

PRACTICAL ADVICE

## **Promoting Clinical Research in General Practice**

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**ABSTRACT** **Context:** *Research is a critical component to the continued growth and development of the quality of primary care. The common rules and values concerning research apply to general practice in the same way as to other specialties. Research should be an integral part.*

**Objectives:** *To identify and discuss the elements and requirements needed in the promotion of research in general practice.*

**Discussion:** *At the university level, undergraduate education is a start, but a university department of general practice must have responsibilities in postgraduate education. Academic departments of general practice must be adequately resourced to be able to conduct credible research and to organize training in research and research methods. They should provide advisory services and guidance to support the activities of motivated GP researchers in the field and also help them to get into contact with other research-minded clinicians. If GPs want to develop their knowledge and skills in research, they must be willing to pay for them in terms of time and effort, which are away from something else. In return, the service organizations and governments benefiting from these increased skills must be willing to create a system which recognizes the value of the activities and aspirations of these general practitioners by creating new career structures and bonus mechanisms. These incentives and value systems must be accepted by the profession.*

**Conclusions:** *High quality applied clinical research can successfully be done in primary care. It needs a supportive climate, motivated researchers and adequate funding.*

**KEYWORDS** *Medicine research, general practice research, primary care research, family medicine research.*

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## **Introduction**

Research is a critical component to the continued growth and development of the quality of primary care. It is important to understand that general practice is not an isolated unique island, which has its own rules and values.

## **Need of Knowledge**

I have worked in general practice or with general practitioners for more than 35 years. I have seen many general practitioners who have been interested in research, but only a few of them have actually done something. There are many reasons for this. Heavy workload, changing work place, changes in family situation and changes in the living environment can be among the reasons. The greatest reason, however, seems to be that research is not easy. Even the identification of a research topic is not as simple as one might think. A common mistake an inexperienced person makes in this respect is proposing a research topic, which is very abstract and impossible to investigate. Much delineation and operationalization will be required for developing the topic into researchable form.

Impatience about research is very common. Often there is frustration. Usually there is a lack of research training or knowledge about research, for example, a belief that research must be something big to be important. This idea effectively leads one's thoughts away from the daily practice and from one's own work.

## **What to Study?**

Some of the most important study areas in primary care are: the prevalence and incidence of diseases, the natural course of various diseases, preventive care, health education and health promotion, outcomes of care, effectiveness of various treatment procedures, quality of care, health care organization and management, evaluation of primary health care, psychosocial studies, studies on patient-provider interaction, mental health, studies on access, continuity of care, teamwork, homecare, motivation of the staff, management of a primary care team, education of physicians and other primary care professionals, continuing education of general practitioners and the costs of care. This list gives an idea of the great variety of possible topic areas regardless of the setting.

Table 1 shows some recent definitions or descriptions of research in general practice. From those definitions more options will rise. The main focus is on clinical research in its various forms.

**Table 1.** Recent definitions and descriptions of research in general practice

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**European General Practice Research Workshop (EGPRW), Leonis, C. *et al.* (2004)**

Research on “clinical issues” (common diseases, chronic diseases, etc.) including diagnostic strategies, was considered to be the core content of general practice research, with primary care-based morbidity registration essential for surveillance of disease, clinical research and teaching in general practice. A consensus was on the need for research on education and teaching. “Insufficient funding opportunities” was perceived as the major barrier to the development of general practice research.

**Mant, D. *et al.* (2004)**

Primary care needs evidence base, primary care research should focus on clinical practice, primary care research can affect clinical practice. “Absence of research in primary care will lead to over-investigation, inappropriate treatment and diagnostic delay through wrong-track referral.” The main function of primary care research is to inform clinical practice in primary care. . . High-quality research that influences clinical practice can be done successfully in primary care. This is particularly clear in relation to the management of conditions seen only in primary care. High quality applied clinical research requires integration of research into clinical services.

