HEE Workforce Planning 2014/15 – Call for Evidence

To submit your evidence please complete this form. Please make your submissions relevant to the categories provided in the boxes provided. We have categorised the known drivers of demand and supply under the following headings, and believe this to be a comprehensive description of the variable involved.

You can provide extracts of reports into the free text boxes below, or submit a whole report with this form by clicking on the email at the bottom of this form. Please mark clearly in the email which of the below categories the report/evidence relates to, including any relevant page numbers. Where an extract is provided, please reference the source.

Please use Part 3 to submit any information/evidence that does not fit the below categories. You can also leave any comments/observations in the free text box.

Before completing the form below please submit your contact details here:

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Form submission:

Once completed please submit the form via email to hee.workforceplanning1@nhs.net making sure all supporting documents are also attached to the email.

Please make the subject of the email: HEE Workforce Planning 2014/15 Call for Evidence [The Royal College of Pathologists]

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Any information contained in your response may be subject to publication or disclosure if requested under the Freedom of Information Act 2000. By providing personal information for this review it is understood that you consent to its disclosure and publication. If this is not the case, you should limit any personal information provided or remove it completely.

If you want the information in your response to be kept within HEE's executive processes, you should make this clear in your submission, although we cannot guarantee to be able to do this.

PART 1 – Future Service and Workforce Models

1. **Drivers of Future Service Demand**
   - Needs identified by patients and the public
   - Activity and epidemiology
   - Quality. Innovation, prevention and productivity
   - Funding
   - Other
2. **Future Service Models**
3. **Future Workforce Models**
   - Associated knowledge and skills – and assessments of the supply and demand position*
   - Associated values and behaviours – and assessments as above*
   - Workforce structure, team structure, skill mix, new roles.
   - Workforce performance and productivity

*NB: – this may include views on the efficacy and quality of education processes in equipping staff with these skills, knowledge, values and behaviours.

The discipline of cellular pathology serves all areas of practice where it is required to establish a diagnosis and provide clinical advice on management based upon examination of tissue taken from a patient. These services lie at the heart of the health care services provided to patients and are essential to the delivery of many of the national priorities and targets for the NHS. In delivering the service over 13 million histopathology slides and 4 million cytology slides are examined each year. (Independent Review of Pathology Services - Carter). Several national cancer screening programmes are reliant upon services delivered by cellular pathology, especially cytopathology. Service units are based in NHS Trusts with the majority being run by NHS organisations. A minority of the service is provided by independent organisations.

Cellular pathology also provides a national autopsy service to legal authorities as well as supporting mortuary services in NHS organisations.

The number of medical trainees in cellular pathology should receive a marginal increase to deal with capacity in the next 5 years together with a linked initiative to fund and develop a role for non-medical clinical scientists taking on some of the work in reporting cellular pathology under clinical supervision, to manage longer term structures. Review and development of capacity for support of research, clinical trials, training and education is seen as a priority area. Workforce planning to sustain a national autopsy service is seen as a risk area in need of wider review.

- Patients and the public expect a pathology service that provides reliable and timely results that meet the clinical requirement for information that guides patient management. Indirectly, tax payers require a service that is cost effective i.e. the community as a whole wants more activity at lower cost.
- The NHS Improving Outcomes: A Strategy for Cancer (2011) emphasises the need for early diagnosis as well as access to new therapies. Histopathology is central to delivery of this strategy linked to
    - increasing the uptake of cancer screening
    - increasing early diagnosis of cancer
    - ensuring that all patients have access to the best possible treatment
- The development of sub specialist cellular pathology is well developed to meet the needs of service users as follows. Breast Pathology, Cytopathology. Cardiac Pathology. Cytopathology, Dermatopathology, Endocrine Pathology, Head and Neck Pathology. Forensic Pathology. Gastrointestinal Pathology , Gynaecological Pathology, Haematopathology, Liver Pathology, Neuropathology, Non-Forensic Autopsy Pathology, Ophthalmic Pathology, Oral and Maxillofacial Pathology, Osteoarticular Pathology, Pulmonary and Thoracic Pathology, Renal Pathology, Urological Pathology
- It is anticipated that there will be a workload impact flowing from a major review of quality in pathology services published in January 2014. This concluded that
    - the current system is focused on minimal acceptable standards and relies almost entirely on professionalism and goodwill.
    - it was not designed to provide public assurance to patients, nor to assist boards and commissioners in fulfilling their statutory duties
    - There is variation between pathology services, and a lack of harmonisation and standards, which is unacceptable to patients and service users
- Key performance (assurance) indicators are now in place and will start to feed the quality and improvement agenda linked to robust laboratory accreditation and increased detail required for ISO15189-2012 accreditation standard. Many laboratories do not meet these standards and this will be a workforce driver.
- There is constant pressure to reduce turnaround times to meet service expectations. A shorter turnaround time can only be achieved 100% of the time if staffing levels are sufficient to accommodate fluctuations in workload i.e. staff level to cope with maximum workload rather than minimum or average workload.
- Workload in terms of crude sample numbers or requests is increasing 1-3% (Keele benchmarking datasets) and varies between different services (no. requests and no. specimens). This crude increase belies actual workload that applies because of increased sophistication of diagnosis. This crude increase is not distributed evenly within all areas of cellular pathology and there is no reliable datasets that are available to inform workforce planning. Keele datasets suggest around 50% year-on year increase in sections and stains being performed 2010/11-11/12
- This increasing complexity of reports, for example as evidenced in cancer dataset

publications can be regarded as an indirect measure of quality.

