

ORIGINAL ARTICLE

Series: The research agenda for general practice/family medicine and primary health care in Europe. Part 3. Results: Person centred care, comprehensive and holistic approach

PAUL VAN ROYEN¹, MARTIN BEYER², PATRICK CHEVALLIER³, SOPHIA EILAT-TSANANI^{4,5}, CHRISTOS LIONIS⁶, LIEVE PEREMANS^{7,8}, DAVORINA PETEK⁹, IMRE RURIK¹⁰, JEAN KARL SOLER¹¹, HENRI EJH STOFFERS¹², PINAR TOPSEVER¹³, MEHMET UNGAN¹⁴ & EVA HUMMERS-PRADIER¹⁵

¹Department of Primary and Interdisciplinary Care, University of Antwerp, Belgium; ²Institute for General Practice, University of Frankfurt, Frankfurt, Germany; ³Department of General Practice, Saint-Quentin University Versailles, France; ⁴Department of Family Medicine, Emek Medical Center, Faculty of Health Sciences, Ben-Gurion University of the Negev, Israel; ⁵Afula and the valleys, Clalit Health Services, Northern District; ⁶Clinic of Social and Family Medicine, and Department of Social Medicine, University of Crete, Crete, Greece; ⁷Department of Primary, Interdisciplinary University of Antwerp, Antwerp, Belgium; ⁸Department of Youth Health, Vrije Universiteit of Brussels, Brussels, Belgium; ⁹Department of Family Medicine, Medical School, University of Ljubljana, Slovenia; ¹⁰Department of Family Medicine, University Debrecen, Hungary; ¹¹Mediterranean Institute of Primary Care, Attard, Malta; ¹²Department of General Practice, School of Public Health and Primary Care (CAPHRI), Maastricht University Medical Centre, Maastricht, The Netherlands; ¹³Department of Family Medicine, Acibadem University, Istanbul, Turkey; ¹⁴Middle East Technical University Medical Centre, Ankara, Turkey; and ¹⁵Institute of General Practice, Hannover Medical School, Hannover, Germany

Abstract

The recently published 'Research Agenda for General Practice/Family Medicine and Primary Health Care in Europe' 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 a second article, the results for the two core competencies 'primary care management' and 'community orientation' were presented. This article reflects on the three core competencies, which deal with person related aspects of GP/FM, i.e. 'person centred care', 'comprehensive approach' and 'holistic approach'. Though there is an important body of opinion papers and (non-systematic) reviews, all person related aspects remain poorly defined and researched. Validated instruments to measure these competencies are lacking. Concerning patient-centredness, most research examined patient and doctor preferences and experiences. Studies on comprehensiveness mostly focus on prevention/care of specific diseases. For all domains, there has been limited research conducted on its implications or outcomes.

Key words: General practice/family medicine, research agenda, person centred care, comprehensive approach, holistic approach

Background

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

Correspondence: Paul Van Royen, Department of Primary and Interdisciplinary Care, University of Antwerp—Faculty of Medicine, Universiteitsplein 1, 2610 Antwerp, Belgium. E-mail: paul.vanroyen@ua.ac.be

(Received 15 March 2010; accepted 19 March 2010)

presented in part 1(3). Results on the two core competencies, which deal with organizational aspects of GP/FM, i.e. ‘primary care management’ and ‘community orientation’ were presented and discussed in part 2 (4). This article reflects on the three core competencies that deal with person related aspects of GP/FM, i.e. ‘person centred care’, ‘comprehensive approach’ and ‘holistic approach’.

Definition of the research domains

According to the WONCA Europe definition of GP/FM, ‘*person centred care*’ includes the ability to

- adopt a person-centred approach in dealing with patients and problems in the context of patient’s circumstances.
- establish an effective doctor-patient relationship, with respect for the patient’s autonomy.
- communicate, set priorities and act in partnership.
- provide longitudinal continuity of care as determined by the needs of the patient, referring to continuing and co-ordinated care management (2).