**North American Primary Care Research Group, NAPCRG. Brungardt, S.H. (2004)**

Family medicine research is research done by family physicians about the patients and communities that they serve. This research covers the entire spectrum of clinical problems as well as organization and delivery of primary care. Key research areas are: studying the natural history of common problems and major diseases, understanding how patients, families, communities, and systems deal with health and illness, improving doctor-patient communication, decision making, partnership, testing systems to improve patient satisfaction, safety and outcomes. Family medicine research uses a combination of methods from the biomedical, health services, public health and social sciences, which are often characterized by teamwork that is interdisciplinary, patient centered and community based.

**De Maeseneer, J.M. *et al.* (2003)**

In primary care, research is needed that takes into account the specific characteristics of its population and the presentation and prevalence of illness and disease. The context of the doctor-patient encounter plays a major part, and needs better understanding. At the policy level, issues of equity must be addressed. The knowledge base for family practice must be expanded by integration of multiple methods of comprehension, so we can bridge the gap between evidence and practice. The knowledge base for family practice must be expanded by integration of self-reflective practice by clinicians, involvement of the patient in generation of research questions and interpretation of data, inquiry into the systems affecting health care and investigation of disease events and diagnostic approaches and treatment effects in patients over time. A multimethod, transdisciplinary, participatory approach is needed to create knowledge that retains connections with its meaning and context, and therefore is readily translated into practice. This research integrates quantitative and qualitative traditions and involves active participation of both clinicians and patients. Three sources of evidence is needed: medical evidence to prevent, cure and care for diseases, contextual evidence to make medical research work in daily practice, and policy evidence to contribute to equity on a worldwide scale.

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*(continued overleaf)*

**Table 1.** (*continued*)

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**Starfield, B. (1996)**

Primary care research consists of four types: basic, clinical, health services and health systems. Basic research addresses the development of methods to study subjects relevant to primary care services, regardless of whether they deal with a clinical problem or a characteristic of service delivery. Clinical research involves issues relevant to the processes of delivering services, including recognition of people's problems, diagnostic approaches and types of therapy and their outcomes. Health services research concerns the relationships associated with the organization and financing and their impact on the processes and outcomes of care. Health systems research focuses on understanding how the economic, political and social milieus influence the structures and processes of health services system, with specific relevance to its primary care infrastructure.

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## **The Need for an Academic Infrastructure**

General practice should be represented in medical schools as one of the compulsory disciplines in undergraduate medical education. From the base as an academic department of general practice, general practice professors should do research to be credible. The department should have responsibility for undergraduate education, as well as postgraduate education.

## **The Need for Training**

Few people are so talented that they can rush into research without any preparation. In designing training for GPs, it is important to recognize that there are two types: (1) those who want to improve their practices, and (2) those GPs who are interested in careers in academia and who therefore want a PhD. In addition to quantitative methods and biostatistics, knowledge of qualitative methods is also useful.

## **The Need for Support**

The important tools nowadays are the computer, a connection to the internet and access to electronic library data bases, such as Medline, EMBASE, Cochrane Library data bases, CINAHL, etc. This assumes necessary skills. However, it is still possible to conduct simpler research without the computer and the internet.

Regardless of how the training is arranged, a general practitioner, who thinks of a research career, must be prepared to sacrifice his/her time and resources. There should be regular training courses available that carry

CME credits in the same way as the clinical courses. As part of the research training, a good course on medical informatics is useful, as is a short course on the principles of epidemiology. The purpose of such training is to learn epidemiologic thinking. There should also be a course on medical writing.

An example of courses as presented at our department of General Practice in Helsinki are listed below:

- Virtual Library 0.75 credits\* (1.0 ECTS)\*\*
- Introduction to Research in Primary Health Care 3.0 credits (4,5 ECTS)
- Introduction to Biostatistics 3.0 credits (4,5 ECTS)
- Applied Medical Informatics 1.0 credits (1,5 ECTS)
- Medical Ethics 3.0 credits (4.5 ECTS)
- Research and Evaluation Methods in Health Care 5.0 credits (7.5 ECTS)
- Principles and Methods of Quality Improvement 5.0 credits (7.5 ECTS)
- Biostatistics II (advanced) 5.0 credits (7.5 ECTS)
- Practicing Scientific Writing 3.0 credits (4.5 ECTS) (an internet course).

