaesthetist, Clinical Lead for Inpatient Pain Service, Cardiff and Vale University Health Board
Charlotte.Oliver@wales.nhs.uk

Exposure to draw over anaesthesia in University Hospital Llandough

Draw-over anaesthesia is something that we all learnt about for the exams, but is no longer in use in the UK. Imagine trying to deliver anaesthesia in an operating theatre with scant resources, frequent power cuts, unreliable oxygen and few trained staff. Having had experience working in developing countries where access to plenum vaporisers and more importantly, reliable sources of oxygen and electricity are often limited, we felt that learning to use a draw-over anaesthetic machine, within the safety of the NHS, would be of benefit prior to going out to low resourced settings.

The Glostavent was conceived as a simple, robust machine that was inexpensive to run and would work in the face of any difficulties, anywhere in the world. Most anaesthesia machines are designed for use in resource-rich hospitals and cannot cope with the challenging conditions of a developing world hospital. In addition, highly skilled engineers needed for servicing complex equipment are seldom available. As a result, much expensive, hi-tech equipment in low-resourced hospitals ends up abandoned as unusable, unrepairable or unaffordable.

The Glostavent was specifically designed to overcome these problems. It will continue to function during a power cut or when oxygen supplies run out, enabling safe anaesthesia and surgery to continue. A prototype machine developed by 1999 was successfully trialled in Malawi, Mozambique and Zambia during 2001–2003. Since then the Glostavent has undergone considerable development by Diamedica and it is now used in 80 countries, most in the developing world.

The Glostavent's main components are:

- a low-resistance vaporiser enabling draw-over and continuous flow anaesthesia without high flows of expensive medical gases
- an oxygen concentrator generating oxygen and air for the patient and driving the pneumatic ventilator
- an uninterruptable power supply providing battery backup and a voltage and frequency regulator that protects the equipment from damage during power surges.

The features that make the Glostavent ideal for use in remote and low-resourced hospitals, also make it suitable for outreach work and disaster response. Its reliability and suitability for purpose mean it is now used in field hospitals and mobile operating theatres by humanitarian organisations and in conflict zones, including Syria and Yemen.

We attended a study day and have had the reps with us in theatre and now feel confident to use the machine (which is disarmingly simple). The Glostavent is CE marked and an insurance indemnity is in place. We had the only Glostavent in a UK hospital in the new ENT theatre in Llandough prior to COVID-19 reconfiguration, which we used for short, quick turnover cases. The ODPs have been trained to set it up. We don't use it for long cases from an environmental point of view as low flow anaesthesia isn't possible. We are hoping to re-establish the use of the Glostavent in the near future and would be delighted to offer this as a training facility for doctors contemplating working in developing countries. If you would like to join use for a day, please contact us at naomi.goodwin@wales.nhs.uk or abraham.theron@wales.nhs.uk.

Carol Newman, Charity Liaison Officer, Diamedica (UK) Ltd
c.newman@diamedica.co.uk
Dr Naomi Goodwin, Consultant Anaesthetist, Cardiff & Vale University Health Board
Naomi.Goodwin@wales.nhs.uk

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