

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

Data Protection and Freedom of Information

The information you send us may be made available to wider partners, referred to in future published workforce returns or other reports and may be stored on our internal evidence database.

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.

As noted in Scaling the Heights, “clinical scientists have been employed in the NHS for over 40 years as consultant clinical scientists, recognised through both pay and employment arrangements. A recent review of consultant clinical scientist appointments in life sciences, physiological sciences and physical sciences, in the NHS in England and Wales identified more than 600 in the role. These very senior clinical scientists provide scientific clinical advice and care alongside medical consultants and are involved across the healthcare spectrum”.

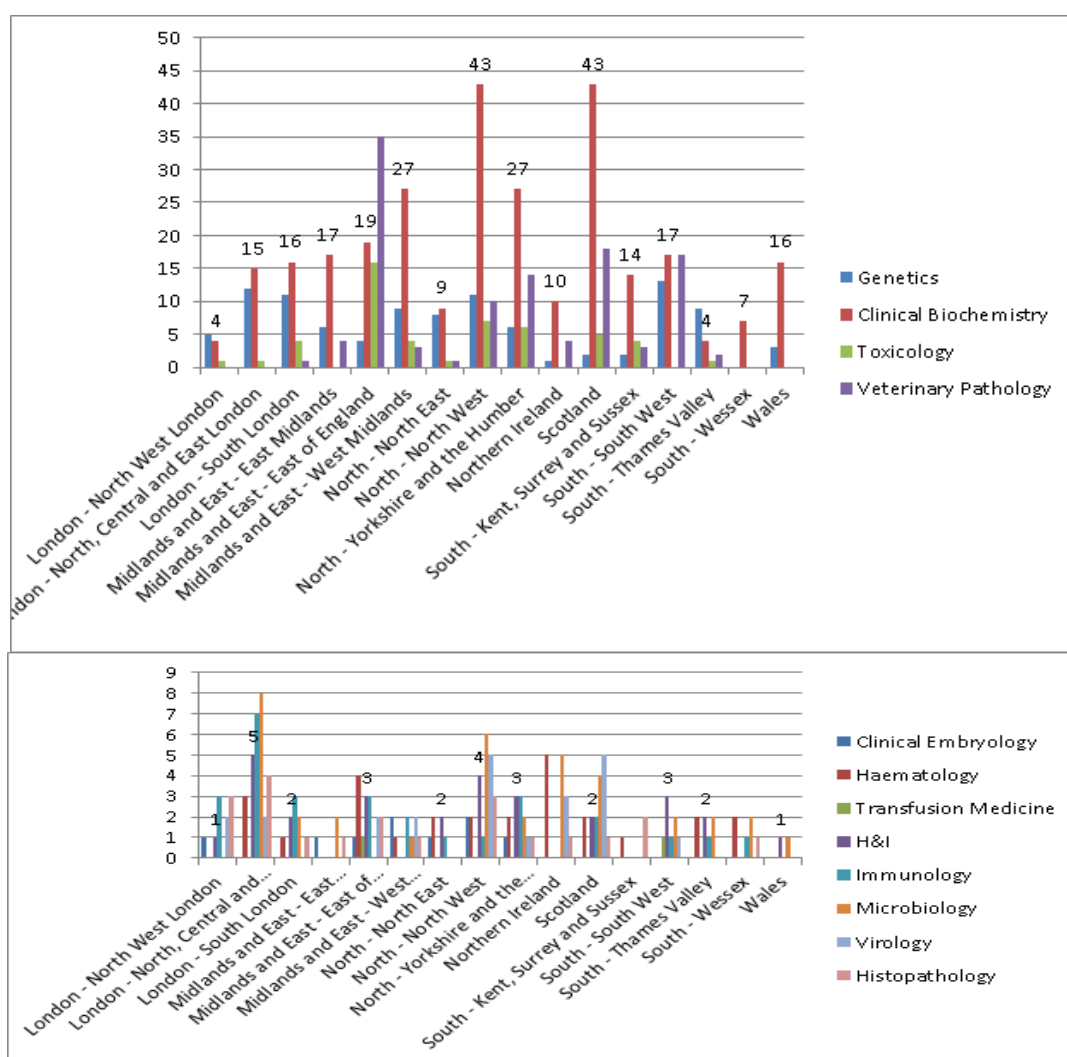
Clinical Scientists are employed at consultant and sub-consultant level in the following pathology specialties. (figures in brackets are number of Clinical Scientists Fellows (FRCPath). These figures are for all clinical scientists, not just England, and will include some which are not in NHS posts, eg University as well as retired.

- Clinical Biochemistry (288) – service leadership shared with medical consultants, in most hospital pathology laboratories.
- Clinical Immunology (29) mostly in specialist regional or sub-regional laboratories
- Microbiology (38) many will be within PHE
- Virology (23) many will be within PHE
- Haematology (27) mostly in specialist services
- Transfusion Medicine (2) will be employed within NBA
- Genetics ((102) – mostly regional laboratories
- Histocompatibility & Immunogenetics (28) – some employed by NBA
- Reproductive Science/ Clinical Embryology (9) some may employed by private providers

- Cellular Pathology (22) – unlikely to be in NHS Pathology but a developing area.

Workforce information on clinical scientists is poor largely due to inconsistencies and lack of standardisation in coding of clinical scientists in the electronic staff record (ESR). We are aware that HSCIC has introduced a new information standard in an attempt to address this and that this is currently being implemented. Thus, in many cases the best available information on the current workforce is that prepared by specialist societies and professional bodies.

The following graphs show the distribution of clinical scientists with FRCPath by LETB although this will include those with academic appointments and some who have retired.



Most Consultant Clinical Scientists are Fellows of the Royal College of Pathologists (FRCPath). Many Clinical Scientists employed at sub-consultant level also have FRCPath.

Modernising Scientific Careers (MSC) is introducing new entry level training for clinical scientists, through STP (Scientist Training Programme) from which the first cohorts of trainees from all disciplines will graduate in 2014. Higher Specialist Scientific Training (HSST), aimed at more formally training senior clinical scientists to an equivalent standard as their medical consultant colleagues, is just about to commence. Completion of HSST in the Pathology disciplines will require achievement of FRCPath in the relevant specialty and the certificate of completion from the National school of Healthcare Science.

Some pathology services are changing through consolidation but these initiatives are often driven through cost saving projects and may not include assessment of future workforce needs.

Changes in medical specialist training, such as the combined infection training may lead to increased need for clinical scientist posts at senior level.

Development of molecular technologies in all specialities will need to be supported by clinical scientists. Molecular techniques are important in diagnosis and in guiding treatments. Molecular technologies will be used in all disciplines.

Clinical Scientists are predominantly laboratory based and bring vital insight, direction and leadership to the nature and quality of the diagnostic service provided by the laboratory and aim to ensure that diagnostics are used properly in the clinical setting.

They increasingly find themselves making significant and important contributions to how diagnostic testing can improve the whole patient pathway, with essential guidance, explanation and interpretation provided to other healthcare professionals who increasingly are unable to deal with the complexity of modern diagnostic medicine in an optimal manner without such input. The recently published Diagnostic Atlas of Variation demonstrates the huge variation in the level of use of diagnostic tests which in turn points towards significant levels of inappropriate testing and understanding amongst medical professionals.

Such clinical liaison work is important for primary and secondary care, especially in providing advice to junior doctors and GPs about the most appropriate tests to request – especially important given that these doctors have not had the same exposure to pathology compared to previous generations. Also in the near future there will likely be a need to provide more direct interpretative and advisory services direct to patients as they obtain the right to access their own results directly (April 2015).

Future Service Models

- The financial downturn, along with recommendations from the Carter Report has resulted in diagnostic services going through a process of reconfiguration which has by and large promoted the evolution of larger centres connected to smaller providers (hub and spoke model). The historic discipline specific boundaries have also begun to contract, with the concept of blood science based models also becoming common. This is likely to continue to be refined.
- The Health and Social Care Act of 2012 has also added a further level of complexity,

with competition, commercial awareness and a risk of fragmentation of both services and the workforce providing such.

