

and the protection of trainees from specific service responsibilities; a similar step by other specialties could be costly in money terms but priceless in the rewards it would bring in the form of unity within the profession.

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Research: The role of the general practitioner

The European General Practice Research Workshop (EGPRW)¹ has been meeting for 12 years. In it, ideas are pooled and research projects are both stimulated and if appropriate, smothered. Encouraged by the publication of statements about the role and education of the general practitioner by the Leeuwenhorst group²⁻⁴ the EGPRW established a working group to consider the possibility of making a parallel statement concerning research in general practice. The working group had wide representation from all countries involved in the EGPRW and its deliberations were refined continuously by reporting back to the entire Workshop.

Our concern was to establish a framework in which research in primary care might be seen in relation to research in patient health and health care systems. In some countries primary care has made considerable advance and achieved academic status over recent years, but in others, the academic contribution from general practice is minimal. This document crystallizes the place of research in primary care and provides the 'raison d'être' and an organizational framework for it.

The statement is published in full. An appendix containing the full classification of research areas and a single sheet summary of the statement is available on request from the Birmingham Research Unit of the Royal College of General Practitioners, Lordswood House, 54 Lordswood Road, Harborne, Birmingham B17 9DB.

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Statement on general practice research: European General Practice Research Workshop, October 1982

1. Introduction

General practice is a scientific discipline within medicine and has a specific place in a comprehensive health care system. It is concerned with the provision of medical care for individuals and in a wider sense in communities. It includes clinical, administrative and educational elements. Research is determined by the problems presented which may arise from any of these elements. The fundamental object of research is to increase knowledge and to apply that knowledge to promote the health and welfare of patients by providing improvements in the quality of care.

2. What is research?

Research is systematic critical enquiry conducted in accordance with rules which facilitate reproducibility. Results are expressed objectively in terms understood by professional colleagues and members of related disciplines. The results and their interpretation are submitted to critical review and testing by others prior to their inclusion as part of the scientific basis of and teaching for general practice. In this way the scientific principles of general practice comply with the rules and canons of any specific discipline.

Detailed research techniques and methods will vary with the problems. The conventional end point of research in all the natural sciences is the elaboration of a 'cause and effect' model of reality, which symbolizes and mirrors the factors or elements interacting in the problem situation and which predicts the subsequent outcome of events involving those elements.

General practice shares with all clinical medicine a 'problem and action' orientation. The emphasis here is on clear definition of the problem and then the initiation of appropriate therapeutic action. Where the

clinical problem can be accurately defined, the choice of effective action may be as surely indicated even in the absence of scientific 'cause and effect' models for the event. Scurvy was first treated and then prevented by limes, quinine 'cured' malaria, and cow-pox prevented or mitigated subsequent small-pox infection long before any scientific knowledge about 'cause and effect' was available. In situations such as these, where effective action is available before scientific explanation, conventional scientific model making is stimulated. In these examples conventional 'cause and effect' models were subsequently established.

The 'cause and effect' model is not always appropriate to the understanding of behavioural responses and in particular to the responses of patients to environmental situations which may constitute their clinical problems. This applies especially to those problems involving the interaction of psychosocial and organic elements or factors and to the influence which interpersonal relationships within the family or other important social groups may have on the ability of the individual to cope. Additionally, it is inadequate for an understanding of the physician's own clinical decision-making processes, many of which are derived from experience learned in the problem/action mode. The probability that a course of action, whether it be the behavioural response of a patient or a clinician's response to a clinical problem, will be effective, can be just as high as the probability that a scientific model matches reality.

In many countries the science of general practice has been accorded the academic status of an independent medical specialty. Continuing research is essential in amassing the necessary knowledge which constitutes the science of practice.

3. Reasons for and benefits from research

a) The individual general practitioner

Participation in 'systematic critical enquiry' can only improve the professional qualities of the individual doctor. It will give support to his actions and a systematization of his everyday work. It will stimulate him to approach his problems in a critical way, reassure or correct him in his own ways of work by critical thought and remove feelings of guilt arising from the use of methods which have been criticized by many as being unscientific. Even if participation in research brings him no new knowledge, the rigour that scientific method imposes on clinical performance provides the practitioner with continuous criticism which should in any case be part of good general practice.

b) Medicine

General practice has a contribution to make to medical science and is an essential part of medical education because:

i) the emphasis in general practice is on the primary

assessment of all previously undifferentiated clinical problems;

ii) the general practitioner is in the unique position to see the initial phase of all clinical problems;

iii) many illnesses are seen and treated exclusively within general practice;

iv) the long-term contact resulting from continuity of care over time with all the clinical problems of each individual patient offers the possibility for perceiving and co-ordinating information about lifestyles and about the natural history of disease;

v) general practice includes not only integration of the content of all the other specialities but also the co-ordination of the resultant activities of other medical and non-medical colleagues;

vi) in advising patients the general practitioner sometimes must use information of a non-medical nature when determining an appropriate management programme;

vii) of the crucial importance of clinical decision-making in the problem/action mode with its inevitable probabilistic character, and the contribution which the general practitioner can make towards the understanding of this process in other specialities.

c) The community

General practice research is essential to the community and appropriate in particular to its leaders and governing bodies for the provision of information appropriate to the rational allocation of resources within a health care system. It is also the appropriate arena for the study of health care problems relating to the community and its environment.

