

REGIONAL WORKFORCE ENGAGEMENT REPORT:

YORKSHIRE & HUMBER

The Faculty of
Intensive Care Medicine

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EXECUTIVE SUMMARY

The Faculty, represented by Dr Andrew Rhodes (at the time, the current Chair of the Workforce Advisory Group, and a Board Member) and Mr Daniel Waeland (Head of the Faculties), were welcomed to the Yorkshire and Humber region by representatives from each Trust, the networks, the Specialist Training Committee and School. The region, across three separate networks and training programmes, were clear about the challenges and potential solutions that would allow them to preserve the high quality care currently provided for critical care patients.

1. GROWTH IN SERVICE NEED: As predicted by the report from the Centre for Workforce Intelligence (CfWI) and predicted and partially validated by the data collection from the Intensive Care National Audit and Research Centre (ICNARC) [see sections 1.2.2 and 1.2.3 below], **there is a considerable growth in service need predicted. The regional networks indicated that local trends confirm these national projections**, with the greater options for beneficial surgery in older individuals and the greater recognition of the benefits of post-surgical critical care support being a key part of this trend. Simultaneously, the demands for critical care support to non-surgical patients, mirrors this growth. It was agreed that **the importance of adhering to quality provision standards (Guidelines for the Provision of Intensive Care Services) to ensure that patient safety and the standard of care are both preserved throughout this growth.**

2. SERVICE RECONFIGURATION AND CAPACITY: Bed capacity in the region has been historically low compared to the rest of the UK. Provision of beds has been worsened by what were felt to be inappropriate admissions from other specialties and service reconfigurations without consultation with ICM. The latter also has impacted transfers. Despite all acute hospitals requiring critical care provision (for emergencies, for elective surgery, for maternity etc.), reconfigurations appear unaware of this central need. **The flow of patients through hospitals and to and from critical care should be a central theme of any service reviews, yet this was rarely the case.** Smaller units, which due to current provision, may struggle to meet national critical care provision standards, also had to weather the storms created by the vast geography of the region, which made the implementation of cross-site working problematic.

The development of Level 1+ / Enhanced Care Units was felt to be a positive step in reducing unnecessary admissions to the ICU by preventing patients deteriorating to the point where they required Level 2 or 3 support. It was noted that this had been a theme through the Critical Futures research work undertaken by the Faculty and due to publish in the summer of 2017. The breakout groups also discussed **the development of outreach services and working with other specialties to manage acutely unwell patients on their own wards.** This, however, would be difficult with the current workforce provision.

3. CURRENT WORKFORCE FOR CRITICAL CARE: All models discussed during the breakout sessions **indicated a need for expansion at the consultant level**, accompanied by expansion in the rest of the multiprofessional team. The increase indicated above, the reorganisation of units (potentially developing a hub and spoke model) and desired trainee expansion all require a more sustainable workforce footprint. Some data is crunched on this in Section 7.4. **Clinical information systems enabling staff to monitor patients remotely, could be part of a potential solution.**

Developing a regional ACCP training programme was felt by those present to be one positive solution to the widening workforce gap in addition to growth at the consultant and trainee level.

There remained a risk that low morale and burnout could lead to consultants leaving the specialty early by practising solely in their other specialty (commonly anaesthetics). The breakout groups discussed **local initiatives to promote ICM as a sustainable specialty.** It was positively noted that during 2017 the Faculty plans to do considerable work on careers and sustainability packages.

4. TRAINEE DOCTORS: Whilst the number of posts has risen in the region back to the output expected previous of the Joint CCT programme, fill rates have not been at 100%. The discussions at the engagement indicated considerable personal experience of **trainee doctors deterred from application by the current policy of recruiting to the vast region as a single unit of application**. What has become clear from the previous engagements to date has been that trainee doctors are more now than ever applying for posts at a time when they have settled into an area (mortgages, schools etc.) and are negative about the potential to find themselves allocated to somewhere at the other end of the region. The general opinion of the room was that further trainee doctors posts would be needed in future years, so ensuring a high fill rate is a necessary part of this puzzle. The fill rate for Yorkshire & Humber for 2017 remains lower than comparable regions.

A failure to grow the number of trainees was felt to exacerbate the risk of burnout in existing consultant teams, as fewer consultants would be available for appointment in the future. At present, those present at the engagement discussed making **further use of Medical Training Initiative Trainees and trainees rotating through the unit from other specialties**.

Those present discussed how they might **take forward local initiatives to better promote ICM training to core, foundation and undergraduate trainees**. The Faculty strong support this and noted they are undertaking work with the Royal College of Anaesthetists on critical care and anaesthetics training within Medical Schools.

The Faculty hopes the proposed solutions discussed in Section 6.2 offer a framework for the Trusts, and the School/STC, in conjunction with HE Yorkshire and the Humber, 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 2016 censuses, the figure for those intending to drop ICM sessions rose from 22% to 38%. The most common reasons across the 2014, 2015 and 2016 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/critical care facilities
- Lack of junior doctors

In 2016, 51% of respondents (an increase of 4% from 2015) felt that they found ICM stressful enough that it would influence their future career plans.

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)

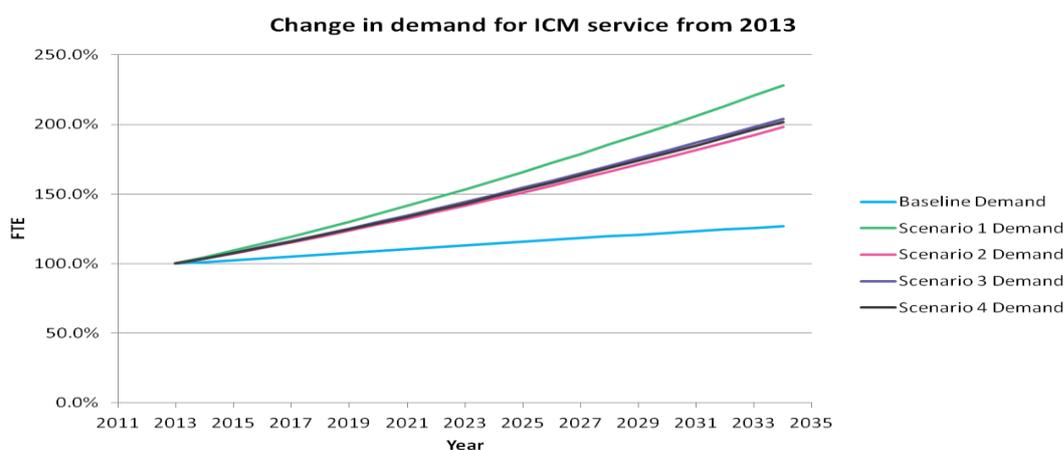
ICNARC is currently undertaking a long-term review of critical care bed utilisation rates. They released the statement below to us in 2014.

“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. The first engagement was held in Wales in November 2015, followed by West Midlands in May 2016 and Scotland in September 2016.

Yorkshire and Humber, our fourth engagement, was the second home nation or region to request an engagement with the Faculty, which we happily accepted. Due to three active networks, there is considerable data and enthusiasm available for the region. The region has previously expanded its training posts back to the levels of output produced through the Joint CCT training programme. There were, however, significant discussions underway about a reorganisation of the training structure for the region.

In February 2016, Dr Daniel Bryden (then Regional Advisor to Sheffield and South Yorkshire) responded to Faculty correspondence to Regional Advisors enquiring if any believe their region or home nation would benefit from an Engagement Meeting. Dr Bryden received support from the other Regional Advisors across Yorkshire and Humber (Dr Andy Gratrix and Dr Helen Buglass), from the Critical Care Delivery Networks and the LETB.

Following extensive discussion representatives (please see Appendix 1) were agreed for each Trust and local training leads. We are grateful to the assistance given by the Network Lead and Managers and Regional Advisors.