- There is only limited scope for demand management in cellular pathology, although the use of agreed datasets for reporting is valuable in containing clinical expectations.
- Demand is driven by increasing complexity of medical investigation requiring more accurate diagnosis before treatment, and the increasing range of options for targeted drug therapies (molecular genetic characterisation of disease) linked to personalised medicine agenda. There are some illustrative examples later in this response document.
- Increasing numbers of cases now require consensus reporting and/or tertiary referral for specialist cellular pathology opinion – reflects increasing sophistication of diagnostic process and a risk-averse culture. There are emerging audits that suggest a possible 10% change in diagnosis, affecting immediate management decisions. This creates problems with availability and capacity of trained specialists. This is seen as a risk area and is likely to cause a rapid shift in the locus of activity for reporting cases. The demand for this type of review is likely to increase.
- More objective assessment is now required for some types of specimen to give reproducible assessments to determine patient treatment e.g. image analysis for Immunohistochemistry (IHC) results that act as the threshold for giving a therapy.
- While it is clear that next generation gene sequencing will refine approaches to diagnostic and prognostic information, it still requires the right tissue to be put into the right pathway to provide prognostic and predictive information. This new technology does not replace diagnostic cell pathology which will still be needed to triage material into this route.

Training and Education

- NHS Pathology services are increasingly the dominant supplier of specialist expertise and content delivery for undergraduate and postgraduate education in all medical and dental specialties (and other healthcare professions). There appears to be general acknowledgement that basic undergraduate pathology teaching has been relatively neglected in recent years – as this position is rectified, the demand for expertise will increase. It has been estimated that in each NHS provider associated with a medical school this could equate to 1 WTE activity.
- Consideration of capacity building for academic cellular pathology should be a priority.

Support for research and clinical trials

- NHS Pathology services are increasing required to provide specialist input for translational research and tissue banking – in principle; this should guarantee the quality of material used in research, the diagnostic integrity of a project and the ability to integrate traditional pathology and molecular data. The requirement for capacity from cellular pathology again is estimated to be at least 1 WTE in major centres associated with medical school or university research structures.
- Consideration of capacity building for academic cellular pathology should be a priority.

Autopsy services

- NHS pathology services provide the capacity to deliver the majority of investigations for HM Coroner and modelling suggests that the number of autopsy-active pathologists will decline to such an extent that a national service will be compromised by 2020.

- There are serious concerns for provision of expertise in niche areas to support investigations in the criminal justice system, notably paediatric pathology, forensic ophthalmic pathology, forensic neuropathology.

Future Service Models

- Increasing collaboration and partnership between organisations is an inevitable consequence of the requirement to ensure high quality (robust quality management systems and availability of specialist opinions, where appropriate). Specialist expertise (expensive) needs to be shared for best effect.
- Increased automation within laboratories (processing, embedding, sectioning, digitisation, molecular) requires investment in equipment that is only cost effective when used on large scale. Although there are major advantages from pathologists and scientific staff being co-located, particularly for more complex activities e.g. molecular work, the full implications of automation in cellular pathology have yet to be understood so that the right people meet in the right places to do appropriate tasks.
- Adjacency to clinical teams is important to minimise risks to patients and there is a need to understand better the options for remote working arising from videoconferencing and telepathology so that the right balance is achieved.
- Adjacency to academic centres is important for education (undergraduate and postgraduate), training and research within pathology and for other clinical and academic areas.
- Digital pathology is a disruptive technology with great potential to drive laboratory reorganisation within and between hospitals. It has the potential to make pathologists working lives more efficient (according to the suppliers), facilitates intra- and inter-departmental consultations, education and training. The business models can incorporate the centralisation of some technical services with digital distribution to wherever the pathologist happens to be, and there is also the opportunity to use central digital diagnostic expertise to provide (and charge for) specialist advice for other hospitals in the UK and internationally.
- As 7 day working becomes more normal for laboratory services, increasing numbers of staff (clinical, scientific and support staff) will be required to support the current weekday level of intensity of working over all 7 days.
- Review and rationalisation of cellular pathology services will only partially address workforce needs. While such rationalisation will help with service resilience (cover for leave, illness), and efficiency (optimal use of equipment) demand is unlikely to be met.

