Balancing science and art in primary care research: past and present

THERE has been and probably always will be a debate over whether medicine is a science or an art. In a lecture given in 1930 on 'medicine as a career' Rolleston stated:

'Medicine is not, and probably never will be, an exact science; it is an art aided by the application of several sciences, in which philosophy, religion, and sometimes commercialism also play a part.'

Research in general practice, and hence primary care, pivots on whether the researcher considers primary care to be a pure science, an art or a blend of both. The bias towards the scientific aspect of medicine was recognized over a century ago by Allbutt who in his British Medical Association address of 1882 stated:

'Are we to please ourselves with the pretence of an unreal knowledge? Where is your science, where is your learning, when the sick man calls you for help, and you stand the more impotent at his bedside the more heavily you are armed?'

Perhaps the key to the direction of primary care research lies in the World Health Organization definition of health: the state of complete physical, mental and social well-being, not merely the absence of disease. This definition acknowledges illness or impairment of health as being more than a disease or physiological dysfunction that results in a defined pathological condition. The pertinence of this is illustrated by a finding that two thirds of patients visiting a general practitioner, and thus perceiving themselves as being ill, have no serious disease. These patients have impaired health, where one of the factors that contribute to well-being is compromised. As a consequence there is a danger that medical practice may become a repeated chore of managing patients perceived to be 'heartsink' patients. However, in terms of research, this finding can empower passionate enquirers to quench their curiosity. If general practitioners fail to appreciate the wider definition of health, they have fewer therapeutic options available to them and therefore a reduced ability to restore a patient's health. This may result in patient dissatisfaction, causing patients to look for alternative therapies and a holistic approach to care from practitioners trained in and thus borne through a different research approach.

For general practice to be effective it must be both an art and a science, 'scientific skill with loving kindness', this is the motto of the Royal College of General Practitioners, 'Cum scientia caritas'. Therefore, in order to explore why a patient or a population with a common ailment is ill, primary care research must establish a balance of explanation between the biomedical aspects of an illness and the issues that address psychosocial well-being.

Unfortunately, medical undergraduate training continues to emphasize principles of diseases in isolation from the persons who suffer them. This issue is currently being addressed by increased general practice based teaching for undergraduates and for general practitioner registrars (trainees). The crux of this teaching is the consultation. However, the importance of the consultation, and the resultant doctor–patient relationship, is not a recent discovery: in 1927 it was described as an 'intimate personal relationship', in 1949 as an attribute of the 'good doctor' and in 1992 as 'the very task of medicine'.

Thus the history of medicine continually emphasizes the natural equilibrium between art and science; it may be that there is a symbiotic relationship between art and science in general practice. In his graduation address of 1949, Taylor stated:

'Medicine is an art and there is no difference in principle between the doctor making up his mind, than the painter building up his picture.'

As a result of the shift in focus onto the consultation, research into illness has developed dramatically. General practitioners' successful participation in the privileged intimacy of consultations has necessitated the development of communication skills to interpret correctly the signals being conveyed by patients. These skills are crucial to discover patients' true concerns, hence the possible cause of their illnesses and thus ultimately to facilitate the restoration of their health.

Despite the focus by primary care research on the consultation, it is unfortunate that case reports and anecdotes, once the mainstay of medical journals (the very quintessence of medical science) have virtually disappeared in the second half of this century. Now an emphasis is placed on rigorous and objective science with demonstration of high degrees of reliability and validity. As a result the case report, as a basic observational method of research that can be used to identify key issues and generate hypotheses, has almost been lost.

In the Lancet in 1923, Pitts applied a basic observational method to the development of the humble toothbrush, which had hitherto been condemned as a useless habit which may indeed do harm. Through his observations he concluded 'the real function of the toothbrush is mechanically to remove debris from the mouth. The purest carbohydrate, if left in contact with the teeth, will cause caries, and the use of the toothbrush, in so far as it helps to prevent stagnation, is thus a useful and hygienic habit'.

Given the ethnographic potential of primary care research, is too much emphasis being placed on the scientific collection of numerical data in order to achieve publication? This concern is echoed by both McWhinney and Donald.

Primary care is very different from the sheltered world of hospital practice where clinical material is so preselected by the general practitioner that a patient's illness is approached more like an engineering or chess problem. Fry correctly asserts that this is not the case for general practitioners working in the community and so not for conducting primary care research:

'It is as though we work in the natural habitat of the jungle, seeking and stalking our prey in its own environment, whereas our hospital colleagues have to function from behind the bars of a zoo, dealing with patients and diseases in highly artificial situations.'

This decade has witnessed a revitalization in the use of qualitative research, focusing on individuals rather than populations. This is more sophisticated than basic observational methods and is able to reduce the potential for observer bias and error. There are a variety of methods that may be used to provide the elucidation of a new concept or an explanatory framework. These in turn may be used as the basis for quantitative research or an intervention strategy. Qualitative research has permitted the
exploration of many issues which are not scientifically definable, for example the critical incident technique which uses semi-structured interviews and the recording of recurrent themes.\textsuperscript{19} Just as there is a balance between art and science, there is a need for a balance between qualitative and quantitative research. The two approaches to research should complement each other as part of their symbiotic relationship.

The dilemma and challenge for primary care research is the need to reconcile the accelerating advance of technological medical knowledge and skills, \textit{scientia}, with a warm and caring relationship, \textit{caritas}. Unfortunately, the general practice environment is constrained by intense competition for resource allocation and patients’ rising expectations of medical care, thus impeding the growth of research.\textsuperscript{13} Furthermore, the current move of secondary care into the community requires not only research into illnesses where no obvious cause can be identified but also those diseases requiring acute and chronic management.

The future improvement of health care lies in the continued proliferation of primary care research as noted by an important mentor at the turn of the century, James Mackenzie:

‘As a result of my experience I take a very different view, and assert with confidence that medicine will take but halting progress, while whole fields essential to the progress of medicine will remain unexplored, until the general practitioner takes his place as an investigator.’\textsuperscript{20}

In a letter to the \textit{British Medical Journal} in 1942 it was suggested that cooperation between the general practitioner and research worker is required to ‘throw some light on many problems at present obscure’.\textsuperscript{21} It is important not only to encourage this cooperation but also to encourage general practitioners to be enquirers and researchers themselves. It is the increase in primary care research into all aspects of health which will strengthen general practice as an academic discipline for, as Denis Pereira Gray states, ‘published research is the only way to turn a craft into a profession and a profession into a discipline’.\textsuperscript{22}

\begin{flushright}
RODGER CHARLTON
Senior lecturer, Department of Primary Health Care,
Keele University
\end{flushright}

\textbf{General practitioners and public health doctors: sharing common goals?}

\textbf{FOR} the patient the quality of the consultation has always been the key to good health care. But general practitioners are increasingly being asked to look beyond caring for individuals and to consider the way in which care is provided in the wider community. Reorganization of local health care has become the stuff of daily life. If general practitioners are to play an effective part in today’s health service, they cannot afford to ignore this change in role or the way resources are rationed on ever more explicit criteria.

Public health doctors have been charged with advising health authorities on how to promote health and commission effective care,\textsuperscript{1} a responsibility that will formally extend to primary care when family health services authorities and district health authorities merge in April 1996.\textsuperscript{2} General practitioners are interested in the same issues, although from a different perspective. They deliver much of the health service’s health promotion, stand at the gateway to secondary care and increasingly help to set priorities for local resource allocation, whether as fundholders or working through other commissioning mechanisms.\textsuperscript{1-5}

Conventional wisdom decrees that the two disciplines of public health and general practice bring complementary but distinct skills to the commissioning process.\textsuperscript{6} Yet, as both Hannay\textsuperscript{6} and Bhopal\textsuperscript{7} have observed, public health doctors and general practitioners often miss opportunities to collaborate. This is

\textbf{References}


Addres for correspondence
Dr R Charlton, The Surgery, Fentham Hall, Marsh Lane, Hampton-in-Arden, Solihull, West Midlands B92 0AH.

640 British Journal of General Practice, December 1995