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 YORKSHIRE AND HUMBER

3.1 ICM TRAINING IN YORKSHIRE AND HUMBER

This information is based on a presentation given by Dr Daniele Bryden and reflects her opinion on ICM training in Yorkshire and Humber. It reflects personal opinion where it is not clearly referenced to existing data from other sources.

Yorkshire and Humber operates as a single LETB and unit of application for recruitment but provides training in ICM in 3 sectors based around the 3 major conurbations of Hull (East), Leeds (West) and Sheffield (South). The ICM rotations are currently located in one sector which ensures excessive travelling times for trainees are avoided, but trainees can move to receive parts of their training in another sector if they so wish.

ICM training at LETB level is organised from within the School of Anaesthesia although there is a separate ICM specialty training committee with input from Emergency Medicine and Respiratory Medicine at Training Programme Director level and specific trainee representation from each sector.

In 2012, East and West pump primed the new national ICM CCT recruitment process for the region by converting 4 permanent staff grade posts into ICM training numbers. South used previous funding for Advanced ICM training posts from Sheffield Teaching Hospitals (STH) to develop the Advanced Critical Care Practitioner (ACCP) programme at STH instead. Subsequent expansion of posts in the region have been funded from the reduction in anaesthetic training numbers; anaesthetic recruitment in the region has also been subject to its own difficulties due to reductions in anaesthetic training numbers and loss of trainees from rotations due to exam failure. Since 2015, 15 ICM training numbers have been offered in national recruitment each year, but the region has never filled all these. Yorkshire and Humber LETB does not have a visible website presence for ICM training even within the School of Anaesthesia when compared to comparable size regions like North West which has a School of ICM. This means it is very unlikely to attract applicants from outside the region to train in ICM.

The reasons for suboptimal application numbers from within the region may relate to the size of the region and changes in anaesthetic recruitment and training on which ICM recruitment in the region is quite dependent. National GMC training surveys for 2015 and 2016 suggest that ICM training in Yorkshire and Humber is comparable to other providers nationally, although the difficulties of providing regular regional teaching specifically for ICM trainees has been noted. A survey conducted by the trainee representatives for the Workforce Engagement meeting suggest that although the consultant body is supportive of training, other ICM training regions are able to provide notably more individual trainee support at each stage of ICM training.

“I’ve not rated [training] excellent as there are other deaneries which provide better ICM training eg. regular echo teaching including echo fellowships, more regular structure(d) ICM teaching including preparation for FICM exam, more opportunities for ‘pre-consultant’ advanced year rather than service provision. “

In order to mitigate the reduction in the ICM trainee workforce a number of options have been considered across the region. The ACCP programme and workforce is established in Sheffield Teaching Hospitals and there is growing interest in other hospitals within the region although issues of recruitment and retention may arise as units not in a position to train a small number of ACCPs may look to recruit them from the workforce trained at larger hospitals. The overseas Medical Training Initiative (MTI) scheme is also nascent in the region and is not as established as in other areas eg Northern Deanery.

There are clearly challenges ahead for ICM training in Yorkshire and Humber and for individual hospitals looking to support the existing workforce at both trainee and consultant level. Successful applicants to ICM training nationally are also training for a CCT in Anaesthesia in 65% of cases: this figure is considerably higher in Yorkshire and Humber and there is a disproportionately low number of ICM consultant posts currently advertised that do not require the applicant to also have a CCT in Anaesthesia. The ICM trainee survey also illustrates that the perception of ICM as a career is putting many applicants off; 98 trainee respondents indicated that the obvious regional requirement to obtain a second CCT to achieve a consultant post allied with a perception of a less attractive work life balance was impacting on trainees' decisions to apply to ICM. In my opinion, the region has been unable to produce sufficient non anaesthetic ICM consultant posts to provide obvious models for different ways of training and working, unnecessarily reducing the pool of applicants for ICM training to trainees in anaesthesia, many of whom are not interested in ICM training. This is of significant concern as the region has a proportionately low number of doctors per population (the UK average is 100 and Yorkshire and Humber have between 85-94) and an anaesthetic workforce that is increasingly feminised at the younger age range.

It is also notable that involvement in ICM at Foundation level attracts applicants for ICM training as well as anaesthesia training, and more opportunities to provide exposure at Foundation level should be encouraged.

On balance ICM training provided at a local level provides good experience for trainees who are a motivated workforce and loyal to the region when they gain a CCT. There are significant issues in the way ICM has not been developed within the LETB in comparison to other regions, and the over-reliance on anaesthesia at a time when anaesthetic recruitment at consultant level is under pressure, means that there is no sustainable plan to support and develop existing ICM training to address the imminent problems of ICM consultant recruitment and retention in the region.

3.2.1 WEST YORKSHIRE

This information is based on a presentation given by Dr Andrew Cohen and reflects his opinion of the current clinical demand and workforce situation in West Yorkshire.

Many of the issues relating to the service in Yorkshire are the same as elsewhere in the country and have already been discussed in detail at earlier Regional Meetings. The West Yorkshire Operational Delivery Network oversees the service provided by 5 Trusts from a reducing number of intensive care units, due to amalgamation. Manpower demands of critical care have changed significantly since the early expansions of the local service in the late 1980's and following the publication of Comprehensive Critical Care in 2000. Yorkshire as a region appears to have suffered more than most from a recent reduction of trainees caused by the lack of recognition of the importance of critical care skills in the training of doctors.

Local trends following national ones include seeing demands for more adventurous surgery, in older and sicker individuals; in addition, there is a greater recognition of the benefits of post-surgical critical care support. The demands for admission of non-surgical patients is increasing at a similar rate.

Our workforce demands are made worse by fewer individuals, each working fewer hours. Gaps in trainee rotas have to be filled but there is a limited resource to fill them causing further problems such as cost of locums and the implications of encouraging full time staff to 'moonlight' to cover empty shifts. Factors causing stress in consultants elsewhere, such as trainee issues, lack of resources and on-call frequency are also apparent in Yorkshire. There are various degrees of compliance with staffing standards around the network. Problems with staffing in some trusts have been recognised and commented upon during recent CQC visits.

Looking at local service provision shows that West Yorkshire has a population of 2.3 million. Critical care is provided in 13 units comprising of 126 beds; 98 general and 28 specialist cardiac, neuro and burns. This represents 5.5 beds per 100,000 population or 4.6 if the specialist beds are not included. Considering the European average 11.2, the English average 6.6 and the worse European country, Portugal, 4.2 indicates that Yorkshire is underprovided with critical care resource. This is supported by data for bed occupancies, inter unit transfers and low bed alerts.

Are there ways of improving efficiency in West Yorkshire? It is possible that fewer, larger critical care units would improve consultant cover and on-call arrangements, facilitate training opportunities, help with the organisation of trainee cover at all levels from acute specialties and help with problems of sourcing multidisciplinary support but at a cost of reducing access to patients in remote geographical areas.

Currently there is work being done looking at the non-medical workforce. Advanced Critical Care Practitioner numbers in Leeds have increased from 1 in 2013 to around 11 in 2017. Skills being developed in ACCPs include prescribing, line placement and FICE accreditation. ACCPs are currently being used to help fill empty slots in trainee rotas. There is local work being done to look at expanding ACCP training programmes. Another way being considered to reduce demand on the current critical care service is the development of level 1 critical care. Finally it may be possible to utilise local skills in telemedicine to look at ways in which smaller units can be supported by colleagues in larger centres.

3.2.2 SOUTH YORKSHIRE

This information is based on a presentation given by Dr Chris Scott and reflects his opinion of the current clinical demand and workforce situation in South Yorkshire.

The clinical demands and workforce issues are the same in the North Trent Critical Care Network as other areas are reporting with increasing patient numbers and recognition that there may not be a sustainable resident medical workforce over the coming years.

Currently care is provided across 9 individual units caring for over 6500 admissions per year. Both the large general ITUs within NTCCN believe there will be an increase in workload over the coming years.

