1. Over the next thirty years, medical practice will have to evolve rapidly to respond to changes in patient needs, arising largely from demographic changes associated with an ageing population and the increasing burden of chronic and complex multi-system diseases. There are significant opportunities to achieve this, for example through deeper understanding of molecular pathology, rapid technological developments, changes in the way in which health services are delivered and the greater involvement of informed patients in decisions about their own care. However, embedding health research and innovation throughout the NHS will be crucial to realising these opportunities.

2. The government has recently made strong commitments towards health research and innovation, and to improving the links between academia and the NHS. There are now statutory duties to promote research across the reformed health service and widespread recognition of the multiple benefits that research brings to the health service. We welcome these announcements. However, we believe that meeting the government’s commitments to sustain and strengthen research in the NHS will require wider recognition that academic values and a spirit of enquiry must pervade the medical workforce.

3. A well-defined yet flexible career path is essential to nurture future clinical academics. We have seen significant improvements in the structure of postgraduate academic training, such as those provided by the National Institute for Health Research Integrated Academic Training Programme. It is vital that the recommendations of the review seek to protect and enhance the academic training pathway and do not create disincentives to academic careers in the constituent countries of the UK. We also consider that to advance patient care the review should seek to ensure that the whole NHS is underpinned by a wider research awareness and involvement. This will require a modified model for training that can equip all trainees with the professional judgement to interpret, apply and embed research findings and the output of innovation as well as develop and maintain a strong group of clinical academic leaders. We therefore welcome this opportunity to raise a number of issues specific to academic training below.

Balance of the medical workforce

4. We agree that meeting the future challenges associated with an older population and the increasing burden of chronic and multi-system disease will be helped by developing a workforce with a solid generalist foundation. This would help general practitioners in the community, hospital-based generalists and specialists and other healthcare workers to understand each other’s roles and to communicate more effectively with one another to ensure that patients receive the most appropriate and effective treatment. It would also introduce greater flexibility, enabling doctors to retrain and move between specialities as healthcare needs change, creating a more adaptable workforce. We note the definition of ‘generalist’ is open to a number of interpretations: it will be important that there is clarity in the review on the definition of generalist being used in the discussion and report.

5. However, any change in the balance between generalists and specialists must not inadvertently deprive any part of the medical workforce of important academic capacity and leadership. Currently, most clinical academic research is undertaken within specialist pathways. Hospital trainees following research careers will be more likely to develop highly specialised clinical skills, and are therefore more likely to enter specialist roles. However, as clinical care moves more towards a community setting or intermediary facilities, it is critically important that clinical academic capacity is available in those settings. Doctors providing more generalist care will need to acquire research skills appropriate to a generalist and population-based approach. We must ensure that academic opportunities are available and attractive within both specialist and generalist training routes.
6. To maximise the opportunities to improve patient care, drawing on the potential of a deeper understanding of molecular pathology, generalists will increasingly require a sound scientific grounding. The ability to understand and apply relevant research, including epidemiological data should be an essential requirement for all doctors, enabling them to evaluate the effectiveness of healthcare delivery in the modern health service. We therefore believe that robust training in research awareness, critical appraisal, and the evaluation of evidence should be an integral component of a generalist foundation. This would embed research awareness across the medical workforce and support the development of a strong clinical academic workforce. Research training should be underpinned by academic components of the curricula, which must be adequately assessed.

**Flexibility of training**

7. There are likely to be many short-term pressures on the training pathway, such as the need to increase efficiency and find savings, the introduction of healthcare reforms and in England, the move to having service providers play a greater role in commissioning education and training. Workforce planning needs to strike a balance by meeting the immediate pressures of service delivery, without compromising the long-term importance of postgraduate training, including academic training.

8. All training pathways, including general practice, must integrate research and clinical activity in a way that is adapted to the needs of individual trainees. We strongly encourage an approach to training that would allow all trainees to gain some research experience to generate a research-aware medical workforce, with further support for those who wish to pursue research as a more integral part of their career. It is important to recognise that for some individuals, and for most trainees in particular disciplines (such as academic general practice), research training will take place after they have achieved their certificate of completion of training (CCT). To ensure that the academic workforce incorporates the most promising academics and future leaders, dedicated time for pursuing opportunities for research training and delivery must exist throughout the training pathway, and beyond. There should also be well-defined exit routes for those who decide not to progress further along the academic pathway, which may attract greater numbers of trainees into broader based research experiences. Transferring between standard clinical training posts and academic programmes or fellowships should be made more straightforward. This will require motivation and commitment from NHS employers.

9. The review should ensure that training can deliver improvements in the quality and delivery of care in healthcare settings across all the constituent countries of the UK and that barriers creating inflexibility are addressed. In particular, trainees who are awarded academic grants and fellowships should have the right to take these up, and should be supported to balance their clinical and academic duties. It is crucial that Health Education England recognises and prioritises the need for flexibility in the application of training guidelines, to allow trainees to pursue research. The new Local Education and Training Boards must have appropriate academic representation and ensure consistency in good practice across the UK.

**The breadth and scope of training**

10. There should be a coherent mechanism for assessing skills as trainees’ progress along the training pathway. The current system of time-based competency certified through the CCT generates a rigid system in which nearly all trainees move at the same pace and may not accurately reflect the skill or proficiency of the individual trainee. By its very nature, combined clinical and academic training will take longer to complete. Trainees must be allowed sufficient time to complete all aspects of training to a high standard, including the acquisition of competencies to achieve specialism. All trainees, irrespective of their training portfolio, must be equitably assessed and only passed as ‘competent’ when merited. Competency based assessment should enable trainees to learn at their own pace and not require them to achieve certain competencies by a specific deadline. We consider that the acquisition of CCT should be on the basis of demonstrable competence, rather than ‘time served’, and support a standardised and robust competency-based system of assessment. This would enable better management of clinical and academic training, addressing the risks that length of training and inflexible training programmes act as disincentives to research careers.
Supporting organisations: