The Postgraduate School of Paediatrics for the East Midlands Healthcare Workforce Deanery (North) and the University of Nottingham are delighted to be able to offer a period of paediatric research training within the Paediatric Specialty Training Programme.

Research for the benefit of children is necessary to optimise and advance patient care. The skills to gather and critically appraise medical literature are key to practising evidence based medicine. The pilot phases of the RCPCH’s new ST7 assessment (to be introduced in full as ‘START’ this year) revealed that paediatric trainees feel poorly prepared for the Assessment Standards related to research in the Curriculum. These are the skills needed to prepare trainees to practice evidence based medicine and their acquisition will be assessed at the ARCP and in START.

The RCPCH Commission on Research in Children has recently identified a need to increase and strengthen training in child health research. This new training attachment, within the Paediatric Specialty Training Programme of the East Midlands Healthcare Workforce Deanery (North (EMHWD (N)), will provide an opportunity for the successful applicant to gain research competencies in line with Curriculum Assessment Standard 25 related to research for the benefit of children. In the most recent Paediatric Trainees’ Survey, more than ¾ of trainees replied that they felt it likely, or very likely, that they would like to undertake such a voluntary short period of research during their clinical training. This post is, therefore, most suitable for a trainee to gain research competencies within a defined short period of time in research. There will be an opportunity to undertake rotaed, banded, out-of-hours work, in a paediatric training unit on the EMHWD (N) paediatric training rotation.

The successful applicant will join an established group of researchers working in Academic Child Health at the University Hospital, Nottingham in one of the following areas of Paediatrics:

- Neonatal Medicine
- Paediatric Haemato-oncology
- Paediatric Medicine

The successful applicant will be able to choose the research training programme most in line with their interests, will receive training in research methods and will have two research-active supervisors (at least one of whom will have a higher research degree (PhD/ MD)) who are experienced in research methodologies to assist them with achieving a personal development plan targeted at the parts of the Curriculum related to evidence based medicine (Assessment Standard 25).

1. http://www.rcpch.ac.uk/training-examinations-professional-development/quality-training/start/start
2. Modi N. 2011 ‘Turning the Tide’: increasing and strengthening child health research Arch Dis Child 96:988
4. RCPCH Trainees’ Committee 2012. Results of a National Trainees’ Survey. Personal Communication
Opportunities for training in research for the benefit of children include the following:

1) **Neonatal Medicine**

   The programmes in neonatal medicine are designed to give experience in research, the opportunity to publish a paper or case report and time to develop competencies matched to the RCPCH Curriculum. There will be a choice of projects and you may consider gaining experience in one, or more, according to your interests. There will also be the opportunity to attend relevant training (such as Good Clinical Practice for Research and other courses relevant to research training). You will also gain experience by attending research meetings for your studies and by taking part in actively recruiting participants. You will also have the opportunity to complete a data analysis project or a Cochrane systematic review.

   a) **Clinical Trials in preterm infants – Supervisor: Dr Jon Dorling**

      Studies currently active, or being developed, include assessing the feasibility of the use of Honey Dressings for wounds in newborn infants, trials of the use of Lactoferrin supplementation, trials of different increments in enteral feeding rates for initial feeding of preterm infants and a programme examining the benefits of deferred cord clamping at birth. There are close links with the Nottingham Clinical Trials Unit and the National Perinatal Epidemiology Unit in Oxford (jon.dorling@nottingham.ac.uk).

   b) **Studies in Nutrition of preterm infants – Supervisors: Dr Helen Budge & Dr Shalini Ojha**

      Studies about to commence include multicentre studies of the nutrition of newborn infants and of improving parenteral nutrition regimes to achieve optimal nutrition and growth for preterm infants. This would include work with a multidisciplinary team of neonatologists, paediatricians, dieticians and pharmacists and builds on existing work and local experience (helen.budge@nottingham.ac.uk).

   c) **Studies of the effects of early encephalopathy using MRI – Supervisor: Dr Helen Budge**

      In this project, you would be involved in recruiting and undertaking research in infants in a study of MR in early encephalopathy about to commence at QMC in collaboration with colleagues at University College, London. This opportunity would be combined with undertaking research in healthy newborn infants to better understand newborn development (helen.budge@nottingham.ac.uk).

   d) **Capillary Refill: can we improve on the clinical evaluation of perfusion using new and novel technology? – Supervisor: Dr Don Sharkey**

      This project will explore new ways of monitoring babies and children who are at risk of clinical deterioration. The project will compare current methods of identifying sick babies and children with newer techniques that could improve our diagnostic capabilities and advance the recognition of cardiovascular compromise. This project will develop academic competencies and aims not only to publish the results in leading journal, but also feed into a larger study that could result in better paediatric outcomes. This project crosses the whole of paediatrics and, therefore, has scope to be tailored to the trainee’s interest in general paediatrics or intensive care (neonatal and/or paediatric). don.sharkey@nottingham.ac.uk

2) **Paediatric Haemato-Oncology – Supervisor: Professor David Walker**

   Professor David Walker is offering supervision as part of the training scheme to have a six months period in research in the field of haemato-oncology. This is a rich
translational research environment where, within the cancer field, the majority of children are treated within the context of clinical trials.

There is the associated Children’s Brain Tumour Research Centre which provides the basic science and translational research environment. A trainee working with this group for six months would have the opportunity to become involved in translational research in the form of a complex service evaluation, case series reporting and/or a hypothesis-driven research project of a clinical nature. The multi-professional environment provides an opportunity to work across disciplines. The patients and their families are enthusiastic to participate in research making informed consent, with the appropriate approvals, achievable (david.walker@nottingham.ac.uk).

3) Paediatric Medicine – Supervisors: Professor Alan Smyth

This 6 month post will offer you a unique “taster” in paediatric research with a focus on evidence based medicine and, the often tortuous, route by which evidence informs clinical practice. We plan to look at all the high quality documents which provide an evidence synthesis, on a key issue in the care of sick children, or the promotion of child health. You will be part of a team reviewing the 1363 systematic reviews in the Child Health of the Cochrane library and comparing them with current paediatric guidelines to see whether important evidence has been included in guidelines. In addition, we will consider other sources of high quality evidence apart from Cochrane reviews. This will also provide an opportunity to see whether guidelines are using misleading or outdated research evidence.

Within your 6 month attachment we expect that you will be able to complete this work for a number of disease areas. (Other team members will work on the remaining areas). The findings of the project will be published in a major journal. Our group have an established track record in this area, with some recent publications in high impact factor journals (BMJ 2012; 344:d7373 & J Cyst Fibros 2012;11:14–17). You will have made a practical contribution to improving systems for the care of sick children and will have covered key elements of Standard 25 of the RCPCH syllabus “an understanding of the need for an ethical and rigorous approach to research in paediatrics” (alan.smyth@nottingham.ac.uk).

4) Additional opportunities

Other opportunities to achieve research training may be available. Trainees who wish to explore alternative opportunities or who have a particular research project in mind are most welcome to approach Dr Helen Budge, Academic Training Programme Advisor for the Postgraduate School and the RCPCH Region for advice helen.budge@nottingham.ac.uk

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**Additional Information**

Trainees should contact:

Dr Louise Wells louise.wells@nuh.nhs.uk and

Dr Helen Budge helen.budge@nottingham.ac.uk for further information