August 2016 – SUPPORT Summary of a systematic review

Does interactive communication between primary care physicians and specialists improve patient outcomes?

Many health systems fail to facilitate the seamless movement and management of patients between different providers and different levels of care. Poor coordination and continuity of care can result in suboptimal patient outcomes and the inefficient utilisation of scarce healthcare resources. Interactive communication holds promise as a method to improve coordination between primary and specialty care. Interactive communication refers to planned, timely, two-way exchanges of pertinent clinical information directly between primary care and specialist physicians. Such communication may occur, for example, through face-to-face exchanges, videoconferencing, telephone, or contact by email.

Key messages

➔ **Interactive communication between primary care physicians and specialists probably leads to substantial improvements in patient outcomes.**

➔ **Although the population samples in the included studies were patients with diabetes and psychiatric conditions in high-income countries, the consistency of effects suggests the potential of interactive communication to improve the effectiveness of primary care/specialist collaboration across other conditions and settings.**

➔ **When assessing the transferability of these findings to low-income country settings, the availability and accessibility of specialist care in these settings should be considered as well as the technology required for interactive communication**

Who is this summary for?

People making decisions concerning interventions to improve patient outcomes in ambulatory care.

! This summary includes:

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

X 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:

Foy R, Hempel S, Rubenstein L, et al. Meta-analysis: effect of interactive communication between collaborating primary care physicians and specialists. *Ann Intern Med* 2010; 152:247–58.

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 was an international project to support the use of policy relevant reviews and trials to inform decisions about maternal and child health in low- and middle-income countries, funded by the European Commission (FP6) and the Canadian Institutes of Health Research.

Glossary of terms used in this report: www.supportsummaries.org/glossary-of-terms

Background references on this topic: See back page

Background

Chronic communicable and non-communicable diseases are the leading causes of morbidity and mortality, and a major reason for the utilisation of health services in many low-income countries. The treatment of these diseases requires multiple interactions with healthcare services, often involving numerous primary care physicians and specialists over the lifetime of those affected. Proper coordination between primary and specialty care is therefore important.

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-income countries. The methods used to assess the reliability of the review and to make judgements about its relevance are described here: www.supportsummaries.org/how-support-summaries-are-prepared/

Knowing what's not known is important

A reliable review might not find any studies from low-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.

A lack of evidence does not mean a lack of effects. It means the effects are uncertain. When there is a lack of evidence, consideration should be given to monitoring and evaluating the effects of the intervention, if it is used.

About the systematic review underlying this summary

Review objective: To assess the effects of interactive communication between collaborating primary care physicians and key specialists on outcomes for patients receiving ambulatory care

Types of	What the review authors searched for	What the review authors found
Study designs & Interventions	Intervention studies with concurrent comparison groups (randomised and non-randomised trials and controlled before-after studies) and without concurrent comparison groups (time-series analyses), as well as uncontrolled before-after designs	11 randomised trials (6 cluster and 5 patient-level), 1 non-randomised trial, 3 controlled before-after studies, and 8 uncontrolled before-after studies
Participants	Primary care physicians and specialists who work collaboratively as individuals or within clinical teams in psychiatry, endocrinology, and oncology	18 studies of primary care collaborations with mental health services and 5 with primary care collaborations with endocrinology (all of which addressed diabetes). No studies of primary care collaborations with oncology were identified.
Settings	Outpatient and community primary care in countries where the main attributes of the healthcare system were broadly known and generalisable to the context of the USA (for example, countries in Western Europe, or Australia and Canada)	Integrated healthcare systems such as the US Veterans Health Administration or the United Kingdom's National Health Service (12 studies), and other non-integrated healthcare systems (11)
Outcomes	Patient, process, and economic outcomes	Patient outcome data, e.g. depression outcomes and improvement in HbA1c haemoglobin test results (23 studies)
Date of most recent search: June 2008		
Limitations: A well-conducted systematic review with only minor limitations.		

Foy R, Hempel S, Rubenstein L, et al. Meta-analysis: effect of interactive communication between collaborating primary care physicians and specialists. Ann Intern Med 2010; 152:247-58.

Summary of findings

The review identified 23 studies. Eleven of these were randomised trials and seven were non-randomised studies of collaboration between primary care physicians and psychiatrists. Twelve of these 18 studies examined depression. The remaining studies examined other psychiatric conditions. Five non-randomised studies included collaboration between primary care physicians and endocrinologists. The median duration of follow-up of all 23 studies was 9.5 months.

The interactive communication methods used included initial joint patient consultations, regular specialist attendance at primary care team meetings, scheduled telephone discussions, shared electronic progress notes, and telepsychiatry (psychiatric assessment and care through telecommunication technology, usually videoconferencing or email) with primary care physicians.

The 23 studies showed that:

➔ **Interactive communication between primary care physicians and specialists probably leads to improvement in patient outcomes. The certainty of this evidence is moderate.**

About the certainty of the evidence (GRADE) *

⊕⊕⊕⊕
High: This research provides a very good indication of the likely effect. The likelihood that the effect will be substantially different† is low.

⊕⊕⊕◯
Moderate: This research provides a good indication of the likely effect. The likelihood that the effect will be substantially different† is moderate.

⊕⊕◯◯
Low: This research provides some indication of the likely effect. However, the likelihood that it will be substantially different† is high.

⊕◯◯◯
Very low: This research does not provide a reliable indication of the likely effect. The likelihood that the effect will be substantially different† is very high.

* This is sometimes referred to as 'quality of evidence' or 'confidence in the estimate'.

