REGIONAL WORKFORCE ENGAGEMENT REPORT:

SCOTLAND

The Faculty of
Intensive Care Medicine

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Executive Summary

The Faculty were welcomed to Scotland by a cohesive community of Intensive Care Medicine (ICM) doctors who were keen to ensure the future for critical care patients remains at current high levels. Critical care provision in Scotland presents many challenges and as many potential solutions.

1. Growth in service need: With the information coming out of the Scottish Intensive Care Society Audit Group (SICSAG), the Intensive Care National Audit and Research Centre's (ICNARC) bed usage figures and the work captured in the Centre for Workforce Intelligence report (covering England only but we agreed at the engagement that the projections it detailed are applicable in all home nations), there is a demonstrable increasing patient need for critical care (an aging population, co-morbidities). The projections range from an increase in need from 50-100% in the next 20 years and though not all of this need will be met with an increase in the critical care workforce, clearly some of it must be.

2. Current workforce for critical care: What became clear at the engagement, from the data presented by each Health Board and the breakout group discussions, was that Scotland's critical care workforce is already showing signs of depletion. Many of the units were unable to fill their current empty posts. This had risen in the few months since the data capture on our annual workforce census had noted that 20% of units had unfilled consultant PAs. The discussions at the engagement detailed how this issue was also acute at the 'middle grade' level. A small number of units had been able to provide extra support with Advanced Critical Care Practitioners (ACCPs), though this was not widespread across Scotland. Whilst ACCPs cannot replace the need for trainees and consultants, they can be a key part of successful workforce solutions, but require a cohesive national plan.

3. Trainee doctors: The above issues are exacerbated by the drop in trainee doctors being recruited into ICM training programmes in Scotland. The Faculty, as one of its workforce metrics, measures the number of posts recruited per home nation or region against its population as a ratio. Whilst the UK average of new post to population has dropped (in 2016 it was 1:447k, down from 1:564k in 2015), the ratio in Scotland has risen from 1:355k in 2015 to 1:590k in 2016. As a comparison this is almost double the ratio of areas like the North East (1:294k) and Yorkshire & Humber (1:350k).

This drop is especially concerning considering the historical output from the previous 'Joint' training programme was at least ten trained ICM doctors annually. At the engagement we considered the additional issues that have arisen since the end of that programme, notably:

- The new programme allows entry from ST3 and has a postgraduate exam. This leads to a much greater risk of attrition than from the Joint CCT, which was recruited later in the trainee doctor's career.
- The growth in critical care patient needs (as in Point 1 above).
- The greater gap that has arisen between the number of trained doctors and the number of consultant vacancies (as in Point 2 above).
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It was universally agreed that a number higher than the 9 posts recruited to in 2016 would be needed to keep the ICM service in Scotland sustainable (producing as many trained doctors as there were consultant positions becoming vacant). Service providers were clearly strongly supportive of the concerns raised by the training fraternity. It is important to recognise that this makes no allowance for a growth in consultant positions.

There are a number of local solutions underway across the UK to manage a growth in the ICM training workforce. The first solution is to use hospital based fellowship posts that are taken over by the Deanery to recruit to centrally. These posts are not present in sufficient numbers in Scotland for this to be viable. The second solution is to use decommissioned Anaesthetic posts. In Scotland, critical care relies heavily upon Anaesthetic trainees to provide on-call and would therefore be in

effect ‘robbing Peter to pay Paul’, and would therefore be unsustainable. The third solution is to use decommissioned funding from other specialties which are either shrinking or consistently under filing. It is the view of the Faculty and of those present at the engagement, that this must be considered urgently.

The Faculty hopes the proposed solutions discussed in Section 6.2 offer a framework for the Health Boards, in conjunction with NHS Education for Scotland and the Scottish Government, to develop a strategy to begin to address the issues outlined.

1 INTRODUCTION: THE CRITICAL CARE WORKFORCE

This section is common to all FICM Workforce Engagement reports.

1.1 Critical Care in the NHS

Historically there has been little or no workforce data published for Intensive Care Medicine (ICM) in the UK. With the birth of the Faculty of Intensive Care Medicine (2010), there has been the opportunity to begin generating crucial workforce data through a series of censuses (2012, 2014 and 2015), engagement with workforce modelling projects and drawing information from audit and research.

Hospitals are in need of consultants with general, acute clinical skills. The needs of patients and desire of central government for a 7 day, consultant-delivered hospital service has been made clear. Whilst funding is shifting towards supporting outpatient and community-based activity, increased longevity, the rising incidence of diseases such as diabetes and cognitive impairment, and the expectations of the public mean that demand for intensive care is rising.

ICM presents a unique challenge for workforce planners:

- The recognition by the General Medical Council (GMC) of intensive care medicine (ICM) as a specialty, some inevitable decoupling from its traditional base in anaesthesia and the evolution of training systems through joint, dual and single specialty programs, means workforce planning for ICM is multi-faceted.
- Training is based traditionally around teaching hospitals and in conurbations. Some 86% of trainees now end up as consultants working in the same area in which they trained. Arguably, areas that struggle to recruit trainees or have few allocated to them will struggle to fill additional consultant posts even if funding is available to create them.
- Joint Faculty of Intensive Care Medicine (FICM) and Intensive Care Society (ICS) standards were published in 2015 (*Guidelines for the Provision of Intensive Care Services*). However, a number of units in England do not currently meet some of these standards, often through a lack of provision of separate ICM consultant rotas. Some critically ill patients are therefore being cared for overnight, over weekends and bank holidays by non-ICM trained consultants.

Whilst central government policy can set out to determine how many doctors are needed, the final number that can be employed in a particular geographical location is determined by the money available to employ them. In times of relative plenty (e.g. 1998-2008) expansion in consultant opportunities is rapid; more recently this has slowed significantly. Such swings are particularly apparent in specialist areas where significant capital investment is needed for optimal clinical practice, of which ICM may be the exemplar.

1.2 Projected demand

1.2.1 Census data

Between the 2014 and 2015 censuses, the figure for those intending to drop ICM sessions rose from 22% to 24%. The most common reasons across both censuses for wanting to leave ICM were all focussed on workforce issues:

- Work-life balance
- Work intensity / burnout
- Frequency of on call
- Lack of available beds?
- Lack of middle grade cover / nurses / consultants

In 2015, 47% of respondents felt that they found ICM stressful enough that it would influence their future career plans. Most respondents appeared to be working 12 PAs per week suggesting that they were taking on additional sessions.

The observation below acts as a summary of a number of similar comments submitted as part of the 2015 census:

'I have decided that regardless I will retire at 60 in order not to have to do ICM on call. The intensity of work is such that I cannot conceive of doing it up to the new retirement age.'

The censuses are revealing that, with increased work hours and increased stress, ICM consultants are already experiencing the difficulties associated with insufficient workforce.

1.2.2 Intensive Care National Audit and Research Centre (ICNARC)

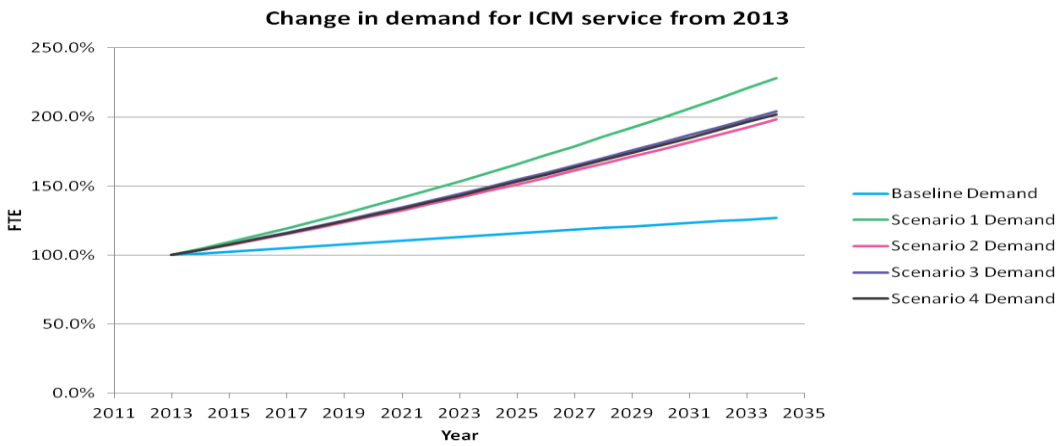
ICNARC is currently undertaking a long-term review of critical care bed utilisation rates. They released the statement below to us in 2014.

"Modelling the trends in terms of age- and sex-specific bed utilisation rates and then projecting forward to 2033, if the observed trends continue, then an increase in overall bed days is estimated of approximately 4% per annum – comprising an approximate increase of 7% per annum for Level 2 bed-days and an approximate decrease of 2% per annum for Level 3 bed-days." (D Harrison, K Rowan)

1.2.3 Centre for Workforce Intelligence (CfWI)

The CfWI conducted an in-depth review of ICM during 2014. The review, which consisted of data sourcing, a Delphi process and scenario modelling, resulted in a final report in early 2015. The report recognised, in line with the ICNARC research covered in 1.2.2, that there is **likely to be a significant increase in need over the next 18 years up to 2033**, with most scenarios indicating that it is likely to double. Although the CfWI, as a partner of Health Education England, focussed entirely on England, the ICM clinicians taking part in the process agreed that the demand scenarios lines were applicable UK-wide.

Figure: *Change in demand for ICM workforce by scenario*



1.2.4 Workforce aims

All current national data sources suggest that, with an aging population with increasing co-morbidities, demand for critical care services will outstrip current supply levels. The censuses reveal that the current workforce is beginning to experience the added stresses and uncertainty of working in critical care at a time where demand is not being met with increased provision.

The last significant growth in ICM took place following the publication of Comprehensive Critical Care in 2000. This document grew out of the poor workforce climate of critical care in the nineties. The Faculty aims to ensure that the current workforce problems are addressed before the UK reaches a second state of emergency.

2 BACKGROUND TO THE ENGAGEMENT

In October 2014 the FICM Board accepted a position paper as a statement of current provision and UK-wide projected trends for ICU services. The Board recognised the need for modelling of workforce demand in the home nations and regions, requesting that two pilot studies be undertaken. Wales and West Midlands followed.

Scotland, our third engagement, was the first home nation or region to request an engagement with the Faculty and we very happily accepted. Much as with Wales, Scotland's position as a home nation brings with it a wealth of data, in no small amount due to the work of the Scottish Intensive Care Society (SICS) and the SICS Audit Group (SICSAG). It also brings a considerable amount of local experience of interaction in the political realm, through direct discussions over posts and funding with the Scottish Government and NHS Education for Scotland (NES).

District General Hospitals and Teaching Hospitals cover roughly 92% of the population. These sites will have up to Level 3 / Intensive Care Unit care and consultant-lead emergency departments. The remaining population are covered by the six Rural General Hospitals, Community Hospitals and remote general practices. These sites will have up to Level 2 / Higher Dependency Unit care and emergency services provided by professionals other than Emergency Medicine consultants. It was recognised by the Faculty that there are likely to be issues unique to each type of structure. In addition, Community hospitals (often located on islands) will have varying models of healthcare to cover for emergencies.

