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BACKGROUND PAPER

Research challenges for family medicine in a changing Europe. Reflections afteran EGPRN conference on multimorbidity (Dubrovnik, 2009)

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Introduction

One of the areas where family medicine plays an important role is in patients with more than one chronic disease. The area of co-morbidity and multimorbidity is becoming interesting for research in medicine, particularly in family medicine. In October 2009, the EGPRN autumn meeting took place in the historical city of Dubrovnik in Croatia. Multimorbidity was the central theme of the meeting. This article by two keynote speakers at that conference is a reflection on research in family medicine, especially research needs with respect to multimorbidity (1).

Over the last 40 years, evidence of importance of family medicine has accumulated. There is more than enough evidence that the strength of a country's primary care system is associated with improved population health outcomes, that health systems with a strong primary care orientation tend to be more equitable and accessible and that using primary care with family physicians reduces costs and increases patient satisfaction with no adverse effects on patient outcomes (2,3). Most policymakers today agree that primary care and consequently family medicine are important.

Political and academic basis family medicine

This fact was first recognized with the Alma Ata declaration, where policymakers agreed that there is enough evidence to promote it as a key element of a good health care system. The declaration represented a political consensus of different countries on the key role of primary health care in improving health of the population (4). The time of the Alma Ata declaration and its putting on the agenda of primary health care coincided with an important transition of population health: the health issues at the forefront of the health care agenda at that time were acute illnesses, healthy pregnancy and labour, and children's health. First the economically developed world, soon followed by developing countries, began to suffer from chronic non-infectious diseases. Health care responded to these new challenges through the application of the models of success in coping with acute illness—through disease specific approaches, leading to further specialization and research, further segregating medical practitioners and scientists along the borders of organs and disease entities. There were only vague ideas about the concepts of family medicine and limited research on importance of primary care, which had been excluded from academia and had virtually no established international organizations.

This was the background against which family medicine and primary care began their academic development, by first defining its core values and concepts and describing its complexity and uniqueness (5).

Challenges in Europe

The world has seen great changes since then, and a lot of them were not for the better. We are increasingly

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talking about the crisis of societies, research and academic medicine. Europe today is confronted with important new challenges of globalization, consumerism and increasing inequality. New, yet unknown, challenges are about to emerge. We have witnessed growing mistrust in authorities, an explosion of knowledge through popular books, media, and the Internet, the rise of consumerism and focus on patients as customers, a rise in litigation and downfall of doctors as heroic figures.

We have also seen the development of high technology medicine which strives to a world of ultimate certainty, where everything can be measured, explained and controlled. Medicine is often seen as production of services and procedures aimed at maximising 'outputs' (e.g. reduced mortality) and minimising costs, where patients are objects with diseases. New concepts in medicine have emerged as well. They include community orientation, patient empowerment, patient autonomy, patient participation, quality of care and uncertainty.

The biomedical research that isolates single diseases or disease processes and studies diseases in highly selected patients, largely evaluates single interventions and prefers »hard« outcomes, such as death or change in measurable physical indicators has largely been unsuccessful in adressing some of the challenges of the modern world. The gap between public health and individual patient care, and the even bigger gap between the domains of health, illness and disease on the one hand and welfare and wellbeing at the other hand, are jeopardizing the benefits that improved prevention, diagnosis and treatment of important health problems can bring to society.

Academic medicine is often being criticized for not putting enough effort into relating to its stakeholders and not being broad enough in its thinking and skill set. A career in academic medicine is not seen as the position for the brightest and the best, it is only one of the career options and often not the most attractive one. The ivory towers of the academia have largely lost their appeal (6,7).

Family medicine: research for the challenges of practice

In this arena, family medicine research had to find its unique position (8). It has always tried to treat the person as well as the disease, within the context of their own home, their family and their community. The 'ecology of health care' (9,10) has served as a model to describe this unique position (Figure 1): with primary care and family medicine as the entry point of professional health care and the community it forms the interface between population and specialized facilities. This brings with it a unique domain of health problems and diseases, hardly ever seen in the hospital. However, next to the (early) diagnosis and treatment, family medicine has a number of other functions: (i) the management of health care resources, in particular through referral to more specialized facilities; (ii) the support of individuals with their health needs, over time; and (iii) the link with other, non-health care actors that determine health and disease—in particular the wellfare sector. This presents the complexity in which individual, disease-related and societal factors have been brought together. This integration is the core and as a consequence, and despite its patina of science, family

