

**Steadfast Flexibility – Supporting Good Practice\***Professor Chris van Weel<sup>1</sup>

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**Introduction**

Clinical practice is at a cross-road: it has to be able to 'deliver' – in a humane context of care for patients – the ever increasing potential of medical technology and innovation, but at the same time the socio-demographic and health status changes of communities and societies pose unfathomed challenges for health care [1]. Supply and needs of health care each in their own right drive medical practice but with little or no co-ordination between the two of them, resulting in overmedication alongside deficiencies in care. This puts strains on medical practice wherever doctors engage with patients. But the strain is nowhere felt stronger than in family practice where generalist medical care is provided for all patients and their families for all health problems in all stages of severity [2, 3]. Here, care is delivered with close contact to the local community where patients and families live, and here, medicine and society meet in an inevitable way.

This paper explores the position of family practice in relation to research and academic development – family medicine – that results from this. Scientific knowledge – Evidence-based Medicine (EBM) – is a leading principle for safe and effective medical care. Patients are entitled to 'the best' treatment and care for their health problem, irrespective of who they are, where they live, or their social, economical or religious background. Their central position in health care commits family practice and family practitioners (FP) to practice EBM. But EBM is more than the appropriate *application* of available knowledge and technology; it is essential that knowledge and technology continue to be developed in response to the

needs of individuals and communities and that we accurately define what is and what is not convincing in terms of 'evidence'. *This* is the essential contribution of family medicine – academic leadership, to *direct* science and research in an environment of increased commercial and market interests, and to *articulate* this.

**Background**

This was the background against which WONCA organized the 2003 Kingston conference 'Improving Health Globally and the Need for Primary Care Research' [4]. The conference recommendations form a basis for the global development of a family medicine research policy and a strengthening of research capacity. In particular, the conference recommended the development of a research infrastructure with university departments and research institutes, and their link with family practice: practice-based research networks (PBRN) [5, 6]. Mentoring and training of family medicine researchers, the development of a research mission and research forums (journals, conferences) were the other elements of these recommendations.

It is essential that research is not considered an aim in itself, but that it is seen as a tool – a critical tool – to make patient care more effective and efficient, safer, more personal, and more relevant for individual patients. In order to be able to do this, and to apply useful scientific knowledge, the research enterprise of primary care must be better tuned to the problems, challenges and questions FPs and their staff encounter in their daily practice. .

*Practice and practice-based research networking*

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Research and the questions it explores should originate from general practice [5, 6]. But in order to serve family practice, research has to be based on or grounded in its core values, the 'paradigms' of the discipline. Research in this context is broader than collecting data – it includes as well the insight and wisdom to put data into a context for interpretation. This is essential to enable FPs to approach the huge variation in health problems and individual patients they encounter in a consistent way. Without this FPs might easily become magical jacks of all trade.

Episodes of illness [7] and patients' careers [8, 9] start with a professional interpretation of the health problem presented to the FP. It is obvious that this requires the 'correct' diagnosis and the most likely diagnoses made in family practice are the health problems encountered in daily practice. *Table 1* lists the most prevalent acute and chronic conditions encountered in the Nijmegen academic family practices network [6, 10]. It should be kept in mind that other FPs working in different populations and practice settings may encounter other morbidity most frequently and all together, this is the clinical domain of family practice and the basis of its expertise. Further developing diagnostic tools and procedures for this epidemiological setting, including the application of tools available from other health care settings, is important to strengthen FPs' professional skills.

But 'the correct diagnosis' is only a small part of FPs' clinical competence. Paramount is the 'correct interpretation and application' of health problems, in the context of the patient's living environment, and this brings family medicine's core values to the equation. Quite often signs and symptoms patients suffer and present to the FP are a reflection of problems elsewhere in their environment – for example their family or work circumstances. Exploring these circumstances is a key component of family practice, and the importance of this exploration can be inferred from the dominant position of 'nervous-functional complaints' in the acute and chronic health problems listed in table 1.

A diagnosis can only be 'correct' when it is serving the needs of the patient – when the prospective outcome of treatment is likely to bring the patient more benefits than harm. This is why family medicine is required to repeatedly take a stance against spurious diagnoses and interventions, including the vested interests often hidden behind them. Developing methodology to explore and interpret health problems in individuals in a systematic and consistent way is a key component of family practice. This requires innovation, rather than the application of medical technology, and the

skill to be able to 'think outside the box'. Multidisciplinary collaboration with behavioural sciences is important.

#### **Expertise and clinical domain: research evidence**

To appreciate fully the vital importance of clinical research in family practice, requires acknowledgement of the fact *that* FPs possess a unique clinical expertise. This seems counterintuitive, particularly when family practice is presented as 'general practice' and contrasted to 'the specialist'. One of the charms of research is that facts can speak their own language and make their own point, and in this respect an old and almost forgotten study may help.