In February 2016, Dr Elizabeth Wilson (then Regional Advisor to South East Scotland) responded to Faculty correspondence to Regional Advisors enquiring if any believe their region or home nation would benefit from an Engagement Meeting. Dr Brian Cook had discussed this informally via the FICM Workforce Advisory Group and received support from the SICS via their then President, Dr Graham Nimmo. A core group was established to organise the meeting which, along with Dr Wilson and Dr Cook, included Dr John Colvin, Dr Stephen Cole, Dr Carol Murdoch and Dr Catriona Barr

Following extensive liaison with key leads in Scotland, representatives (please see Appendix 1) were agreed with each Health Board, SCIS, SICSAG, NES and local training leads. We are grateful to the assistance given by those mentioned above and the Scottish Critical Care Delivery Group.

2.1 Engagement Aims

The engagements would be conducted with the aim of:

- Describing the current supply of ICM/critical care facilities in Scotland and presenting an assessment of likely future (5-10 years) demand.
- Identifying the likely future location of critical care services based upon current provision and networks of clinical care surrounding regional centres.
- Presenting the best estimates that can be made of the current trained medical workforce in ICM in Scotland, their distribution and demographic; and the workforce in training.
- Conducting discussion sessions to reconcile supply and likely demand for ICM, with the current and projected workforce.
- Providing a data report that could be used by the home nation or region to exert professional pressure in order to address areas of workforce concern.

The engagements would not aim to:

- Use the visit to prioritise a particular workforce solution or to replace the local expertise in areas like the planning of training numbers (which is the responsibility of the Regional Advisor in conjunction with the Specialist Training Committee).
- Use this as an opportunity to police the uptake of GPICS. Recommendations and Standards in GPICS will be used as opportunities to model future potential future demands on the workforce in Scotland.

The engagement would result in this final report and its appendices which could be used by the local stakeholders (across the Health Boards, Networks, Deanery and Government) to manage workforce decisions in the specialty.

2.2 UK Wide Application

The Faculty's intention is to run further engagements across the UK. Information gathered from all these workforce engagements will aid the UK-wide workforce plans for the specialty.

3. THE WORKFORCE IN SCOTLAND

3.1 ICM AND CRITICAL CARE FACILTITIES IN SCOTLAND

This information is based on a presentation given by Dr Brian Cook and reflects his opinion of the ICM and Critical Care facilities in Scotland.

Critical Care services in Scotland have evolved over time with planning driven locally in the territorial health boards. While there has been an attempt to match workforce planning on a national basis, the rapid specialty developments and expansions of particularly, level 2 beds, has struggled to match a critical care trained consultant workforce to service demand.

Scottish Critical Care services are delivered in 20 general ICU's, 4 specialist ICUs and 46 HDUs across all of the territorial health boards. Staffing models are variable, particularly in HDU's, 22 of which have no identified dedicated consultant. One of the main pressures from our Guidelines for Provision of Intensive Care Services (GPICS) is a requirement to split anaesthetic and critical care rotas at consultant level. This may be challenging in smaller hospitals and Scotland has a number of these. Scotland's National Clinical Strategy published in 2016 suggests rationalisation of some complex and specialist services but there is no indication of a reduction of acute hospital sites which require level 3 critical care (intensive care) to support activity.

Critical Care underpins our ability to support major elective surgery and acute services across the NHS. With this in mind, the demographic projections of demand and workforce supply can make for some anxious reading. The CfWI and ICNARC projections on demand for critical care and anaesthetic services to the 2030's in England are described above. These equally apply to Scotland: data from the Scottish Intensive Care Society Audit Group (SICSAG) shows that demand is rising as predicted: total level 2 and 3 patient days have increased by 13% over the last 6 years largely driven by a 5% per annum increase in level 2.

Expectations of critical care delivery remain high and there are very close working and shared service relationships with anaesthetic departments in Scotland. ICM training in Scotland is heavily dependent on dual appointments with anaesthetics and this is not a sustainable position. Lack of trained ICM consultants will inevitably deplete resources from anaesthetic departments while demand is also increasing for anaesthetists. Elective surgery becomes threatened by prioritisation of emergency work.

We must look forward to plan for the future at national level in Scotland to support services and clinical staff in our range of hospitals from large urban university hospitals to small rural units. Workforce will be our biggest challenge.

3.2 CLINICAL DEMAND AND WORKFORCE IN SCOTLAND

This information is based on a presentation given by Dr Carol Murdoch and reflects her opinion of the current clinical demand and workforce situation in Scotland.

Critical Care services in Scotland remain under considerable pressure and all projections of future need suggest significant increases in demand.

Scottish data from the Scottish Intensive Care Society Audit Group confirm on-going increased demand for critical care services in Scotland. Admissions are increasing year on year with around 45,000 patients admitted to critical care units in 2015. Demand for level 3 and in particular level 2 care continues to increase. Critical care services run 24/7 with around 35% of ICU admission and 50% of HDU admissions occurring between 2200 and 0800 hours. Patient expectation, complexity and comorbidity and thus the level of required interventions continue to increase. The on-going implementation of minimum standards and quality indicators for the delivery of critical care in Scotland will reinforce the required high level of direct consultant involvement in the delivery of safe and effective critical care services.

Prior to 2012 Scotland appointed 10 doctors per year to train at advanced level in Intensive Care Medicine. These posts were appointed and undertaken towards the end of base specialty CCT programmes and as a result attrition rates were negligible as were delays in training. The number of doctors gaining a CCT jointly with ICM was therefore predictable at 10 per year. These doctors were overwhelmingly appointed to consultant posts with a Critical Care commitment in Scotland.

The advent of the new CCT training programme with Dual training in 2012 has led to extensions to time to train. Appointment earlier in training for ICM has seen an increase in delays in training due to exam failure and attrition from the programme. The specialty has also seen an increase in female doctors and, whilst the specialty benefits from that broadening workforce, it has meant an increase in maternity leave and requests for less than full time training which the specialty needs to learn to adapt to.

As yet no trainee has completed the new CCT programme in ICM in Scotland. Whilst estimating time taken to complete the complex and individually tailored programme is to some extent an exercise in extrapolation, it is possible to consider those trainees in programme and predict future CCT output.

Robust Scottish census data from those consultants with daytime ICM sessions as part of their job plan allows us to compare the predicted consultant retiral rate with the CCT programme output. There is real concern that Scotland will not produce sufficient numbers of CCT holders in ICM to replace retiring consultant numbers and recruitment must address this and the projections for growth in service need going forward.

4. ISSUES CURRENTLY FACING CRITICAL CARE

The information below was generated as part of the discussions regarding the issues currently facing critical care services in Scotland. The attendees were divided into two groups and were asked to discuss the following points:

- What current gaps in service provision (personnel or structural) are apparent in your unit specifically and Scotland in general?
- Are there any solutions, outside of increasing the workforce, that are being or could be introduced to address these?
- What is the current morale of the ICM workforce (consultant and the wider multi-professional team)?
- What is happening with regards to providing a dedicated junior tier in critical care and what issues does the group foresee with this?
- What is happening with regards to separating anaesthesia and critical care consultant rotas and what issues does the group foresee with this?

The comments below are a reflection of these discussions and the opinions of those who took part.

NHS AYRSHIRE AND ARRAN

University Hospital Ayr

The unit has 5 ICU beds (4.5 of which are funded) and 4 HDU beds adjacent to the ICU. The consultant rota has increased in frequency as there is a lack of seniority amongst the trainees meaning more consultant cover is needed. Out of hours cover is provided by intensivists and generalists. There is now a second consultant on-call that is used for junior trainee cover up to ST2 level. There is now a second consultant in the hospital who is used for transfer. The unit runs a hybrid rota; an ICU consultant covers weekdays and 1 weekend day on call and the rota has been adjusted to ensure that no more than 24 hours passes without an intensivist available for a ward round. Night-time cover is shared with the non-intensivist consultants. There is an additional Level of consultant rota cover for the emergency theatre or to allow transfers when the first on-call is year 1 & 2. At present, we are managing to cover our needs but discussing complying with GPICS has already caused great stress in the department. We expect 1-2 retirements in the next five years and we have one anaesthetist who wishes to develop an ICU interest. The HDU is next to the ICU and is run by the same nursing staff but clinical responsibility for the patients remains with medical and surgical teams. The lack of HDU capacity has forced the Medical High Care Unit to extend its role into HDU care to try and cope with HDU demand in medicine.

University Hospital Crosshouse

The intensive care unit has 6 Level 3 beds, and has a separate Consultant rota. The medical and surgical HDUs are located elsewhere in the hospital. All the trainee rotas are stretched, and overnight the trainee is shared between theatres and ICU. The unit is considering developing ACCPs with a skill set equivalent to CT1 and CT2 trainees to fill the gaps. There is uncertainty about the future provision of services in Ayrshire which makes planning for future workforce difficult. There are currently 6 beds but no room for expansion and patients have to be transferred if the unit is at capacity. There is a separate consultant transfer rota to mitigate for this. The Board is generally supportive of having separate rotas. There are currently 10 consultants on the ICU rota and a shared trainee overnight on-call intense. All consultants are GPICS compliant but we are expecting 2-3 consultant vacancies to come up in the next 2 years.

NHS BORDERS

Borders General Hospital

The combined on-call rota has 12 consultants plus 2 locums; in order to separate the rotas the unit needs 16-18 consultants. There would be difficulties sustaining a 1:6 rota. We have a middle grade rota but not dedicated to ICM and this is not achievable. We are dependent on SAS doctors for this rota and will have issues with retirement in the near future. ACCPs on the unit could to cover up to ST2 Level but have no plans to recruit at present.

NHS DUMFRIES & GALLOWAY

Dumfries and Galloway Royal Infirmary

The hospital is close to the border so lots of consultants come from the North of England and we look to recruit from there too. A new hospital is being built which will integrate the medical and surgical HDU and ICU; this could be difficult if it is not set up properly. The unit is highly reliant on SAS grades to cover the ICU. Trainees have usually done their ICU block which is problematic. There are 12 consultants, 6 of whom do ICM. There are 2 consultants on at night, 1 anaesthetist and 1 intensivist in hierarchical 1st/2nd call; 2nd call is quieter and there is a day off after a night on call which makes it more sustainable.

NHS FIFE

Victoria Hospital, Kirkcaldy

The Intensive Care Unit has 10 Level 3 beds of which 9 are funded. There are currently 9 consultants and 6 trainees on the rota; 2 are higher trainees, 2 are ACCS and 2 are LAS posts which we fill every 6 months, usually with juniors who want ICU experience before applying for training. Most of these trainees come from an ACCS or EM background. There is concern that we might not be able to fill the posts in future and that the rota is not robust; however so far we have not had difficulty filling the posts. Critical care intends to look at the employment of ACCPs or Advanced Nurse Practitioners as part of a hospital-wide consultation on ANPs but financial considerations mean that this is likely to be a long way off. Intensivists run the 8 bedded surgical HDU Monday to Friday 8am-5pm. There is no intention to take over the medical HDU, which is run by physicians.

