May 2011 – SUPPORT Summary of a systematic review

Is general practice effective?

General practice (primary care) provides entry for the majority of patients in many healthcare systems, and includes care for a wide range of common, often poorly-defined health problems. Primary care can be offered in health centres, hospitals or by independent physicians, and sometimes fulfills a gatekeeping function for access to specialist services. Reimbursements are usually made on a fee-for-service or capitation basis unless general practitioners are salaried employees. It has been argued that while the care offered by general practitioners is cheaper than specialist care it is also of lower quality.

Key messages

- **Increased availability of primary care may lead to lower mortality and morbidity and increased life expectancy**
- **Primary care may reduce healthcare costs compared to specialist care. The use of medical specialists instead of general practitioners in primary care may lead to higher costs**
- **Capitation is more likely to lead to the achievement of primary care goals as well as cost reduction**
- **A gatekeeping system probably leads to little or no change in costs**
- **Personal continuity probably increases patient satisfaction and health outcomes, and leads to lower costs**
- **Primary care may reduce costs without effects on outcomes for certain diagnoses compared to specialist care**

Who is this summary for?

People making decisions concerning the role of general practice in a healthcare system.

This summary includes:

- **Key findings** from research based on a systematic review
- **Considerations about the relevance of this research** for low- and middle-income countries

Not included:

- Recommendations
- Additional evidence not included in the systematic review
- Detailed descriptions of interventions or their implementation

This summary is based on the following systematic review:

Engström S, Foldevi M, Borgquist L. Is general practice effective? A systematic literature review. Scand J Prim Healthcare 2001; 19:131-144.

What is a systematic review?

A summary of studies addressing a clearly formulated question that uses systematic and explicit methods to identify, select, and critically appraise the relevant research, and to collect and analyse data from the included studies.

SUPPORT – an international collaboration funded by the EU 6th Framework Programme to support the use of policy relevant reviews and trials to inform decisions about maternal and child health in low- and middle-income countries. www.support-collaboration.org

Glossary of terms used in this report: www.support-collaboration.org/summaries/explanations.htm

Background references on this topic: See back page.

Background

The WHO Alma Ata declaration of 1978 stipulates that primary care should be the first level of contact within national healthcare systems by bringing healthcare to the places where people live and work. Ideally, primary care should be client-focused and care provided by the same primary provider over long periods. This enables general practitioners to know the background and life history of their clients. Rooted in this holistic knowledge, greater trust and understanding should result in well-adapted, acceptable and comprehensive treatment and patient management. By advising and deciding on referrals to specialists, general practitioners assume an important role in controlling healthcare spending given that services at lower levels of the healthcare system are usually cheaper than those at higher levels. General practitioners encounter a wide range of diseases and syndromes and concern has been raised as to whether general practitioners are able to identify conditions requiring specialist attention promptly, and provide services of a quality equal to their specialist peers.

How this summary was prepared

After searching widely for systematic reviews that can help inform decisions about health systems, we have selected ones that provide information that is relevant to low- and middle-income countries. The methods used to assess the quality of the review and to make judgements about its relevance are described here: www.support-collaboration.org/summaries/methods.htm

Knowing what's not known is important

A good quality review might not find any studies from low- and middle-income countries or might not find any well-designed studies. Although that is disappointing, it is important to know what is not known as well as what is known.

About the systematic review underlying this summary

Review objective: To find evidence of the cost-effectiveness and quality of the work done by physicians in primary care.

	What the review authors searched for	What the review authors found
Interventions	Studies in which costs, quality and/or results in specialist care versus primary care were compared	6 studies of primary care and its impact on health indicators 7 studies on primary care and costs in health care systems 6 studies on reimbursement systems 4 studies on the effects of gatekeeper systems 6 studies on the effects of continuity of care 6 studies on the effects of medical specialities in primary care 10 studies comparing quality of care in primary and specialist care
Participants	Individuals and populations. No limits with regard to study design (cohort, cross-sectional, case-control, RCT, reviews, database studies)	31 studies focusing on individuals or events 4 studies comparing outcomes across populations (same country) 3 studies comparing outcomes across countries 7 literature reviews
Settings	No restrictions	OECD, majority from the United States of America (USA) and Western Europe
Outcomes	Public health outcomes and proportion of health care resources allocated to primary care	6 studies on public health outcomes and proportion of health care resources allocated to primary care 7 studies on total health care system expenditure and proportion of health care resources allocated to primary care 22 studies on performance/effects of primary care and ways of organising primary care 10 studies on differences in quality of and cost for care between primary and specialist care

Date of most recent search: Not specified.