Across the network within the next 5 years there is likely to be a loss of around 20% of the current consultant workforce due to retirements.

Sheffield Teaching Hospitals General Intensive Care Units started a programme of training Advanced Critical Care Practitioners (ACCP) in 2013 in conjunction with Sheffield Hallam University. They now have a full tier of 8 trained ACCPs who have replaced a tier of junior doctors and are continuing to recruit and train new ACCPs.

Gaps in resident trainee rotas remain a common problem with a variety of solutions across the network none of which appear sustainable in the medium to long term.

3.2.3 NORTH EAST YORKSHIRE AND NORTH LINCOLNSHIRE

This information is based on a presentation given by Dr Jerry Thomas and reflects his opinion of the current clinical demand and workforce situation in North East Yorkshire and North Lincolnshire.

North Yorkshire and Humberside network includes Hull, York, Harrogate, Scunthorpe, Grimsby and Scarborough Hospitals. There is interaction between the stakeholders on a regular basis. D16 and its implications have dominated the agenda for a while.

The smaller units have found it difficult to comply with some of the recommendations especially around providing 24/7 Consultant cover as they find it difficult to recruit quality staff to these posts. So far middle grade cover hasn't been a problem in the smaller units but unsure as to what the situation will be like in the future.

Alternative medical workforce (ACCPs) have been used in Hull for a few years now but it is unclear if they represent value for money for the smaller units.

Future plans include peer review visits later in the year. Work is also progressing on developing a website for the network.

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 Yorkshire and Humber. 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 the region 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.

AIREDALE GENERAL HOSPITAL: Airedale NHS Foundation Trust

The unit is a similar size to Harrogate however it is unclear at the moment if there is enough work to justify a separate rota. There are 10 SAS doctors who manage obstetrics; there could be issues in future recruiting to vacant posts. There are 2 tiers of anaesthetic doctors covering OOHs in 3 areas, although Level 2 patients are currently not automatically reviewed by the anaesthetic team. There are ongoing concerns regarding taking on Level 2 work out of hours; 1 doctor on the out of hours team is usually a novice anaesthetist or locum without critical care experience.

BRADFORD ROYAL INFIRMARY: Bradford Teaching Hospitals NHS Foundation Trust

There are 16 beds on the unit. The consultants are quite protected but are undertaking more junior roles due to a lack of junior staff. For example, for August, September and October 2016, all CT late shifts and weekend long-days were covered by consultants which was a massive undertaking. There is a separate ICU on-call rota however, all ICM consultants are also anaesthetists and cover obstetrics. During the day, 2 ICU consultants are present covering Monday to Friday in blocks. 14 ICU consultants contribute to this. Out of hours, 1 ICU consultant covers ICU and 1 anaesthetic consultant covers acute theatres. Obstetric cover alternates between the two. 4 trainees are on-call at a time, 1 for the ICU, 1 for anaesthetics and 1 for obstetrics; the 4th is a senior registrar (ST4-ST7) who covers the other 3 trainees.

CARDIAC INTENSIVE CARE UNIT: Sheffield Teaching Hospitals NHS Foundation Trust

There are 38 consultant vacancies countrywide due to a huge deficit in trainees and no eligible consultants at interview despite frequently advertising these posts. The work/life balance of cardiac critical care is deterring people from the specialty; cardiac anaesthesia is more attractive. Newcastle has been trying to split the anaesthetic and cardiac ICU rotas for some time but have so far been unsuccessful. Moving forward, trainees are unlikely to do ICM training combined with advanced cardiac training so the Dual trained consultants will not be there at the end. The CICU at Sheffield is a physically separate unit and separately funded from the general ICU. Some solutions that might involve use of personnel from the general grouping by expanding the general workforce to meet the gap in cardiac ICU have not yet been fully explored locally or indeed nationally. CICU cover is provided by anaesthetic trainees; they are not doing enough theatre time for anaesthetics so the issues are just moved around. CICU consultants also perform emergency cardiology procedures.

DEWSBURY AND DISTRICT HOSPITAL: The Mid Yorkshire Hospitals NHS Trust

There are 4 Level 3 beds and between 2 and 6 Level 2 beds run mainly by anaesthetic colleagues who are able to phone ICM colleagues when necessary. Consultants can spend more time on the phone providing assistance to other colleagues than on the unit. There is a mixture of SAS doctors and MTI doctors on the rota. Dewsbury is planning to merge with the larger unit at Pinderfields.

DIANA, PRINCESS OF WALES HOSPITAL, GRIMSBY: North Lincolnshire and Goole NHS Foundation Trust

The unit has 7 beds made up of 6 Level 3 beds and 1 Level 2 bed; the hospital looks after approximately 3000 admissions per year. The rota runs from 8am-9pm daily and then becomes on-call; the rota is currently joined with anaesthetics and would require a further 2 consultants to split the rota effectively. The unit has problems with trainee cover.

DONCASTER ROYAL INFIRMARY: Doncaster and Bassetlaw Hospitals NHS Foundation Trust

The ICU at Doncaster Royal Infirmary has 20 beds and is mixed Level 2 and Level 3. The rota is split during the day and there are 2 consultants working out of hours. The unit has help with the second ICU consultant on Saturday and Sunday between 8am and 2pm from 2 anaesthetists (1:8 for them). There are 2 consultant vacancies and we have, so far, been unable to recruit to these posts. The unit is reliant on anaesthetic trainees but has every tier of trainee from FY2 to senior ST and trains respiratory medicine registrars for their ICM block and has emergency medicine trainees also. The Trust invested in consultant physicians to do extra ward rounds at weekends; these were originally intended to improve patient flow but it has also led to a drop in inappropriate referrals to ICU. Bassetlaw Hospital ICU has 6 beds, with a maximum of 4 Level 3 beds and is run entirely by general anaesthetists.

HARROGATE DISTRICT HOSPITAL: Harrogate and District NHS Foundation Trust

There are 10 beds which are flexibly Level 2 and Level 3. There are 9 consultants on a 1:9 rota which is mainly split; fully separate rotas are expected to be formalised next year. There is enough work to justify the rota separation. As this is a smaller hospital, the service relies on flexibility. GPICs has improved the service just by trying to attain it.

HULL ROYAL INFIRMARY & CASTLE HILL HOSPITAL: Hull and East Yorkshire Hospitals NHS Trust

There are 32 mixed Level 2 and Level 3 general beds (3 units) and 10 cardiothoracic/ cardiology beds (1 unit) across the trust. The outreach service requirement has increased and supports other services in the hospital. A recent CQC visit suggested 2 outreach nurses should work 24/7 however, there has been difficulty in progressing this proposal due to financial restraints. The unit has difficulties recruiting and retaining nursing staff and is subsequently overusing agency nursing staff to maintain bed availability. There are 4 newly qualified ACCPs and 5 more in various stages of training. They function at core trainee level. There are 11 general intensivist consultants doing the work of 16 however, the hospital is not attractive to potential appointees. The Trust tends to recruit consultants from within the trainee group; the changes to the training scheme and no local recruitment to this for 2 years has led to a lack of output to consultant. Local anaesthetic trainees do not appear to want to do ICM and the Trust has not been supportive of joint EM and ICM posts, of which we have had 2 suitable local joint trainees.

