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Series: The research agenda for general practice/family medicine and primary health care in Europe. Part 2. Results: Primary care management and community orientation[1]

Eva Hummers-Pradier, Martin Beyer, Patrick Chevallier, Sophia Eilat-Tsanani, Christos Lionis, Lieve Peremans, Davorina Petek, Imre Rurik, Jean Karl Soler, Henri Ejh Stoffers, Pinar Topsever, Mehmet Ungan & Paul van Royen

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BACKGROUND PAPER

Series: The research agenda for general practice/family medicine and primary health care in Europe. Part 2. Results: Primary care management and community orientation[1]

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Abstract

At the WONCA Europe conference 2009 the recently published 'Research Agenda for General Practice/Family Medicine and Primary Health Care in Europe' was presented. It is a background paper and reference manual, providing advocacy of general practice/family medicine (GP/FM) in Europe. The Research Agenda summarizes the evidence relating to the core competencies and characteristics of the WONCA Europe definition of GP/FM, and its implications for general practitioners/family doctors, researchers and policy makers. *The European Journal of General Practice* publishes a series of articles based on this document. In a first article, background, objectives, and methodology were discussed. In this second article, the results for the core competencies 'primary care management' and 'community orientation' are presented. Though there is a large body of research on various aspects of 'primary care management', it represents a very scattered rather than a meta view. Many studies focus on care for specific diseases, the primary/secondary care interface, or the implications of electronic patient records. Cost efficiency or process indicators of quality are current outcomes. Current literature on community orientation is mainly descriptive, and focuses on either care for specific diseases, or specific patient populations, or on the uptake of preventive services. Most papers correspond poorly to the WONCA concept. For both core competencies, there is a lack of research with a longitudinal perspective and/or relevant health or quality of life outcomes as well as research on patients' preferences and education for organizational aspects of GP/FM.

Key words: *General practice/family medicine, primary care management, community oriented health care, research agenda*

Background

The 'Research Agenda for General Practice/Family Medicine and Primary Healthcare in Europe' was published in September 2009 by the European

[1]Based on: Hummers-Pradier E, et al. Research Agenda for General Practice/Family Medicine and Primary Health Care in Europe. Maastricht: European General Practice Research Network, 2009. pp. 13–15, 27–28.

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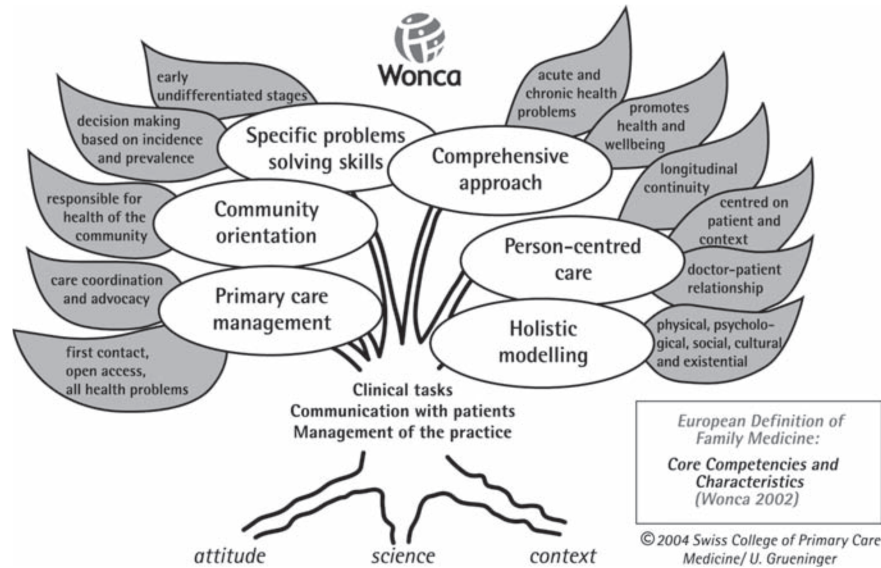

Figure 1. The WONCA tree: Core competencies and characteristics of general practice/family medicine.