- The rising importance of quality in healthcare, highlighted by the NHS England publication of the Pathology Quality Assurance Review, will also drive all aspects of Clinical Biochemistry services in the coming years. Clinical Scientific and Medical leadership and insight into this process will be vital to ensure appropriate quality milestones are achieved in relation to teaching, CPD, informatics, quality assessment and clinical governance.
- Clinical Scientists working within the NHS and academia make significant contributions to research output both directly via their own driven research activity, but also by providing essential and important collaboration and diagnostic support to many other studies and trials.

Further information by specialty, where available

Clinical Biochemistry

- Clinical Scientists in Clinical Biochemistry also have an increasingly important role, providing much needed clinically diagnostic insight, into the processes of reconfiguration, procurement and commissioning of pathology services, including areas such as repertoire, turnaround times and demand management that depend hugely on being able to make the link between diagnostic service and the needs of the patient.
- Pressure on Clinical Biochemistry (Chemical Pathology) diagnostic services continues to rise year on year both in terms of the number of samples but also with regards to the increasing complexity of requests, which includes a wider repertoire with molecular based testing beginning to emerge in some areas.
- The ageing population will continue to add pressure to the whole of diagnostics in relation to the inevitable increase in prevalence of multi-system and chronic disease processes.

Future Service Models

- The increasing use and dependency on Point of Care Testing (POCT) will continue to expand not just in primary and secondary care, but also in the high street and in patient's homes. While there will be a vital input required from pathology professionals to ensure that the technical aspects of such POCT is carried out to sufficient standards; there will also be additional guidance from Clinical Scientists to ensure that any such service is clinically relevant, warranted and is performed and understood by the user of the test. It will be their responsibility to redesign the patient pathway using POCT and other innovative approaches to improve the clinical efficiency and patient experience.

Future Workforce Models

- Workforce models with Clinical Biochemistry services will continue to be delivered using a combination of Chemical Pathologists, Clinical Scientists, Biomedical Scientists and other support workers. This team approach is essential as it allows each member to bring an important, clearly identifiable and necessary capability that complements the others in the team.

Clinical Immunology

- There are fewer clinical scientists in the specialty, which is more likely to be based in regional or sub-regional laboratories.

Future Service Models

- Immunology laboratory services are developing along Clinical Biochemistry and Haematology as Blood Science services. This will involve team working at the most senior levels often in providing service to more than one hospital.

Future Workforce Models

- Workforce models will develop, particularly with the introduction of combined infection training for medical consultants, so that more clinical scientists are included as part of the Microbiology and Virology teams.
- Clinical Scientists will increasingly be able to make significant and important contributions to how diagnostic testing can improve the whole patient pathway, with essential guidance, explanation and interpretation provided to other healthcare professionals who increasingly are unable to deal with the complexity of modern diagnostic medicine in an optimal manner without such input.

Microbiology and Virology

- Many of the clinical posts in these specialties are with Public Health England, formerly being with the Health Protection Agency. In addition to FRCPATH in either Microbiology or Virology, as part of the MSC HSST workstream there will be an FRCPATH in Combined Infection Training (working title) due in 2015.

Future Service Models

- As laboratory services are consolidated services will be provided to more than one hospital, as well as supporting investigations in the community.

Future Workforce Models

- Workforce models will develop, particularly with the introduction of combined infection training for medical consultants, so that more clinical scientists are included as part of the Microbiology and Virology teams,
- Clinical Scientists will increasingly be able to make significant and important contributions to how diagnostic testing can improve the whole patient pathway, with essential guidance, explanation and interpretation provided to other healthcare professionals who increasingly are unable to deal with the complexity of modern diagnostic medicine in an optimal manner without such input.

Haematology and Transfusion Medicine

- Clinical Scientists are less well established in these specialties. Many are in specialist services such as haematopathology and specialist coagulation laboratories.

Future Service Models

- Haematology laboratory services are developing alongside Clinical Biochemistry as Blood Science services. This will involve team working at the most senior levels often in providing service to more than one hospital.
- It is anticipated that more clinical scientists will work as specialists in Transfusion Science in local hospitals, as there are shifts in the medical role.

