

GP investigators

Julian Tudor Hart has provided us with a much needed call-to-arms to undertake scientific enquiry in our practices,¹ although it is likely that the cavalry will need to re-enlist. Once again we need to see ourselves as scientific enquirers working in the unique laboratories of our everyday surgeries to understand the better diseases that affect our patients in the 21st century.

At present, the complex mathematical methods used to design and present results of therapeutic studies have marginalised many clinicians from believing that they can, and have to be, scientific observers. In addition, the so-called hierarchies of evidence commonly used in guidelines, often with randomised controlled trials (RCTs) and their meta-analyses at the top and clinical observations at the bottom, imply that the scientific observations that clinicians can make in their everyday practice are of little value and that 'research' is best left to others.

This has led many of us to view ourselves as followers of guidelines, and rarely to be independent investigators. However, these guidelines do not accurately represent the conditions that exist in the laboratories of our surgeries, having been predominantly constructed by single issue specialists. Rather our science involves observing the continuity of care of increasing comorbidity in a relatively stable population over time. This environment is unique and we are the scientists best placed to undertake the necessary observations to understand the diseases our patients are suffering from. As Julian Tudor Hart wrote over 15 years ago.

'Continuity, not salesmanship, will be the keystone of the applied medical science of the future, in which health-workers and patients will work together to produce better health not as adversarial providers and consumers but as mutually respectful experts in the realities of care, measuring costs in the real currencies

*of time and measured outcomes rather than the mindless reductionism of the market.'*²

As followers of guidelines, GPs have had to assume that the treatments recommended in these single disease guidelines can simply be added together to be used in patients with many concurrent diseases, leading to a level of polypharmacy which many of us are instinctively concerned about. Iona Heath has written 'The problem is that in health care the specialist medical view predominates. And, as a direct result, multiple diagnoses lead almost inevitably to polypharmacy as each condition is treated in perverse isolation from the others.'³

Rawlins has provided a summary of the potential problems in extrapolating the findings of RCTs to wider patient populations.⁴ The RCTs that were used to justify the single disease guidelines cannot provide the balanced information that GPs require. RCTs are an inadequate scientific methodology for providing information on how to manage the complexity of comorbidities in individual patients over time, and they are particularly weak on providing the crucial information that prescribers require on the adverse drug reactions resulting from the current polypharmacy of comorbidity. As the therapeutics of comorbidity becomes ever more complex, so to do the limitations of RCTs become more obvious. Information on both the benefits and harms of therapeutic interventions are needed for a balanced assessment of patient safety.

One of the systematic enquiries that we need to undertake is that of the pattern recognition of the adverse drug reactions resulting from the current polypharmacy of comorbidity. GPs are the scientists who can recognise the patterns of symptoms and signs in their patients over time which are being caused by adverse drug reactions. The mathematics of the RCT needs to be counterbalanced by observational studies in clinical practice. The benefits of a therapeutic intervention demonstrated in an RCT needs to be

combined with the evidence of any harm observed in clinical practice so making patients safer. We all need to become scientific observers again.

How is this work to be supported? Why not have an enhanced service in the new GMS contract for all of us to participate in the scientific enquiries that need to be undertaken in general practice? GPs as investigators not the investigated, now there's a thought!

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How much should a GP read?

We GPs have to keep learning all our lives to have our knowledge updated. Reading is not the only way to learn and yet we must keep some time every week for it. Seeing three patients generates two clinical questions, which solution would improve our practice. Furthermore, disease management changes very quickly and we wouldn't follow this evolution without reading.

There is also an ethical need to learn: we have to give patients the best possible care and we have to seek the highest level of professional development for ourselves.¹ Doctors who don't continue to learn become dissatisfied and burn out.

Daily work together with our own team helps us identify our learning needs. A person's ability to assess his or her own performance is limited. Lifelong learning means finding the right balance