The research domain also includes studies on patients’ perspectives and preferences, as well as the effectiveness of a person- or patient-centred approach and aspects of patient involvement and shared decision making, though there is an overlap with aspects of specific problem solving. Patient-centredness has been accepted as an important, central value in medical care and it is nowadays universally advocated in medical education (5).

According to the WONCA Europe definition, a ‘*comprehensive approach*’ includes the ability to

- manage multiple complaints and pathologies simultaneously.
- promote health and well being by applying disease prevention strategies appropriately.
- manage and coordinate health promotion, prevention, cure, care, palliation and rehabilitation (2).

The core competency and research domain ‘*comprehensive approach*’ thus includes two aspects: a focus on management of illness (managing simultaneously multiple complaints and pathologies encompassing acute as well as chronic health problems) and another on well-being and health promotion. General practitioners have to manage and coordinate all of these aspects in a specific long-term general practitioner-patient relationship.

This means that the ‘*comprehensive approach*’ research domain includes studies on health promo-

tion and prevention, diagnosis, treatment and follow-up of all diseases but also palliation. It necessitates the simultaneous consideration of these different aspects of care, and requires research not linked to specific diseases, but to patient groups or to health themes in all their aspects.

The research domains of ‘*person-centred care*’ and ‘*comprehensive approach*’ reflect two of Starfield’s four central components of primary care, i.e. ‘*longitudinality*’ or ‘*continuity*’ (defined as person-focused care over time) and ‘*comprehensiveness*’ (defined as the extent to which the healthcare provider actually recognizes all the patient’s needs as they occur, and offers a range of services broad enough to meet all common requirements) (6).

According to the WONCA Europe definition (2), a ‘*holistic approach*’ includes the ability to use a biopsychosocial model that takes into account cultural and existential dimensions (7,8). The holistic approach can be defined as ‘*caring for the whole person in the context of his values, family beliefs, family system, culture and socio-ecological situation within the larger community, and considering a range of therapies based on the evidence of their benefits and cost*’. The complexity phenomenon is another aspect of a holistic approach. Individuals, organizations, social groups and society have characteristics of complex adaptive systems (9). The more directly involved the patient or the health care provider is in clinical or general practice interventional research, the more sophisticated the design of the trial has to be to take account of the influence of the individual over the outcome (10). Finally, ethical issues and cultural competency are considered an important part of a holistic approach to health and health care.

Methodology

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 ‘*patient centeredness*’ was sought using the MeSH term ‘*patient-centred care*’, combined with ‘*continuity of patient care*’ (MeSH), ‘*primary health care*’ (Majr MeSH) and/or ‘*family practice*’ (MeSH). Literature on ‘*comprehensive approach*’ was sought using the MeSH terms and combinations shown in Table I.

As the MeSH term ‘*comprehensive health care*’ is a very large term also including primary health care and patient-centred care as subheadings, different combinations on sub domains as health promotion, prevention, palliative care and teaching were used. For retrieval of literature on ‘*holistic approach*’, and the specific aspects of complexity and cultural com-

Table I. Search strategies: Comprehensive approach.