NHS FORTH VALLEY

Forth Valley Royal Hospital

The unit is a combined ICU and HDU with 19 beds and is the result of 2 DGHs merging in 2005. The unit has a resident consultant (either ICU or anaesthesia) and an anaesthetic trainee on call all night with a team working to cover three areas; ICU, theatres and obstetrics. There is also an ICU and general rota consultant on call from home; the resident consultant triages admissions and workload and calls in the relevant person. Each resident consultant delivers three nights in every 6 week period. This is unusual for Scotland but seems to work well; 6 FY1/FY2 trainees are on the extended daytime rota, with 2-3 anaesthetic trainees and an ICM advanced trainee rotates intermittently for several months, usually on an ad-hoc basis. Daytime cover needs to be more robust as often foundation or new in post anaesthesia trainees are sole junior provision. The unit may train ACCPs in the future however, the theatres use PAAs so these may be increased instead.

NHS GREATER GLASGOW & CLYDE

Glasgow Royal Infirmary

The unit is a 20 bed mixed unit, there is also an 8 bed medical HDU and an 8 bed surgical HDU. There are currently 12 consultants working on the ICU doing an equal share of day and night time shifts. There is 1 consultant on long-term sick leave who is being covered by an internal locum. 2 new consultants have just been appointed; 1 has a joint CCT and the other did 6 months ICM training. The most recent retiring consultant was told he could not give up ICU until he was replaced. The RA is encouraging anaesthetic trainees to do 6 months ICM as part of an advanced anaesthetic year if they want to do daytime ICM sessions in the West of Scotland in the future. There is 1 tier of trainees and 1 tier of consultants and nothing in between. There are no ACCPs at the moment and there is no funding to train them this year however, we are hoping to train 2 next year. There is usually 1 intubating trainee and 1 non-intubating trainee. There also used to be medical trainees however, these posts were often unfilled so, due to staff shortages, the TPD has stopped sending acute medicine trainees in ST4 to ICM. The ultimate goal is to increase the number of consultants to 18 which will stop consultants working 72 hours at the weekend. The anaesthetic rota back fills any leave on the trainee tier; the anaesthetic training committee and trainees are unhappy about the amount of time spent on the ICU as they are concerned about losing anaesthetic skills.

Inverclyde Royal Hospital

There are 2 Level 3 beds. Only 4 out of 8 consultants provide daytime cover to ICU. The unit is not GPICS compliant. There is a consultant vacancy which has been difficult to fill. The unit is not approved for ICM training. Challenges exist in providing continuous junior resident cover and the inter-hospital transfer of patients especially time critical out of hours cases. Skill retention among the medical and nursing staff also raise some issues around the long term sustainability of the current care model.

Queen Elizabeth University Hospital

This is a new hospital opened in 2015. There are 59 beds on the critical care floor 53 of which are fully funded. 6 are unfunded and are used for escalation; these beds will be required and funded for the anticipated opening of the Major Trauma Centre. There are currently 18 funded Level 3 beds, 9 funded Level 2 Medical HDU beds and 26 funded Level 2 beds. This configuration is flexible. There are 21 consultants working within critical care including a mix of full time intensivists and those with sessions on anaesthesia and emergency medicine. All Level 2 and Level 3 beds are covered by critical care with the exception of the medical HDU out of hours. When on-call, consultants only have responsibilities for critical care. At night, there are 3 consultants, 1 resident and 2 on call. There are 2 trainee rotas for the 2 ICUs. One trainee always has advanced airway skills and are usually Specialty Trainees. The other rota comprises ACCS trainees or Core Anaesthetic trainees. In addition an Advanced/Stage 3 trainee may at times contribute to the rota however there has been no such trainee at QEUH for the last 9 months. The HDU trainee rota is comprised of Surgical FY2s supported by FY1s. There are 3 ACCPs currently undergoing training. Pharmacy and physiotherapy cover does not meeting GPICS standards at the weekend. There is no Cardiac ICU at the QEUH. The Neuro-critical care has a separate on call team. There is no retrieval team. There are difficulties providing attendance with appropriate personnel for two resuscitation teams.

Royal Alexandra Hospital, Paisley

The unit has 7 Level 3 beds and has a separate rota. All consultants have a dual CCT. There is a 1:7.5 rota working full weeks of daytime ICM and covering nights in-between. A new 9 bed unit is planned for 2018. It will be co-located with HDU. If all beds are funded there will need to be an increase in the present medical staffing model (of at least 2 consultants and 1 trainee). HDU is currently covered by parent speciality teams. There may be opportunity with the co-located units for more intensivist input into HDU.

NHS HIGHLAND

Raigmore Hospital, Inverness

The unit has 8 Level 3 beds looked after by 8 consultants and a pool of trainees. The consultant rota was recently split allowing a consultant in ICM to manage the patients on the unit 24/7. We heavily rely on anaesthetic CT2 trainees on their introductory 3 month block to cover the junior rota. On site there is also a 6 bed surgical HDU where patients are managed by consultant surgeons. A refurbishment is about to take place which increases the bed capacity of the Surgical HDU from 6 to 8 Level 2 beds and collocates the Surgical HDU next to the intensive care unit. It is anticipated that the intensive care team will take over the daily management of the Level 2 patients in the new Surgical HDU. At the moment nurse practitioners cover the Surgical HDU during the day.

NHS LANARKSHIRE

General Health Board information

There are 3 acute hospitals, Hairmyres, Monklands and Wishaw which are all run independently. There are 3 critical care units (combined ICU/HDU) with 30 beds in total with 18-19 consultants. Each site has a separate medical HDU with no formal intensivist input. Level 1 surgical HDU beds are in place on all 3 sites. None of the units have a separate consultant intensivist out of hours rota; consultants provide blocks of cover at Wishaw and Monklands and this works well. There are a limited number of trainees on site and 8 qualified ACCPs are distributed in the 3 units. All units are very reliant on trainees to run the service out of hours which is risky and there can be gaps in the service. This could be filled by training more ACCPs but there is a risk of becoming too reliant on them also and we are unsure how to sustain them.

Wishaw Hospital

The unit is a 12 bed combined general Level 3 and surgical Level 2 facility. Within this, the critical care team has clinical responsibility for Level 3 and orthopaedic Level 2 patients only. The rota is currently combined but there are plans to split it at the beginning of 2017. Intensivist cover is provided in hours on week days. Out of hours cover may be anaesthetist or intensivist. There are 3 trained ACCPs and the unit is dependent on them to ensure that anaesthetic trainees fulfil their theatre training requirements. ACCPs can also leave gaps in the nurse staffing rota which need to be backfilled. The unit needs 3 ACCPs to augment the service and discussions are ongoing regarding succession planning.

NHS LOTHIAN

General Health Board information

There are 3 ICUs in the Health Board (RIE, WGH & SJH). NHS Lothian is in the middle of a major service redesign: the Department of Clinical Neurosciences (DCN), which includes Neurology and Neurosurgery, is moving from the Western General Hospital to the Royal Infirmary of Edinburgh. This service redesign is known locally as the 'DCN re-provision' and is currently planned for Spring 2018. New recruitments and considerable changes to job plans will be required.

Royal Infirmary Edinburgh

RIE ICU is expanding from 30 to 42 beds (22 Level 3 and 20 Level 2 beds) due to the DCN re-provision. From a staffing point of view these beds are going to be divided between 2 adjacent wards (physically separated by a corridor). It is already a very busy ICU with a high proportion of night time admissions. An expansion in the number of nurses, doctors of all grades and ACCPs is planned. All rotas cover critical care only. The consultant body is currently a mix of full-time Intensivists and those with commitments to other specialties including Anaesthesia, Emergency Medicine and other medical specialties. The preferred consultant rota model would be 4 consultants for weekday ICU cover and 2 consultants out of hours (nights and weekends). To ensure this is sustainable would need 24 WTE consultants. The consultant workforce has recently been expanded (currently 21 WTE) in preparation but 3 new consultants are still needed before Spring 2018. Consultant recruitment to this unit has been very successful. Cross site working for consultants will also be adopted. It is hoped that cross site working will:

1) support the delivery of neuro-critical care in the RIE (with the transfer of experienced staff)
2) support the smaller WGH & SJH ICUs
3) result in the net transfer of consultant time to the RIE

There are currently 2 tiers to the trainee rota (a middle grade rota and a CT/foundation doctor rota) plus ACCPs. There are currently 6 trainees on the middle-grade rota (5 of whom are anaesthesia trainees undertaking their intermediate and higher ICM blocks; 1 is likely to be an advanced ICM trainee). This rota suffers from frequent gaps in supply from the anaesthetic training programme; the unit would like to appoint 2 Clinical Fellows to give this rota some stability.

There are currently 15 trained ACCPs across the 2 sites (RIE and WGH) with a further 2 ACCPs in training.

St John's Hospital

The ICU has three Level 3 and two Level 2 beds; the hospital has an active A&E, unselected medical take, an obstetric unit and a burns unit. 5 WTE consultants provide cover for the ICU (exclusively) during weekdays. Out of hours consultant cover is provided by either a consultant Anaesthetist/Intensivist or a consultant Anaesthetist (who has no daytime commitment to intensive care) and the consultant covers both ICU and Anaesthesia. The consultant on-call rota is currently 1:14 but there are not quite enough consultants in intensive care to split the rota (a split would also very unpopular with the consultant staff). 2 consultants are expected to retire in the next year. In recent years the unit has struggled to recruit consultants to the ICU but in 2016 2 new appointments were made; both posts had cross site working in their job plans and this is thought to have been a

decisive factor in the successful appointment process. Currently, anaesthetic trainees provide daytime and night-time cover for the ICU; they also cover the busy obstetric unit. The ICU is looking at using ACCPs for daytime cover seven days a week instead of the anaesthetic trainees but the ICU will still rely on anaesthetic trainees for night-time cover. The ICU is only recognised for Stage 1 training.

Western General Hospital

The DCN re-provision will result in significant changes at the WGH. The number of beds is being reduced from 16 to 10 (six Level 3 and four Level 2). There will be 1 consultant on duty during the day instead of the 2 currently. Cross-site working for the WGH Intensive care consultants is anticipated; some/most of them will be expected to do sessions at the RIE.

Currently there are gaps in the middle-grade rota and a full CT1 Level rota supported by ACCPs. These doctors and ACCP's cover critical care only. It is anticipated the number of trainees on the middle grade rota will be reduced following the DCN re-provision. Airway skills amongst the CT1 trainees are variable and there is a resident anaesthetist on call in the hospital.

These changes are not viewed positively and morale is currently low. There are concerns about the retention and recruitment of consultants in the future.

NHS ORKNEY

Balfour Hospital

A representative from NHS Orkney was not able to attend this meeting due to staff shortages however, the report was submitted via email.

Orkney has a population of 22,000 people scattered across 24 islands. Balfour Hospital has a 2 (funded) bed HDU which is shared with medicine and also looks after coronary care patients. There can be 3 patients on the unit at a time. Level 3 patients are cared for until they can be transferred or when the island is stormbound. Critical Care nurses are enthusiastic and keen to learn however, opportunities can be limited and funding for training is an ongoing issue.