General Practice Research Network (EGPRN) (1). It summarizes the evidence relating to the core competencies and characteristics of the WONCA Europe definition of General Practice/Family Medicine (GP/FM) (Figure 1) (2), and indicates evidence gaps and research needs. The European Journal of General Practice presents this document as a series of articles. Background, objectives and methodology were presented and discussed in part 1. Briefly, the Research Agenda is based on international key informant surveys and expert consensus and a comprehensive literature review on research domains related to each of the six core competencies of the European definition, covering health services research, clinical research, educational research and methodology issues (3). In this and the following issues, the results will be presented. This article reflects on the two core competencies which deal primarily with organizational aspects of GP/FM, i.e. 'primary care management' and 'community orientation'.

Definition of the research domains

According to the WONCA Europe definition of GP/FM (2), *primary care management* includes the ability to:

- Manage primary contact with patients, dealing with unselected problems, and providing open and unlimited access;
- Cover the full range of health conditions;
- Make available to the patient the appropriate services within the health care system;
- Coordinate care with other professionals in primary care, other specialists and secondary care;
- Master effective and appropriate care provision and health service utilisation, using resources efficiently;
- Act as an advocate for the patient, i.e. protecting them from harm which may ensue through unnecessary screening, testing and treatment.

Our research domain also includes the clinical effectiveness and health systems effects of models of managing particular health problems in primary care, i.e. defined disease management programmes, and ways of organizing care within a practice or primary health care team. Educational research in this field comprises management skills at a health system and practice level, as well as education for collaborating medical professionals with a range of backgrounds and expertise.

The core competency of *community orientation* includes the ability to reconcile the health needs of individual patients and the health needs of the community in balance with available resources (2). Presentation of the paradigm of community oriented medicine started with work of Kark in the 1950s and 1960s (4), and received a more structured definition during the 1980s. According to this definition, the following topics can be included in the research domain: health needs reflecting individual health needs in the context of a person's environment, as well as community health needs, and possible conflicts between these two. It also includes the specific context-related decision making process, and cooperation with other professionals and agencies according to these health needs.

Table I. Search strategies: Primary care management.

- 'organization and administration' [MeSH Terms] combined with 'primary health care' [Majr MeSH] and/or 'family practice' [MeSH]
- 'practice management' combined with 'primary health care' [Majr MeSH] and/or 'family practice' [MeSH], 'health services' [MeSH], 'education, medical' [Majr MeSH]
- 'health services accessibility'[Majr MeSH] combined with 'primary health care' [Majr MeSH] and/or 'family practice' [MeSH]
- 'medical records systems, computerized' [MeSH] combined with 'primary health care' [Majr MeSH] and/or 'family practice' [MeSH]

The research domains of primary care management and community orientation overlap with each other, and to some extent also with the competencies of 'patient centred care', 'specific problem solving skills', and 'comprehensive approach'. These research domains also reflect three of Starfield's four central components of primary care, i.e. accessibility, coordination (defined as the degree to which the primary care provider manages all the patient's health care and possesses the necessary infrastructure to do so) and comprehensiveness (there defined as the provision of a range of services broad enough to meet all common needs in the population) (5–7). Her fourth component, longitudinality or continuity, will be considered with the core competency of 'person-centred care' in this research agenda.

Methodology—overview of search strategies

A general description of the methodology of our evaluation—key informant surveys, a comprehensive literature review and expert consensus—was presented in the first part of this series (3).

Literature on primary care management was sought using the MeSH terms and combinations shown in Table I.

As there is no explicit MeSH term for community oriented primary care, combinations of several terms were used, as shown in Table II.

Additional searches using 'seek related articles' options, MeSH terms of relevant articles, free text searches or search strings not limited to 'family practice' or 'primary health care' were used to extend the overview. Literature was reviewed and consented conclusions were drawn according to the procedure described in part 1 of this series (3).

Results

Primary care management

The research field of primary care management is very large. The retrieved literature gave very scattered results, rather than a meta-view. Although there have been few systematic comparisons, it seems that there is little evidence in favour of any particular *organizational, funding or workforce model*. However, it seems obvious that the organization and workforce of general practice has to be developed further in order to meet current and future requirements of primary care management better. Evidence shows advantages for health systems that rely relatively more on primary health care and general practice in comparison to those systems tending towards specialist care, in terms of better population health outcomes, improved equity, access and continuity and lower cost (8,9).