Future Workforce Models

- Workforce models will develop, so that more clinical scientists are included as part of

the Haematology and Transfusion teams,

- Clinical Scientists will increasingly be able to make significant and important contributions to how diagnostic testing can improve the whole patient pathway, with essential guidance, explanation and interpretation provided to other healthcare professionals who increasingly are unable to deal with the complexity of modern diagnostic medicine in an optimal manner without such input.
- In Transfusion the traditional model and staffing structure in hospitals is being challenged by automation, deskilling and centralisation of pathology services. Equally, the shift to genomics- based diagnostics requires PhD level clinical scientists and bioinformaticians.
- A model, building on current practice, is where the decision to transfuse is medically led, with the scientist able to decide which particular donation is suitable. If there are consultant level scientists in overall charge of laboratories, there needs to be a 'partnership of equals' between doctor and scientist.

Genetics

This will be covered in a separate submission by the Association for Clinical Genetic Science (ACGS) supported by the SAC on Genetics.

Histocompatibility & Immunogenetics

This will be covered in a separate submission by the British Society for Histocompatibility and Immunogenetics (BSHI).

Reproductive Science/ Clinical Embryology

- Some services are delivered by private providers.
- More work needs to be done on the workforce needed to support these services. The College is cooperating with the Association of Clinical Embryology and the Association of Biomedical Andrologists, the relevant professional bodies, in this.

Cellular Pathology

- The role of clinical scientists is not well developed in Cellular Pathology.
- Where there are clinical scientist roles, these are in very specialist areas such as Electron Microscopy, and Molecular Pathology
- Electron Microscopy is better known as Ultrastructural Pathology. This sub-specialty is provided from a small number of centres and is in urgent need of workforce planning to sustain existing services. The College has recently formed a group to review the curriculum for a qualification in this important niche area.
- The Association of Clinical Electron Microscopy (ACEM) have already reported to CfWI on workforce problems in this area.

Future Service Models

- With the consolidation of Pathology Services, Cellular Pathology will probably be provided in a centralised manner, allowing sub-specialisation and appropriate concentration of expertise.

Future Workforce Models

- MSC has anticipated this with the commissioning of small number of STP posts in Histopathology and Cytopathology.

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

There is little reliable information about the clinical scientist workforce profile across the disciplines. The Association for Clinical Biochemistry and Laboratory Medicine (ACB) has supplied information to the CfWI, and this College, but this only represents those members of the workforce who are members of the ACB.

ACB membership includes clinical scientists in Immunology, Microbiology and Virology.

Most clinical scientists in Clinical Biochemistry are members of the ACB.