LEEDS GENERAL INFIRMARY: The Leeds Teaching Hospitals NHS Trust

The general ICU has 8 mixed Level 2 and 3 beds and the separate neuro ICU has 7 Level 3 plus 7 Level 2 beds. The general HDU is currently closed due to nursing staff shortages but is planned to reopen with 4 beds in January 2017. Day time cover is provided by 2 consultants, 1 for Neuro and 1 for General but, out of hours, 1 intensivist consultant covers all ICU/HDU beds. Currently there are 13 Consultants covering ICU out of hours, including some neuro-anaesthetists who have not previously had daytime sessions in ICU. From January 2017, with 2 new appointments, this will change and all consultants on the out of hours rota will have block daytime sessions. Currently the units have a mix of DRE-EM/ACCS/MTI doctors filling gaps in rotas that were previously filled with anaesthetic trainees. There are also 2 fully trained and 2 trainee ACCPs. This presents a very diverse skill mix, the different types of doctors require different input and requires consultants to be aware of quantity and quality considerations. The hospital recently introduced a resident consultant anaesthetist to handle trauma on a separate rota and the cardiac ICU is separately covered by consultant cardiac anaesthetists.

NEURO INTENSIVE CARE UNIT: Sheffield Teaching Hospital NHS Foundation Trust

A representative from the Neuro-ICU was not able to attend this meeting however, the report was submitted via email.

There are 7 Level 3 and 14 Level 2 neurosciences beds, flexing to 8 Level 3 and 12 Level 2 if needed. A neuro-anaesthetic rota of 1 consultant and 1 registrar (resident) cover the Level 3 beds and neurosurgical theatres. Level 2 beds are covered by a resident neurosurgical registrar and on-call consultant. Co-location with the general critical care unit at the Royal Hallamshire Hospital allows flexible use of beds across the department. Northern General Hospital do not have a neuro-intensivist in the hospital, but the neuro-intensivist on-call at the Royal Hallamshire Hospital is available for consultation, and where necessary can attend (although attendance is more often required in theatre).

NORTHERN GENERAL HOSPITAL & ROYAL HALLAMSHIRE HOSPITAL: Sheffield Teaching Hospitals NHS Foundation Trust

There are 42 beds between the IDU and HDU across two sites; 34 at Northern General Hospital and 8 at the Royal Hallamshire Hospital. At the Northern General Hospital, one trainee rota has gone and there is now a 'mix and match' skill set. Although there may be numbers on the ward, the skill set might not be appropriate to perform certain procedures, hence resident consultant cover has been increased and additional job-planned ICM sessions have added. Resident consultant cover is provided up until 10pm Monday to Friday. At weekends, 3 resident consultants are present each morning to undertake timely ward-rounds. The on-call consultant is usually then resident at the NGH site until late in the evening. There is 1 airway competent trainee doctor at each site to cover the units. There is a separate on-call rota which covers both sites but is helped by Metavision, a clinical information system which enables staff to electronically monitor patient stats from each site.

PINDERFIELDS HOSPITAL: The Mid Yorkshire Hospitals NHS Trust

Pinderfields has 1 ACCP who is working to the equivalent of ST3 or above and is also training medical trainees. Pinderfields had 15-17 beds and staffing is fine during the day. At night there is 1 resident and this is difficult to manage and can negatively impact the resident. At weekends there is consultant cover but the days are long. Both situations can impact how long people will stay in the specialty.

SCARBOROUGH HOSPITAL: York Teaching Hospital NHS Foundation Trust

Scarborough Hospital has recently expanded to accept 6 level 3 patients, into 7 bed spaces (soon to be 8). This funding for an extra bed took considerable discussion with the CCG in order for them to realise the need. The Trust had an external review within the last 18 months and a decision is to be taken on how the unit will run in future. As part of meeting GPICS, the unit has tried to focus on initially achieving the 12 hour Consultant Intensivist review. Although the unit is still planning to implement 24 hour ICM consultant cover, it will be a difficult task due to the isolation of the unit. The Trust tried advertising a post with split site working between York and Scarborough but there was no interest; the units are quite far apart and it would have been a challenging role.

ST JAMES'S UNIVERSITY HOSPITAL, LEEDS: The Leeds Teaching Hospitals NHS Trust

There are bed spaces for up to 23 Level 3 patients in one unit and 16 Level 2 beds in a separate unit. There are 2 consultants covering Level 3 beds, 1 consultant doing a ward round at Level 2 and 1 consultant on-call at night. There are too many beds not to have senior cover available. Consultants work in blocks and have annualised job plans. The 2 middle grade rotas are covered by a mixture of anaesthetic trainees, ICM trainees and MTI trainees and the core rota is made up of acute and emergency medicine trainees. This felt secure in the past but the reliance on MTIs has made the middle grade rota in particular more vulnerable. Rotating trainees based on RCoA requirements can cause problems; training takes place at weekends but these shifts are not recognised as training days, only as service. ACCPs work at the equivalent of ST3 however, they are unable to intubate.

THE YORK HOSPITAL: York Teaching Hospital NHS Foundation Trust

There are 17 beds, used flexibly, on the unit. The Trust lacks trainees sufficiently experienced to be independent out of hours in the ICU. There are only two tiers of trainee; one of the trainee tier's first responsibilities is to obstetrics, they are supposed to assist on ICU but this is dependent on the trainee. This means the unit is often run by a consultant and CT1 or CT2 trainee out of hours. At consultant level, there is 1 intensivist (who is not also an anaesthetist) and a smaller pool of anaesthetic ICM consultants cover having to open a second theatre while the non-anaesthetist ICM is on-call. There are 13 consultants on the unit at the moment, 4 of whom are over 50; consultant numbers are good at the moment but the Trust is expecting an increased workload in the future which will require an increased consultant workforce. The rota is split but there is only one consultant for theatre after 6pm so if a second theatre is required it falls to ICU to manage. The Trust includes Scarborough Hospital, which consultants from York also cover, however the distance between the two is 50 miles and requires at least an hour of travel time. The Trust have had difficulty recruiting recently and split site working between York and Scarborough could be deterring applicants. Despite this, other Trusts in the region believe York is a very desirable place to live and work.

GENERAL DISCUSSION POINTS**Nurses**

Nursing staff are voicing concerns about the difficulties involved in working with doctors with differing skill sets and competency levels. In some extreme cases, this is causing senior nursing staff to retire at the earliest opportunity. A recent statistic showed that 25% of senior critical care nurses will retire in the next five years. The uptake of the ACCP programme is also leaving gaps however, senior nurses tend to progress to organ donation or management roles so the upside to ACCPs is that they remain on the unit and their knowledge and experience is retained.

ACCPs

ACCPs are permanent members of staff so only learn and improve. However, the process is not cheap and there needs to be funding in place to both train and employ ACCPs. ACCPs would be a great solution for smaller units however, most do not have the ability to train them as they are not recognised for Stage 1 and Stage 2 ICM training. The region should look for ways around this; the general consensus being that ACCP training should be regionalised.

Recruitment/Training Posts

The attendees shared concerns that trainees were being deterred from applying to Yorkshire and Humber as one unit of application. The region is geographically huge and there is no way of knowing which part of the region they would be appointed to meaning trainees may be live two hours or more from the hospital they were expected to work in. Second speciality and the unit of application is also a danger as trainees might resign from one area in order to move to another where they originally wanted to work. The region did not fill all of its training posts during the last recruitment round so there is an argument that increasing ICM posts will not solve the problem.

Technically, there is no funding for ICM posts which have historically come from anaesthesia. There was an argument from a School representative that Fellowship by Assessment meant that enough consultants were being trained; consultants from any parent specialty with 1 daytime ICM session per week can obtain FFICM. This was countered by the argument that Fellowship was not an equivalent of training and there is an emerging trend where units will not appoint consultants without a CCT in ICM or formal recognition of ICM training.

Trainees

It was widely agreed that significant numbers of senior trainees relieved pressure on consultants, particularly on out of hours rotas. With fewer trainees currently in the system, less anaesthetic trainees and specifically less involvement in ICU (as 'intermediate training' no longer exists) the workload of consultants has increased.

In smaller hospitals, although there may be numerous consultants and trainees on the ward, some of the trainees are very junior and/or have variable levels of ability. In actuality there may only be 2 or 3 people who can actually cover the service.

There is a reliance on anaesthetic trainees both in and out of hours. This results in a 'feast or famine' type situation during training blocks.