Future Workforce Models

- Traditionally cellular pathology has been a Consultant based service with very little direct service provision from other clinical staff or scientists. This is perceived as minimising risk to patients. The current situation by growth of consultant numbers is unsustainable. There is need for agreement on which work needs to be done by Consultants and which can be done with minimal risk by other pathologists or by clinical scientists. Biomedical scientists now provide cut-up with minimal pathologist supervision with consultants making contributions in order to maintain their own competency. There is a need to develop formal qualification frameworks, models for clinical supervision and career pathways for clinical scientists in cellular pathology who would report a proportion of cell

pathology work under consultant clinical supervision as part of a multiprofessional team. Consultants are needed as
  - clinical diagnosticians providing a clinical opinion
  - to make decisions in the face of uncertainty
  - able to prioritise need and manage workflows

Advanced roles for biomedical scientists in specimen cutup are now well established. RCPath and IBMS are carrying out a pilot of BMS reporting in histopathology in which the first cohort of scientist will complete the initial programme in 2015. Additional healthcare scientist training posts will be required to provide sufficient additional scientists to carry out this role. The impact on the medical workforce is not clear yet and it is highly unlikely that there will be any impact in the next 2-3 years. In the 5-10 year window, BMS reporting practitioners may mitigate against the need for consultant expansion related to year-on-year increase in workload.

There is a particular need to develop ultrastructural pathology (electron microscopy) which retains a central place in the diagnosis of certain pathological processes. However, the current state of electron microscopy services in the UK is parlous, as many electron microscopes are reaching the end of their usable lifespan and many electron microscopists are similarly approaching the end of careers. Some rationalisation of service has happened, but at present electron microscopy is not an attractive career option. The College proposes a certificate in electron microscopy to provide a formal qualification for those staff. The required investment is in healthcare scientist training positions that are not currently in the system to support additional posts.

- Intelligence around how technology/investigations impacts on workforce numbers is limited – cellular pathology typically introduces new investigations as an addition to current work rather than to replace current work. Hence overall workload increases.
- Molecular testing and integrated reporting is an important priority area that requires service redesign. There is a possibility that some molecular testing could replace established immunohistochemistry but will likely be part of a triage of diagnostic material, not a full replacement. It is uncertain how far or how quickly this will develop – or in which circumstances it will be cost effective.
- Service reconfiguration provides an opportunity to refine/redefine workforce models but there is little evidence for an effect on cellular pathology given the dominance of the current Consultant-based model of service delivery. Consolidation of services is likely to provide greater opportunities for BMS cut-up and clinical scientist reporting (there needs to be a critical number of people engaged in any such activity to ensure continuity of service). Purely specialist-based reporting creates difficulties during periods of leave or when someone retires; it is likely that a mixed economy of specialist specialists and specialist generalists will be most efficient. There is a need to consider in detail the training and assessment requirements for different groups of career-grade staff as well as the possibilities for movement between groups.
- Molecular training and expertise is vital to the new generation of cellular pathologists. Such training can only be delivered in major centres. It follows that most if not all cellular pathology will (and should) be delivered from major regional centres in the not-so-distant future.
- It is predicted that centralisation of pathology services will be linked to an increase in overall workload (linked to sophistication of investigation); this centralisation has started and is still in progress, and this trend will increase further with anticipated trends for

personalised medicine depending on results of diagnostic testing. This requires sub-specialist pathologists in centres, and a support network of less specialised pathologists.

PART 2 – Forecast of future supply and demand – volumes

If you want to input evidence into the forecasting of future numbers you can report your perspectives on either;

i) the high level indicators; supply, demand, and any forecast under / over supply, or if available - Part 2.1
ii) the more granular components of these three components e.g. retirement rates, output from education relative to attrition – Part 2.2

2.1 Summary forecasts

- Forecast Workforce Demand
- Forecast Workforce Supply and Turnover
- Forecast Under / Over Supply

The planning assumptions published by CfWI remain appropriate. The estimated increase in consultants in histopathology moving to 2020, greater than the level based on population growth, is likely to be negated by factors other than demographic & epidemiological mentioned in Part 1. These include geographical inequalities, trainees not commencing consultant posts within 1 year of obtaining their CCT, and a small attrition rate.

AAC appointments in 2013 showed regional selectivity in proportion of successful appointments as follows. Trends suggest that there is a developing inability to recruit to consultant posts, following the ending of a period of uncertainty around laboratory configuration. The contribution of cellular pathology to a timely patient pathway, often providing the clinical information that directs a patient to a specific pathway, is now evident as a service constraint and consultant expansion has been required to meet needs.

Cellular Pathology	
East Midlands	1 successful
East Midlands	6 not successful
East of England	9 successful
East of England	2 not successful
Kent, Surrey & Sussex	6 successful
Kent, Surrey & Sussex	1 not successful
North East	1 successful
North East	3 not successful

North West	9 successful
North West	6 not successful
North West London	5 successful
North West London	2 not successful
North, Central & East London	1 successful
South London	2 successful
South West	8 successful
South West	4 not successful
Thames Valley	3 successful
Thames Valley	1 not successful
Wessex	5 successful
Wessex	2 not successful
West Midlands	6 successful
West Midlands	4 not successful
Yorkshire & T Humber	3 successful
Yorkshire & T Humber	4 not successful

There will be an issue for small subspecialties in cellular pathology is securing adequate recruitment from those who acquire their CCT. There is little if any accurate workforce data regarding sub-specialty needs at current consultant level. A more reliable way of predicting need might be to develop and adopt a pragmatic model of WTE cellular pathologists that are required for clinical service units. This could then be used in commissioning and quality review specifications.