-
- ‘comprehensive health care’ [MeSH] AND ‘primary care’ [MeSH] OR ‘family practice’ [MeSH]
 - ‘comprehensive health care’ [Majr] AND ((‘primary health care’ [TIAB] NOT Medline [SB]) OR ‘primary health care’ [MeSH Terms] OR primary care [Text Word]) OR ((‘family practice’ [TIAB] NOT Medline [SB]) OR ‘family practice’ [MeSH Terms] OR family medicine [Text Word]) OR ((‘family practice’ [TIAB] NOT Medline [SB]) OR ‘family practice’ [MeSH Terms] OR general practice [Text Word]) AND Meta-Analysis [ptyp] NOT ‘comprehensive dental care’ [MeSH]
- Health promotion**
- (‘Comprehensive Health Care’ [MeSH] OR ‘Primary Health Care’ [MeSH] OR ‘Family Practice’ [MeSH]) AND ‘Health Promotion’ [Majr] NOT nursing Limits: meta-analysis
- Prevention**
- (‘prevention and control’ [Subheading] OR ‘primary prevention’ [MeSH]) AND (‘comprehensive health care’ [MeSH] OR ‘primary health care’ [MeSH] OR ‘family practice’ [MeSH])
- Palliative care**
- ‘comprehensive health care’ [MeSH] AND ‘palliative care’ [MeSH] AND (‘primary health care’ [MeSH] OR ‘physicians, family’ [MeSH])
- Teaching**
- (‘teaching’ [MeSH] OR ‘education’ [MeSH] OR ‘education’ [Subheading] OR ‘teaching materials’ [MeSH]) AND ‘comprehensive health care’ [MeSH] AND ‘family practice’ [Majr MeSH]
-

petency, the MeSH terms and combinations 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. As many retrieved articles focused on nurs-

Table II. Search strategies: Holistic approach.

-
- ‘holistic health’ [Majr MeSH] AND (‘primary health care’ [Majr MeSH] OR ‘family practice’ [MeSH])
 - ‘holistic health’ [Majr MeSH] AND (‘primary health care’ [Majr MeSH] OR ‘family practice’ [Majr MeSH] AND ‘health services research’ [Majr MeSH])
 - ‘holistic health’ [Majr MeSH] AND (‘primary health care’ [Majr MeSH] AND ‘education’ [Subheading] AND ‘research’ [MeSH] OR ‘research’ [Text Word])
 - ‘holistic health’ [Majr MeSH] AND (‘biomedical research’ [MeSH] OR ‘clinical nursing research’ [MeSH] AND ‘psychology, social’ [MeSH] OR ‘sociology, medical’ [MeSH]) AND ‘primary health care’ [Majr MeSH]
- Complexity**
- ‘complexity’ [All Fields] AND (‘primary health care’ [Majr MeSH] OR ‘family practice’ [MeSH])
- Cultural competency**
- (‘cultural competency’ [MeSH] OR ‘culture’ [MeSH]) AND (‘primary health care’ [Majr MeSH] OR ‘family practice’ [MeSH])
-

ing were not relevant to family practice, these were excluded through use of the search string ‘NOT nursing’. Literature was reviewed and consented conclusions were drawn according to the procedure described in part 1 of this series (3).

Results

Person centred care

Many of the retrieved articles dealing with the concept of patient-centredness were opinion papers, sometimes based on literature review (5). The concept remains however poorly defined. Although some specific measures were developed, i.e. on enablement, satisfaction, and participation, instruments to measure the complex concept as a whole are still lacking.

Several papers studied patient and doctor experiences, beliefs and preferences of a biomedical versus a patient-centred approach in communication, mainly using qualitative research methods (interviews, focus groups, videotapes) (11). It appears that not every situation or each patient group in general practice cherishes a distinctly patient-centred communication style, or shared decision making. A better understanding of the diversity of patient and doctor preferences in different situations may lead to more effective and individualized care.

Other papers have explored the preferences and experiences of patients on (interpersonal) continuity of care. Both, patients and doctors valued continuity in addressing serious and psychosocial issues, and for routine checks of a chronic illness. However, continuity is considered less important than good doctor-patient communication. For acute disorders, being able to achieve fast access to care is more important than interpersonal continuity for many otherwise healthy patients. Continuous care performed by the same doctors seems to be beneficial for regular follow-up examinations in chronic disorders and to some extent for compliance with guidelines, i.e. for diabetes.

The effects of a patient-centred approach or communication have been studied with regard to patient satisfaction and treatment adherence, improved medical outcomes and decreased malpractice claims (12). Most studies showed effects on patient satisfaction.

