undertake their research activities and continue to participate in routine patient care within the NHS.

Existing measures of success and recognition for those working in other areas of science are often inappropriate for clinical research. Data emerging from clinical studies is seldom published in the high impact journals *Nature, Cell,* and *Science,* and the time required to move through the development and implementation of a single set of protocols is such that productivity can easily be perceived to be low. Recognition must be found for individuals undertaking clinical investigation that acknowledges the challenges associated with developing and instituting protocols in patients.

New funding should be made available

The biggest limitation to expansion of clinical research once an appropriate infrastructure is in place would be programme funding. Extra funds should be available through the Medical Research Council to support clinical trials and provide for a funding stream for experimental medicine and training clinical scientists. This money should be ring fenced. Support is also required to develop new methods for studying chronic disease, where randomised controlled trials are often inappropriate.

In response to this increase, major charities need to commit to properly resource the aspect of clinical research relevant to their interests. Attempts should also be made to ensure that the biotechnology industry and pharmaceutical companies recognise this opportunity and increase their investment in UK research. Collaboration between funders, although difficult to achieve, will be essential to fund studies that are likely to become bigger and more complex as standards of care improve.

Educate the public about merits of clinical research

Expansion of clinical research will be successful only if the public recognises its value and is willing to participate. Serious attempts must be made to ensure that people understand the benefits of clinical research, not just for those participating in studies but also for future patients who will benefit from the insights gained. In exchange, the NHS should make it possible for any patient who wishes to participate in a clinical study to have the opportunity to do so.

Conclusion

The United Kingdom is not alone in facing a decline in research. Many other countries are experiencing similar problems. However, the NHS is perhaps more dependent on a healthy research environment than other healthcare systems. Any attempt to energise clinical research will require the joint efforts of the Department of Health, the Department of Trade and Industry, the Medical Research Council, and the major medical charities. The success or failure of their efforts will have serious implications for the effective management of the NHS, for patients who require new treatments for their disease, and for those attempting to develop new medicines in the biotechnology and pharmaceutical industries.

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Competing interests: JB has been employed by the NHS and MRC for many years, both of whom could benefit from this report. He was a member of MRC Council until July 2002. He has modest equity positions in a pharmaceutical investment fund and has shares in Roche AG. He is a non-executive member of Oxagen, Avidex, and Roche AG. He has had many speaking engagements funded by industry and the MRC and has served on numerous scientific advisory boards for universities and medical schools. He is on the board of Oxford Genetic Knowledge Park funded by the Department of Health.

Summary points

- Clinical research is in decline in the United Kingdom
- The main problems are in experimental medicine and clinical trials
- A national network for clinical research is needed to help coordinate funding and research programmes
- Better career and reward structures are needed for clinical researchers
- Funding must be increased from all sources

1 Doll R, Hill AB. Smoking and carcinoma of the lung. *BMJ* 1950;i:739-48.
2 Heart Protection Study Collaborative Group. MRC/BHF heart protection study of cholesterol lowering with simvastatin in 20 536 high risk individuals: a randomised placebo-controlled trial. *Lancet* 2002;360:7-22.
3 Chalmers I, Rounding C, Lock K. Descriptive survey of non-commercial randomised controlled trials in the United Kingdom, 1980-2002. *BMJ* 2003;327:1017-9.
4 Nuffield Trust for Research and Policy Studies. *Learning from experience: privacy and the secondary use of data in health research.* London: Nuffield Trust, 2002.

Corrections and clarifications

Understanding sensitivity and specificity with the right side of the brain

We introduced a typographical error when we redrew the summary figure for this article by Tze-Wey Loong, and unfortunately this was not noticed at the proof stage (27 September, pp 716-9). The bottom orange block should be labelled "Number of positive results" [not "Number of people with the disease"].

A history lesson

In this filler by Catriona Rundle (6 September, p 545) a bizarre editorial error that we have not yet been able to unravel led to the author's institution, Perth Royal Infirmary, being wrongly assigned to Perth in Western Australia (whose main hospital is Royal Perth Hospital) rather than to Perth in Scotland.