The study was done in 1982 in the Netherlands, by researchers who were interested in clinical decision making. They compared the clinical performance of FPs and internal medicine physicians in hypertension management [11] (*figure 1*). Both groups of doctors were presented with two cases: 'uncomplicated' hypertension and 'complicated' hypertension and their performances were scored on the basis of pre-defined criteria. FPs, when confronted with 'uncomplicated hypertension' demonstrated an effective performance and achieved their objective with relatively few diagnostic and therapeutic interventions. This changed, in the case of 'complicated' hypertension: FPs' performance took more time and became much more explorative, using more diagnostic and therapeutic interventions. This was in contrast to the performance of internal medicine physicians, who demonstrated a much more focused and efficient approach to 'complicated' hypertension.

Figure 1: Comparing fps and physicians-internal medicine [11]

	UNCOMPLICATED HYPERTENSION	COMPLICATED HYPERTENSION
FAMILY PHYSICIANS	Few interventions Limited time Purposeful	More interventions More time Exploring
PHYSICIANS	More interventions More time Exploring	Protocol driven Relative limited time Purposeful

This is fully in line with expectations, and often without much further ado it is concluded that internal medicine physicians are better equipped than FPs to treat health problems such as hypertension. This is why 'specialists' so often maintain a key position in continuous medical education and it is also the reasoning behind special interest on clinical programmes in which

FPs are exposed to the clinical world of the hospital setting to improve knowledge and skills. In this respect it may be interesting to further follow the study findings and look at performance of internal medicine physicians when they found themselves confronted with 'uncomplicated' hypertension: under these circumstances they took more time, adopted a more explorative approach and used more diagnostic and therapeutic interventions. What the study in fact demonstrated was the importance of the clinical domain for medical practice. FPs working in an environment of 'uncomplicated' hypertension set all hypertension against that norm and focuses their care accordingly. Identification of deviations from that norm invokes additional interventions. On the other hand, the physician's clinical domain is that of 'complicated' hypertension, and exceptions to that rule ('uncomplicated' hypertension) can only be dealt with at the expense of additional interventions.

What is true for 'uncomplicated' hypertension is also true for 'early signs/symptoms', signs/symptoms in the absence of an obvious somatic, physiological explanation and many other health problems that FPs have to deal with on a regular basis, and this is when professional experience is a valuable but poorly understood resource.

#### *The ecology of health care.*

The 'Ecology of Health Care' [12] analyses the place of care from a community perspective. In any community or population at any given time about 80 % of people experience at least one episode of poor health, and this is the recruitment ground for professional medical care. In fact about three quarters of them consider visiting a doctor. However, no more than one in ten are actually in contact with a primary care physician – most often an FP – and only a few per cent visit out-patient departments, home health care, emergency care or receive in-hospital care (figure 2). This reflects what is called 'the iceberg' of illness and disease: 90% of the individuals with a health problem are outside professional care, emphasizing the importance of self-care and lay care. The 'ecology of health care' quantifies the contributions of primary care and hospital care for society and for the course of this paper illustrates three paradigms of family medicine:

- a morbidity domain in its own right, different – in nature, presentation and prognosis – from the specialists' sector and it can only be studied in family practice (table 1) ('the correct diagnosis')
- a central role in legitimating professional health care, analyzing why patients seek care and navigating patients through the

health care system ('the correct application'). Table 1 exemplifies elegantly the diverse approach needed: the acute illnesses are to a large extent self-limiting with explanation and reassurance the most valuable interventions in an otherwise restrained approach. The chronic disorders, on the other hand, list all the major health problems of society and require pro-active, long-term care after early diagnosis

- a community perspective, directed at the most important needs of the community, relating health problems to social, societal and psychological determinants ('the correct interpretation').

Figure 2: The ecology of health care [12]

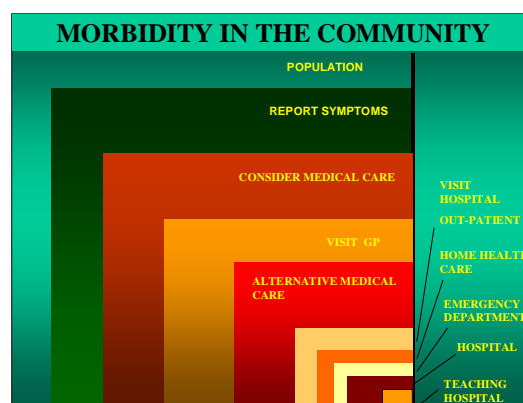


Figure 2 helps us to understand why high quality primary care is such a determining factor of the overall health status of communities. [13] It should, however, be a sobering thought for the discipline of family medicine that this effectiveness is to a large extent based on clinical *experience* of FPs which is based on rather than *evidence*: procedures of early diagnosis, predicting over-medication and medicalisation or strengthening self-care have thus far received scanty attention in clinical research. [14] A better understanding of FPs' clinical decision making might harvest vital evidence to further strengthen primary care expertise. PBRNs offer an excellent setting to explore diagnostic and prognostic research in depth and to take into account existing expertise, for example with 'usual care' as one of the study's modalities.