4. Research areas and priorities

The Leeuwenhorst Group have described the functions and contributions of the general practitioner. Areas for research may be classified in five main groups:

Clinical

Epidemiological

Operational

Behavioural

Educational

(A classification is available as an appendix.)

Such a classification does not imply priorities. These may be determined nationally by Health Departments, locally within communities by professional or public request or individually by doctors. Political motives, educational objectives, information needs all may be relevant to determining priority. In the execution of research, a most important factor is the personal attachment of an individual to a problem that motivates. Research must be satisfactory to him by giving insight into problem relationships not previously understood.

5. Methods of research

There is no specific methodology for general practice research. The specificity comes from the problems not from the methods. When the problem is clearly defined, appropriate scientific methods are available for research. These methods may come from the biological, epidemiological or social science tradition. Appropriate methods can be considered in relation to four stages of research:

a) Descriptive research

All scientific work has to start with a systematic description of relevant facts and situations. This includes numerical and non-numerical information coming from case study, morbidity surveys and activity analyses. Such data are prerequisites to the identification of problems, though are not necessarily sufficient for resolution of the problems.

In the collection of primary data the true situation of general practice must be recognized. Diagnoses are commonly made on clinical grounds alone, either because there is no appropriate scientific test or the severity of the illness does not merit the cost of further investigation or, in some cases, the risks entailed in investigation procedures. Diagnosis on clinical grounds, much of which are subjective, makes for difficulties in the standardization of clinical criteria. In many instances, diagnostic terms may equate with problem definition and are used as the basis for action. Descriptive research by identifying problems provides a self-perpetuating need for continuing research as a monitor of change.

b) Hypothesis generation

This is derived from the identification and quantification of problems. It evolves from the intuition and creativity of the researcher and is formulated by systematic consideration of alternative ideas gradually refuting improbable ones. Though hypotheses may be generated individually, the critical contribution of like-minded colleagues and the concensus of opinion among peers can have a value outweighing numerical analysis. The small discussion group provides the forum for identifying errors, discrepancies and anomalies permitting only the small minority of initial hypotheses to survive and go forward for more conventional and scientific testing.

c) Hypothesis testing

The full testing of a hypothesis follows traditionally accepted scientific rules and is exemplified by the rigorous controlled trial. This approach is appropriate whether a 'cause and effect' relationship is established or not. Though statistical probability will in general provide the basis by which an hypothesis is accepted, there are areas of activity of the general practitioner which will not necessarily lend themselves to this type of mathematical analysis.

d) Assimilation of data

The final stage is concerned with the assimilation of proven hypotheses into the body of knowledge which we recognize as the scientific basis of general practice and which provides the core of teaching.

6. Standardization in research

Researchers in general practice should work towards a common vocabulary. We accept the need for standardized classification systems, definitions and criteria for all aspects of primary care. There is a universal need for transcultural and translingual expressions applicable in the dialogue between individual researchers. Spurious over-precision in classification and measurement systems for clinical problems needs to be avoided, and the desirability for standardization must not stand in the way of innovation.

7. Interdisciplinary research

In his research the general practitioner may need to use an integrated interdisciplinary approach and call on the aid of specialists in other fields. Likewise it is logical that when others need health information from the community as part of their own research project they should look to general practitioners for co-operation.

8. Ethics

We acknowledge the Declaration of Helsinki II, and as individual researchers respect our nationally accepted medical ethics and laws relating to data protection.

Reality orientation

There is now good evidence that elderly mentally impaired patients can be re-orientated for time, place and person using the technique of reality orientation (RO). To date, all empirical trials demonstrating this have been carried out on elderly institutionalized patients. This technique, however, might be of greater value to those elderly dementing patients still living with relatives in the community but attending geriatric psychiatry day hospitals, where they could receive RO in a consistent and systematic way. The results of an empirical study of RO with a group of such patients is reported. These showed that day hospital patients could be effectively re-orientated and that concomitant with changes in level of orientation of the patients, there were parallel changes in the patients' behaviour at home, reported stress on relatives and in relatives' mood.

Source: Greene JG, Timbury GC, Smith R, Gardiner M. Reality orientation with elderly patients in the community: an empirical evaluation. *Age and Ageing* 1983; 12: 38-43.