MTIs/Overseas Trainees

There is a reliance on MTIs for some rotas and MTIs have not always been successful in the region. While they have been of a high standard in some units in others, the doctor has reported to be at consultant level but actually operate closer to core trainee level. These doctors often have MBBS and become anaesthetists but have no other experience so are not suited to ICM. To date, trainees from Spain have been very good as the country has a single ICM training programme.

Alternative training posts

Chesterfield is developing an optional FY3 post which trainees could utilise before taking up a core training post; this helps the trainee by providing extra support and additional training if required and also helps the Trust with service requirements. Trainee GPs have the option of a FY3 post as part of their standard foundation training. Harrogate are developing a CT3 year and Fellow posts. These again provide an educational component but also assist with service requirements.

Referrals

In Leeds, admissions were reduced after insistence on a consultant to consultant discussion before admissions were accepted. There still remains reluctance by parent teams to address, at an early stage, the suitability/appropriateness of patients for critical care involvement. There were a number of anecdotal comments about inappropriate admissions causing pressure on beds. An alternative view was expressed that this is not the case, it being noted that the provision of beds in the region is lower than the rest of the UK and the UK is lower than the rest of Europe.

Standards

There was some opinion that GPICS and other standards haven't been written with smaller hospitals in mind and that there was little or no evidence to support recommendations. There was a feeling that the 'gold standard' of split rotas might detract from other things which might be more useful. There was a feeling that GPICS was preventing smaller units from having the flexible workforce required to cover multiple areas of practice. However, it was generally agreed that aiming for the 'gold-standard' can improve services just by aspiring to meet them. Acute trusts cannot plan for when they will be busy and need to be appropriately staffed at all times. The CQC also seem satisfied if a Trust can demonstrate that they are trying to plan for the 'gold standard'.

ICM as a single specialty

There was a view that the creation of ICM as a single specialty came just as the NHS was running out of money. It was highlighted that this situation was forced by the GMC and was not the decision of the Faculty or any of the parent Colleges. The decision was made without any funding provision so the specialty has been left to 'find its own feet' with help anaesthesia and other acute specialties.

Morale

Morale is mixed across the region. In West Yorkshire, there were serious concerns about morale until 7 trainees were appointed following this year's recruitment which has boosted the mood amongst the teams. Trainee morale seems reasonable at the moment however, the Junior Doctor's contract dispute has naturally affected trainee morale which has had a knock on effect on consultant morale. Similarly, low consultant morale is having an effect on trainees and their enthusiasm for their future career; the increase in the remit of ICM, inability to find consultants and consultants leaving ICM at 50 does not entice new recruits.

Morale can be affected by how Trusts deal with individuals and the workforce as a whole. For example, delays in paying for extra shifts can impact the individual and failing to consult on future organisational plans can impact the entire workforce.

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 Yorkshire and Humber. The attendees were asked to consider different models based on the short-term future (5-10 years):

- What workforce would be required for each Trust 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?
- Are there any other factors which may have an effect on future workforce models?

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.

<p>BRADFORD ROYAL INFIRMARY: Bradford Teaching Hospitals NHS Foundation Trust</p> <p>The adult ICU requires 24-28 beds and needs more flexibility to move with winter pressures etc. Centralising service or losing facilities can leave clinicians feeling de-skilled There are a large number of paediatric stabilisation cases per year and, as adult intensivists, the consultants feel they are being asked to go beyond their skillset. Managing these patients for long periods of time before they are transferred detracts from providing adult ICM out of hours. The large numbers reflect the local population.</p>
<p>CARDIAC INTENSIVE CARE UNIT: Sheffield Teaching Hospitals NHS Foundation Trust</p> <p>The unit requires an increase in Level 3 beds and there has also been an increase in workload from PCI services which is pulling staff away from the unit.</p>
<p>DIANA, PRINCESS OF WALES HOSPITAL, GRIMSBY: North Lincolnshire and Goole NHS Foundation Trust</p> <p>The unit is currently recruiting for 2 consultants but acknowledge the posts could take years to fill. The unit also requires an additional 4 beds to meet demand.</p>
<p>DONCASTER ROYAL INFIRMARY: Doncaster and Bassetlaw Hospitals NHS Foundation Trust</p> <p>A link was established between Doncaster and Rotherham for some services however, critical care was not consulted and this lead to confusion regarding patient care and transfers. The organisation of critical care services between the two trust sites (Doncaster and Bassetlaw) is ongoing and is likely to produce a different layout and arrangement in the medium term.</p>
<p>HARROGATE DISTRICT HOSPITAL: Harrogate and District NHS Foundation Trust</p> <p>The Trust is trying to obtain funding for Level 1 beds and could do Monday to Friday consultant lead outreach to capture Level 1 patients and prevent admission to HDU or ICU.</p>

HULL ROYAL INFIRMARY: Hull and East Yorkshire Hospitals NHS Trust

There is no room for expansion within the building at the moment and the unit is running at 90% capacity. The Trust want to expand, there are 4 consultant vacancies and an increase in workload is expected.

LEEDS GENERAL INFIRMARY: The Leeds Teaching Hospitals NHS Trust

The Trust is expecting more trauma and more head and neck cases so expansion may be required. There are 6 high-op beds for cardiac admissions which allow for discharge from ICU earlier.

NORTHERN GENERAL HOSPITAL & ROYAL HALLAMSHIRE HOSPITAL: Sheffield Teaching Hospitals NHS Foundation Trust

The number of ventilator days have doubled since development of the Major Trauma Centre with no net increase in beds. As a result, the units require expansion. There has been an increase in the centralisation of other services which is also impacting on ICU bed capacity; for example, there is a lack of adequate cover for GI bleed rotas which means more cases are transferred in for intervention which then impacts on Level 2/3 bed usage.

PINDERFIELDS HOSPITAL: The Mid Yorkshire Hospitals NHS Trust

Pinderfields has an 8 bed Level 1 surgical unit; the ARC unit and NIPPY unit are expanding also. GPICS has been very useful regarding nursing standards as it has prevented hospital management from becoming involved with nurse staffing and redeploying nurses elsewhere. The Trust is undergoing reconfiguration. Acute surgery has moved to Wakefield, surgeons were not ready so the Trust had to leave half of the medical workforce at Dewsbury just as a precaution.

SCUNTHORPE GENERAL HOSPITAL: North Lincolnshire and Goole NHS Foundation Trust

Capacity is a major issue. There were 27 non clinical transfers last year. A business plan was approved for 4 HDU beds in the current year. The unit need an additional 4 Consultants to split the rota. The lack of good quality appointees is a perennial problem here. There are plans to appoint 24/7 critical care outreach nurses; critical care outreach teams have been empowered to discuss the prospect of escalation and this has reduced admissions.

ST JAMES'S UNIVERSITY HOSPITAL, LEEDS: The Leeds Teaching Hospitals NHS Trust

The unit has been quite effective in reducing demand for the ICU and tried to be more collaborative with other specialties to prevent inappropriate admissions. ICU consultants should also be involved in post ICU care. There are 6 high-op beds for cardiac admissions which allow for discharge from ICU earlier. Nurses decide their own ratios which can help to prevent nurse shortages. The Trust is currently modelling units for 10 years' time and is looking at groups of 20 beds as 10 patients per consultant seems manageable. The group agreed that 15 beds was the tipping point for 1 consultant and 1 trainee.

GENERAL DISCUSSION POINTS

ICU Resources

A trial of intensive care can be beneficial for patients but doesn't always have a clear endpoint which can be a problem for bed availability. One view was that, in some cases, this type of request seems to be using the resource to manage patient and their family expectations rather than other staff having difficult conversations.

Remit of ICU

ICM treats different people today than it did 10 years ago. A lot of time is spent preventing people from needing to go into the ICU. There seems to be a lack of senior input on wards to avoid this.

