

HOT TOPIC – CLINICAL SCIENTIST TRAINING DELIVERED VIA THE SCIENTIST TRAINING PROGRAMME (STP)

“The science of today is the technology of tomorrow”
– Edward Teller

FOOTBALL!!

Now, at this point I imagine many of you will be thinking “I thought this was an article about healthcare science, so why football?” The start of the 2014 World Cup will serve as possibly one of the greatest stages ever in promoting the current and strengthening role of scientists in healthcare.

Previous viewing figures have shown that 46.4% of the global population (that’s about 3 billion people) tuned in to watch the 2010 world cup. For the 2014 world cup (which is expected to be bigger and better) a teenager will walk onto the pitch and take a shot at the goal. ‘So what’s so special about that?’ I hear you say. The teenager will be a paraplegic (paralysed from the waist down), but they will be wearing a mechanical exoskeleton controlled not by leavers, buttons or remote control, but by the power of their mind.

Technology is currently evolving at a pace that the human race has never experienced before. Advances in imaging, point of care testing, 3D printing, neurosciences, genetic sequencing and robotics (to name but a few) mean that things we used to see in Star Trek, which we considered

science fiction, are rapidly becoming science fact.

The Modernising Scientific Careers (MSC) programme will ensure we have a healthcare science workforce which has the skills, knowledge and flexibility to embrace these technological and scientific advances for the benefit of NHS service users. This article focusses on the clinical scientist training delivered via the Scientist Training Programme (STP) which, following a pilot in 2010, was rolled out nationally in 2011.

Though MSC is a national programme and the STP is being supported within all regions, the North West, through the unique collaboration of its academic institutes and high level of commitment from healthcare provider organisations, is widely regarded as an example of best practice in its approach to supporting the development of the clinical scientist workforce.

Background

The STP (a three-year pre-registration postgraduate academic (MSc Clinical Science) and work based programme) was developed as part of the Modernising Scientific Careers programme. It will produce a healthcare science workforce with a skill set that will facilitate the rapid adoption of new science, medicines and technologies to deliver care more innovatively, such as remotely or closer to home. The



workforce it delivers will be capable of developing and taking up new ground-breaking and cost-effective technologies giving access to cutting-edge new treatments and services.

Applicants apply through a national recruitment process managed by the National School of Healthcare Science and the programme can be accessed as either a direct entry applicant (from outside the NHS) or as an in-service applicant. In-service applicants are those who hold a substantive contract of employment in the NHS specialism for which they are applying prior to the training programme. The in-service application route ensures that (where a work force need is identified) there is a progression route for those with potential for progression and currently working in the NHS.

The highly competitive national recruitment process ensures that the best and brightest talent is recruited to the training programme. Recruitment for 2014 saw over 8000 applications for just over 300 posts and in previous years just over 40% of those recruited held either an MSc or PhD as their highest level qualification.

Once again, academic providers in the North West have embraced the opportunity to deliver the Scientist Training Programme. The following are all currently being delivered in the region and, with the invitation to tender for new programmes due to be advertised in 2014, there is potential for the list to be expanded to also include Perfusion Science, Clinical Bioinformatics (Health Informatics, Physical Sciences & Biomedical Engineering, Life Sciences) and Health Informatics.

Health Education North West recognises the importance of the development of the Clinical Scientist workforce and provides a generous support package¹ to the employers of scientist training posts. HENW is currently supporting a total cohort of 105 trainee scientists across all years of the programme with the first outturn of 26 clinical scientists expected in August 2014. Support funding is allocated to those organisations able to demonstrate a workforce need (through workforce plans) and the commitment and ability to deliver a high quality learning experience.

The introduction to this article highlighted the developments in prostheses and rehabilitative technology, but similar advances can also be seen across the other divisions of healthcare science. Consider for a moment the impact of 3D printing on healthcare and the impact of genomic medicine and genome sequencing. Sequencing of the first human genome took about thirteen years and cost about \$3Bn – it can now be done in 24 hours for a few thousand dollars.

Is your organisation supporting the development of the workforce which can utilise and apply these developments to the delivery of healthcare?