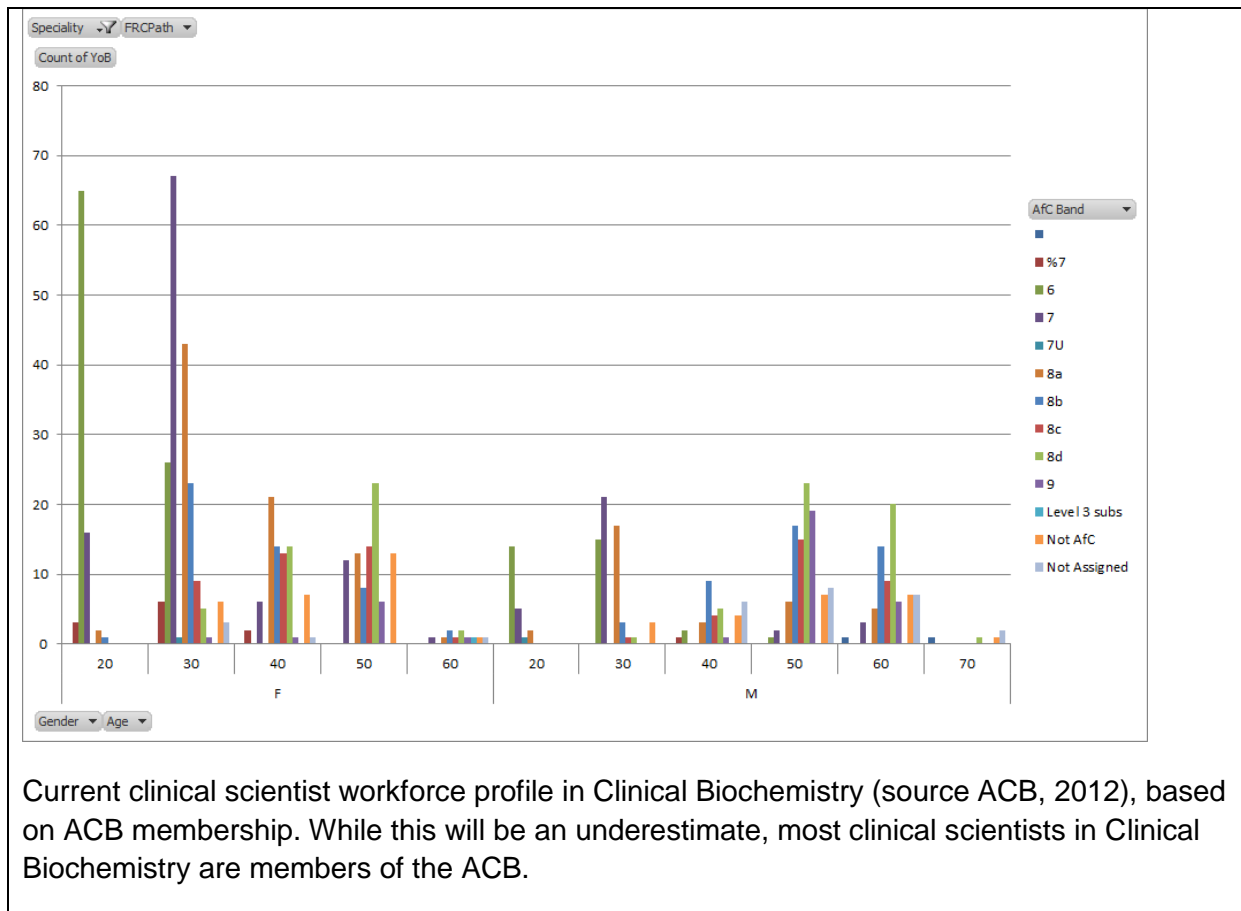
Membership of clinical scientists in Immunology, Microbiology and Virology is far from comprehensive.