External Issues

Staffing and reconfiguration of services impacts ICM which can result in increased admissions such as respiratory NIPPY admissions. Critical care has picked up a lot of patients who could have been kept on the ward if they were properly staffed. Other specialty reorganisations, particularly affecting transfers and acute services, can have a detrimental impact when critical care is not consulted. In 5-10 years more centres will be providing ECMO for respiratory failure and there will be cost and time implications for this also.

Collaborative Working

There needs to be intelligent screening of elective ICU 'just in case' admissions. Doncaster has had success with some elective surgeries such as bariatric and vascular surgery by working with pre-assessment and post-operative wards to prevent deterioration. The main issue which cannot be planned for is unselected medical admissions.

Nurses

On some units nurses agree their own ratios based on the nature of the patients. On other units, this is decided by the management based purely on the number of patients. It was agreed that this should be done with some discretion as some patients may require more care than others. There may also be a varying turnover of patients depending on the nature of the unit; for example a Level 2 HDU would admit and discharge patients on a more regular basis than a Level 3 unit.

Allied Health Professionals

There was consensus that it is very difficult (impossible in some cases) to meet the GPICS standards regarding the staffing ratio for physiotherapists, dieticians and pharmacists. Their respective society standards are not as high so it seems odd that the ratios for GPICS are. There is also no funding to pay for more. It was acknowledged that their input is important to critical care and can affect the length of stay for patients.

Trainees

Although more trainees would ultimately be good for the specialty and patients, there needs to be a balance as an increase in non-career intensivists such as MTIs and DRE-EM doctors can create more work and pressure on permanent consultant and nursing staff. Ideally there would be more trainees who are career intensivists but currently recruitment and retention is not ideal. Expansion is needed in the workforce to take into account capacity to train.

Other specialty trainees rotate through the ICU and could be added to the rota to really understand the 24 hour nature of critical care. Those trainee groups who interact with ICM but do not undertake any ICM training could also be explored; for example surgical trainees in Scotland do three months on the ICU whereas trainees in England do none. For core capabilities, it was suggested that there needs to be a minimum block of three months.

Single CCT Training Programme

Clearer guidance is needed on the routes into the single CCT training programme. The possible routes need to be better advertised as well as the benefits of the training programme and how a career can progress. Trainee days are run regionally to attract foundation trainees. Trainee career days are run by the ICS and the Faculty is taking forward a career strategy. Medical students and foundation trainees need exposure to critical care earlier in their career.

Transfers

Paediatrics have a good transfer service (EMBRACE) within the region which works well although there was mixed support for an equivalent adult model. The less critical care available in a hospital the higher the risk of transfers so having some critical care service helps to alleviate the need for this. Transfers would also depend on where the patient would be transferred to and it can be a difficult conversation to have with relatives. It is easier to convince relatives and patients with a quality argument or for a specialist service rather than a lack of resources especially if the other unit is far away. Transferring during out of hours puts even more of a strain on an already under-staffed unit as the transfer needs support and takes people away from the ICU. Transferring for clinical reasons is increasing due to loss of services. Creating an adult EMBRACE type service could have consequences if a patient deteriorates during the transfer or too quickly before the transfer can take place. Transfers themselves always carry risks. It would be useful for the region to audit the impact of transferring or not transferring a patient.

ACCPs

Regionalising ACCP training would be more beneficial to both trainees and hospitals. ACCP training can only be done in units which are approved to train ICM trainees at Stage 1 and Stage 2 which means smaller hospitals and DGHs are unable to train their own ACCPs. These units could collaborate with the larger hospitals and fund ACCPs to train in the larger unit before moving back to their original hospital. The biggest challenge is funding as ACCPs are not a cheap solution. ACCPs can function as various members of staff i.e. as a junior doctor or an extra pair of hands. Smaller hospitals are so reliant on anaesthetic cover for out of hours and ACCPs could deliver service during the day which frees up consultants to perform their role and means anaesthetic trainees can cover theatres. ACCPs could also be used to transfer patients which would keep an extra body on the unit. Networks could look at training and distributing them when qualified.

Centralisation, Reconfiguration and Small Units

Some smaller units are expecting that the majority of their services will be centralised and they will be forced to merge with larger units. There was little enthusiasm for consultants from larger hospitals rotating to smaller units. Using a hub and spoke model may also be difficult as it would take staff from units with their own staffing problems therefore expansion would still be needed to ensure there were enough staff to cover all units. There would need to be a degree of flexibility with this arrangement and it would largely depend on the size of the unit. The group was divided on the issue of closing small units and moving their services to larger hospitals. Some of the group were of the opinion that small units are not economically viable in the present climate with regards to staffing numbers etc and there was a suggestion that skills could not be maintained sufficiently.

GPICS standards are not helping with this and encouraging small units to increase their consultant workforce at the expense of larger hospitals which admit more patients. Larger teaching hospitals such as Sheffield could cohort neuro, cardiac and general ICM and combine them into a larger unit if space were available. The group were advised that in Manchester, a new structure was being implemented whereby all hospitals were merging into three big Trusts that all staff would rotate through; it was agreed this development would be followed with interest.

Level 1

Developing Level 1 could prevent patients being inappropriately admitted to ICU or deteriorating enough to require admission. However, by taking on Level 1 patients in the HDU this could be doing a disservice to Level 2 patients in regards to nurse staffing and patient care.

Tele-medicine

Tele-medicine would be helpful for isolated units however this still does not help with bodies on the ground and could create some political issues.

Burnout and work life balance

There is a perceived issue with work-life balance in ICM which, although not always correct, sometimes is. Burnout seems to come earlier in the specialty at around 40-45

Less than full time

While there are lots of trainees in LTFT training there are not the same number of LTFT consultant posts available. Foundation Trusts do not have to advertise part time possibility but the College/AAC route does. Different working patterns are very evident in anaesthesia but people think Critical Care will not allow for it. The different working patterns available in ICM need promoting. These differing models suit different people and this can be beneficial to the specialty.

Funding

Universally the group considered ICNARC's 4% increase to be too conservative for larger units, but felt that was a figure suited to smaller units. Trusts will not fund more posts on the basis of what a unit predicts it will require in the future.

6. PROBLEMS AND SOLUTIONS

Sections 4 and 5 of this report detail the many problems currently facing the ICM workforce in Yorkshire and Humber. These can be summarised into the areas below. It is notable that when compared to information from the annual ICM workforce census, there are many commonalities across the entire UK.

6.1 PROBLEMS

Training and Trainees

The current structure of recruiting to the region as one unit of application is deterring trainees due to the uncertainty of where they will be placed. The region is geographically huge and trainees could live over two hours away from the hospital they are recruited to. The transition between the old Joint CCT and the new Dual CCT has created a dip in the number of experienced trainees on the units and there are fewer trainees in general in the current programme. In addition, the skill sets of trainees can vary significantly, with different entry routes to the programme and the different specialty backgrounds of trainees. It was noted that some of the nursing staff are finding this inconsistency and uncertainty particularly difficult to deal with. The experience of MTI trainees within the region has been both positive and negative, although there appears to be a reliance on them in some Trusts.

Geography

The region's vast geography presents its own challenges. As previously mentioned, there can be large distances between where a trainee or consultant lives and where they work. It can also mean that units within the same Trust can be hours apart from each other which reduces the possibility of sharing resources and implementing cross-site working.

Consultant Staffing

All future staffing models discussed, would require significant consultant expansion on top of the expected retirements and gaps already present in the region. The predicted increase in workload, reorganisation of units and desired trainee expansion will need more consultants in order to staff these units and supervise junior doctors. If trainee numbers do decrease, even for the short term, consultant workload will increase which could in turn lead to increases in long-term sickness and burnout. With fewer trainees in the system, it is expected that there will be fewer consultants being employed within the region as trainees tend to accept consultant jobs within their training region.