The unit currently has 1 full time anaesthetist, who is likely to retire in late 2017 and 1 part time consultant who works a 0.4 WTE. There are also 2 consultant vacancies; recruitment has so far been unsuccessful however we are establishing a bank of 'regular' locums. Anaesthetists cover the whole hospital and are involved in A&E, obstetrics, paediatrics and neonates, as necessary. A consultant with specific ICM training would be useful if they can also get involved in A&E, obstetrics including anaesthesia for Caesarean Section, paediatric and neonate assessment, resuscitation and treatment.

NHS SPECIAL BOARD

Golden Jubilee National Hospital

This is a special NHS Health Board and was initially a heart and lung waiting times centre. The hospital is a regional and national cardio-thoracic centre with 20 Level 3 beds during the week and 12 at the weekend, there are also 16 HDU beds. There are 10 consultants on the ICU rota, 2 during the day, 1 at night during the week.

NHS SHETLAND

Gilbert Bain Hospital

The region has approximately 25,000 people looked after by 3-4 consultants; locums are used and this is likely to increase in the future. There is a 2 bed HDU and most Level 3 patients are transferred. There are no trainees and few critical care nurses but these are well supported by anaesthetic nurses. The consultants cover the entire hospital and lots of specialties including paediatric and neo-natal. It is unlikely that the hospital will recruit anyone who is ICM trained and recruitment in general is difficult as training for remote hospitals doesn't exist; this type of hospital requires a much more generalist approach. There is a rural fellowship available but it's difficult to get funding. The consultants aim to provide the best possible intensive care while the patients are on the unit but the consultants may be needed elsewhere so patients cannot stay for too long.

NHS TAYSIDE

Ninewells Hospital

There is one Level 3 unit within the hospital with 8 funded beds. There are 7 consultants and trainees from CT1-ST3 who are resident on call. Consultants are phoned every night but not always called in. The unit is very close to meeting GPICS standards.

Perth Royal Infirmary

There are 11 consultants on the unit, all anaesthetists who cover anaesthetics and ICM during the day and overnight. There were 110 patients in 2015, 60 of whom were Level 3. There is a hybrid rota of 8 people this includes 4 trainees and specialty doctors. The hospital still looks after an unselected medical take.

GENERAL

Nursing staff and ACCPs

Although ACCPs are able to run units and manage most cases, they might not have airway skills so units are still missing senior trainees or require more consultant input.
Nursing shortages on other wards have an impact on the ICU; for example, if a rehabilitation ward is understaffed, patients are kept on the ICU for longer which is safer but also increases delayed discharge figures.

Telemedicine

Telemedicine might be useful but the problem is the technology; it would be difficult to diagnose a patient over skype or facetime if the Wi-Fi or phone signal was not good. There is also the question of responsibility; it would need to be clear who was responsible for the patient and both parties would need to be invested in the patient's care. There was an argument that telemedicine may not help rural and remote units as viewing a patient from a computer screen would not give accurate impressions. For these units, a phone call to a colleague you know and who knows the resources available in these units would be more beneficial however, this has implications for training, CPD and visits.

ScotSTAR

The Scottish Specialist Transfer and Retrieval services (ScotSTAR) are managed by the Scottish Ambulance Service. ScotSTAR includes Adult (EMRS), Paediatric and Neonatal transfer services. The Emergency Medical Retrieval Service (EMRS) was established to retrieve adult patients requiring critical care from health facilities in remote and rural areas. EMRS covers the six Rural General Hospitals), over 20 GP-led Community hospitals and many remote General Practices across the west and north of Scotland.

Secondary transfer of cases from other areas of Scotland are arranged and carried out by staff from the referring hospital.

There was a 'Shock Team' run by NHS Greater Glasgow and Clyde which did Critical Care transfers between major hospitals in the West of Scotland however, this ceased in 2014.

Trainees

Scotland is one Deanery split into 4 training regions. The number of trainees is allocated as follows; West of Scotland has 50% of trainees, South East Scotland has 25%, North of Scotland has 15% and East of Scotland have 10%. Trainees within the ICU come from different specialty backgrounds and are at various stages of training. Trainees rotate within each School of Anaesthesia. Access to trainees depends on the infrastructure; for example, some units can only provide basic training so will only have very junior trainees.

The trainee rota in most units is very competent for level of training but there is a shortage of trainees at a more senior level who are capable of making decisions around ICU admission. Trainees still require regular consultant support and advice and not infrequently consultants are also required simply to provide an extra pair of hands. An increase in junior doctor numbers does not necessarily mean a reduced work load for consultants. Trainees are not always experienced working 12 hour shifts and making decisions.

The South East region in particular has a good academic record which attracts good trainees however, this condenses clinical output as academic trainees clinical sessions are fewer and many academic trainees take on consultant posts with fewer clinical sessions. In some cases, these trainees contribute to out of hours cover.

The transition between the Joint and Dual training programme is hitting Scotland hard with fewer trainees coming through the programme. Some trainees in the Joint system left ICM training or had Inter-Deanery transfers and their training slots could not be re-advertised. Since these posts carried only one year of funding we were unable to re-advertise them under the new system which is a longer training programme.

The complexity of the new training programme has been an issue. It has proved confusing to intensivists, those in other Dual specialties and those in management and training roles, in particular NES which has worked against the specialty. It has been problematic in the current financial climate to secure additional funding and accommodate the longer training time required. Training numbers in Scotland for all specialties are based on a trainee establishment where numbers are relatively static. This is not the case for ICM. NES are reluctant to approve any further ICM training posts without the Scottish Government's support in terms of provision of new funding.

Trainees at the Glasgow Royal Infirmary are now undertaking 6 months of ICM as a mandatory part of their training.

As a rule, trainees want to work where they train. If bigger centres cover more interesting cases, training there will be appealing. This is also affected by geography, house prices etc.

Medical rotas seem to be worse than anaesthetic and ICM which is making deaneries reluctant to let trainees do some ICM training as it will affect service delivery.

Funding

Funding in Scotland is based on a block grant which means there is no increase in funding to accompany an increase in activity. The commissioning structure isn't used in Scotland. More money seems to be directed towards scheduled care as this is a priority for the government and resources are being cut to try to make savings. There is a struggle every year to obtain funding for training posts and there will be difficulty in filling gaps in both service and training without an increase in funding.

There seems to be a lack of understanding from the Deanery and Health Boards about the problems with the programme, this is exacerbated by the complicated Dual programme. There have been several efforts over the years to change this system to no avail. The 'one in, one out' system is going to fail eventually.

There is also a lack of understanding that a shortfall in the critical care medical workforce will in large part be taken up by anaesthetists who have the skills and training to do so. This will be at the expense of scheduled activity as emergency workload is prioritised.

Levels of Care

Critical Care doesn't have the resources to take over Level 1 care so drawing a line above these patients is a sensible way to manage admissions. In some hospitals, Level 1 patients are managed safely by anaesthetists, physicians and surgeons without any critical care input so there is no need to change this. In others, Level 1 patients are put in Level 2 beds as there is nowhere else for them to go which means Critical Care staff ultimately looks after the patient. The levels of care seem to be more blurred and are less helpful now.

HDUs

Some trainees don't see HDU as Critical Care and ICU sessions seem to be more attractive. HDUs can be more complicated than ICUs so it is useful for trainees to work in them however, in some cases FY2 trainees are looking after HDU beds which may not be safe. There is a need for ICM trainees; there are larger gaps in HDU rotas than ICM which could be covered by ICM trainees. Many HDUs in Scotland do not have dedicated consultant cover at any time.

Geography

Geography plays a role in the ICM service across Scotland. Approximately 8% of Scottish people live over an hour away from a hospital with an ICU and 10% of hospitals have no ICU specialists. Community Hospitals are available in remote and rural areas and these are run by GPs. Resources can be limited if the distance between hospitals is too great for example, if an ICU nurse is needed to cover for a night in Aberdeen, you have to use the existing pool of people as an ICU nurse from Glasgow etc. won't travel to Aberdeen for one night.

An approach to staffing and recruitment that may work in urban areas is unlikely to work in the Islands. If the Scottish Government and the profession wish there to be cost-effective, sustainable secondary care in the Scottish Islands, there needs to be a radical rethink about training, recruitment and retention.

Referrals

In non-time critical situations, there is a system in place for who deals with rural referrals but in time critical situations it falls to whoever is available. Paediatrics and neo-natal services have a national programme for retrieval for remote and rural locations. There is currently no designated major trauma centre in Scotland but plans are underway to implement a national trauma network with 4 MTC's in the major cities.

On-call

On-call seems to have increased in intensity if not the frequency. As there are fewer senior trainees, consultants have to go in more frequently when called by junior trainees and nurse practitioners and The intensity of the rota can lead to consultants being in the hospital for large proportions or all of the on call shift.

In some hospitals, including larger teaching hospitals, there are is only tier of trainees, sometimes all very junior so there is variability in how often a consultant is called in depending on the level of trainee working.

5. MAPPING THE FUTURE

As with section 4, the information below was generated as part of the discussions regarding the future of critical care services in Scotland. The attendees were asked to consider different models based on the short-term future (5-10 years):

- What workforce would be required for each unit/Health Board in order to
  - to maintain the current critical care service provision?
  - to meet the Standards of GPICS?
  - to meet both the Standards and Recommendations of GPICS?
- Will local reconfiguration plans have an effect on the above workforce models?
- What does the group foresee the effect of EMRTS and patient transfer and repatriation will be on units?

For each model, the attendees were asked to include the approximate number of WTE consultants, trainees, ACCPs and nurses and any other specific relevant detail (i.e. the number and level of beds).

The comments below are a reflection of these discussions and the opinions of those who took part.

NHS AYRSHIRE & ARRAN

University Hospital Ayr

There are 2 variables for the future; one is trying to fulfil GPICS and the other is extending the units (ICU/HDU) to create 6 Level 3 and 12 Level 2 beds. Plans to safely staff the HDU are incomplete. It is anticipated that a new hospital will be built by the Health Board due to structural problems at University Hospital Crosshouse therefore, we would expect service reconfiguration to take place in the next 8-15 years. Meeting both the standards and recommendations of GPICS is very difficult for smaller ICUs especially in a country which has only 10% of the population density of England where these standards were created.

University Hospital Crosshouse

The hospital has plans to develop a combined critical care unit made up of 24 beds. A 12 bedded combined ICU/surgical HDU adjacent to a 12 Medical HDU. The medical HDU will be run by the acute physicians, with ICU consultants looking after the ICU/surgical HDU with support from surgical colleagues There are currently 10 consultants and this would likely result in an increase in daytime sessions. There will be an issue with junior medical staff as there is not the volume of trainees available. The unit will probably train ACCPs to help fill these gaps; it is estimated that we will need 6 for 24/7 cover. The unit would benefit from trainee expansion.

NHS BORDERS

Borders General Hospital

The unit generates anaesthetist intensivists out of anaesthetic trainees and consultants. There are 3 full time anaesthetists at the moment and we expect to need 2 more anaesthetists and 4 more intensivists over the next 5 years. This is taking into account the fact that retirement will increase on-call frequency but there will be a decrease in trainees. There is no way to get a separate ICM rota without a massive funding injection. We have the most established outreach programme in the region; nurse practitioners would like to include critical care daytime sessions.

NHS DUMFRIES & GALLOWAY

Dumfries and Galloway Royal Infirmary

The new building is due to open in December 2017 with 17 beds. The ICU and medical/surgical HDU will be co-located; we do not expect there to be enough staff during the day to cover the medical/surgical HDU patients. There will be 2 teams on the floor; 1 for the ICU and 1 for the HDU. We are heading towards a closed model of daytime weekdays from 8am-6pm for all critical care beds. Level 2 patients will then be managed by out of hours medical and surgical teams. With the co-location, consultants will need to protect against unnecessary calls. There has been approval to create 3 more posts and we would like to appoint someone who is ICM trained however, we are expecting 4 or 5 people to retire in the next 5 years. We would recruit non ICM trained anaesthetists to look after Level 2 patients. The unit is heavily reliant on anaesthetic trainees and SAS grades and will probably have to use locums overnight to run a rota. A funding request has been submitted to train 3 ACCPs however, this is complicated as funding will come from different places. We would like an FY1 and FY2 trainee plus a CT1 trainee to cover the medical HDU as we are expecting care for the medical HDU to increase. There is a shortage of medical middle graders to populate the critical care rota. In the future if we get ACCP we may be able to operate a fully closed unit.

NHS GREATER GLASGOW & CLYDE

Glasgow Royal Infirmary

The unit currently has 14 consultants; we would ideally need 18 and are expecting to lose 3 or 4 in the next 5 years so we would need to recruit an additional 7 people. We are heavily reliant on anaesthetic trainees, after amalgamating we agreed to take 6 acute medicine trainees but these posts are not filled. Most trainees in the region have done ACCS so the TPD does not send them. Ideally the unit would need 10 trainees to fill the rota and provide their own backfill in order to avoid using anaesthetic trainees. The 2 ICM trainees can be very junior and there are concerns that if we do not appoint, we will lose funding and the posts will not be available. The unit put in a bid to train 2 ACCPs in 2016 but there was no space on the course. There is not much appetite to take over the HDUs but this may be a possibility; newer consultants are more used to ‘shared care’ so this might be easier for them to accept.

Inverclyde Royal Hospital

There are local concerns about the sustainability of the Level 3 provision on this site. There is a persistent consultant vacancy which we are unable to fill.

Queen Elizabeth University Hospital

The current weekend workload is considerable. The introduction of the Major Trauma Service will require increased workforce provision out of hours. 6 ACCPs will be required to support this increased workload as well as increased consultant provision at weekends. This may require further expansion of the current team. There is little continuity in the trainees working within HDU. A more prolonged duration of rotation and the deployment of ACCPs would be beneficial. The current management of patients is under review. Currently critical care consultants only provide week day cover. A move to out of hours cover would be challenging.

Royal Alexandra Hospital, Paisley

There are 7 consultants and 7 ICU beds. We have advertised for 1 consultant post. If all beds in the new unit are funded we require consultant number expansion of 1/2. Although there is no involvement in the HDU at the moment, there are people in ICM who feel we should take over the management of it. We currently have 4 trainees but we will need 2 for every shift once we move to the new unit and are co-located with HDU. Clyde has recently appointed 2 trainee ACCPs.

NHS FIFE

Victoria Hospital

A critical care review was carried out in 2016 to look at a future vision and possible developments. In the long term, the view is that the ICU team would run SHDU out of hours as well as in the daytime; currently daytime is all that is possible with the current consultant and junior staffing. We would also like to explore the possibility of a Level 1 Post-Anaesthesia Care Unit to take the pressure off the overstretched SHDU. ANPs/ACCPs (ideally more than 6) would be useful for out of hours SHDU and MHDU cover. However there is unlikely to be funding for more than one ANP. The ANPs would work predominantly in the HDUs and possibly in outreach and follow-up of ICU patients. The MHDU model is currently that the patients are looked after by different medical consultants. We would like this to move towards a single medical consultant running the unit for a week (as part of a team) but again personnel and funding currently prevent this. Currently trainee numbers are stable with good recruitment into the 2 LAS posts as well as consistent filling of the core and ACCS posts but there is always a risk that the LAS posts could become difficult to fill.

NHS FORTH VALLEY

In the past five years the provision of critical care has been reorganised to a single unit with anaesthetists providing both intensive care and high dependency cover. We have a resident consultant who oversees delivery of out of hours anaesthesia and critical care, always with a non-resident intensive care consultant available on call. Trainee staffing is currently reliably provided from the East and the West deaneries, and through our foundation year cohort. Our challenges centre around increasing demand for particularly HDU services and provision of AHP support, especially occupational therapy which will significantly impact on our ability to deliver GPICS standards

NHS LOTHIAN

Royal Edinburgh Infirmary

Following the DCN re-provision the RIE ICU will have twenty-two Level 3 beds and twenty Level 2 beds. The ICU will have a broad case mix (including neuro-critical care and Transplant). 2 consultant retirements are expected in the next 5 years and one consultant is planning to reduce ICM clinical work to undertake more academic work, which means there will be a need for 3 consultant replacements. It is unclear how long cross site working will be a feature of consultant job plans. This middle grade rota is likely to remain dependent on the anaesthetic training programme for trainees. The plan to support this middle grade rota with 2 clinical Fellows is also reliant on the regular appointment of appropriately trained/skilled applicants. The ICU is likely to be increasingly reliant on ACCPs working to ST 2 level in the trainee rotas; the ACCPs are learning new skills and gaining new competencies (such as intra-hospital transfers and advanced airway skills). Recruitment and retention of ACCPs have not been a problem although career progression might become more of an issue.

St John's Hospital

Over recent years the unit has struggled to recruit consultants to the ICU. Cross site working appears to have made working in this unit more attractive. *GPICS has also had an impact; s*ome of the out of hours cover is provided by consultant Anaesthetists (who have no daytime commitment to intensive care). Also the on call consultant covers both the ICU and Anaesthetics. Considerable expansion of the consultant workforce would be required to change this and that is unlikely in the foreseeable future. The ICU is looking at using ACCPs for daytime cover seven days a week instead of the anaesthetic trainees but the ICU will still rely on anaesthetic trainees for night-time cover. It is estimated that approximately 2.5 WTE ACCPs will be required. This development is at a very early stage (a business plan has been prepared for submission). There is also a formal review of burns services in Scotland, which may have implications for this unit.

Western General Hospital

Following DCN re-provision the WGH ICU will have 10 beds (six Level 3 and four Level 2). The planned staffing model will have one consultant on duty during the day and another consultant on call overnight. All of the consultants who provide ICU cover will have daytime sessions in intensive care. This will require a consultant rota with approximately 8 WTEs. Cross-site working for all/most of the consultants is anticipated. The reduction in the number of trainees on the WGH ICU middle-grade rota following the DCN re-provision is likely to persist for the foreseeable future.

The CT1 level rota supported by ACCPs will be maintained; both will provide daytime and night-time cover for critical care only. The ICU will remain reliant on the resident on-call anaesthetist to provide airway skills. There are concerns about the impact of these changes on the retention and recruitment of consultants; there are currently 3 consultants aged 55 years or above.

NHS SHETLAND & NHS ORKNEY

Gilbert Bain Hospital & Balfour Hospital

There are no retirements expected in the next 5 years but there are 3 expected in the following 5 years. Orkney is running on 1 full time consultant, the rest are locums. There is an expectation that rural units will be run using locums in the future. Rural units need generalists and these are not being trained in the UK. It would be helpful if larger units sent their trainees or consultants to work in rural units for a period. There need to be more rural training posts and they need to be more effective. It is difficult moving staff between health board so cross-health board working may not be an option. The unit will never meet GPICS standards as they are currently written.

NHS SPECIAL BOARD

Golden Jubilee National Hospital

The unit has 10 consultants at present and we expect 2 to retire in the next 5 years. We wouldn't expect to recruit ICU trained consultants but rather anaesthetists with an interest in ICM. The unit has 4 trainee ACCPs currently and a further 2 will be trained in the next 2 years. The anaesthetic workforce seems robust.

NHS TAYSIDE

There is large critical care unit in the pipeline which would incorporate a medical HDU, surgical HDU and burns unit. This would mean the current model would not work if this was implemented as the unit would be 40/50 beds. The unit would need to consider training ACCPs as there are none at present. There are risks of sustaining Level 2 out of hours cover with physicians and surgeons.

GENERAL

ACCPs

ACCPs present both solutions and problems. They are able to acquire the skills similar to a junior trainee enabling them to fill gaps in rotas and provide outreach to the rest of the hospital. However, they take a significant amount of time and money to train. There can be variation in the quality of ACCPs and their job roles; some units are using them effectively as part of their outreach service, whereas some are being used as core trainee equivalents, managing patients and performing 'simpler' ICU procedures. There is also the risk that by recruiting too many ACCPs, you lose experience at the senior critical care nurse level. The general feeling among the group was that the training programme should be centralised and trainees should undertake a national programme. The region needs to be aware of ACCP career progression; some of the ACCPs who have been in post for a long time are getting restless. There doesn't appear to be a 'proper' plan in place for their development or long term career path.

Outreach

The group discussed using outreach services to triage patients before their admission to ICU. There was an outreach service in Glasgow for a time however, this was stopped as it could not demonstrate that it was of any use. It appeared that funding was put into developing HDUs rather than the outreach service. As discussed in the ACCP section, ACCPs and senior nurses could be used to provide this service. Several units are using ACCPs to assess patients and provide an opinion on whether care needs escalating. Consultants would still be responsible for making the final decision. The caveat being that the consultant would need to trust the ACCP's opinion and there would be added pressure when there were fewer beds and/or staff available.

Cross-site working

Cross site working could be explored further; all recent appointments to Edinburgh have been cross-site and this seems to work well however, in Shetland it did not so location may be an important factor.

Training & Trainees

ICM is relying heavily on anaesthetic trainees; anaesthetic trainees are being overused for their airway skills when the specialty should be doing more to ensure ICM trainees have advanced airway skills. There are shortages at Higher Level of both anaesthetic and ICM trainees. However, lots of acute specialties want ICM to take their trainees and this should be encouraged.

The specialty would need to recruit extra trainees each year to reliably get the number of CCTs required to meet demand. However, there is no way to train these additional trainees with the current 'one in, one out' system, in terms of funding, which is not fit for purpose.

Although the speciality is keen to fund more posts, it does not want to do so at the expense of anaesthetics. Support from anaesthetic training programmes and colleagues has been invaluable. Initially, ICM was given help to appoint dual anaesthesia/ICM trainees from anaesthetic funding which will likely eventually revert back to anaesthesia. The current position using anaesthetic dual training numbers is not sustainable.

