

From the Editor

Chasing ideas: clinical research in the NHS

*Those who have the opportunity to take part in clinical research ... have the pleasure of the chase, the chase of ideas.*¹

(David Pyke)

Wilhelm Feldberg (1900–1993), who, with Sir Henry Dale, demonstrated neurotransmission by acetylcholine, described his first experiment at the age of five. His brother had just returned from a scripture lesson describing God's creation of man. So 'I took some clay, formed a kind of doll, and then breathed and blew with all my might into its nostrils. I still remember my disappointment when nothing happened. Later my experiments became less ambitious'.² He persisted with research for most of his very long life.

Enthusiasm for research often declares itself at an early age and continues over a lifetime, and may stem from a variety of backgrounds.³ Excitement for clinical research amongst medical students and young doctors often comes from their teachers and consultants. While the problems of academic medicine have been widely discussed, the decline of research by NHS consultants has been much neglected.

Sir Keith Peters, in his brilliant Harveian Oration, described some of the major clinical discoveries of our time, examining how rare clinical cases can lead research from 'bedside to bench'.⁴ The approach which he has carefully nurtured in Cambridge placed a large academic unit of clinical medicine in close proximity to some of the world's greatest laboratories, rightly yielding some remarkable discoveries. In contrast, a short generation before, Dr David Pyke (1921–2001), physician at King's College Hospital and Registrar at this College, also described some of the achievements of clinical science in the UK at the centenary meeting of the Association of American Physicians in 1986,

observing that major discoveries can be made in the course of routine clinical care.¹ He and many others produced world-class clinical research while working throughout their careers as NHS consultants, often with limited resources, but in an era when consultants in teaching hospitals were not only encouraged but indeed expected to undertake research. This model of clinical research in the NHS has been almost extinguished. Is there any hope?

Obstructions to NHS research

There are now many obstructions to clinical research in the NHS. Early exposure to the excitement of research during clinical training has been sadly discouraged by the relative inflexibility of the post-Calman training programmes. Absence from the bedside, resulting both from training programmes and from the shorter working hours imposed by the European Working Time Directive, has virtually eliminated the involvement of medical trainees in small clinical research projects which in the past so often stimulated them toward a career in research. Overregulation and excessively burdensome requirements of R&D committees using different formats from ethics committees, together with almost unanswerable questions on costs, have discouraged enthusiastic clinicians.⁵ In addition, the requirements of research councils and medical schools to form large research groupings to permit clinical research or obtain research grants are often inimical to the innovative and inquiring spirit of individual NHS clinicians.

Career flexibility

Career flexibility is essential to the pursuit of clinical research, as history shows. A switch from a career in chemistry to one in biology by Louis Pasteur followed his studies on tartrate crystals in which he distinguished living from inanimate processes.⁶

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More recently, Sir Paul Nurse, Harveian Orator in 2003, suggested that future studies of the cell might need to move away from biology to the disciplines of mathematics and physics.⁷ In contemporary research, Sir Keith Peters described the career of an academic Cambridge respiratory physician who trained in a haematology department but is now making major contributions to dementia research 'which he is currently pursuing in the department of genetics by introducing mutated neuroserpin genes into flies'.⁴

Research environment

The appropriateness of the research environment is obviously essential, both in the academic and the NHS environment, but there can be no single model. A close physical relationship between academic clinical departments and those in basic science is obviously right: no-one would believe that a failed orthopaedic surgeon (Frederick Banting) and a medical student (Charles Best) could have discovered insulin had it not been for the state-of-the-art laboratories of JJR McLeod and the collaboration with the chemist, JB Collip.⁸ In contemporary terms, Sir Keith Peters has described the sophisticated research links in Cambridge.⁴ But much less consideration is given to the relationships between appropriate clinical departments which can create such an important stimulus: the juxtaposition of clinical departments can be the key to cross fertilisation of ideas and at the same time offer the best treatment for patients. The close association of a diabetes unit, for example, with ophthalmologists, neurologists, renal physicians, or obstetricians leads at times to highly innovative observations and programmes of clinical research, often following joint consultations over individual patients.⁹

The future for NHS research

Sir Walter Bodmer, in his 1996 Harveian Oration, pleaded that 'we must at least ensure that the opportunity to do the first-class clinical research in the setting of our NHS is preserved'.¹⁰ Now there are encouraging signs. Following a report from the Research for Patient Benefit Working Party, the UK Clinical Research Collaboration (UKCRC) was created to oversee 'the effective and efficient translation of scientific advances into patient care'.¹¹ R&D funding has now been expanded by some £100 million over four years to assist with the establishment of managed research networks in the NHS. Cancer and mental health networks already exist, and there are now proposals for networks in diabetes,¹² stroke,¹³ Alzheimer's disease, and medicines for children. These networks will establish collaborative infrastructures individually tailored by the speciality to promote advances in treatment.

Almost 100 years ago, the doyen of clinical research, Sir Thomas Lewis, wrote 'there is indeed a fertile science that deals primarily with patients and this must be encouraged to a more vigorous growth'.¹⁴ Commentators today are saying exactly the same, and much encouragement for academic clinical medicine comes with the report from the Forum on Academic

Medicine,¹⁵ described in our last issue,¹⁶ with its strong recommendations on flexibility in training. In the USA, a substantial boost to morale in clinical research has come from the opening of a 242-bed research unit at the National Institutes of Health in Bethesda. But at the same time, we must not lose the enthusiasm of individual clinical research workers in the NHS fired up for the chase – the chase of ideas.

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Tsunami

A wall of water arising from an earthquake under the Indian Ocean has caused death and destruction on an unprecedented scale. The human spirit across the globe has risen to assist those who are now suffering, showing unparalleled generosity and often unstinting devotion offered at great personal sacrifice. It has been moving to witness the untiring efforts of doctors attending the sick and injured round the clock in daunting conditions. Our sympathy goes out to the bereaved, and our admiration to those who are caring for them. We would like our own Fellows and Members to know that this College will do all in its power to support them, and that it is setting up a RCP Tsunami Relief Fund with the aim of helping to restore the medical structure in affected countries.

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