A proportion of sub-specialist pathologists in the past have been employed by Universities because they also have education roles. However, prioritising clinical academic appointments to research areas make universities reluctant to fund clinical academics who work much of their time in the NHS. Posts are being frozen and not reappointed. Such academic posts made major contributions to highly specialised pathology service provision within cellular pathology, including referral practice.

Assumption of average retirement age of 63 is likely to be inaccurate, with increasing numbers of senior consultants considering retirement at 60 (College datasets); the impact of this may be in part tempered if individuals return part time following retirement. There are few incentives for this especially for those who have been in receipt of a clinical excellence award. This is wasteful.

In cellular pathology there will be an increased trend for sub-specialist reporting. Overall forecast for consultants in histopathology is not going to be the key factor for recruitment to small subspecialties, though if the forecast is incorrect, and there is a shortfall, small subspecialties will be more vulnerable.

It is important to highlight that a specific issue relates to autopsy-active pathologists as a sub-set of the whole where with retirements there is a predicted shortfall in autopsy-active pathologists that will cause a compromise to the delivery of Coronial services by about 2020.

The reason for this is that newly qualified consultant pathologists are less likely than previous generations to be autopsy active.

2.2 Detailed / Component forecasts

Forecast Workforce Demand

- Service Demand drivers
- Change in use of temporary staff
- Addressing historic vacancies
- Skill Mix / New Roles
- Workforce Productivity

Demand for cellular pathology

- ~5% increase in case requests annually depending on speciality area
- Increased requirement for sophistication of investigation per case
- Quality Improvement agendas
- KPIs require faster turnaround times
- A higher proportion of cases require secondary or tertiary specialist pathology review

Productivity of consultant cellular pathologists can be improved if some work could be taken on by BMS (cut up) or clinical scientists (reporting) or administrative staff (meeting preparation)

Anecdotally there is a tendency for Trusts to omit or ignore histopathology services when developing new clinical posts or services. For example, a new gastroenterological or surgical consultant post or a proposed plan for new work to be transferred from another Trust is not necessarily accompanied by additional histopathology consultant PAs, support staff, or laboratory staff. Accordingly the increases in demand and workload often become apparent after they have happened. This makes any form of planning, let alone sensible prediction of appropriate trainee numbers in histopathology or its subspecialty areas, extremely difficult.

It would be useful to have a national guideline advising Trusts to include pathology and imaging support routinely in all their business plans from the outset, rather than as an afterthought or not at all.

Productivity in cellular pathology is notoriously difficult to measure; numbers of request or specimens do not correlate with the time and effort required to provide a clinical opinion for each patient. College guidance on workload assessment provides data that is generally equitable across specialties, although it works better at Departmental level rather than for individuals. Laboratory IT systems are not sufficiently sophisticated to automatically calculate workload/productivity using this sort of metric. Pathologists' work also involves much more than providing a clinical opinion e.g. attendance at clinics and MDT meetings, clinical

management.

There is a significant opportunity to develop clinical scientist roles for reporting cellular pathology cases under clinical supervision as part of a multidisciplinary team. This will need a coordinated training route together with a clear career structure for qualified clinical scientists in cellular pathology.

Some examples of demand issues as they pertain to selected sub-specialist areas are provided

Gastrointestinal disease
An increase in cancer incidence will occur in an ageing population (as identified in DOH documents). This will impact particularly heavily on gastrointestinal (GI) pathology which encompasses several of the commonest cancers, including many resectable cases: colorectal (2nd commonest cause of cancer death), pancreatic (5th), oesophageal (6th) and gastric (7th) (CRUK data). In combination, GI cancers are the largest cancer burden of all.

Also, there has been a consistent and significant increase in the incidence of pancreatic cancer, oesophageal adenocarcinoma, and oesophagogastric junction tumours in the UK - both in absolute terms and relative to other cancer types. This will probably continue.

The bowel cancer screening programme (BCSP) is operational; age extension is almost complete. Additional one-time flexible sigmoidoscopy for 50-60 year olds is now being piloted. A major future impact on GI pathology is well recognised, affecting medical, technical and administrative work. The impact will probably be about 1200 additional specimens (i.e., 50% of a consultant) per million population per annum (NE Thames data).

Incidental lesions discovered as a result of the BCSP, e.g., inflammatory bowel disease, will also impact on histopathology in the medium term.

The patient awareness campaign associated with the BCSP has also had an impact and will continue to do so: patients who are not eligible for screening nevertheless recognise symptoms of bowel cancer, and may then undergo endoscopic examination and biopsy.

Eosinophilic oesophagitis has been recognised increasingly in the past few years. International consensus guidelines recommend biopsies of proximal, middle and lower oesophagus in all patients who could have this diagnosis. If this advice is followed, which it should be, the number of oesophageal biopsies will increase very significantly. Histopathology is the only reliable way to diagnose this entity.

The number of biopsies recommended for diagnosing coeliac disease has also increased, and this advice is steadily being adopted (RCPath GI tissue pathway). Newer recommendations suggest additional biopsies from multiple small bowel sites.