† Substantially different = a large enough difference that it might affect a decision

See last page for more information.

Interactive communication between primary care physicians and specialists

People	Primary care physicians and psychiatrists or endocrinologists
Settings	Outpatient and community care in the USA, Canada, Australia, and western European countries
Intervention	Interactive communication through face-to-face meetings (9 studies), letters written on paper (8), telephone discussions (7), videoconferencing (3), electronic records or letters (2 studies), and combined methods of communication (14).
Comparison	No intervention

Outcomes	Impact	Certainty of the evidence (GRADE)	Comments
Patient outcomes	On average, interactive communication between primary care physicians and specialists probably improves patient outcomes (SMD −0.48, 95% CI −0.67 to −0.30)*	⊕⊕⊕◯ Moderate	An SMD of − 0.48 suggests a moderate effect. Several sensitivity analyses were conducted: the findings were consistent across different settings and across different study designs.

SMD: standard mean difference; CI: confidence interval; GRADE: GRADE Working Group grades of evidence (see above and last page)

*The post-intervention risk difference is adjusted for pre-intervention differences between the comparison groups.

Relevance of the review for low-income countries

➔ Findings	▷ Interpretation*
APPLICABILITY	
➔ **The studies included in the review were conducted in high-income countries. The studies, whose designs varied widely, consistently found that interactive communication between primary care and specialist mental and endocrinology services improves patient outcomes.**	▷ *The consistency of effects across different primary care-specialty collaborations, healthcare conditions, and study designs suggests the potential of interactive communication to improve the effect of collaboration across other specialties, conditions, and settings.* ▷ *However, when assessing the transferability of these findings to low-income country settings, one needs to consider the organisation of the health system as well as the availability and accessibility of specialist care in such settings.* ▷ *The limited availability of specialists is an important consideration when providing healthcare in low-income countries. If specialists are already overburdened, the introduction of time-consuming interventions may not be feasible or may compromise other aspects of specialist care.*
EQUITY	
➔ **There was no information in the included studies regarding the differential effects of the interventions on resource-disadvantaged populations.**	▷ *There is a scarcity of specialists serving disadvantaged populations in most low-income countries. Collaboration between primary care and specialists therefore could potentially reduce inequalities in access to specialist care in under-served communities.* ▷ *However, some communication interventions may not be appropriate for low-income health systems (e.g. videoconferencing, the use of electronic records). Collaborative programmes between primary and specialist care providers which do not consider local realities and limitations may exacerbate health inequities or fail to address them adequately.*
ECONOMIC CONSIDERATIONS	
➔ **The review did not report the cost effectiveness of interactive communication between primary care physicians and specialists.**	▷ *The costs and cost-effectiveness of interactive communication are uncertain. Because costs, particularly for human resources, vary, consideration should be given to undertaking costing studies in settings where interactive communication strategies are being considered or implemented.*
MONITORING & EVALUATION	
➔ **No evidence from low-income countries was reported in this review.**	▷ *In low-income countries, interactive communication and other forms of collaboration between primary care and specialist services should be implemented within the context of rigorous evaluation studies before they are scaled up. A rigorous assessment of their costs and impacts should also be undertaken.*

*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-income countries. For additional details about how these judgements were made see: www.supportsummaries.org/methods

Additional information

Related literature

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Conflict of interest

None declared. For details, see: www.supportsummaries.org/coi

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This review should be cited as

Foy R, Hempel S, Rubenstein L, et al. Meta-analysis: effect of interactive communication between collaborating primary care physicians and specialists. Ann Intern Med 2010; 152:247-58.

The summary should be cited as

Wiysonge CS. Does interactive communication between primary care physicians and specialists improve patient outcomes? A SUPPORT Summary of a systematic review. August 2016. www.supportsummaries.org

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Cochrane South Africa, the only centre of the global, independent Cochrane network in Africa, aims to ensure that health care decision making within Africa is informed by high-quality, timely and relevant research evidence. www.mrc.ac.za/cochrane/cochrane.htm

About certainty of the evidence (GRADE)

The "certainty of the evidence" is an assessment of how good an indication the research provides of the likely effect; i.e. the likelihood that the effect will be substantially different from what the research found. By "substantially different" we mean a large enough difference that it might affect a decision. These judgements are made using the GRADE system, and are provided for each outcome. The judgements are based on the study design (randomised trials versus observational studies), factors that reduce the certainty (risk of bias, inconsistency, indirectness, imprecision, and publication bias) and factors that increase the certainty (a large effect, a dose response relationship, and plausible confounding). For each outcome, the certainty of the evidence is rated as high, moderate, low or very low using the definitions on page 3.

For more information about GRADE: www.supportsummaries.org/grade

SUPPORT collaborators:

The Cochrane Effective Practice and Organisation of Care Group (EPOC) is part of the Cochrane Collaboration. The Norwegian EPOC satellite supports the production of Cochrane reviews relevant to health systems in low- and middle-income countries . www.epocoslo.cochrane.org

The Evidence-Informed Policy Network (EVIPNet) is an initiative to promote the use of health research in policymaking in low- and middle-income countries. www.evipnet.org

The Alliance for Health Policy and Systems Research (HPSR) is an international collaboration that promotes the generation and use of health policy and systems research in low- and middle-income countries. www.who.int/alliance-hpsr

Norad, the Norwegian Agency for Development Cooperation, supports the Norwegian EPOC satellite and the production of SUPPORT Summaries. www.norad.no

The Effective Health Care Research Consortium is an international partnership that prepares Cochrane reviews relevant to low-income countries. www.evidence4health.org

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