Recently, some research has been done on self-management education for patients with various chronic conditions. It appears that these programmes are more effective than information-only patient education; small, short-term effects were recorded with regard to increased satisfaction, health behaviour, decreased symptoms and health care utilisation (13–

15). Despite this relatively weak evidence, it is believed that the concept of patient self-activation or self-motivation and establishing a pro-active team-patient relationship in GP/FM will gain in importance in the future, especially for chronic diseases (16,17).

There is limited research on the effect of training programmes for practitioners in person-centred care on clinical and non-clinical outcomes (18).

In conclusion, the concept of person-centredness remains poorly defined. Most research examined patient and doctor preferences and experiences, whereas implications or outcomes of a patient-centred approach were hardly studied.

Comprehensive approach

Most research on medical comprehensive care is either related to care or prevention of a specific disease, very often mental health (depression, alcohol abuse) (19,20) and cardiovascular disease, or to specific activities such as disease screening or complex interventions (counselling (21–23), implementation of a chronic care model (24), lifestyle modification (25)). Concerning prevention and comprehensive care, there seems to be not much good research in family practice to date. Often, the setting of studies and their relevance for general practice are not clarified. This gives a very scattered view with multiple fragments of knowledge, highlighting very specific situations (often without defining the setting of care well), but not resulting in a good picture on comprehensiveness as defined by Wonca.

A considerable amount of research on lifestyle interventions for primary care patients is labelled with the term ‘comprehensive’. Only some of these studies are really primary care based, and more often they were undertaken by specialists on more or less selected samples. Meta-analyses concluded that there is no evidence to support an effect of stages-of-change based interventions on levels of physical activity. With respect to quitting smoking, interventions such as telephone counselling might positively affect behaviour (26). Some positive evidence was found regarding fat intake at short- and long-term follow-up. Individual studies on lifestyle interventions often claim positive effects, but these are usually small and often described by surrogate or disease-specific outcome measures and cover only very limited aspects of health. In conclusion, scientific evidence does not significantly support lifestyle interventions to modify health behaviour.

Preventive primary care outreach interventions aimed at older people were associated with a reduction in mortality and increased likelihood of continuing to live in the community (27,28). Most studies on palliative care, another important issue within

comprehensive care, focus on management and are performed by nurse researchers. Good communication, meeting both the patient’s and the family’s needs, with aims to improve quality of life are important elements of good end of life care (29–31).

Many studies related to practice management and organization were found under the heading comprehensive and primary care (32–36). However, most fell into the domain of primary care management, discussed in the previous paper (4).

There is limited material on *medical education* for a comprehensive approach (37–40). In a review of educational interventions in primary care, the authors concluded there were only two articles meeting the criteria for good research in this field.

Almost all-existing research on a comprehensive approach is either cross-sectional or prospective with relatively short follow-up times. Sustainability and long-term impact on relevant health outcomes are rarely studied. There is an important lack of methodologies and outcome measures as well as longitudinal studies.

In conclusion, there is very little evidence establishing this competency as understood in the Wonca definition. The concept of a comprehensive approach in general practice is not well defined in terms that are applicable for designing research, apart from the Starfield indicator, which is, however, rarely used. We do not know how well the concept is understood by primary care doctors, and whether patients share this view and recognize activities as comprehensive care. There is almost no research on a generally comprehensive approach towards the patient irrespective of specific medical problems.

Holistic approach

Almost all of the retrieved papers are opinion papers or non-systematic reviews (41–45). There is virtually no investigative research. The majority of the papers relate to nursing; a considerable number to complementary medicine, a theme that seems to be associated with a holistic approach. Few articles deal with ‘holistic care’ for various conditions, but usually the definition does not seem to follow the Wonca Europe concept. However, many of the reviews and opinion papers agree that a holistic approach is important and valuable, and that care providers and patients hold similar views on this issue.