Liver disease
Liver pathology has important epidemiological and public health changes due to increase fatty liver disease and related effects on transplantation and liver cancer.

Medical liver biopsy interpretation is very dependent on integration of many facets of medical and pathology knowledge, and requires integrated working with clinicians. So not an area which would be impacted by workforce reconfiguration.

Clarification of the role and indications for biopsy (RCR/clinical/RCPath guidance) and NICE clinical guidelines will improve the appropriateness of biopsy; most think it unlikely that it will have an effect on number of biopsies performed (more case finding, smaller proportion need biopsy).

Primary liver cancer is increasing rapidly, with future role for typing of molecular pathology

Complex medical (requiring biopsy), transplant and oncology cases are likely to be increasingly localised in main centres - succession planning for the hepatopathologists is important, in small specialty with limited exposure during training.

Gynaecological pathology
There are increasing numbers of prophylactic specimens in gynaecological pathology, for example prophylactic bilateral salpingo-oophorectomy in patients with BRCA1/2 mutation or a family history of breast or ovarian carcinoma, and prophylactic hysterectomy and bilateral salpingo-oophorectomy in patients with Lynch syndrome. These specimens require extensive pathological sampling, often with embedding of the entire specimen.

Endometrial carcinomas are common in patients with Lynch syndrome. There is an exponential increase in the number of cases of endometrial carcinoma where immunohistochemistry for mismatch repair proteins (MMR IHC) is requested by clinicians or performed at the initiative of the pathologist. There are no national recommended guidelines but MMR IHC is often performed in young patients, those with a positive family history or in tumours with morphology suggestive of MMR abnormalities. It is possible that in the future, MMR IHC will be performed in all newly diagnosed endometrial carcinomas.

Immunohistochemistry is increasingly used in the classification of gynaecological malignancies. New markers continue to be developed. There will be a requirement for these to be available in laboratories dealing with such specimens.

Ophthalmic pathology
Cases are getting more complex; with a 60% increase in number of large/complex specimens and a 40% drop in number of small/simple specimens in past year. Consolidation of the national service is important, together with establishing training routes into this small specialty area.

Breast pathology
There still exists a relative shortage nationally at Consultant level to support clinical services

Breast cancer has been and will continue for the foreseeable future to be a focus for molecularly targeted therapy. It is likely that multiplex/ comprehensive molecular methods based on deep sequencing will play an increasing role in breast (and other) cancers.

Pathologists are likely to play a lead role in integration of cancer related data for therapeutic use.

Going forward, there is likely to increased demands due to age extension of the breast cancer screening programme, increased detection of cancers, and changing demographics with an ageing population.

Complex oncoplastic surgical procedures and increased use of neoadjuvant therapy make it more time consuming to deal with increasing the burden on pathologists.

CRUK and other research organisations have raised concerns that there are fewer pathologists available or interested in supporting research and clinical trials

Thoracic pathololgy

Although the incidences of thoracic diseases are slowly changing over time, information suggests that the number of specimens per year remains relatively constant. However practitioners state that they are increasingly struggling due to the increased complexity of managing these samples, especially for lung cancer cases.

This complexity is due to:

- Increased immunohistochemistry - Whilst most cases of lung cancer a decade ago were simply divided into non-small cell lung carcinoma (NSCLC) and small cell carcinoma (NSCLC), there is now a need in most specimens to undertake immunohistochemistry in order to identify the phenotype, as the type of chemotherapy is dependent on accurate subtyping, particularly in NSCLC which is the majority of specimens (evidence for this is within the recent HQIP audit of UK thoracic pathology practice). On average, a pathologist would be looking at 5-6 slides rather than just 1-2 slides.
- Molecular testing - NICE guidelines in 2010 have meant that the majority of NSCLCs (i.e. those with advanced disease) should be assessed for EGFR mutations, the administration of which falls to the pathologist as we are the guardians of the samples. Furthermore, international guidelines now recommend screening for EML4-ALK translocations, with several other treatment-related genetic tests already additionally being requested sporadically. This will only increase in the next few years.
- More labour intensive specimens - the advent of new techniques, such as transbronchial needle aspiration (TBNA) reduces the cost and patient discomfort in relation to obtaining tumour samples. However these require much more detailed assessment (screening cytology) that those previously (mediastinoscopy specimens). Furthermore, the number of samples per specimen has increased, with the requirement for more thorough staging and, with a need for immunohistochemistry and molecular testing, there is typically a doubling of the number of samples as additional preparation of cellblocks is required.
- Attendance at multidisciplinary meetings - the number of meetings per week is increasing, with different clinical groups now asking for pathology support (e.g. in relation to interstitial lung disease and, likely in the near future, mesothelioma-specific MDTs)

Forecast Supply from HEE commissioned education

- Assumed training levels
- Under recruitment
- Attrition
- Employment on completion of training

Taking service demand and drivers presented in earlier sections the numbers in training are seen to be generally adequate to allow for immediate capacity provided that there is a paired initiative to fund and develop a clinical scientist role in cellular pathology.

The training of future pathologists needs to acknowledge the increasing scientific and clinical complexity of the work as well as any required competencies for their roles in teaching and management.