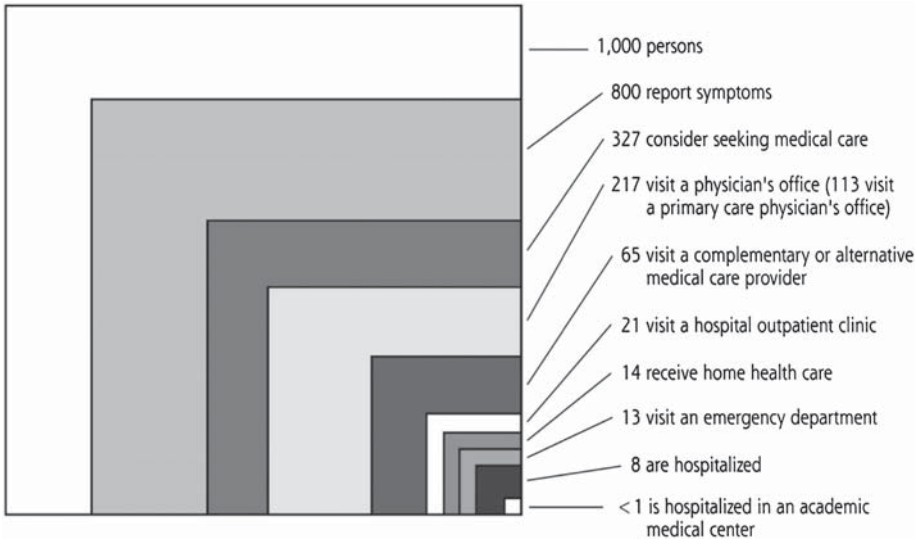

Figure 1.The ecology of medical care - health problems from community, through primary care to hospitals' The figure has earlier been published in references 9, 10.

medicine is not about certainties. It is also about doubt, ambiguity; it is about the limits of the human expertise. Although these characteristics are very clear to the average practitioner, it took a lot of time to explain them to the others.

The exercise of writing the European definition was important in order to define the discipline of family medicine (11). The development of theoretical models was a great intellectual challenge and has helped in articulating the research needs and priorities, as well as curricula for family medicine worldwide (12). The work of experts in theory of general practice has successfully demonstrated the difference of family practice from the other disciplines not also in terms of clinical work, but also in problem solving and cooperation with the community.

Chronic disease: Co- and multimorbidity

Overall, the successes of academic development of family medicine in Europe have been remarkable. Family medicine has been successful in creating its theoretical background and in promoting itself as an academic discipline. This success coincided with a fundamental change in the health status of populations, from a dominance on acute illness with an emphasis on technical instrumental interventions in isolation and with medical (sub)specialists in charge, to chronic diseases. Table I illustrates this from Dutch family medicine data. In this transition, the prevention, treatment and management of health problems have become an integral part of every day life of patients, and the community rather than the hospital the place of action. With it, the role of patients has fundamentally changed, from confined to passively undergoing and recouvering, to that of the main actor.

An important feature of this transition to chronic diseases is the development of co-morbidity or multimorbidity. Most patients with chronic conditions in family practice suffer from more than two chronic diseases (13). In part, the clustering of morbidity is the consequence of common etiology or complication: this makes someone suffering from the one disease susceptable for the other one. Nevertheless disease mechanisms only play a limited role and a substantial part of co-morbidity is related to the person's ageing, and a 'coincidence' in mechanistic terms (14).

Table I. The top-10 morbidity in Dutch general practice (13).

Acute, 'everyday'	Chronic
Respiratory tract infection	Obesity
Functional complaints	Hypertension
Dermatitis	Chronic nervous complaints
Urinary tract infection	Deafness
Tonsillitis	Malignancy
Myalgia neck, shoulder, arm	COPD
Ear wax	Chronic ischaemic heart disease
Minor trauma	Myocardial infarction
Low back pain	Hyperlipaemia
Vaginitis	Psoriasis

The big questions

Comorbidity or multimorbidity is at the core of the new challenges for researchers and practitioners, that new times bring and they will have to address.

One of the big problems in addressing this issue is the primary care paradox (15) that although there is a belief that family physicians provide poorer quality care of specific diseases than do specialists, yet primary care is associated with better health, greater equity, lower costs, and better quality of care. Unraveling the paradox depends on understanding the added value of primary care.