Daily general practice and primary care often claim to adopt a holistic approach. From a theoretical or consensus point of view, it seems that a holistic approach, including the concept of complexity, becomes ever more important as populations present with more chronic diseases. To aim for a broad concept of health and well-being, their care requires both

a holistic, comprehensive and person centred view on the patient. It has been postulated that a holistic approach improves patients' satisfaction and coping, and probably their health, but research evidence supporting these assumptions is lacking (46).

Some aspects of a holistic approach have been subject to research. There is a limited number of papers studying the concept of cultural competency in depth, as well as the influencing factors, obstacles in practice, measurement instruments, and models of implementation (i.e. programmes focussing on cultural competency) (47–54). Furthermore, some papers focus on complexity, looking at barriers and facilitators for change in healthcare as complex phenomena. Such research also shows that the metaphor of 'removing barriers to change' is of limited use when studying the implementation of a certain policy or programme. The observation and study of the 'complex' context and underlying social relations are proven to be more relevant (55).

In conclusion, the concept of a holistic approach remains poorly defined, and is very rarely a topic for research. Both a clear definition in practical terms and validated instruments to measure it are still lacking. There is almost no research on its implications or outcomes.

Implications

Research

Given these results, further research in the area of person centred care, comprehensive and holistic approach, should focus on:

- Better understanding and clearly defining the competencies person-centredness, comprehensiveness and a holistic approach (or components thereof).
- Developing research instruments and outcome measures for these competencies (or components thereof), taking into account their complexity and interactions.
- Understanding of the social, cultural and environmental circumstances that may have an effect on different aspects of health.
- Patient and doctor perceptions, perspectives and preferences on person-centredness, communication, involvement and shared decision making, including social, cultural and environmental circumstances affecting these preferences.
- Evaluating effectiveness and efficiency of a person-centred approach, comprehensive models of care and a holistic approach with regard to relevant clinical health outcomes and outcome

measures such as satisfaction, knowledge, and quality of life.

- Simultaneous delivery of curative care (management and rehabilitation of illness) and preventive activities (health promotion and disease prevention) in the same patients.
- Appreciation of the comprehensive, 'full-range' work of GPs, and a way to reflect this in electronic medical records and research databases.
- Effective methods of future GP training to practice a person-centred, holistic approach and the sustainability of education effects.
- Exploring what kind of need is expressed in the approval of holistic care, and in demands for complementary medicine.

Research methodology

For studies on the competencies person centred care, comprehensive and holistic approach, the following methodological needs could be formulated:

- Qualitative research, to clarify the concepts of a comprehensive or holistic approach and to study patients' and doctors' concepts and expectations.
- Instrumental research, to develop measures for patient-centredness, comprehensive and holistic approach.
- Longitudinal observational studies with retrospective and prospective designs, to assess the effectiveness and sustainability of (specific aspects of) a person-centred, comprehensive or holistic approach, and the effects of training these competencies.
- Interventional studies, to assess effects of person-centred care or a holistic approach
- Mixed research designs.

Frequently in lifestyle or preventive care intervention studies, 'usual' and 'good' general practice care are not well described. In these studies, the expected added value to the 'usual' comprehensive general practice care and its validity as a comparator should be considered carefully.

Final comments

It can be concluded that all person related aspects of family medicine are poorly defined. Validated instruments to measure these competencies are lacking. Concerning patient-centredness, most research examined patient and doctor preferences and expe-

riences. For the domains of comprehensive and holistic approach, there is a striking lack of research. Studies on comprehensiveness mostly focus on prevention or care of specific diseases. For all domains, there has been limited research conducted on its implications or outcomes.

Maybe 'comprehensiveness' is an umbrella concept, which should encompass the other five core competencies of the WONCA definition. It is questionable if 'comprehensiveness' as a whole can be the focus of research. For research purposes, the concept needs to be broken down into individual specific approaches and aspects of comprehensiveness, which can themselves be subjects of research.