Changes envisaged in the Greenaway report may have an adverse impact on cellular pathology if there is a mandatory increase in general medical experience before specialising (cellular pathologists need awareness of clinical work but not necessarily medical competency) and even shorter time to acquire specialist competencies.

Small specialist areas could face serious disruption if the anticipated rates of recruitment to subspecialty areas are interrupted by a change in training (potentially cellular pathology recruitment as a whole (60-70 per year) could be seriously challenged by a small reduction in good quality applicants – this was seen few years ago when there was a move to national recruitment without thinking through all the implications of overly restrictive entry criteria.

There are areas in the country with long standing vacant posts with a shortage of local trained people to fill them. Trainees seem increasingly to tend to stay fairly close to where they were trained when they look for Consultant posts. Hence, the need for population weighted data on numbers of pathologists, since we need to ensure local training numbers are sufficient to fill most of the projected vacancies.

There may changes in trends for mobility of the scientific and medical workforce – it seems to be less than it was 10-20 years ago.

Potentially, 7 day working will create difficulties for many pathologists in balancing work/family life. In itself, 7 day working will require more trained pathologists.

Training numbers are difficult to assess for specific subspecialty areas of histopathology, as trainees do not specialise until quite late in their training, as a rule.

Forecast Supply – Other Supply and Turnover

- From other education supply
- To/from the devolved administrations

- To/from private and LA health and social care employers
- To/from the international labour market
- To/from other sectors / career breaks and 'return to practice'
- To/from other professions (e.g. to HV or to management)
- Increased / decreased participation rates (more or less part time working)
- Retirement

There is a need to consider the problems of HEFCE funded posts, where clinical academic staff have a proportion of their time allocated to service delivery. Service delivery is at risk if the academic component is successful ('excessive' time devoted to research) and also if the posts become vacant but the University choses to remove funding (priorities elsewhere). This has created gaps in service delivery nationally as the clinical service commitment of pathologists has to be picked up form NHS budgets (Medical schools council datasets)

Forensic pathology

There are special considerations that need to apply to service provision for forensic pathology in the United Kingdom is currently almost completely out with the Health Service planning process, although there is a possibility (see below) that this may change in the future. In Scotland, the forensic pathology and medico-legal autopsy services are funded by the Crown Office and provided almost completely by consultant forensic pathologists employed by the Universities of Glasgow (6 all in post), Edinburgh (5 all in post), Dundee (2 but possibly only 1.5 in post) and Aberdeen (2 and both in post). From discussions with Dr Marjorie Turner (Head of Department in Glasgow) the workload remains stable but high in Scotland. There are 3 Specialty Trainees currently in post in Scotland (1 Glasgow, 1 Edinburgh, 1 Dundee). The situation in Scotland both in terms of funding of training and of consultant posts appears stable.

In Northern Ireland, the forensic pathology and medico-legal services are funded by the Department of Justice and provided by 4 consultant forensic pathologists working in the State Pathologist's Office in Belfast. The State Pathologist's post is currently vacant following the retirement of Professor Jack Crane, who is providing cover until the post is filled. The post has been advertised this week. A specialty registrar is currently in post. The situation is again considered stable providing a new State Pathologist is appointed.

The situation in England and Wales is less clear for a number of reasons not least because of the variable employment status. The large majority of the 35 consultant forensic pathologists on the Home Office Registrar are now independent and self employed. 2.5 pathologists are employed by the NHS and 8 by the Universities of Cardiff, Leicester and Newcastle (all posts now filled). The consultants are directly, indirectly, or partially funded by the Police. Specialty training occurs in 4 centres (Newcastle, Liverpool, Leicester and Newcastle) and currently there are 2 STRs in post in Liverpool, 2 in Leicester, 1 in Newcastle (plus vacant post open to recruitment at the moment) and 1 in Cardiff (other post status unsure). All but one (it is believed) of the posts are fully funded by the Home Office who all provide additional funding to the centres to support the training. The trainee numbers are considered sufficient to meet likely consultant openings based on current workload demands.

Potential Issues:
Retaining trained forensic pathologists is difficult due to the lack of NHS and University employed posts in England and Wales, a national drop in forensic autopsy numbers (at least partly due to funding cuts) and recruitment to well paid posts in Australasia and Canada. A significant shift in national non-forensic autopsy arrangements (with or without scanning) may mean a necessary and rapid increase in numbers of forensic pathologists if the specialty is envisaged to be more involved in non – suspicious death investigation. There is a current Home Office driven review of the forensic pathology services underway by Professor Peter Hutton which may propose a different model or models, which may include more centralisation and a means for employment particularly of more recently qualified forensic pathologists.

PART 3 – General / Other Evidence not included elsewhere

It would be useful to supplement the data on number of pathologists/trainees by Region with a population-weighted estimate of service capacity and provision.

It should be emphasised that pathologists have to be considered an integral part of clinical teams. A successful surgical, medical, oncological team, needs appropriate scientific and pathology support – mapping of demand for pathologists has to be integrated with anticipated developments in other clinical specialties. There is little evidence base on what is needed.