Limitations: This review has important limitations with regard to the methods used to identify studies. Only studies published in English were included and reference lists were not checked. It is also not clear if multiple reviewers screened texts and extracted data or not. The date of the most recent search is not provided, and the review might be out-of-date given that it was published in 2001.
The review is narrative and no weighing or quantification of the findings beyond that provided in the underlying publications is attempted.

Engström S, Foldevi M, Borgquist L. Is general practice effective? A systematic literature review. Scand J Prim Healthcare 2001; 19:131-144.

Summary of findings

A total of 45 publications, including literature reviews, studies comparing outcomes across countries or across populations, and studies focusing on individuals or events, were included. All studies were conducted in Organization for Economic Co-operation and Development (OECD) countries, mainly in the United States of America (USA) and Western Europe. The identified studies investigated the impact of primary care on health indicators and costs, compared reimbursement systems, evaluated the effects of gatekeeper systems, the continuity of care and medical specialities in primary care, and compared the quality of care provided by general practitioners and specialists.

About the quality of evidence (GRADE)

⊕⊕⊕⊕

High: Further research is very unlikely to change our confidence in the estimate of effect.

⊕⊕⊕◯

Moderate: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.

⊕⊕◯◯

Low: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.

⊕◯◯◯

Very low: We are very uncertain about the estimate.

For more information, see last page

1) Public health outcomes and proportion of healthcare resources allocated to primary care

➔ **Increased availability of primary care may lead to lower mortality and morbidity and increased life expectancy**

➔ **Increased availability of primary care may lead to an improved satisfaction/cost ratio**

Outcomes	Impact	Number of participants (studies)	Quality of the evidence (GRADE)	Comments
Public health outcomes and proportion of healthcare resources allocated to primary care	- Increased availability of primary care is associated with lower mortality rates, increased life expectancy, lower (post) neonatal mortality rates, and a lower rate of low birth weight - Close association between ranking of primary care and 12 public health indicators and satisfaction/cost ratio - Lack of primary care doctor: OR 4.4 for severe uncontrolled hypertension	(6 studies)	⊕⊕◯◯ Low	Comparisons across States in the USA Comparisons across 10 countries Case-control study

p: p-value GRADE: GRADE Working Group grades of evidence (see above and last page)

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2) Total healthcare system expenditure and proportion of healthcare resources allocated to primary care

➔ **Compared to specialist care, primary care may reduce healthcare costs but may not lead to any differences in health outcomes**

Outcomes	Impact	Number of participants (studies)	Quality of the evidence (GRADE)	Comments
Total healthcare system expenditure and proportion of healthcare resources allocated to primary care	- Increased availability of primary care physicians reduces healthcare costs (in-hospital and out-of-hospital). Health outcomes are similar - Primary care physician rather than specialist as personal physician results in 33% lower annual healthcare expenditure - Primary care physician rather than hospital as primary source of care results in 35% less inpatient care and 50% fewer emergency room visits - Ambulatory care episodes: 53% cheaper if started with personal primary care physician - Low back pain: similar outcomes but 50% less cost if treated by primary care physician rather than specialist	(7 studies)	⊕⊕◯◯ Low	Database studies of insurance claims, cohort and cross-sectional studies of individuals, literature review including 23 studies

p: p-value GRADE: GRADE Working Group grades of evidence (see above and last page)