Scientist Training Programmes being delivered in the North West

Theme	Specialism (Programme)
Blood Sciences	<ul style="list-style-type: none"> • Clinical Biochemistry • Immunology • Haematology and Transfusion Science • Histocompatibility & Immunogenetics
Neurosensory Sciences	<ul style="list-style-type: none"> • Audiology • Neurophysiology • Ophthalmic and Vision Science
CCVRS Sciences	<ul style="list-style-type: none"> • Cardiac Science • Critical Care Science • Vascular Science • Respiratory and Sleep Science
Cellular Sciences	<ul style="list-style-type: none"> • Reproductive Science • Histopathology • Cytopathology
Reconstructive Science	<ul style="list-style-type: none"> • Reconstructive Science
Clinical Bioinformatics	<ul style="list-style-type: none"> • Genomics
Physical Sciences and Biomedical Engineering	<ul style="list-style-type: none"> • Radiotherapy Physics • Radiation Safety Physics • Imaging (ionising radiation) • Imaging (non-ionising radiation) • Clinical Pharmaceutical Science

Context

The way services are delivered is changing driven by new technology; the drive to relocate service into primary care and the community and broader range of providers. The implementation of the Scientist Training Programme is an enabler to developing world class performance in clinical science and will ensure we have a healthcare science workforce which has the skills, knowledge and flexibility to embrace these technological and scientific advances for the benefit of NHS service users.

Benefits

The overarching benefits of the MSC programme have been detailed in the previous articles (An Introduction to Modernising Scientific Careers and Healthcare Scientist Practitioner Workforce Development) whilst the benefits to the NHS, service users and trainees on the Scientist Training Programme have been referred to throughout this article.

There are huge amounts of information available regarding the Scientist Training Programme and we would encourage readers to access the information via the 'Useful Links / Resources' section. Alternatively please contact Nick Fowler-Johnson to arrange a meeting to discuss the delivery of scientist training within your organisation.

Useful Tools/Activities

The North West Healthcare Science Network (NWHCS Network) is working hard to ensure that the healthcare science workforce is well informed of the changes to education and training made through the Modernising Scientific Careers programme. To facilitate this network is supporting the formation of local HCS networks and encouraging organisations to identify organisation lead scientists to lead the local networks. Holding a HCS / MSC 'roadshow' can ensure that your HCS workforce is engaged with the MSC programme and can help identify opportunities for delivering HCS training within your organisation. Please contact Helen Liggett (North West Healthcare Science Lead) or Nick Fowler-Johnson if you wish the NWHCS Network to support an event in your organisation.

There are a number of useful resources to help understand how advances in technology will impact on service delivery and the HCS workforce and many of these can be accessed in the 'Useful Links / Resources' section. However, The Delivery of 21st - The Implications for the Evolution of the Healthcare Science Workforce is an excellent paper for outlining how the HCS will have to change to deliver services in the future.

Key Dates

Currently there are no engagement events planned for the HR workforce community, however, please do contact us if you would like to discuss the provision of such an event at your organisation.

Links/Resources

- North West Healthcare Science Network website nwhcs.nhs.uk
- NHS Employers – Planning Your Workforce: MSC nhsemployers.org/PlanningYourWorkforce/Modernising-Scientific-Careers/Pages/MSC-background-info.aspx
- National School of Healthcare Science nshcs.org.uk

- The Academy for Healthcare Science ahcs.ac.uk
- HCS Careers Framework nhsemployers.org/SiteCollectionDocuments/MSC%20career%20and%20training%20pathways%20framework_sl_211010.pdf
- NHS Networks networks.nhs.uk/nhs-networks/msc-framework-curricula/stp

References

- The Delivery of 21st Century Services – The Implications for the Evolution of the Healthcare Science Workforce hee.nhs.uk/wp-content/uploads/sites/321/2014/02/Healthcare-Science-A-21st-century-workforce.pdf
- Modernising Scientific Careers: The England Action Plan gov.uk/government/uploads/system/uploads/attachment_data/file/139529/dh_115144.pdf

⁽¹⁾ Please contact Nick Fowler-Johnson for details of support funding

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