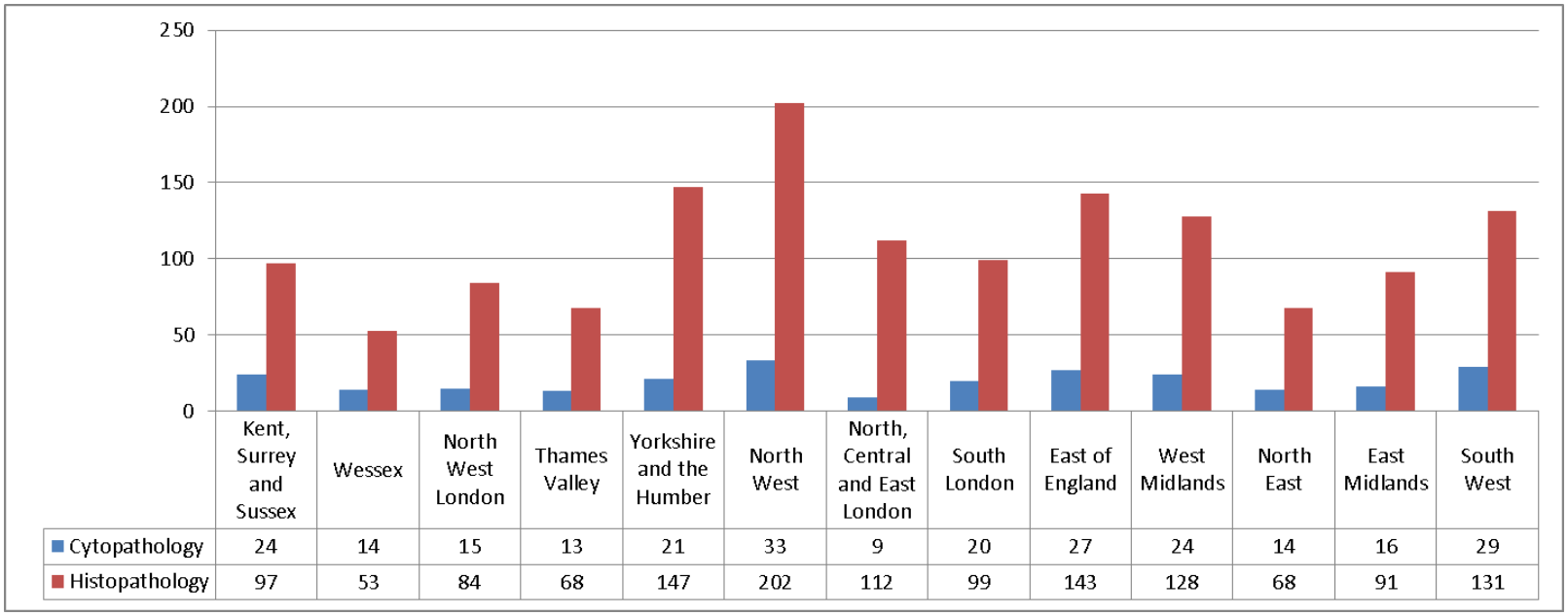
The number of Multidisciplinary meetings continues to increase and cellular pathologists provide essential inputs for patient management, not simply providing a 'report on a test' New guidelines from the clinical specialty groups strongly emphasise the continuing need for clinicopathological meetings for-cancer work such as inflammatory bowel disease. Such meetings have often been identified (wrongly) as areas for cost savings by managers: it is likely that this situation will have to change unless quality and care are compromised and guideline advice is ignored.

Investment in IT systems is essential to make best use of pathologists' time; there are some efficiencies within departments from changing workflows, changing skill mix and implementation of digital pathology.

There may be interest from service providers outside the NHS in contributing to provision. It is likely that services will be offered on a purely clinical reporting basis without due regard for essential interactions with clinical teams and the education and training that are both essential and rewarding for more senior staff. If this happens, then the 'add-on' work will become concentrated in fewer centres making them even less efficient in the eyes of commissioners, unless there is additional ring-fenced funding for education and training to compensate for 'loss of productivity). Loss of high throughput/low complexity cases will have an effect on increasing baseline costs to departments that will be needed to provide specialist reporting and training.