The region is keen to avoid adopting the new EM model of recruiting more consultants to cover the gaps left by having fewer trainees. This makes the consultant workload unappealing for trainees as future consultants. The consultant workforce and workload has to look attractive to trainees.
In 5 years, if nothing changes, ICM will be increasing pressure on other services (such as anaesthesia) and these services will suffer too.

HDUs and Co-location

New build hospitals and redevelopments seem keen on co-locating ICUs and medical HDUs. HDUs in England and Wales are generally run by intensivists, whereas in Scotland they seem largely physician lead. Co-location means that, inevitably, intensivists will take on more responsibility for HDU patients which will increase their workload. If ICM were to take over these HDUs significant expansion would be required as there are not enough ICM staff at to cover these units.

GPICS

There is a concern that if most units cannot meet GPICS, it begins to look unattainable and might not help the specialty obtain more funding for posts. The group was keen to emphasise that GPICS were good standards to aim for, but suggested that there should be caveats made for remote units.

Referrals/Transfers

Increasing the scope of the transport/transfer service could be another solution for remote units; however, it would need careful consideration regarding how it would be staffed. If services were centralised, the number of transfers would increase so even more staff would be required.

Making ICM more sustainable

There were several solutions discussed to make ICM a more sustainable career including job shares and providing cover to the trauma rota only. It was acknowledged that it was important to keep people working in ICM for as long as possible to maintain the level of experience. However, it was also acknowledged that if younger consultants were made to do all of the onerous on call, it made the specialty less attractive so a balance needed to be struck. Excessive on-call can lead to people developing health issues or leaving the specialty altogether.

6. PROBLEMS AND SOLUTIONS

Sections 4 and 5 of this report detail the many problems currently facing the ICM workforce in Scotland. These can be summarised into the areas below. It is notable that when compared to information from the annual ICM workforce census, with the exception of the extremes of geography all of these areas are common across the entire UK.

6.1 PROBLEMS

Geography

Scotland's vast and varied geography creates a variety of issues when providing Critical Care; Geographically isolated units tend to need generalists more than specialists; this type of training is either very rare (there is a rural training fellowship however, it is difficult to obtain funding) or does not exist. These units are often unable to accommodate trainees and find it difficult to attract them. The distances between hospitals can be too far for all staff to commute which means they can be reluctant to move. This also impacts on the pool of staff available to cover any shortages which can result in an increase in transfers.

Trainees

There is a shortage of senior trainees capable of decision making and running an ICU; this has been further exacerbated by the transition between the old Joint and new Dual training systems which has reduced the number of trainees. There needs to be more engagement shown from NES to the new Dual programme, which is more complex than the previous Joint system. The lack of understanding has increased the difficulty in obtaining funding for new posts and caused difficulties securing additional funding for the longer training programme. NES have been reluctant to approve new ICM training posts without support from the Scottish Government in terms of providing more funding. The specialty is keen to emphasise that an increase is ICM posts at the expense of anaesthetic posts is not feasible and would be to the detriment of both specialties. There is already an over-reliance on anaesthetic trainees for airway skills and a reduction in ICM posts would actually result in increased pressure being put on other acute services including anaesthesia.

Funding

The current funding process for ICM is based on a block grant which has not increased with the increase in activity. Funding for ICM training posts is equally not fit for purpose and is based on a 'one in, one out' system which does not allow enough trainees to enter and complete the training programme in order to meet demand.

External Factors

There has been a demonstrable increase in service need related to an aging population and increase in co-morbidities. Intensivists are being increasingly relied upon to make difficult decisions within other areas of the hospital. Shortages in other specialties and hospital roles are having an impact on Critical Care; gaps in medical rotas mean that deaneries and managers are refusing to allow trainees from acute specialties to train on the ICU which then increases gaps in the ICU rota. Shortages in nursing staff on rehabilitation and recovery wards mean fewer beds are available which delays discharge from the ICU. During hospital reorganisations or new builds, ICUs are being increasingly co-located with medical HDUs in order to better manage resources however, this can result in intensivist taking increasing responsibility for HDU patients.

6.2 SOLUTIONS

Investment in workforce: Trainee doctors

There are a number of local solutions underway across the UK to manage a growth in the ICM training workforce. The first solution is to use hospital based fellowship posts that are taken over by the Deanery to recruit to centrally. These posts are not present in sufficient numbers in Scotland for this to be viable. The second solution is to use decommissioned Anaesthetic posts however, in Scotland, critical care relies heavily upon Anaesthetic trainees to provide on-call and would therefore be in effect 'robbing Peter to pay Paul', making this option unsustainable. The third solution is to use decommissioned funding from other specialties which are either shrinking or consistently under-filling.

Acute specialties appear keen to engage in a more reciprocal relationship with ICM and there have been increased requests for acute trainees to undertake training on an ICU. This could benefit both specialities, enabling acute trainees to improve their knowledge of ICM could help reduce inappropriate referrals and mean a patient could be treated on an acute ward or medical HDU. It would also increase the number of non-anaesthetist trainees on the ICUs enabling a broader range of skills to be utilised while at the same time, helping to ease gaps in the ICU and subsequently anaesthetic rotas.

Investment in workforce: Advanced Critical Care Practitioners (ACCPs)

ACCPs are a possible workforce solution to gaps in the middle grade rotas; they are often able to run a unit, provide outreach to other areas of the hospital and assist in training junior doctors. It also presents another career option for experienced nurses (other than management or education) which will keep them on the unit. ACCPs are also expensive to train (being supernumerary) over their two year training programme. They are also unable to help with airway skills so some senior trainee or consultant input is required. During the group discussions, it was generally agreed that ACCP training should be centralised in order to give smaller units the opportunity to help fund ACCP training even if they're unable to train them themselves. It was also agreed that a clear career path was in place to help with retention of staff as some of the more experienced ACCPs were becoming restless.

Investment in workforce: Consultants

The increasing workload evidenced in the region has not been matched in an increase in the ICM consultant population.

Telemedicine

This could be particularly useful for isolated and smaller units lacking ICM consultant staff however, it is entirely dependent on the technology being adequate and there would need to be clear governance regarding who was responsible for the patient. It would also heavily depend on the skills of both the advisor and treating clinician.

Outreach

Outreach services could be used to triage admissions to the ICU; again, this would depend heavily on a number of factors including staffing (using ACCPs was suggested). A system was used in Glasgow but was stopped as it could not demonstrate that it provided any benefit.

Cross-site working

This has been used in NHS Lothian and seems to have attracted some excellent new recruits. It could make certain less attractive hospitals more so and poorly staffed units may benefit by sharing resources. This would however, be entirely dependent on geographical location in relation to the hospitals included. It was tried in the highlands and was not successful.

Improve Sustainability

Those who attended the engagement agreed that it was important to make ICM more sustainable to enable doctors to work in the specialty for as long as possible. In doing this however, they had to be careful not to place all of the burdens (on-call etc.) on younger consultants as this would make the specialty less appealing and increase the risk of burnout.

7. DATA

All attendees at the Regional Engagement Meeting were asked to provide information on their current workforce and what they expected their workforce need to be approximately 5 to 10 years in the future.

7.1 Headcount

All attendees were asked to provide a headcount of all consultants, ACCPs and nurses working on their unit both now and in the future. The question marks within in the tables indicate that the information was not available or not provided.

HOSPITAL	CONSULTANTS		SAS/Staff Grade		ACCPs		NURSES	
	NOW	FUTURE	NOW	FUTURE	NOW	FUTURE	NOW	FUTURE
Balfour Hospital	3	4	0	0	0	0	0	0
Borders General Hospital	7	5	6	?	0	0	36	36
Crosshouse Hospital	10	10	0	0	0	6	41	46
Dumfries & Galloway Royal Infirmary	6	8-9	4	6	0	3	33	33
Forth Valley Royal Hospital	10	?	0	?	0	?	91	?
Gilbert Bain Hospital	4	4 (ref 1)	0	0	0	0	0	0 (ref 2)
Glasgow Royal Infirmary	12	14	0	0	0	2	114	114
Golden Jubilee National Hospital	11	11	2	2	0	0	220	220
Monklands Hospital	6	7	0	0	2	3	43	43
Ninewells Hospital	7	?	0	?	0	?	?	?
Queen Elizabeth University Hospital	21	?	0	0	0	3	285	285+
Raigmore Hospital	8	8	6	6	0	0	64	64
Royal Alexandra Hospital, Paisley	7	9	1	2	0	2+	47	60
Royal Infirmary Edinburgh	21	25	0	0	18	13	187	240
St John's Hospital	5	5	0	0	0	0	34	34
University Hospital Ayr	7	8	4	5	0	0	42	44
Victoria Hospital, Kirkcaldy	9	9	0	2	0	0	?	?
Western General Hospital	10	9	0	0	4	5	107	166
Wishaw General Hospital	8	?	0	?	3	?	44	?

Ref 1 – Consultants shared with anaesthetics, chronic pain and critical care for all age groups
Ref 2 – 5 band 6 nurses with critical care competences work in critical care when a patient is present but work on the surgical ward the majority of the time.

7.2 Whole time equivalents (WTEs)

All attendees were asked to provide the whole time equivalent (WTE) of all consultants, ACCPs and nurses working on their unit both now and in the future. The question marks within in the tables indicate that the information was not available or not provided.

HOSPITAL	CONSULTANTS		SAS/Staff Grade		ACCPs		NURSES	
	NOW	FUTURE	NOW	FUTURE	NOW	FUTURE	NOW	FUTURE
Balfour Hospital	3	4	0	0	0	0	0	0
Borders General Hospital	3.5	3.5	1.5	1.5	0	0	30.9	30.9
Crosshouse Hospital	4	5	0	0	0	6	36.34	41
Dumfries & Galloway Royal Infirmary	Ref 1	Ref 1	Ref 1	Ref 1	0	3	33	33
Forth Valley Royal Hospital	10	?	0	?	0	?	79.45	?
Gilbert Bain Hospital	3.8	3.8 (ref 2)	0	0	0	0	0	0 (ref 3)
Glasgow Royal Infirmary	9.1	9.1	0	0	0	2	102.4	102.4
Golden Jubilee National Hospital	10	10	2	2	0	0	147	147
Monklands Hospital	9	7	0	0	2	3	33	33
Ninewells Hospital	?	?	?	?	?	?	56.4	56.4
Queen Elizabeth University Hospital	15.8	?	0	0	0	3	285	285+
Raigmore Hospital	8	8	6	6	0	0	51.91	51.91
Royal Alexandra Hospital, Paisley	7	9	0.2	1	0	2+	42.39	50.4
Royal Infirmary Edinburgh	18.5	23.5	0	0	13	12	155	200
St John's Hospital	1.25	1.25	0	0	0	0	29.33	29.33
University Hospital Ayr	Ref 4	Ref 4	4	4	0	0	37.36	39.14
Victoria Hospital, Kirkcaldy	9	9	2	2	0	0	55.42	55.42
Western General Hospital	9	8	0	0	4	5	90	55
Wishaw General Hospital	8	?	0	?	3	?	44	?

Ref 1 - Shared with anaesthetics so difficult to calculate
Ref 2 – Shared with anaesthetics, critical care and chronic pain
Ref 3 - 5 band 6 nurses with critical care competences work in critical care when a patient is present but work on the surgical ward the majority of the time.
Ref 4 – Due to the nature of ICM cover on this unit, it is not possible to calculate the consultant WTE accurately

7.3 Trainees

All attendees were asked to provide a headcount of all trainees working on their unit both now and in the future; these were broken down into those in their Foundation, Core and Higher training posts along with those trainees not in a recognised training post. The question marks within in the tables indicate that the information was not available or not provided.

HOSPITAL	FOUNDATION		CORE		HIGHER		NON-TRAINING		TOTAL	
	NOW	FUTURE	NOW	FUTURE	NOW	FUTURE	NOW	FUTURE	NOW	FUTURE
Balfour Hospital	0	0	0	0	0	0	0	0	0	0
Borders General Hospital (ref 1)	0	0	0	0	0	0	0	0	0	0
Crosshouse Hospital	0	?	5	?	11	?	1	?	17	?
Dumfries & Galloway Royal Infirmary	<1	1	5	5	0	0	0	0	5	6
Forth Valley Royal Hospital	6	?	2	?	1	?	0	?	9	?
Gilbert Bain Hospital (ref 2)	0	0	0	0	0	0	0	0	0	0
Glasgow Royal Infirmary	1	1	5	5	3	3	0	0	9	9
Golden Jubilee National Hospital	0	0	0	0	0.3-0.5	0.3-0.5	1	1	1.5	1.5
Monklands Hospital	1	1	6	6	6	6	0	0	13	13
Ninewells Hospital	0	?	?	?	1	?	0	0	?	?
Queen Elizabeth University Hospital	3	3	5	5	5	5	0	0	13	13
Raigmore Hospital	1	1	8	8	3	3	0	0	12	12
Royal Alexandra Hospital, Paisley	0	1	4	6	variable	1	0	1	4+	5+
Royal Infirmary Edinburgh	4	9-13	4	3	6	8	0	2	14	22-25
St John's Hospital	0	0	0	0	0	0	0	0	0	0
University Hospital Ayr	0	0	2	2	2	3	0	?	4	5
Victoria Hospital, Kirkcaldy	<1	<1	2	2	2	2	2	2	6	6
Western General Hospital	0	0	6	5	1	2	0	0	7	7
Wishaw General Hospital	1	?	2	?	0	?	0	?	3	?

Ref 1 – all trainees come from anaesthetics.
Ref 2 – The unit has had 3 remote and rural trainees for 3 months each in 12 years.

7.4 Survey Questions

To assist with the report and workforce planning Dr Radha Sundaram (Deputy RA for the West of Scotland) sent the following questions to the Critical Care Units in Scotland.

- How many appointments to Critical Care have been made in your hospital in the last 10 years?
- How many retirals from Critical Care in the last ten years and of these how many Consultants have stayed in the NHS but retired from ICM?
- Are there any plans for mergers/ expansions/ reorganisation of units within your health board that would influence Consultant numbers?

Critical Care Unit	Appointments in the last 10 years	Retirals in the last 10 years	Plans for re-organisation
Aberdeen Royal Infirmary	5.5 WTE (4.5 WTE for HDU)	3	Yes – expanding to 18 beds
Balfour Hospital	5 (providing critical care to adults, children and neonates)	0	No
Borders General Hospital	3	1 (2 remains in anaesthetics)	
Crosshouse Hospital	9	5 (2 remain in the NHS)	Yes
Dumfries & Galloway Royal Infirmary		1 remains in anaesthetics, 1 moved to England	Yes – need 3 more
Forth Valley	2	2 (1 left to pursue non-ICU role)	
Glasgow Royal Infirmary	4	4 (2 remained in the NHS)	No
Golden Jubilee National Hospital	10	2 (1 just from critical care)	No
Inverclyde Hospital	0	1	Yes
Inverness	3	2	Yes – HDU merger possible
Monklands Hospital	3	0	Recently done
Ninewells Hospital	1	1	Yes
Queen Elizabeth University Hospital	3		Additional 19 PAs needed for Major Trauma Centre
Royal Alexandra Hospital	9	6 (5 remained in the NHS)	Yes – possible expansion/merger with HDU
Royal Infirmary Edinburgh	12 (3 joint with WGH)	4 (1 stayed in the NHS)	The Neuro ICU and 6 ICU beds will go from the Western General Hospital to the Royal Infirmary Edinburgh taking the number from 30 to 42
Southern General Hospital	4	3 (1 remained in the NHS	Merging with QEUH

St John's Hospital	4 (1 with RIE and 1 with WGH)	1 retiral and 1 resignation	
University Hospital Ayr	7	3	Increase number of funded ICU beds from 4.5 to 6; split on-call rota for ICM.
Victoria Hospital (Kirkcaldy)	6	5 (3 from ICU only and 1 working abroad)	No
Victoria Infirmary (Glasgow)	5	5 (1 remains in anaesthetics)	Merging with QEUH
Western General Hospital	5 (1 joint with RIE)	1	The Neuro ICU and 6 ICU beds will go from the Western General Hospital to the Royal Infirmary Edinburgh taking the number from 30 to 42
Western Infirmary (Glasgow)	3	3	Merging with QEUH

7.5 Data Summary

The table below provides a summary of all of the tables found earlier in this section and indicates whether units expect their need for workforce to increase, decrease or remain the same in the future. The question marks within in the tables indicate that the information was not available or not provided.

HOSPITAL	NOW	FUTURE	% INCREASE OR DECREASE
Balfour Hospital			
WTE for Consultants	3	4	Remains the same
WTE for SAS/Staff Grades	0	0	Remains the same
WTE for ACCPs	0	0	Remains the same
WTE for Nurses	0	0	Remains the same
Number of Trainees	0	0	Remains the same
Borders General Hospital			
WTE for Consultants	3.5	3.5	Remains the same
WTE for SAS/Staff Grades	1.5	1.5	Remains the same
WTE for ACCPs	0	0	Remains the same
WTE for Nurses	0	0	Remains the same
Number of Trainees	0	0	Remains the same
Crosshouse Hospital			
WTE for Consultants	4	5	Increase
WTE for SAS/Staff Grades	0	0	Remain the same
WTE for ACCPs	0	6	Increase
WTE for Nurses	36.34	41	Increase
Number of Trainees	17	?	unknown
Dumfries & Galloway Royal Infirmary			
WTE for Consultants	Shared with anaesthetics so difficulty to calculate		
WTE for SAS/Staff Grades	Shared with anaesthetics so difficulty to calculate		
WTE for ACCPs	Shared with anaesthetics so difficulty to calculate		
WTE for Nurses	33	33	Remains the same
Number of Trainees	5	6	Increase
Forth Valley Royal Infirmary			
WTE for Consultants	10	?	Unknown
WTE for SAS/Staff Grades	0	?	Unknown
WTE for ACCPs	0	?	Unknown
WTE for Nurses	79.45	?	Unknown
Number of Trainees	9	?	Unknown
Gilbert Bain Hospital			
WTE for Consultants	3.8	3.8	Remains the same
WTE for SAS/Staff Grades	0	0	Remains the same
WTE for ACCPs	0	0	Remains the same
WTE for Nurses	0	?	Remains the same
Number of Trainees	0	?	Remains the same

Glasgow Royal Infirmary			
WTE for Consultants	9.1	9.1	Remains the same
WTE for SAS/Staff Grades	0	0	Remains the same
WTE for ACCPs	0	2	Remains the same
WTE for Nurses	102.4	102.4	Remains the same
Number of Trainees	9	9	Remains the same
Golden Jubilee National Hospital			
WTE for Consultants	10	10	Remains the same
WTE for SAS/Staff Grades	2	2	Remains the same
WTE for ACCPs	0	0	Remains the same
WTE for Nurses	147	147	Remains the same
Number of Trainees	1.5	1.5	Remains the same
Monklands Hospital			
WTE for Consultants	9	7	Decrease
WTE for SAS/Staff Grades	0	0	Remains the same
WTE for ACCPs	2	3	Increase
WTE for Nurses	33	33	Remains the same
Number of Trainees	13	13	Remains the same
Ninewells Hospital			
WTE for Consultants	?	?	Unknown
WTE for SAS/Staff Grades	?	?	Unknown
WTE for ACCPs	?	?	Unknown
WTE for Nurses	56.4	56.4	Remains the same
Number of Trainees	1 approx.	?	Unknown
Queen Elizabeth University Hospital			
WTE for Consultants	15.8	?	Unknown
WTE for SAS/Staff Grades	0	0	Unknown
WTE for ACCPs	0	3	Increase
WTE for Nurses	285	285+	Increase
Number of Trainees	13	13	Remains the same
Raigmore Hospital			
WTE for Consultants	8	8	Remains the same
WTE for SAS/Staff Grades	6	6	Remains the same
WTE for ACCPs	0	0	Remains the same
WTE for Nurses	51.91	51.91	Remains the same
Number of Trainees	12	12	Remains the same
Royal Alexandra Hospital			
WTE for Consultants	7	9	Increase
WTE for SAS/Staff Grades	0.2	1	Increase
WTE for ACCPs	0	2+	Increase
WTE for Nurses	42.39	50.4	Increase
Number of Trainees	4+	5+	Increase

Royal Infirmary Edinburgh			
WTE for Consultants	18.5	23.5	Increase
WTE for SAS/Staff Grades	0	0	Remains the same
WTE for ACCPs	13	12	Decrease
WTE for Nurses	155	200	Increase
Number of Trainees	14	22-25	Increase
St John's Hospital			
WTE for Consultants	1.25	1.25	Remains the same
WTE for SAS/Staff Grades	0	0	Remains the same
WTE for ACCPs	0	0	Remains the same
WTE for Nurses	29.33	29.33	Remains the same
Number of Trainees	0	0	Remains the same
University Hospital Ayr			
WTE for Consultants	?	?	Unknown (see p.29)
WTE for SAS/Staff Grades	4	4	Remains the same
WTE for ACCPs	0	0	Remains the same
WTE for Nurses	37.36	39.14	Increase
Number of Trainees	4	5	Increase
Victoria Hospital			
WTE for Consultants	9	9	Remains the same
WTE for SAS/Staff Grades	2	2	Remains the same
WTE for ACCPs	0	0	Remains the same
WTE for Nurses	55.42	55.42	Remains the same
Number of Trainees	6	6	Remains the same
Western General Hospital			
WTE for Consultants	9	8	Decrease
WTE for SAS/Staff Grades	0	0	Remains the same
WTE for ACCPs	4	5	Increase
WTE for Nurses	90	55	Decrease
Number of Trainees	7	7	Remains the same
Wishaw Hospital			
WTE for Consultants	8	?	Unknown
WTE for SAS/Staff Grades	0	?	Unknown
WTE for ACCPs	3	?	Unknown
WTE for Nurses	44	?	Unknown
Number of Trainees	3	?	Unknown

7.6 Training Posts

One of the many workforce metrics that the FICM has used to monitor the growth of training posts in the UK has been comparing the number of posts recruited each year for a region or home nation against the population of each region or home nation. The table below indicates the population serviced per training post recruited to in each year. Scotland has moved from an average of one new post per 355,180 of the population to one new post per 591,967 of the population due to the recent shrinkage in training post numbers.

