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Implementation strategies for health systems in low-income countries: an overview of systematic reviews. *Cochrane Database of Systematic Reviews* 2017, Issue 9. Art. No.: CD011086. DOI: 10.1002/14651858.CD011086.pub2.

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[Overview of Reviews]

Implementation strategies for health systems in low-income countries: an overview of systematic reviews

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Editorial group: Cochrane Effective Practice and Organisation of Care Group. **Publication status and date:** New, published in Issue 9, 2017.

Citation: Pantoja T, Opiyo N, Lewin S, Paulsen E, Ciapponi A, Wiysonge CS, Herrera CA, Rada G, Peñaloza B, Dudley L, Gagnon MP, Garcia Marti S, Oxman AD. Implementation strategies for health systems in low-income countries: an overview of systematic reviews. *Cochrane Database of Systematic Reviews* 2017, Issue 9. Art. No.: CD011086. DOI: 10.1002/14651858.CD011086.pub2.

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ABSTRACT

Background

A key function of health systems is implementing interventions to improve health, but coverage of essential health interventions remains low in low-income countries. Implementing interventions can be challenging, particularly if it entails complex changes in clinical routines; in collaborative patterns among different healthcare providers and disciplines; in the behaviour of providers, patients or other stakeholders; or in the organisation of care. Decision-makers may use a range of strategies to implement health interventions, and these choices should be based on evidence of the strategies' effectiveness.

Objectives

To provide an overview of the available evidence from up-to-date systematic reviews about the effects of implementation strategies for health systems in low-income countries. Secondary objectives include identifying needs and priorities for future evaluations and systematic reviews on alternative implementation strategies and informing refinements of the framework for implementation strategies presented in the overview.

Methods

We searched Health Systems Evidence in November 2010 and PDQ-Evidence up to December 2016 for systematic reviews. We did not apply any date, language or publication status limitations in the searches. We included well-conducted systematic reviews of studies



that assessed the effects of implementation strategies on professional practice and patient outcomes and that were published after April 2005. We excluded reviews with limitations important enough to compromise the reliability of the review findings. Two overview authors independently screened reviews, extracted data and assessed the certainty of evidence using GRADE. We prepared SUPPORT Summaries for eligible reviews, including key messages, 'Summary of findings' tables (using GRADE to assess the certainty of the evidence) and assessments of the relevance of findings to low-income countries.

Main results

We identified 7272 systematic reviews and included 39 of them in this overview. An additional four reviews provided supplementary information. Of the 39 reviews, 32 had only minor limitations and 7 had important methodological limitations. Most studies in the reviews were from high-income countries. There were no studies from low-income countries in eight reviews.

Implementation strategies addressed in the reviews were grouped into four categories – strategies targeting:

- 1. healthcare organisations (e.g. strategies to change organisational culture; 1 review);
- 2. healthcare workers by type of intervention (e.g. printed educational materials; 14 reviews);
- 3. healthcare workers to address a specific problem (e.g. unnecessary antibiotic prescription; 9 reviews);
- 4. healthcare recipients (e.g. medication adherence; 15 reviews).

Overall, we found the following interventions to have desirable effects on at least one outcome with moderate- or high-certainty evidence and no moderate- or high-certainty evidence of undesirable effects.

- 1. Strategies targeted at healthcare workers: educational meetings, nutrition training of health workers, educational outreach, practice facilitation, local opinion leaders, audit and feedback, and tailored interventions.
- 2. Strategies targeted at healthcare workers for specific types of problems: training healthcare workers to be more patient-centred in clinical consultations, use of birth kits, strategies such as clinician education and patient education to reduce antibiotic prescribing in ambulatory care settings, and in-service neonatal emergency care training.
- 3. **Strategies targeted at healthcare recipients**: mass media interventions to increase uptake of HIV testing; intensive self-management and adherence, intensive disease management programmes to improve health literacy; behavioural interventions and mobile phone text messages for adherence to antiretroviral therapy; a one time incentive to start or continue tuberculosis prophylaxis; default reminders for patients being treated for active tuberculosis; use of sectioned polythene bags for adherence to malaria medication; community-based health education, and reminders and recall strategies to increase vaccination uptake; interventions to increase uptake of cervical screening (invitations, education, counselling, access to health promotion nurse and intensive recruitment); health insurance information and application support.