An intriguing example of the poorly fathomed 'value' of FPs expertise comes from the sad experience in promoting large scale use of hormone replacement therapy (HRT) for 'healthy' post menopausal women. This practice was triggered by a descriptive study in 1991 that reported cardio-protection of HRT. [15] After millions of women were put on HRT, however,

RCTs reported an elevated cardiovascular and breast cancer risk. A methodological analysis of how to explain these contradicting findings illustrates a number of points. It emphasizes the limitations of descriptive research, which depends on the actual treatment given to patients studied. *Selective* prescription of HRT to women at low cardiovascular risk is a most likely explanation of why the initial study [15] was, in hindsight, misleading. [16] This exemplifies how FPs' clinical experience, with their awareness of cardiovascular risk, was more than a decade ahead of the scientific knowledge of HRT risk. [17]

### Evidence, knowledge and understanding

The need of the discipline of family medicine is summarized by not just knowing what diagnostic and therapeutic interventions work, but by coming to an understanding as to why this is the case. Only then will it be possible to articulate the effectiveness of family practice as otherwise family practice will remain a 'black box'. The need of insight and wisdom on top of knowledge makes the case for qualitative research in addition to or combination with, quantitative methods.

Table 1 : Morbidity in family practice 1998-2003 [6, 10]

ACUTE	Incidence*	CHRONIC	Prevalence**
Respiratory tract infection	157	Chronic nervous complaints	143
Myalgia neck, shoulder, arm	126	Varicose veins	60
Functional complaints	117	Obesity	47
Minor trauma	100	Hypertension	42
Vaginitis (women only)	56	Deafness	33
Dermatitis	46	COPD	31
Tonsillitis	42	Hyperlipidemia	26
Low back pain	40	Asthma	23
Ear wax	40	Chr. Isch. Heart disease	22
Urinary tract infections	38	Psoriasis	15

\* incidence = number of new cases with diagnosis/1,000 patients during one registration year

\*\* prevalence = number of cases with diagnosis/1,000 patients during one registration year

This experience illustrates three other points of family medicine research, here only mentioned in passing: the need to study risks of medical interventions next to their benefits; the need to do so in a longitudinal design [10]; and the need to be aware of the importance of the external validity of research: the extent to which studies represent an important problem encountered in family practice and the degree to which the findings can be transferred – implemented – in regular family practice. PBRNs have the potential to deal with these aspects in a constructive way.

This is particularly true for the socio-medical context and the FP as a personal doctor. The paradigms of family medicine are founded on the view that diseases do not stand alone but take place in human beings living in a community and that this interacts with the lives of these individuals. But evidence of the practical implications is at best only weak and circumstantial. An interesting recent study of FPs' treatment of depression [18] may provide helpful data that the socio-medical context matters.

The study looked at the outcome of depression treatment by FPs in relation to their



performance. In a first analysis they addressed FPs' clinical competence – measured as their ability to apply depression guidelines – and found that FPs adhering to the prevailing guideline achieved, in comparison to FPs who did not, better outcomes for their patients. The second part of their analysis addressed the FP-patient interaction operationalised as 'empathy' (patient-centeredness). This resulted in four sets of outcome-determining factors, FPs who did or did not follow guidelines and did or did not relate well to their patients. The final analysis showed that FPs who demonstrated clinical competence in combination with an empathic relation with their patient achieved the best outcomes of their management of depression. In other words, it is the **combination** of clinical and inter-personal competence that determined effectiveness. There is a need to study this for a variety of health problems in a variety of health care settings.

### Conclusion

In conclusion, it is crucial for the future of family medicine to develop a culture of research and science that is directed to the field of family practice, involving practice, practitioners and their care of patients.

PBRNs are a recognized method to open the field for research and should be recognized by the research community as a vital part of research infrastructure. (Co-)ownership of research that is directed towards the clinical field relevant questions enhances the likelihood that research findings will be acknowledged and implemented and PBRNs offer a logical structure to share the study questions and findings with FPs and their staff. There are more and more signs that this approach will enable research in the unfathomed problems of clinical care and has the potential to change practice.

A second conclusion is that family medicine research should include a systematic exploration of the existing clinical expertise and reasoning of FPs and feed back its findings for FPs' professional development: the 'reflective' practitioner.

This results in research directed at the paradigms and core values of family medicine [Kingston]:

- The clinical field of family practice health problems;
- The aspects (inter)personal relations and behavior;
- The structure and community setting of health care.

The main scientific challenge is in the integration of findings from the variety of domains FPs cover. This calls for the use in a comprehensive way of different (qualitative and quantitative)

methodologies and requires a multidisciplinary study setting. It is essential to gain wisdom and insight in addition to mere facts and evidence. That will provide the rock-solid basis for FPs to provide solid, steadfast high quality care with the flexibility to tune it to individual patients' needs.

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