Concerning the holistic approach, care providers and patients across many countries seem to share a common view, but this has not been translated into outcome measures. However, ICPC provides the possibility to code the social as well as psychological problems presented or dealt with, which may be used as a proxy for a holistic concept. There is a dichotomy between the obvious lack of research and evidence and the somewhat implicit consensus about its importance as an essential element for GP/FM. Therefore, Wonca Europe should reflect and reconsider the concept and its status as a core competency.

Acknowledgments

The authors acknowledge the support and contribution of many organizations and persons. The full text can be read in the first article of this series (3).

Declaration of interest: The authors report having no conflict of interest. The authors alone are responsible for the content and writing of the paper. All authors are members of EGPRN and active in its committees. Additionally, EHP is member of the Wonca Europe Executive Board. The Research Agenda was supported solely by EGPRN and grants from Wonca Europe.

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.

References

1. Hummers Pradier E, Beyer M, Chevallier P, Eilat-Tsanani S, Lionis C, Peremans L, et al. Research Agenda for general practice/ family medicine and primary health care in Europe.

- Maastricht: European General Practice Research Network EGPRN; 2009.
2. Wonca. Europe definition of Family Medicine. 2005. <http://www.woncaeurope.org/> (accessed 1 March 2010).
3. Hummers-Pradier E, Beyer M, Chevallier P, Eilat-Tsanani S, Lionis C, Peremans L, et al. The research agenda for general practice/family medicine and primary health care in Europe. Part 1. Background and methodology. *Eur J Gen Pract.* 2009;15:243–50.
4. Hummers-Pradier E, Beyer M, Chevallier P, Eilat-Tsanani S, Lionis C, Peremans L, et al. 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). *Eur J Gen Pract.* 16:42–50.
5. Mead N, Bower P. Patient-centredness: a conceptual framework and review of the empirical literature. *Soc Sci & Med.* 2000;51:1087–110.
6. Starfield B. Is primary care essential? *Lancet* 1994;344: 1129–33.
7. Engel GL. The need for a new medical model: A challenge for biomedicine. *Science* 1977;196:129–36.
8. Engel GL. The clinical application of the biopsychosocial model. *Am J Psychiatry* 1980;137:535–44.
9. Byrne D. Complexity theory and social sciences: An introduction. London: Routledge; 1998.
10. Griffiths F. Complexity and primary healthcare research. In: Sweeney J, Griffiths F. Complexity and healthcare An introduction. Oxford: Radcliffe Medical Press; 2002. pp. 149–66.
11. Grol R, Wensing M, Mainz J, Jung HP, Ferreira P, Hearnshaw H, et al. Patients in Europe evaluate general practice care: An international comparison. *Br J Gen Pract.* 2000;50:882–7.
12. Stewart M, Brown JB, Donner A, McWhinney IR, Oates J, Weston WW, et al. The impact of patient-centered care on outcomes. *J Fam Pract.* 2000;49:796–804.
13. Lorig KR, Ritter PL, Dost A, Plant K, Laurent DD, McNeil I. The expert patients programme online, a 1-year study of an Internet-based self-management programme for people with long-term conditions. *Chronic Illn.* 2008;4:247–56.
14. Effing T, Monninkhof EM, van der Valk PDLPM, van der Palen J, van Herwaarden CLA, Partidge MR, et al. Self-management education for patients with chronic obstructive pulmonary disease. *Cochrane Database of Systematic Reviews.* 2007;4:CD002990.
15. Foster G, Taylor SJC, Eldridge SE, Ramsay J, Griffiths CJ. Self-management education programmes by lay leaders for people with chronic conditions. *Cochrane Database of Systematic Reviews.* 2007;4:CD005108.
16. Lorig KR, Holman H. Self-management education: History, definition, outcomes, and mechanisms. *Ann Behav Med.* 2003;26:1–7.
17. Bodenheimer T, Lorig K, Holman H, Grumbach K. Patient self-management of chronic disease in primary care. *JAMA* 2002;288:2469–75.
18. Hobma S, Ram P, Muijtjens A, van der Vleuten C, Grol R. Effective improvement of doctor-patient communication: A randomised controlled trial. *Br J Gen Pract.* 2006;56: 580–6.
19. Bertholet N, Daepfen JB, Wietlisbach V, Fleming M, Burnand B. Reduction of alcohol consumption by brief alcohol intervention in primary care: Systematic review and meta-analysis. *Arch Intern Med.* 2005;165:986–95.
20. Beich A, Thorsen T, Rollnick S. Screening in brief intervention trials targeting excessive drinkers in general practice: Systematic review and meta-analysis. *Br Med J.* 2003;327: 536–42.