If researchers now agree that primary care and family medicine work, they still have to find out why. The core values of family medicine: patient-centeredness, responsibility and care, continuity, compassion and holistic approach, are poorly understood and very complex concepts in a world that is aiming at simplification. It is an assumption (which is by no means proven) that they are the reason behind that paradox.The big question, therefore, is: are these core concepts that have been so clearly described in the past unnecessary ornaments that can be discarded and simplified or do they represent an important added value that will solve some of the core challenges of the modern world?

Balance between empirism, theory and practical experience

In addressing this, family medicine researchers face some important practical problems.

Currently, research priorities are driven by a disease-centered approach. Much of the current health related research has a biomedical, often disease-centered focus. Appropriate funding for academic departments and research institutes is in no way related to the importance of the discipline within the health care system. Funding is given to researchers with a high number of publications in journals with high impact factors. Since primary care is a newcomer to this game, it is extremely difficult to compete in it (16). The example of comorbidity—multimorbidity stresses the limitations and dangers of this approach. Rather than the disease, the person with a number of chronic diseases takes central stage, and person centered, rather than disease oriented performance will determine outcome.

This can be illustrated from a review of the performance of family physicians in their treatment of patients with depression (17) In general, family physicians prescribed state of the art interventions, and were led by patients' needs: the more severe the depression, the more antidepressants were prescribed or patients referred. However, this was only the case for those with depression-alone. When patients had other co-morbidity next to depression, family physicians prescribed or referred less, and in doing so deviating from the prevailing markers of 'good practice'. The actual reasons were not studied, but it is possible to infer (18): concerns of side effects, and medicalization would make them reluctant to add additional drugs or burden the patient with additional referral, and insted make a-specific interventions like advice, support and counceling more attractive (Table II).

Nevertheless, this 'wisdom from practice experience' is, or easily becomes, in terms of evidence based medicine just speculation that does not count. It stresses the fact that family medicine researchers should take care that research should remain closely linked to practising physicians, their problems and needs of their patients and the needs of the everyday practitioner. Family medicine has so far been innovative in developing good collaboration between practice and theory. A 'theory' behind the dealing of comorbidity is responsiveness: the fact that every episode of care starts with a patient who contacts a family physicians, and comes with a specific reason to do so. Responding to that person's question is directing further care, even though the family physicians has a well developed set of skills and objectives towards the diseases the person brings into the practice. Responsive differs essentially from a supply-driven approach and most family physicians will recognize its importance. However, as long as these principles do not determine the research and teaching agenda, and with it the evolving evidence to guide care, there will remain a chasm between science and practice.

Teaching practices and research networks are the natural environments for research and education in family medicine as much as the laboratories and hospital departments are the environment for basic and clinical sciences (19,20). Owing to that, the departments of family medicine are often a model how collaboration between theory and practice should be achieved.

Table II. family physicians' performance in patients with depression and multi-morbidity.

Observed practice
• More interventions when depression is more severe (reflecting patients' 'needs')
• In case of comorbidity less specific interventions were offered
Interpretation
• Concerns of side effects and interactions of multiple specific therapy
• Non-specific interventions are more attractive
Conclusion
• Practice empirism is way ahead of research and science

Final remarks

Europe has experienced the rise in the importance of primary care and family medicine. This important fact, supported by ample research evidence, means that family medicine is able to take over the responsibilities of a well established discipline, which is characterized by partnership between the academy and practice. Theory has been useful in explaining why family medicine is unique, but future research should take into account the relevance of development projects in practice. New steps need to be taken, the steps that would prove its value to the public. They can be made only in partnership between the professional organizations and academic bodies. In order to maintain this link, a close cooperation between professional and academic organizations is necessary.

The role of international organizations is to try to support this process through exchange of experience, by networking with other organizations and to serve as advocates of the discipline on the international level (21). They have to ensure that in the future the key decision-makers maintain their commitment and political will needed to develop primary care based health care systems: because only this approach promises a resilient response to health problems of people, with access to the best (sub)specialist care for those who need it.

Conclusion

Family medicine is the most appropriate discipline to lead the research agenda of the emerging challenges of co-morbidity and multimorbidity in medicine, because these problems are the core of its practice. In order to perform this task, it needs adequate support of decision makers and appropriate organization of research capacities that will reflect its role.

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