Common *outcome measures* in research on primary care management aspects included effectiveness with regard to quality aspects/quality indicators, often with a benchmarking approach, or efficiency with regard to costs (10–19). Outcomes which reliably reflect patients' health or well-being or Starfield's central components or indicators (5) were rarely used.

Many of the retrieved papers were related to the management in primary care of patients with a specific disease (very often depression or other mental conditions, or diabetes) or of a defined patient population, i.e. geriatric care (20–24). The effect of various *primary care management models or interventions*, such as outreach preventive visits or care by nurse practitioners, was studied in different patient populations. Several studies suggest that for some well defined conditions, quality of care provided by appropriately trained nurses is as high as care provided by

Table II. Search strategies: Community orientation.

- ('community networks'[MeSH] OR 'community health services'[MeSH] OR 'community health planning'[MeSH] OR 'community-institutional relations'[MeSH] OR 'community health aides'[MeSH] OR 'community health nursing'[MeSH] OR 'community health centres'[MeSH] OR 'community medicine'[MeSH] OR 'consumer participation'[MeSH] OR 'delivery of health care'[MeSH]) AND ('primary health care' [Majr MeSH] OR 'family practice' [MeSH] NOT 'public health'[MeSH])
- ('minority groups'[MeSH] AND 'health services needs and demand'[MeSH] OR 'community networks/utilization') AND ('primary health care' [Majr MeSH] OR 'family practice' [MeSH])
- 'residence characteristics'[MeSH] AND ('primary health care' [Majr MeSH] OR 'family practice' [MeSH])
- 'community' AND ('family practice'[MeSH] OR 'physicians, family'[MeSH]) AND 'education'[Majr MeSH]

doctors and health outcomes for patients are comparable. However, primary care by nurse practitioners is likely to cost as much as care provided by (salaried) GPs according to currently available data. Interventions on practice organization seem to influence service uptake, but the effect on health outcomes was rarely studied (25,26).

The impact of *consultation length* has been studied in observational studies, but without conclusive findings. Further trials are needed focusing on health outcomes and cost effectiveness.

Access to primary care is differently organized across various countries both inside and outside Europe. Many of the retrieved papers were disease related studies or nursing research papers. Improving access is a key policy issue in improving quality of (primary) care and in guaranteeing equity in health care, but until now the topic has mostly been studied from a local point of view rather than as a general characteristic or in a comparative way (27–32).

An important focus of research was *collaborative care* and the *interface between primary and secondary care*. However, this interface is organized very differently in various European countries, implying that studies have to be interpreted in their local context and cannot really be generalized to another setting. Much research has been conducted with regard to referral rates and it shows a wide variation between individual general practitioners. Local educational interventions actively involving GPs and secondary care specialists, and structured referral sheets are the only intervention shown to have an impact on referral rates based on current evidence. The effects of an 'in-house' second opinion and other intermediate primary care based alternatives to outpatient referral appear promising in settings with otherwise strict gate-keeping by GPs (33–44). Cooperation with pharmacists (i.e. for control or coordination of prescriptions) may possibly reduce medication-related adverse events. More randomized controlled trials of primary care based pharmacist-led interventions are needed, to decide on the effectiveness of this (45).

There has been quite a lot of research on the role and potential effects of *electronic medical records (EMR)* in primary care. The use of *ICPC* and coding of GPs' daily practice activity based on patients' reasons for encounter was a central concept of many papers (46). These show the usefulness, potential and possibilities for further development of primary care epidemiology based on the electronic medical records coded with ICPC and structured according to episodes of care (47–50). However, in many European countries medical record utilisation and quality are less than ideal from the perspectives of primary care epidemiology or data collection for national and international research databases. This is caused by either the lack of standard classifications, or by national legislation imposing use of ICD based coding. Often, this results in incomplete records. For research purposes, a pragmatic approach to 'everyday' EMR or other routine data, i.e. health insurance or billing data used for secondary analyses, must be adopted (51,52). There is a rapidly increasing body of literature both on methodological and quality issues of research on EMR/routine data, and on research projects using such records as a data source, for example eHID, QRESEARCH and other morbidity/EMR databases in the UK, Belgium and the Netherlands (53–57). A substantial proportion of research papers dealt with the potential of these databases to generate data for quality management (including audits) and of EMRs to represent a platform for implementing guidelines or recommendations, to identify patients eligible for treatment or preventive services, or to prompt drug warnings. Results obtained were mostly positive, but not overwhelmingly so, which may depend on the EMR system used. Effectiveness with regard to health outcomes is rarely studied.