3) Performance/effects of primary care and ways of organising primary care

- ➔ **Capitation probably leads to fewer single-doctor practices, and better achievement of primary care goals and reduced costs**
- ➔ **A gatekeeper system probably leads to little or no difference in costs**
- ➔ **Group practices probably lead to better quality standards**
- ➔ **Personal continuity probably increases patient satisfaction and health outcomes, and leads to lower costs**
- ➔ **The use of medical specialists in primary care probably leads to higher costs**

Outcomes	Impact	Number of participants (studies)	Quality of the evidence (GRADE)	Comments
Performance/effects of primary care and ways of organising primary care	Re-imbursement systems: - Capitation is associated with fewer single-doctor practices and the better achievement of primary care goals. - Fee-for-service increases flexibility and activity of physicians, 41% more hospitalisations and 12% more drugs prescribed.	(22 studies)	⊕⊕⊕◯ Moderate	Cohort and cross-sectional studies, medical record review
	Gatekeeper system: - Tends to reduce costs and hospital outpatient consultations (mostly not significant).			Cross-country comparisons, RCTs
	Single or group practices: - Group practices have better quality standards and lower hospitalisation rates than HMO/group practices. - Community health centres have the best outcome scores.			Cohort study
	Continuity of care: - Greater positive effects of primary care if doctor choice is free, resulting in long-term patient-doctor relationships. - Personal continuity increases patient satisfaction and compliance with therapeutic regimens, reduces hospital admissions, and saves time and laboratory tests. - Previous knowledge of the patient increases the odds of the doctor recognising psychosocial problems influencing the patient's health.			Literature review, cohort studies, insurance claims review
	Medical specialities in primary care: - Increasing availability of family/general practitioners is associated with a lower rate of avoidable hospitalisations. - Hospitalisations are 100% higher for cardiologists and 50% higher for endocrinologists compared with family practitioners. - Patients attending primary care in family practices have 40% lower hospitalisation costs than those attending primary care in internal medicine. - Generalists are more accessible than specialists.			Database study of medical records, RCTs, cross-sectional and cohort studies

p: p-value GRADE: GRADE Working Group grades of evidence (see above and last page)

4) Differences in quality and cost between primary and specialist care

➔ **Primary care may not lead to any difference in the quality of care for some diagnoses compared to specialist care**

➔ **Primary care may reduce costs without effects on outcomes**

Outcomes	Impact	Number of participants (studies)	Quality of the evidence (GRADE)	Comments
Differences in the quality and cost of care between primary and specialist care	– No difference in the quality of diabetes, hypertension, low back pain and depression management between primary and specialist care. – Management by GPs reduces costs by 30–40% with no apparent effects on outcomes.	(10 studies)	⨁⨁◯◯ Low	RCTs, cohort studies, medical record review, literature reviews

p: p-value GRADE: GRADE Working Group grades of evidence (see above and last page)

Relevance of the review for low- and middle-income countries

➔ Findings	▷ Interpretation*
APPLICABILITY	
➔ **All included studies were conducted in high-income countries.**	▷ *Primary care is a component of virtually all healthcare systems because care for minor health issues needs to be provided in a decentralised way. Hence, at least some of the findings from this study are likely to be valid in LMICs as well.* ▷ *Conclusions derived from studies of primary care delivered by physicians in HICs may not be directly applicable to LMICs due to structural differences in healthcare options, education and resources.*
EQUITY	
➔ **The review did not discuss equity-related issues.**	▷ *Primary care could improve equity by lowering financial and institutional access barriers to healthcare.* ▷ *The resources saved could be employed to improve equity.*
ECONOMIC CONSIDERATIONS	
➔ **Primary care may reduce healthcare costs compared to the health costs of specialist care.**	▷ *The cost-savings associated with primary care are arguably more relevant in resource-constrained settings and could result in disproportionally positive public health effects if savings are invested in boosting healthcare.* ▷ *Boosting primary care usually results in lower overall healthcare resource usage (diagnostic tests, drugs, hospitalisations, specialist appointments etc.).* ▷ *Establishing a primary care system requires additional resources, specifically for the training of general practitioners, public information and education and, if unavailable, healthcare infrastructure (such as health centres etc.).*
MONITORING & EVALUATION	
➔ **The review found evidence from a substantial array of sources for the financial and public health benefits of primary care in high-income countries.**	▷ *The absence of evidence on the effectiveness of general care from LMICs calls for comprehensive monitoring and evaluation if primary care is introduced/expanded/emphasised. All areas (financial, public health, health outcomes, patient satisfaction, organisational etc.) need to be monitored and evaluated.*