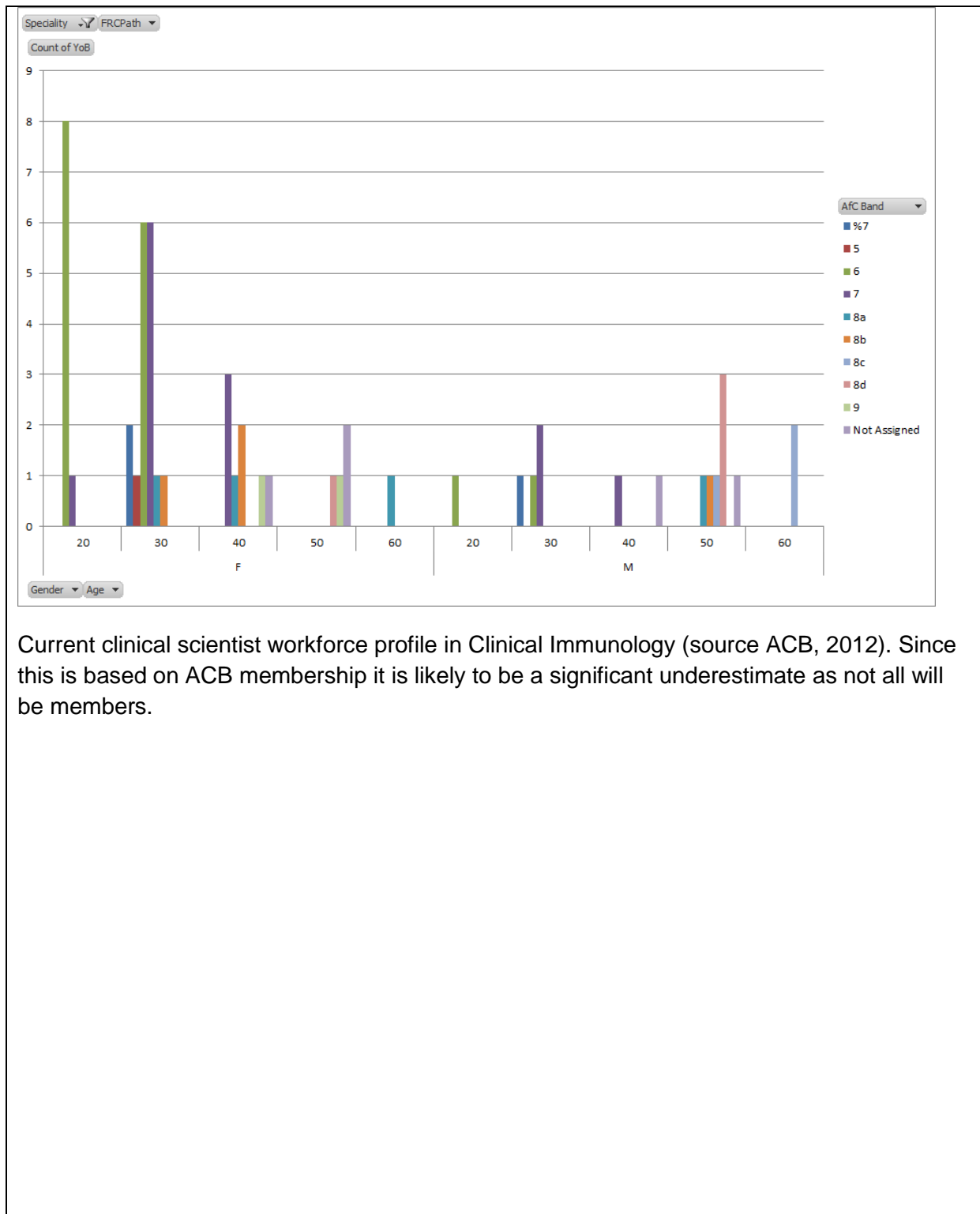
The following graphs show the workforce profile for these disciplines.

In Clinical Biochemistry, female clinical scientists predominate in younger group, who are the ones in training, and men predominate in the over 60 age group.

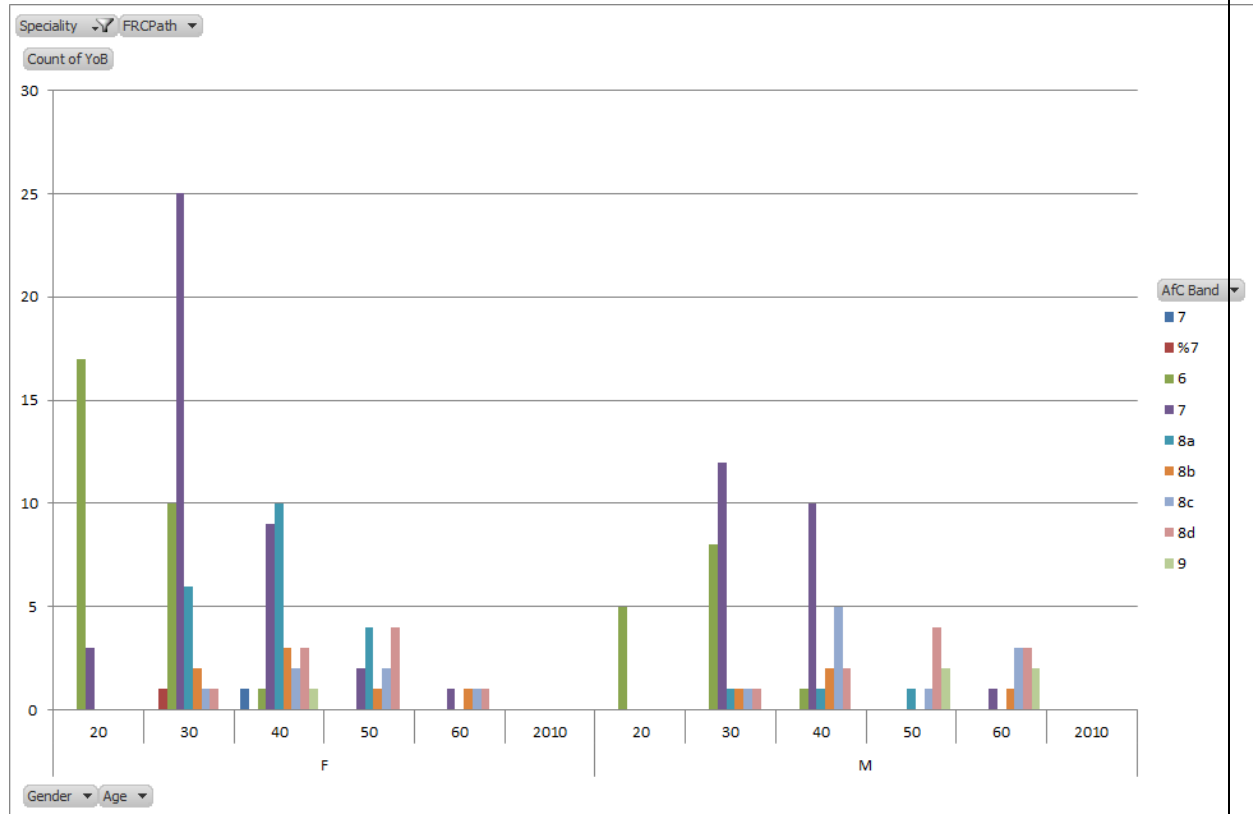
For the other disciplines the numbers are too small to draw meaningful conclusion, but these are small samples of a quite small workforce.