\* = one Finnish credit corresponding to 40 hours of student's work; \*\* = European Commission Transfer System credit.

## **Linking to Other Practice Entities**

Seldom are primary care organizations or units self-sufficient concerning research skills, computer software or access to library databases. What is needed is a link to an institute or department, which is involved in primary care research and training. Usually this is a university department of general practice. This kind of a unit can provide the research oriented general practitioners with advice and guidance and provide links to other experts, such as other research oriented GPs, social scientists, biostatisticians, psychologists, etc.

## **Supporting the Research**

Besides the time and effort needed to get the necessary training, time and effort are needed also for the real thing—the research. The idea that one could spend much time during working hours to research is idealistic and most probably will not work. If, on the other hand, the workplace climate is supportive of research, and its value for patient care is understood, this could result in bonuses, leave from the office with pay, payment of course fees, assistance in data collection, access to library data bases, access to more sophisticated software, etc. In many developed countries, the funding of the research in general practice has

improved during the recent years, but still there remains a lot to do. This is an important development area. A beginning researcher should not count very much on getting a grant.

## **Collaborative Research and Development**

University departments can and should collaborate with the real world primary care organizations and groups. A rewarding activity for both sides is the research and development collaboration or partnership activity, which combines research and training. This is not an easy activity. It requires continuous supervision, coordination, guidance and training. The results, however, can be very motivating. Observing the changes gives a feeling of achievement and increases the interest in the development of quality in primary care. This kind of an experience can be a starting point for an interest in research. These projects usually last for at least one year, but many times they last longer. The topics come from primary care staff. People learn by doing and working in their own working environment on their own problems. The training is based and directed according to the results of the analyses. The following example clarifies this activity.

Developing the quality of prevention and treatment of coronary heart disease in five health centers (GP led teams from five primary care health centers), 3 years. Results: very significant improvements in the risk factor levels of the study patients ( $n=526$  at the start, 482 at the end).

## **Conclusions**

Research in general practice and primary care is important. Mant *et al.* (2004) stated the strength of primary care research in any country is probably a good indicator of the strength and quality of primary care in that country. "Investment in research in primary care must be recognized, not only as an investment in the generation of clinical evidence, but also an investment in clinical leadership and service quality. The focus of general practice research should be on clinical practice as its main function is to inform clinical practice in primary care."

University departments of general practice should be adequately resourced to be able to conduct credible research and to organize appropriate training in general practice research. They should provide advisory services and guidance to support the activities of motivated GP researchers in the field and also help them to get into contact with other research-minded clinicians. The aim is not to train all general practitioners to become serious researchers, but the more

general practitioners get interested in collecting and analyzing data from their everyday work, the better. A possibility should be created for general practitioners to enter doctoral programs in general practice and also to work in academic settings.

There should be a supportive climate for research in primary care. The challenges to general practice will be great as a consequence of the rapid changes in the society and the environment in which the general practitioners work. The decisive factor will always be a motivated GP. How to attract these doctors, retain their motivation and how to reward the work are important questions to be answered by primary care organizations and employers. This is also an important issue for university departments of general practice. They must be able to recruit motivated general practitioners who are interested in research and who understand its value. If GPs want to develop their knowledge and skills in research, they must be willing to pay for them in terms of time and effort, which requires some sacrifice. In return, the service organizations and governments benefiting from these increased skills must be willing to create a system, which recognizes the value of the activities and aspirations of these general practitioners by creating new career structures and bonus mechanisms. These incentives and value systems must be accepted by the profession. A good way of spreading information and raising interest are collaborative research and development activities between university departments of general practice and the primary care service organizations.

It is easy to agree with Mant *et al.* (2004) when they state “good, motivated primary-care clinicians in any health-care system want to reflect and improve on what they do (that is, to engage in research) and we believe that it is self-evident that encouraging this activity promotes the recruitment and retention of good doctors and stimulates the implementation of evidence-based best practice.”

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