Authors' conclusions

Reliable systematic reviews have evaluated a wide range of strategies for implementing evidence-based interventions in low-income countries. Most of the available evidence is focused on strategies targeted at healthcare workers and healthcare recipients and relates to process-based outcomes. Evidence of the effects of strategies targeting healthcare organisations is scarce.

PLAIN LANGUAGE SUMMARY

Implementation strategies for health systems in low-income countries

What is the aim of this overview?

The aim of this Cochrane Overview is to provide a broad summary of what is known about the effects of strategies for implementing interventions to improve health in low-income countries.

This overview is based on 39 relevant systematic reviews. Each of these reviews searched for studies that evaluated the different types of implementation strategies within the scope of the question addressed by the review. The reviews included a total of 1332 studies.

This overview is one of a series of four Cochrane Overviews that evaluate different health system arrangements.

What was studied in the overview?

A key function of health systems is implementing interventions to improve health. Coverage of essential health interventions remains low in low-income countries. Decision-makers may use a range of strategies to implement health interventions, and these choices should be based on evidence of the strategies' effectiveness.

What are the main results of the overview?



The following implementation strategies had desirable effects on at least one outcome with moderate- or high-certainty evidence and no moderate- or high-certainty evidence of undesirable effects.

Strategies targeted at healthcare workers

- Educational meetings.
- Nutrition training of health workers.
- Educational outreach (vs. no intervention).
- Practice facilitation.
- Local opinion leaders.
- Audit and feedback.
- Tailored interventions (vs. no intervention).

Strategies targeted at healthcare workers for specific types of problems

- Training healthcare workers to be more patient-centred in clinical consultations.
- Use of birth kits.
- Clinician education and patient education to reduce antibiotic prescribing in ambulatory care settings.
- In-service neonatal emergency care training.

Strategies targeted at healthcare recipients

- Mass media interventions to increase immediate uptake of HIV testing (leaflets and gain-framed videos).
- Intensive self-management and adherence, intensive disease management to improve health literacy.
- Behavioural interventions and mobile phone text messages for adherence to antiretroviral therapy.
- A one-time incentive to start or continue tuberculosis prophylaxis.
- Default reminders for patients being treated for active tuberculosis.
- Use of sectioned polythene bags for adherence to malaria medication.
- Community-based health education, and reminders and recall strategies for vaccination uptake.
- Providing free insecticide-treated bednets.
- Interventions to improve uptake of cervical screening (invitations, education, counselling, access to health promotion nurse, and intensive recruitment).
- Health insurance information and application support.

The following implementation strategies had low- or very low-certainty evidence (or no studies available) for all the outcomes that were considered.

Strategies targeted at healthcare organisations

- Strategies to improve organisational culture.

Strategies targeted at healthcare workers

- Printed educational materials.
- Internet-based learning.
- Interprofessional education.
- Teaching critical appraisal.



- Educational outreach (vs. another intervention).
- Pharmacist-provided services.
- Safety checklists for use by medical care teams in acute hospital settings.
- Tailored interventions (vs. non-tailored interventions, and interventions targeted at organisational and individual barriers vs. interventions targeted at individual barriers only).
- Interventions to encourage the use of systematic reviews in clinical decision-making.

Strategies targeted at healthcare workers for specific types of problems

- Interventions to improve handwashing.
- Interventions to reduce unnecessary caesarean section rates.
- Training of traditional birth attendants.
- Skilled birth attendance.
- Training of traditional healers about STD and HIV medicine.

Strategies targeted at healthcare recipients

- Providing information/education for promoting HIV testing (multimedia).
- Providing written medicine information.
- Single interventions to improve health literacy.
- Interventions to improve medication adherence.
- Adherence TB (immediate versus deferred incentives; cash vs. non-cash incentive; different levels of cash incentives; incentives vs. other interventions).
- Adherence malarial medication (blister packed tablets and capsules compared to tablets and capsules in paper envelopes; tablets in sectioned polythene bags compared to bottled syrup).
- Training of healthcare workers, home visits, and monetary incentives to improve immunisation coverage.
- Risk factor assessment to improve the uptake of cervical cancer screening.

How up to date is this overview?

The overview authors searched for systematic reviews that had been published up to 17 December 2016.