Standards

Although standards such as GPICS have proven helpful in most cases, it was argued that they are creating problems in smaller units. It was felt that there needed to be a more flexible workforce to work on these units using consultants who were able to cover a second specialty in addition to working in the ICU when necessary.

Bed Numbers

There are a lack of ICU beds in the region which some in the group believed was exacerbated by inappropriate admissions from other specialties. However, it was highlighted that the number of beds available was lower than the rest of the UK and that the number of beds available in the UK as a whole was lower than in the rest of Europe.

External Factors

Service reconfigurations without consultation or consideration of ICM have created problems in the region, particularly affecting transfers and bed capacity; several members of the group provided anecdotal evidence to support this. Acute services cannot exist within a hospital without provision for critical care yet it appeared to some that Trust management often overlooked this. Staffing shortages on other wards also have an impact on ICM services and can mean that patients are admitted to the ICU earlier than necessary or there are delays with discharging the patient back to the ward. All of which can increase workload and bed pressures on the ICU.

6.2 SOLUTIONS

It was interesting to note that a number of areas raised (i.e. ICM in undergraduate education and initiatives on work/life balance) are already underway as new work streams within the Faculty. However, this will not replace the need for local initiatives for these and the other areas.

ACCPs

ACCPs are a possible workforce solution; they are able to fill gaps in the junior rota, provide outreach which keeps consultants and trainees on the unit and supervise training of junior doctors and nurses. They are not a cheap option however and take a minimum of two years to train. The group felt that ACCPs would be particularly beneficial to smaller units (who were currently unable to train them) so suggested that regionalising ACCP training would be the best course of action. This would also ensure that ACCPs had a similar skill set and cannot be poached by other units. Some argued that ACCPs created gaps in the senior nursing staff where others felt that the programme ensured they remained on the ICU rather than leaving to take up teaching or management roles.

MTI Trainees

Although experience of MTI trainees has not always been positive in the region, if they are trained and supervised appropriately, they can be an asset to the unit. There has been some success with trainees from Spain as the country has an ICM training programme.

Alternative Training and Recruitment

Some units are developing alternative training posts in the form of FY3, CT3 and fellowship posts. These are aimed at helping trainees transition to the next stage of training while also helping with service requirements. There was a suggestion to utilise trainees from other specialties who rotate through the ICU; again this helps service requirements but also allows these trainees to develop different skills and understand how an ICU works which may help prevent future inappropriate admissions. As trainees are potentially not applying to ICM due to the lack of option to preference an area of this large region, it would be sensible for the School and STC to consider the impact on the geographical spread of rotations and trainee wellbeing.

Preventing Deterioration/Admission to the ICU

Finding ways to prevent and reduce admission to the ICU could help reduce demand on both staffing and resources. Suggestions from the group included developing Level 1+ care to help prevent patients deteriorating to the point where they required HDU or ICU admission. Similarly, the group suggested developing outreach services and helping other specialties manage acutely unwell patients on their own general or specialist wards.

New Staffing Models

The region needs to investigate new ways of staffing units such as 'hub and spoke' models and cross-site working; it was acknowledged that this might not be possible for every unit due to geographical difficulties mentioned previously. There were also concerns that these models may exacerbate shortages if there were not enough staff to properly staff rotas.

Metavision

Metavision is a clinical information system which enables staff to electronically monitor patients from different sites across a network. This is currently used in Sheffield and could be used in other Trusts within the region.

Earlier Exposure to ICM

Many trainees are not exposed to ICM until later in their training and with ST5 being the latest trainees can apply in the new Dual programme, trainees who come to ICM too late in training are restricted. The group agreed that better promotion and opportunities for undergraduate students to visit and work on an ICU are required to encourage more trainees into the specialty. As well as this, clearer information needs to be provided as to the routes of entry into the specialty.

Perception of Work/Life Balance

There appears to be a perception that the work/life balance for ICM consultants is far too much in favour of work. Whilst it was agreed that the job is high pressure and can be very stressful, this is also true of other acute specialties and the group agreed that more could be done to promote the idea that ICM can be a family friendly specialty. Low consultant morale can affect trainee morale and therefore trainee recruitment and retention.

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
Airedale Hospital	6	10	8	6	1	1	40 (approx)	40 (approx)
Bassetlaw Hospital	7	7	7	8	0	2	35	12
Bradford Royal Infirmary	14	20	0	0	0	9	86	115
Chesterfield Royal Hospital	11*	15	0	0	0	8	?	128
Diana Princess of Wales Hospital	6	8	8	9	0	?	0	?
Doncaster Royal Infirmary	8	11	0	0	0	6	110	135
Harrogate District Hospital	9	10	0	?	0	?	43	?
Hull Royal Infirmary/Castle Hill Hospital	12	16**	0	0	4***	13	189	189
Leeds General Infirmary - Cardiac ICU	7	7	0	0	0	0	93	110
Leeds General Infirmary - General ICU	7	10	0	0	2	8	70	80
Leeds General Infirmary - Neuro ICU	5~~	5~~	0	0	0	0	83	90
Mid Yorkshire Hospitals NHS Trust	13	13	0	0	1	6	?	?
Northern General Hospital - Cardiac ICU	12	14	0	4	4	8	73	85
Northern General Hospital & Royal Hallamshire Hospital	19	19	0	0	8	>8	220	?
Royal Hallamshire Hospital - Neuro ICU	11	?	0	?	0	?	75	?
Scarborough Hospital	6~	6	2	0	0	0	31	38
St James's University Hospital	14	?	3	?	4	?	200.68	?
York Hospital	13	?	0	?	0	?	72.4	?

- * all mixed with anaesthetic job plans
- ** aiming for 20
- *** plus 5 in training
- ~plus 7 anaesthetists to help cover on call
- ~~ shared with general ICU

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
Airedale Hospital	6	10	8	6	1	1	40 (approx)	40 (approx)
Bassetlaw Hospital	7	7	6	0	0	2	35	12
Bradford Royal Infirmary	6.4	?	0	0	0	0	83	?
Chesterfield Royal Hospital	11	15	0	0	0	8	45	128
Diana Princess of Wales Hospital	6	8	7.6	8.6	0	?	36.9	?
Doncaster Royal Infirmary	8	11	0	0	0	6	110	135
Harrogate District Hospital	9	10	0	?	0	?	36.7	?
Hull Royal Infirmary/Castle Hill Hospital	16	16	0	0	13	13	204	204
Leeds General Infirmary - Cardiac ICU	4.2	4.2	0	0	0	0	93.32	110
Leeds General Infirmary - General ICU	4.2	6	0	0	2	8	70.23	80
Leeds General Infirmary - Neuro ICU	6	?	0	?	0	?	100	?
Mid Yorkshire Hospitals NHS Trust	ref 1	ref 2	2	0	1	6	121.44	136
Northern General Hospital - Cardiac ICU	1.9	1.9	0	0	4	8	83.6	84
Northern General Hospital & Royal Hallamshire Hospital	19	?	0	?	8	?	220	?
Royal Hallamshire Hospital - Neuro ICU	11	?	0	?	0	?	67.5	?
Scarborough Hospital	6	6	2	0	0	0	28	38
St James's University Hospital	8	?	3	?	4	?	200.68	?
York Hospital	?*	?	0	?	0	?	72.4	?