21. Bower P, Rowland N, Mellor C, Heywood P, Godfrey C, Hardy R. Effectiveness and cost effectiveness of counselling in primary care. *Cochrane Database Syst Rev.* 2002; CD001025.
22. Bower P, Rowland N, Hardy R. The clinical effectiveness of counselling in primary care: A systematic review and meta-analysis. *Psychol Med.* 2003;33:203–15.
23. Bower P, Byford S, Barber J, Beecham J, Simpson S, Friedli K, et al. Meta-analysis of data on costs from trials of counselling in primary care: Using individual patient data to overcome sample size limitations in economic analyses. *Br Med J.* 2003;326:1247–50.
24. Smith SM, Allwright S, O'Dowd T. Effectiveness of shared care across the interface between primary and specialty care in chronic disease management. *Cochrane Database Syst Rev.* 2007;CD004910.
25. van Sluijs EM, van Poppel MN, van Mechelen W. Stage-based lifestyle interventions in primary care: Are they effective? *Am J Prev Med.* 2004;26:330–43.
26. Shearer J, Shanahan M. Cost effectiveness analysis of smoking cessation interventions. *Aust N Z J Public Health* 2006; 30:428–34.
27. Wetzels R, Harmsen M, Van Weel C, Grol R, Wensing M. Interventions for improving older patients' involvement in primary care episodes. *Cochrane Database Syst Rev.* 2007; CD004273.
28. Ploeg J, Feightner J, Hutchison B, Patterson C, Sigouin C, Gauld M. Effectiveness of preventive primary care outreach interventions aimed at older people: Meta-analysis of randomized controlled trials. *Can Fam Physician* 2005; 51:1244–5.
29. Lorenz KA, Lynn J, Dy SM, Shugarman LR, Wilkinson A, Mularski RA, et al. Evidence for improving palliative care at the end of life: A systematic review. *Ann Intern Med.* 2008;148:147–59.
30. Evans R, Stone D, Elwyn G. Organizing palliative care for rural populations: A systematic review of the evidence. *Fam Pract.* 2003;20:304–10.
31. Wittenberg-Lyles EM, Sanchez-Reilly S. Palliative care for elderly patients with advanced cancer: A long-term intervention for end-of-life care. *Patient Educ Couns.* 2008;71: 351–5.
32. Wilson A, Childs S. The effect of interventions to alter the consultation length of family physicians: A systematic review. *Br J Gen Pract.* 2006;56:876–82.
33. Hollinghurst S, Horrocks S, Anderson E, Salisbury C. Comparing the cost of nurse practitioners and GPs in primary care: Modelling economic data from randomised trials. *Br J Gen Pract.* 2006;56:530–5.
34. Grimshaw JM, Winkens RA, Shirran L, Cunningham C, Mayhew A, Thomas R, et al. Interventions to improve outpatient referrals from primary care to secondary care. *Cochrane Database Syst Rev.* 2005;CD005471.
35. Bunn F, Byrne G, Kendall S. Telephone consultation and triage: effects on health care use and patient satisfaction. *Cochrane Database Syst Rev.* 2004;CD004180.
36. Briggs CJ, Garner P. Strategies for integrating primary health services in middle- and low-income countries at the point of delivery. *Cochrane Database Syst Rev.* 2006;CD003318.
37. Van Weel C, Mattsson B, Freeman G, de Meyere M, von Fragstein M. EU Socrates Programme 'Primary Health Care'. General practice based teaching exchanges in Europe. Experiences from the EU Socrates programme 'primary health care'. *Eur J Gen Pract.* 2005;11:122–6.