There has been a limited amount of educational research on primary care management aspects. Of the studies performed, the vast majority focuses on *educational interventions aimed at doctors* to implement specific service approaches, for example, prevention activities, inter-professional collaboration, or care strategies for specific diseases, detection of disease, and prescribing. Most studies showed either small or insignificant effects; sustainability of these effects has not been studied (58–62).

Community orientation

Community orientation seems to be a rather new competence. Several articles from recent decades were descriptive, explanatory opinion papers. They attempted to define the concept of community oriented primary care and described its development (4,63–68). The English language concept of 'community' includes both small entities such as a family, and large communities such as a school, a city or a country. This renders the concept difficult to study and results in considerable overlap between public health and primary care research.

Not unexpectedly, many narrative and descriptive reports were retrieved. A lot of research literature was related to nursing rather than GP/FM. There were few research articles on community oriented primary care (COPC), and most lacked control groups or comparators. Research considering relevant, GP related outcomes was missing. There were some studies exploring health needs with a combination of qualitative and quantitative methods, but in general

there is a lack of qualitative research. Most studies focused on very specific issues, either care for defined diseases (mental conditions, common chronic diseases like diabetes or arthritis), or patient/population groups (geriatric patients, mothers and newborns, minorities or deprived groups) or on preventive services (vaccinations, screening, smoking cessation, dentistry) (69–91). They were community or population based, but were not community orientated from a primary care point of view. Thus, most of the current research did not really cover the concept of a community oriented approach as described in the European definition of GP/FM (92–97).

Some articles described methods of disease management in COPC involving cooperation between primary care and institutions in the community, i.e. GPs' referral to several community programmes, or collaborative care (98–104), or evaluated the implementation of a COPC model in local communities (105,106). Regarding educational research, there were several articles describing educational programmes on community related themes, or teaching experiences with students, but very few evaluations (107–114). The majority of studies were not controlled.

Implications

Research

Given these results, further research should focus on:

- Developing research instruments and outcome measures reflecting and measuring the different aspects of primary care management and community orientation, and their convergence;
- Patient and doctor's perceptions, perspectives and preferences on practice management issues (such as open access, telephone consultations, telemedicine);
- Comparing different models of care and evaluating effectiveness of different primary care management strategies or interventions, not only at the level of patient satisfaction and/or service uptake, but also on the health outcome level;
- Validity and utility of electronic patient records in a general practice; and use of information technologies in COPC;
- Routine collection and the feasibility/validity of data from GPs' electronic medical records, their use for studies of morbidity and GP care (incl. appropriate denominators), and as a means for recruitment, data collection and data management in research;
- Comparing different approaches/models of primary health care in the community, regarding outcomes with respect to both individual health and community needs (115);
- Community based care models for specific areas of clinical work (for example palliative care, drug addiction programmes);
- Effective methods of inter-professional education and teaching management skills to (future) GPs;
- Education for COPC, including the evaluation of programmes with a clear methodology.

Research methodology

The following methodological needs can be formulated:

- Instrumental research to develop and validate measures for practice management issues and aspects of community orientation;
- Longitudinal observational studies, i.e. on epidemiology of GP/FM, including specific aspects and outcomes of care, and looking at both individuals and the community;
- Interventional research (controlled trials—comparing different primary care management strategies, or comparing innovative strategies with 'care as usual');
- Implementation studies of effective strategies (observational);
- Observational cohort studies comparing different approaches and models, also on education;
- Mixed design studies.

It can be concluded that much of the current research focussed on specific diseases rather than a generalist perspective. Outcomes are usually process indicators or cost efficiency, research with regard to health outcomes is rare. Though there is a large body of scientific literature on organizational aspects of primary care, many essential topics are not or not sufficiently well studied.

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Full text versions of the research agenda

Electronic versions (pdf) are available from: http://www.egprn.org. Paper versions can be requested from the Coordinating Centre of EGPRN, Mrs Hanny Prick. E-mail: hanny.prick@hag.unimaas.nl

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