Other professional bodies have good workforce data in: Genetics (ACGS), H&I (BSHI), Clinical Embryology (ACE), and Biomedical Andrology (ABA) and, as noted above, Ultrastructural Pathology (ACEM).





Current clinical scientist workforce profile in Clinical Immunology (source ACB, 2012). Since this is based on ACB membership it is likely to be a significant underestimate as not all will be members.



Current clinical scientist workforce profile in Microbiology and Virology (source ACB, 2012)
Since this is based on ACB membership it is likely to be a significant underestimate as not all will be members.

Training of Clinical Scientists

Training of Clinical Scientists is in a period of transition and the initial STP Commissions have in some cases been more informed by previous commissioning numbers and are not necessarily informed by future workforce needs.

STP Posts Commissioned

From information gathered from the National School of Health Science kit appears that the following posts have been commissioned. It is not clear whether they were all appointed to.

<u>Specialism</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>
Clinical Biochemistry	25	20	21
Clinical Immunology	6	4	5
Microbiology (inc Virology)	18	7	7
Haematology & Transfusion	11	8	8
Genetics	10	18	17
Histocompatibility & Immunogenetics		3	2
Reproductive Science	5	12	14
Histopathology	5	2	2
Cytopathology	3	1	1

While there is a model of career progression for the more established specialties, work need to be done to further develop the role of those STP trainees in Histopathology and Cytopathology.

Post STP training aspects of MSC are only now beginning to be introduced, including HSST, but there is still much uncertainty amongst the professions about how training numbers will be determined. A number of HSST posts have been commissioned to start at the end of 2014 or beginning of 2015. It is understood that the numbers in the pathology disciplines are as follows. Most of these are clinical scientists already in post who are applying to transfer to HSST, and only a small number, believed to be 4, are new posts for which there will be competitive entry.

HSST Commissions

<u>Specialism</u>	
Clinical Biochemistry	8
Clinical Immunology	4
Microbiology	4
Virology	2
Haematology& Transfusion	3
Genetics	6
Histocompatibility & Immunogenetics	5
Reproductive Science	1
Molecular Pathology of Acquired Disease	5

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

The Royal College of Pathologists has met with sister professional bodies about coordinated workforce planning for clinical scientists. There is agreement to work together to collect more reliable workforce information and to relate this to changes in service demands and the development of new roles.

Forecast Supply from HEE commissioned education

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

Insert evidence here....

NONE

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

Insert evidence here....

NONE

PART 3 – General / Other Evidence not included elsewhere

Insert evidence here....

NONE