Whilst some English regions (for example KSS) may have a more reasonable post to population ratio due to parts of their population seeking treatment in another region (for example London), those present at the Engagement agreed that Scotland was very unlikely to have a population that required critical care treatment beyond the boundaries of the home nation. Additionally, trainees are increasingly unlikely to seek employment beyond the vicinity of where their trained (having established mortgages and families there).

	2015 training post to population	**2016 training post to population**
1	West Midlands (1,134,942)	West Midlands (810,673)
2	East of England (992,362)	East of England (744,271)
3	East Midlands (919,746)	East Midlands (656,961)
4	Wales (770,603)	Northern Ireland (609,908)
5	KSS (745,578)	**Scotland (591,967)**
6	Northern Ireland (609,908)	KSS (559,184)
7	Wessex (394,978)	Wessex (394,978)
8	**Scotland (355,180)**	Wales (385,302)
9	Yorkshire & Humber (349,853)	South West (356,647)
10	London (339,747)	Yorkshire & Humber (349,853)
11	Thames Valley (330,900)	Thames Valley (330,900)
12	South West (329,213)	North Western (312,109)
13	North Western (326,971)	Northern (293,726)
14	Northern (293,726)	London (283,122)

APPENDIX 1: LIST OF ATTENDEES

Jonathan Aldridge	Borders General Hospital (NHS Borders
Catriona Barr	Gilbert Bain Hospital (NHS Shetland)
Monika Beatty (RA South East Scotland)	Royal Infirmary Edinburgh (NHS Lothian)
Sandy Binning	Queen Elizabeth Hospital (NHS Greater Glasgow & Clyde)
Steve Cole	Scottish Intensive Care Society Audit Group
Brian Cook	Scottish Critical Care Delivery Group Chair
Michel Gillies	Royal Infirmary (Edinburgh (NHS Lothian)
Gordon Houston	Crosshouse Hospital (NHS Ayrshire & Arran)
Martin Hughes	Scottish Intensive Care Society President
Andrew Inglis	ScotSTAR/ Queen Elizabeth Hospital (NHS Greater Glasgow & Clyde)
Iain Lang	Wishaw General Hospital (NHS Lanarkshire)
Charles Lee	Raigmore Hospital (NHS Highland)
Rory Mackenzie	Monklands Hospital (NHS Lanarkshire)
Iain Macleod	Aberdeen Royal Infirmary (NHS Grampian)
Marcia Macdougall	Victoria Hospital, Kirkcaldy (NHS Fife)
Fiona Mcilveney	Forth Valley Royal Hospital (NHS Forth Valley)
Stuart McLellan	Western General Hospital (NHS Lothian)
Carol Murdoch (Lead/RA for West of Scotland)	Glasgow Royal Infirmary (NHS Greater Glasgow & Clyde)
Sarah Ramsay	Specialty Advisory Board
Chris Richard	Borders General Hospital (NHS Borders)
Robyn Smith	Golden Jubilee National Hospital (NHS Greater Glasgow & Clyde)
Radha Sundaram	Glasgow Royal Infirmary (NHS Greater Glasgow & Clyde)
Dewi Williams	Dumfries & Galloway Royal Infirmary (NHS Dumfries & Galloway)
Eddie Wilson	NES Specialty Training Board/NHS Tayside
Liz Wilson	Royal Infirmary Edinburgh (NHS Lothian)
Amadeusz Ziarkowski	University Hospital Ayr (NHS Ayrshire & Arran)

APPENDIX 2: MAP OF HEALTH BOARDS AND HOSPITALS

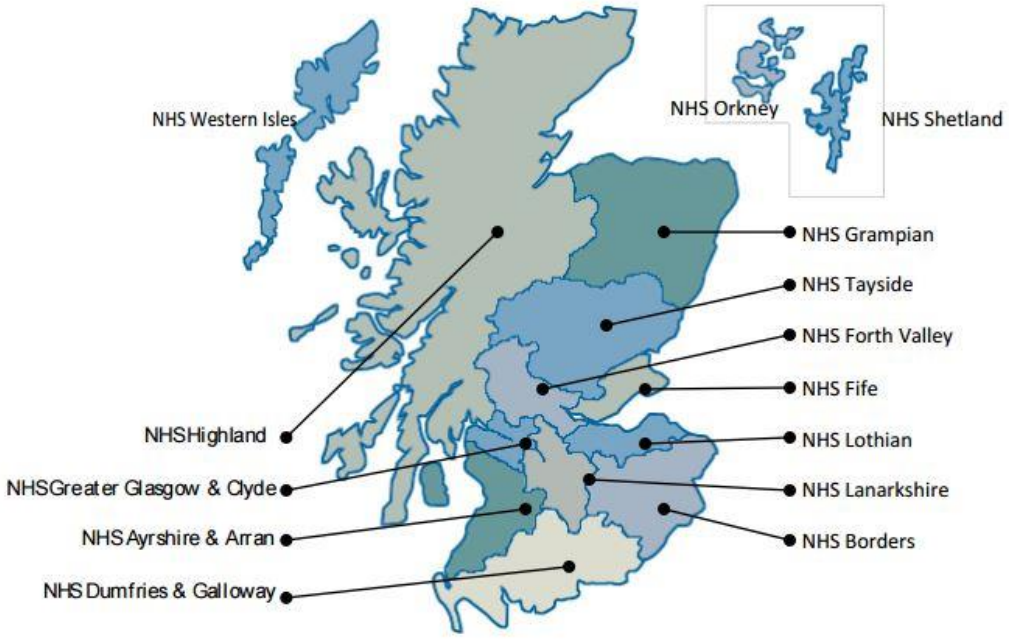


Image from Scottish Government website

APPENDIX 3: 2016 CENSUS DATA

COUNT: 84 Respondents (out of 770 nationally)

Specialty	COUNT
With Anaesthesia	70
ICM only	9
With EM	3
PICU	1
With PHEM	1

Health Board	COUNT
NHS Ayrshire and Arran	8
NHS Dumfries and Galloway	2
NHS Fife	7
NHS Forth Valley	5
NHS Grampian	6
NHS Greater Glasgow and Clyde	23
NHS Highland	3
NHS Lanarkshire	1
NHS Lothian	20
NHS Tayside	6
National Waiting Time Centre	3

At what age do you anticipate permanently stopping clinical critical care medicine?

AGE RANGE	COUNT
50-54	4
55-59	25
60-64	36
65+	15

Do you intend to practice ICM for the remainder of your career?

ANSWER	COUNT
Yes	51 or 63% (compared to 81% in 2015)
No	30 or 37% (compared to 19% in 2015)

If 'NO', why? (MULTIPLE SELECTIONS PERMISSIBLE FOR THIS QUESTION)

ANSWER	COUNT
Frequency of on-call, stress, work intensity	22
Work-life balance	20
Intend to stop/reduce ICM in favour of another speciality	14
Junior staff lacking expected competencies	10
Lack of critical care capacity and finding beds	7
Lack of junior medical staff	6
Conflict with colleagues	4
Dealing with families of patients	4

Do you plan to alter your ICM commitment in the next 2 years?

ANSWER	COUNT
Decrease	13
Increase	6
Neither	62

Do you find ICM significantly stressful enough to influence your future career plans?

ANSWER	COUNT
YES	26 or 31% (compared to 35% 2015)
NO	57 or 69% (compared to 65% in 2015)

Those who answered 'YES' were asked what would need to change. The most common answers were reducing work intensity and on-call with age (n=16), more numerous and experienced middle grade & nurse staffing (n=11) and more consultants (n=5).

How frequent is your re-attendance on the unit overnight?

ANSWER	COUNT
More than once a night	4
Every night	13
Every other night	43
Rarely	21
N/A Resident on-call	2

The most common reasons given for re-attendance was dealing with extra admissions or complex cases (including the related issue of the experience and number of junior doctors able to cope with such cases).

APPENDIX 3.1: PA and Service Time Data

NB: Per week PA data across the region

	ICM DCC-PAs	Non-ICM DCC-PAs	SPAs (ICM and non-ICM)	Additional duty PAs for ICM
RANGE	1-10	0-9.5	1-4.5	0-5
MEAN	4.3	4.3	2.3	0.3
MEDIAN	4.5	5	2.5	0
MODE	5	5	2.5	0

	OOH/Weekends unplanned hours per week	Nights per week worked	Weekends per year worked
RANGE	0-12	0-8	0-14
MEAN	3.1	1.2	8.3
MEDIAN	2	1	8
MODE	0	1	8

APPENDIX 3.2: Unit Data

COUNT: 15 Clinical Leads responded (one giving date for 2 units)

Does your unit work to a closed model of care?

ANSWER	COUNT
Yes	15
No	1

Total number of staffed critical care beds on your unit? (include Level 2 and 3)

ANSWER	COUNT
0-4	3
5-9	5
10-14	1
15-19	3
20-24	1
25-29	0
30-34	1
35+	2 (53 and 59 beds respectively)

Total number of CCMDS days

ANSWER	COUNT
0-2000	3
2001-4000	2
4001-6000	3
6000+	0
NO ANSWER	8

Is there a dedicated trainee on the unit 24/7?

ANSWER	COUNT
YES	11
NO	5

Does the dedicated trainee:patient ratio exceed 1:8?				
ANSWER	During the day	During the night	On weekends	On bank holidays
YES	4	5	6	4
NO	11	9	8	10
NO ANSWER	1	2	2	2

Is there a dedicated staff grade on the unit 24/7?

ANSWER	COUNT
YES	1
NO	11

Is there a dedicated ACCP or equivalent on the unit 24/7?

ANSWER	COUNT
YES	1
NO	11

What is the total WTE for consultants on this unit? (1 WTE = 10 PAs)

ANSWER	COUNT
0-2	3
3-4	3
5-6	2
7-8	2
9-10	1
11-12	1
13+	1
NO ANSWER	3

How many individual consultants provide clinical work for this unit?

ANSWER	COUNT
0-4	0
5-9	6
10-14	7
15-19	0
20-24	2
25-29	1
13+	1

Is care led by a consultant in Intensive Care Medicine every day of the week?

ANSWER	COUNT
YES	12
NO	3
NO ANSWER	1

What is the minimum number of consecutive days that a consultant would cover the unit?

ANSWER	COUNT
1	7
2	1
3	4
4	2
5	2

When on call for critical care, are the critical care consultants covering another specialty?

ANSWER	COUNT
No	12
Yes	4 (3 covering both General and Specialist ICU)

Are consultants contractually required to be resident 24/7?

ANSWER	COUNT
No	15
Yes	1

Is an ICM consultant available 24/7 to lead twice daily ward rounds?

ANSWER	COUNT
No	5
Yes	11

Is an ICM consultant available 24/7 to attend the unit in 30 minutes?

ANSWER	COUNT
No	3
Yes	13

Are there any consultant posts with ICM clinical PAs currently unfilled?

ANSWER	COUNT
No	13
Yes	3 (one per unit)