EDITORIAL

Is operational research true science? What should it be used for?

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Public Health Action has now published over 100 articles focused on operational research. When we first launched the *Journal*, I told a colleague of mine, a researcher in clinical trials, about the journal and what we hoped to achieve with it. He turned and said to me 'But that is not really science, is it?' He is not alone in terms of his opinion about operational research. Clearly, this opinion must be taken seriously and addressed responsibly.

What is science? According to the Oxford dictionary, it is 'the systematic study of the structure and behaviour of the physical and natural world through observation and experiment'.¹ Research in the life sciences begins with an observation leading to a (null) hypothesis which is tested using one of a set of standard study designs and evaluated using one of an approved set of statistical tests, based on a pre-determined level of probability. This provides the evidence upon which the appropriate form of standard care is determined for those seeking care. Operational research follows the same procedure, differing only from other types of research in selecting the operation of systems and services as the focus of the research. This research addresses determinants of these operations and emphasizes the efficiency, accessibility, equity and quality of the services provided and evaluates the processes that contribute to improving these elements. The subject matter is that of the institutions and personnel providing the care as compared with the individual affected by the disease or condition, and often accesses routine records kept by the services to make the evaluations. Accordingly, operational research is as scientific as all other forms of research in the life sciences.

PHA has published scientific articles on all manner of health services, primarily for the poor and from many places in the world. In this issue, for example, one study evaluated the predictors of development of

tuberculosis disease in children living with HIV who were on isoniazid preventive treatment in Kenya.² Another reported the additional value of fluorescence microscopy using light-emitting diode as compared with traditional smear microscopy in busy diagnostic laboratories in India.³ Still another determined, among TB patients offered HIV testing in India, who was most likely to accept the tests.⁴ Each of these studies provides information that will help services focus their practice more precisely and efficiently, refining approaches to those who are currently underserved.

Challenges remain even in health services in the richest countries, as for example the poor quality of care provided in the Mid Staffordshire NHS Foundation Trust.⁵ This is a perfect example of where operational research can help to ensure that services continue to be of high quality, particularly where economic pressures are increasing.

The benefit of operational research is only as good as the willingness to take up the results to improve the services. We look forward to publishing more research on the impact of operational research. The ultimate goal is not simply new knowledge, but a willingness to act on this new knowledge.

References

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