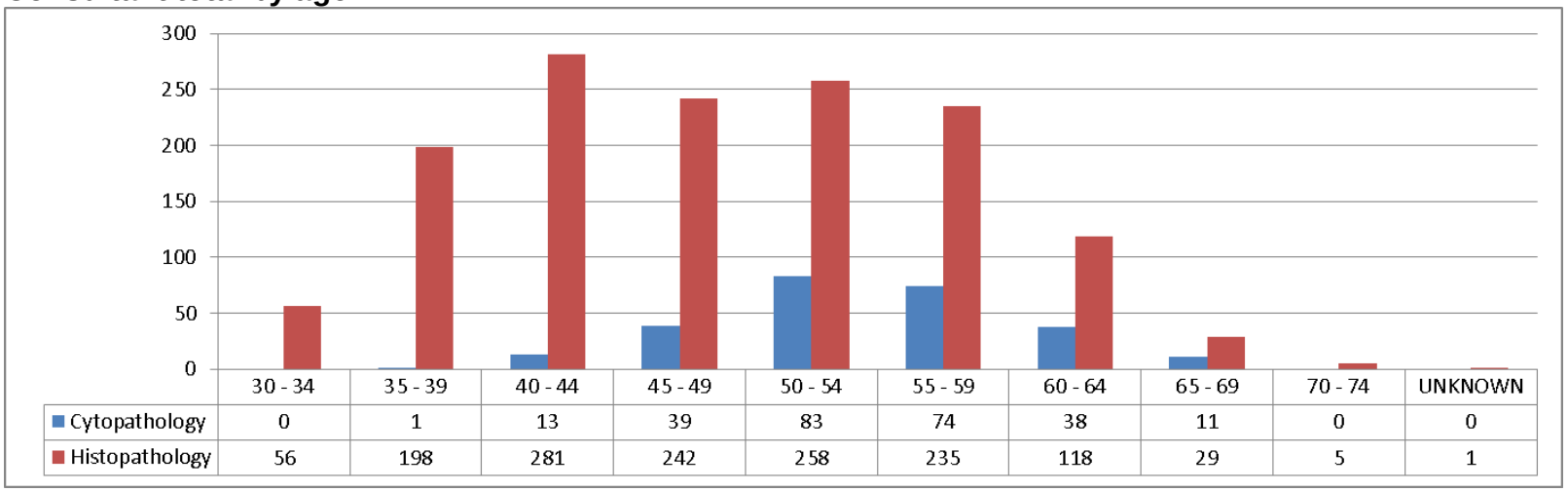
Cellular Pathology is a clinical service that needs to work in harmony with clinical teams in hospitals and the community. As the demands (activity and 7 day working) increase, more staff will be required. There are limited compensations from technical developments and changes in skill mix (which will require changes in training and expectations of staff within and outside laboratories). The service will fail unless training numbers (medical and scientific) increase. Such an increase needs to be managed alongside a funded strategy to develop a clinical scientist role in cellular pathology.

Consultant total by region



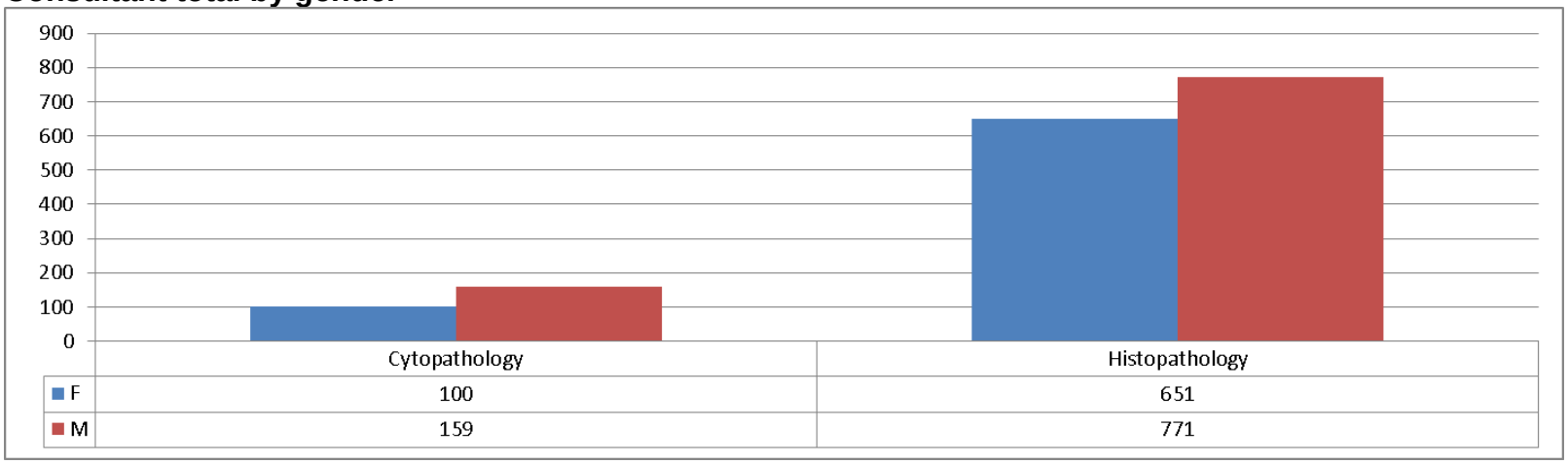
	Kent, Surrey and Sussex	Wessex	North West London	Thames Valley	Yorkshire and the Humber	North West	North, Central and East London	South London	East of England	West Midlands	North East	East Midlands	South West
Cytopathology	24	14	15	13	21	33	9	20	27	24	14	16	29
Histopathology	97	53	84	68	147	202	112	99	143	128	68	91	131

Consultant total by age



	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	UNKNOWN
Cytopathology	0	1	13	39	83	74	38	11	0	0
Histopathology	56	198	281	242	258	235	118	29	5	1

Consultant total by gender



	Cytopathology	Histopathology
F	100	651
M	159	771

Registered trainees in England