*Judgements made by the authors of this summary, not necessarily those of the review authors, based on the findings of the review and consultation with researchers and policymakers in low- and middle-income countries. For additional details about how these judgements were made see: http://www.support-collaboration.org/summaries/methods.htm

Additional information

Related literature

Gosden T, Forland F, Kristiansen IS, Sutton M, Leese B, Giuffrida A, Sergison M, Pedersen L. Impact of payment method on behaviour of primary care physicians: a systematic review. *J Health Serv Res Policy*. 2001; 6:44-55.

Gosden T, Forland F, Kristiansen IS, Sutton M, Leese B, Giuffrida A, Sergison M, Pedersen L. Capitation, salary, fee-for-service and mixed systems of payment: effects on the behaviour of primary care physicians. *Cochrane Database of Systematic Reviews* 2000, Issue 3. Art. No.: CD002215. DOI: 10.1002/14651858.CD002215.

Lewin S, Munabi-Babigumira S, Glenton C, Daniels K, Bosch-Capblanch X, van Wyk BE, Odgaard-Jensen J, Johansen M, Aja GN, Zwarenstein M, Scheel IB. Lay health workers in primary and community health care for maternal and child health and the management of infectious diseases. *Cochrane Database of Systematic Reviews* 2010, Issue 3. Art. No.: CD004015. DOI: 10.1002/14651858.CD004015.pub3

Starfield B. Is primary care essential? *Lancet* 1994;344:1129 – 33.

WHO. Alma Ata 1978. Primary Health Care. Report of the International Conference on Primary Health Care. Geneva: WHO; 1978.

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Conflict of interest

None declared. For details, see: www.support-collaboration.org/summaries/coi.htm

Acknowledgements

This summary has been peer reviewed by: Sven Engström, Sweden; Julie Cliff, Mozambique.

This summary should be cited as

Steinmann P. Is general practice effective? A SUPPORT Summary of a systematic review. May 2011. www.support-collaboration.org/summaries.htm

Keywords

All Summaries: evidence-informed health policy, evidence-based, systematic review, health systems research, health care, low- and middle-income countries, developing countries, primary health care, specialist care, general practitioner, cost, health outcomes, capitation, fee-for-service, gatekeeper

About quality of evidence (GRADE)

The quality of the evidence is a judgement about the extent to which we can be confident that the estimates of effect are correct. These judgements are made using the GRADE system, and are provided for each outcome. The judgements are based on the type of study design (randomised trials versus observational studies), the risk of bias, the consistency of the results across studies, and the precision of the overall estimate across studies. For each outcome, the quality of the evidence is rated as high, moderate, low or very low using the definitions on page 3.

For more information about GRADE:
www.support-collaboration.org/summaries/grade.htm

SUPPORT collaborators:

The Alliance for Health Policy and Systems Research (HPSR) is an international collaboration aiming to promote the generation and use of health policy and systems research as a means to improve the health systems of developing countries. www.who.int/alliance-hpsr

The Cochrane Effective Practice and Organisation of Care Group (EPOC) is a Collaborative Review Group of the Cochrane Collaboration: an international organisation that aims to help people make well informed decisions about health care by preparing, maintaining and ensuring the accessibility of systematic reviews of the effects of health care interventions.
www.epocoslo.cochrane.org

The Evidence-Informed Policy Network (EVIPNet) is an initiative to promote the use of health research in policymaking. Focusing on low- and middle-income countries, EVIPNet promotes partnerships at the country level between policy-makers, researchers and civil society in order to facilitate both policy development and policy implementation through the use of the best scientific evidence available. www.evipnet.org

For more information:
www.support-collaboration.org

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