Ref 1: 25 DCC for critical care cover

Ref 2: increase to 30 DCC

* unable to provide this information

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
Airedale Hospital	0	0	0	0	0	0	0	0	0	0
Bassetlaw Hospital	0	0	0	0	0	0	0	0	0	0
Bradford Royal Infirmary	2	2	7	7	7	7	0	0	16	16
Chesterfield Royal Hospital	1	3	1	5	1	8	0	0	3	16
Diana Princess of Wales Hospital	0	?	8	?	1	?	0	?	9	?
Doncaster Royal Infirmary	6	7	1	2	2	2	0	0	9	11
Harrogate District Hospital	1	?	5	?	4	?	1	?	11	?
Hull Royal Infirmary/Castle Hill Hospital	8	<8	12	12	8	8	2	2	30	<30
Leeds General Infirmary - Cardiac ICU	0	0	0	0	7	7	0	0	7	7
Leeds General Infirmary - General ICU	0	0	7	7	0	0	0	0	7	7
Leeds General Infirmary - Neuro ICU	0	0	0	0	7	7	0	0	7	7
Mid Yorkshire Hospitals NHS Trust	1	1	6	8	1	1	0	1	8	10
Northern General Hospital - Cardiac ICU	0	0	0	0	7	7	1	1	8	8
Northern General Hospital & Royal Hallamshire Hospital	5	8	8	8	7	8	0	0	20	24
Royal Hallamshire Hospital - Neuro ICU	0	?	7	?	0	?	0	?	7	?
Scarborough Hospital	0	0	6	6	2	2	2	2	8	8
St James's University Hospital	0	?	14	?	3	?	0	?	17	?
York Hospital	9	?	7	?	9	?	0	?	19*	?

* all trainees do anaesthesia & ICM

7.4 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
Airedale Hospital			
WTE for Consultants	5	?	unknown
WTE for SAS/Staff Grades	10	?	unknown
WTE for ACCPs	0	?	unknown
WTE for Nurses	40 (approx)	40 (approx)	unknown
Number of Trainees	0	0	remains the same
Bassetlaw Hospital			
WTE for Consultants	7	7	remains the same
WTE for SAS/Staff Grades	6	0	decrease
WTE for ACCPs	0	2	increase
WTE for Nurses	35	12	decrease
Number of Trainees	0	0	remains the same
Bradford Royal Infirmary			
WTE for Consultants	6.4	?	unknown
WTE for SAS/Staff Grades	0	0	remains the same
WTE for ACCPs	0	0	remains the same
WTE for Nurses	83	?	unknown
Number of Trainees	16	16	remains the same
Chesterfield Royal Hospital			
WTE for Consultants	11	15	increase
WTE for SAS/Staff Grades	0	0	remains the same
WTE for ACCPs	0	8	remains the same
WTE for Nurses	45	128	increase
Number of Trainees	3	16	increase
Diana Princess of Wales Hospital			
WTE for Consultants	6	8	increase
WTE for SAS/Staff Grades	7.6	8.6	increase
WTE for ACCPs	0	?	unknown
WTE for Nurses	36.9	?	unknown
Number of Trainees	9	?	unknown
Doncaster Royal Infirmary			
WTE for Consultants	8	11	increase
WTE for SAS/Staff Grades	0	0	remains the same
WTE for ACCPs	0	6	increase
WTE for Nurses	110	135	increase
Number of Trainees	9	11	increase
Harrogate District Hospital			
WTE for Consultants	9	10	increase
WTE for SAS/Staff Grades	0	?	unknown
WTE for ACCPs	0	?	unknown
WTE for Nurses	36.7	?	unknown

Number of Trainees	11	?	unknown
Hull Royal Infirmary/Castle Hill Hospital			
WTE for Consultants	16	16	remains the same
WTE for SAS/Staff Grades	0	0	remains the same
WTE for ACCPs	13	13	remains the same
WTE for Nurses	204	204	remains the same
Number of Trainees	30	<30	decrease
Leeds General Hospital - Cardiac ICU			
WTE for Consultants	4.2	4.2	remains the same
WTE for SAS/Staff Grades	0	0	remains the same
WTE for ACCPs	0	0	remains the same
WTE for Nurses	93.32	110	increase
Number of Trainees	7	7	remains the same
Leeds General Infirmary - General ICU			
WTE for Consultants	4.2	6	increase
WTE for SAS/Staff Grades	0	0	remains the same
WTE for ACCPs	2	8	increase
WTE for Nurses	70.23	80	increase
Number of Trainees	7	7	remains the same
Leeds General Infirmary - Neuro ICU			
WTE for Consultants	6	?	unknown
WTE for SAS/Staff Grades	0	?	unknown
WTE for ACCPs	0	?	unknown
WTE for Nurses	100	?	unknown
Number of Trainees	7	7	remains the same
Mid Yorkshire Hospitals NHS Trust			
WTE for Consultants	?	?	unknown (see section 7.2)
WTE for SAS/Staff Grades	2	0	decrease
WTE for ACCPs	1	6	increase
WTE for Nurses	121.44	136	increase
Number of Trainees	8	10	increase
Northern General Hospital - Cardiac ICU			
WTE for Consultants	1.9	1.9	remains the same
WTE for SAS/Staff Grades	0	0	remains the same
WTE for ACCPs	4	8	increase
WTE for Nurses	83.6	84	increase
Number of Trainees	8	8	remains the same
Northern General Hospital & Royal Hallamshire Hospital			
WTE for Consultants	19	?	unknown
WTE for SAS/Staff Grades	0	?	unknown
WTE for ACCPs	8	?	unknown
WTE for Nurses	220	?	unknown
Number of Trainees	20	24	increase
Royal Hallamshire Hospital - Neuro ICU			
WTE for Consultants	11	?	unknown
WTE for SAS/Staff Grades	0	?	unknown
WTE for ACCPs	0	?	unknown

WTE for Nurses	67.5	?	unknown
Number of Trainees	7	?	unknown
Scarborough Hospital			
WTE for Consultants	6	6	remains the same
WTE for SAS/Staff Grades	2	0	decrease
WTE for ACCPs	0	0	remains the same
WTE for Nurses	28	38	increase
Number of Trainees	8	8	remains the same
St James's University Hospital			
WTE for Consultants	8	?	unknown
WTE for SAS/Staff Grades	3	?	unknown
WTE for ACCPs	4	?	unknown
WTE for Nurses	200.68	?	unknown
Number of Trainees	17	?	unknown
York Hospital			
WTE for Consultants	?	?	unable to provide this information
WTE for SAS/Staff Grades	0	?	unknown
WTE for ACCPs	0	?	unknown
WTE for Nurses	72.4	?	unknown
Number of Trainees	19	?	unknown

7.5 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. Yorkshire & Humber has remained towards the positive end of the list, with one new post per 349,853 of the population. This, however, masks variation between the three sectors in the region. As trainees are increasingly unlikely to seek employment beyond the vicinity of where they are trained (having established mortgages and families there), continuing to grow and support training posts in the region was supported by the intensivists present at the engagement.

	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 2: 2016 CENSUS DATA

COUNT: 53 respondents (out of 770).

98.1% of the respondents are practicing in both Anaesthetics and ICM (all but one). This compares to 83.3% in Scotland and 85.7% in West Midlands.

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

AGE RANGE	NEYNL	W YORKS	S YORKS / SHEFF	TOTAL
Pre 50	1	0	0	1
50-54	3	2	2	7
55-59	3	6	9	18
60-64	7	6	7	20
65+	0	5	0	7

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

ANSWER	NEYNL	W YORKS	S YORKS / SHEFF	TOTAL
Yes	8	12	9	29
No	7	6	9	22

If 'NO', why? (MULTIPLE SELECTIONS PERMISSIBLE FOR THIS QUESTION – TOP 5 OPTIONS GIVEN)

ANSWER	COUNT
Work-life balance	17
Frequency of on-call, stress, work intensity	15
Lack of critical care capacity and finding beds	8
Intend to stop/reduce ICM in favour of another speciality	7
Lack of junior medical staff	5

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	1-7.5	1-9	1-3	0-5
MEAN	3.7	4.7	2.0	1.1
MEDIAN	3.5	4.5	2	1
MODE	5	4	2.5	0

	OOH/Weekends unplanned hours per week	Nights per week worked	Weekends per year worked
RANGE	0-10	0-5	3-13
MEAN	2.8	1.1	7.1
MEDIAN	2.5	1	6.5
MODE	0	1	6