38. Dornan T, Littlewood S, Margolis SA, Scherpbier A, Spencer J, Ypinazar V. How can experience in clinical and community settings contribute to early medical education? A BEME systematic review. *Med Teach.* 2006;28:3–18.
39. Coleman T. Using video-recorded consultations for research in primary care: Advantages and limitations. *Fam Pract.* 2000;17:422–7.
40. Freudenstein U, Howe A. Recommendations for future studies: A systematic review of educational interventions in primary care settings. *Br J Gen Pract.* 1999;49:995–1001.
41. Pink J, Jacobson L, Pritchard M. The 21st century GP: physician and priest? *Br J Gen Pract.* 2007;57:840–2.
42. Bailey T. The evolution of family medicine. *Can Fam Physician* 2007;53:1113–4.
43. van Weel C, Orbon K, van der Gulden J, Buijs P, Folgering H, Thoonen B, et al. Occupational health and general practice: From opportunities lost to opportunities capitalised? *Med Lav.* 2006;97:288–94.
44. Kamenski G, Fink W, Maier M, Pichler I, Zehetmayer S. Characteristics and trends in required home care by GPs in Austria: diseases and functional status of patients. *BMC Fam Pract.* 2006;7:55.
45. Checkland K, Harrison S, McDonald R, Grant S, Campbell S, Guthrie B. Biomedicine, holism and general medical practice: Responses to the 2004 General Practitioner contract. *Soc Health Illn.* 2008;30:788–803.
46. Donadio G. Improving healthcare delivery with the transformational whole person care model. *Holist Nurs Pract.* 2005; 19:74–7.
47. Gadon M, Balch GI, Jacobs EA. Caring for patients with limited English proficiency: the perspectives of small group practitioners. *J Gen Intern Med.* 2007;22(Suppl. 2):341–6.
48. Sussman AL, Rivera M. 'Be gentle and be sincere about it': A story about community-based primary care research. *Ann Fam Med.* 2008;6:463–5.
49. Meeuwesen L, Tromp F, Schouten BC, Harmsen JA. Cultural differences in managing information during medical interaction: How does the physician get a clue? *Patient Educ Couns.* 2007;67:183–90.
50. Roberts C, Moss B, Wass V, Sarangi S, Jones R. Misunderstandings: A qualitative study of primary care consultations in multilingual settings, and educational implications. *Med Educ.* 2005;39:465–75.
51. Rosenberg E, Richard C, Lussier MT, Abdool SN. Intercultural communication competence in family medicine: Lessons from the field. *Patient Educ Couns.* 2006;61:236–45.
52. Green AR, Betancourt JR, Park ER, Greer JA, Donahue EJ, Weissman JS. Providing culturally competent care: residents in HRSA Title VII funded residency programs feel better prepared. *Acad Med.* 2008;83:1071–9.
53. Marion GS, Hildebrandt CA, Davis SW, Marin AJ, Crandall SJ. Working effectively with interpreters: A model curriculum for physician assistant students. *Med Teach.* 2008;30:612–7.
54. Harmsen H, Bernsen R, Meeuwesen L, Thomas S, Dorrenboom G, Pinto D, et al. The effect of educational intervention on intercultural communication: Results of a randomised controlled trial. *Br J Gen Pract.* 2005;55:343–50.
55. Checkland K, Harrison S, Marshall M. Is the metaphor of 'barriers to change' useful in understanding implementation? Evidence from general medical practice. *J Health Serv Res Policy* 2007;12:95–100.