



August 2016 – SUPPORT Summary of a systematic review

What is the impact of increasing salaries on improving the performance of health professionals in the public sector?

The performance of professionals employed in the public sector is crucial for delivering effective services in health, education, and the judiciary.

Key messages

- It is uncertain whether increasing the salaries of health professionals or other professionals in the public sector improves either the quantity or quality of their work.
- Rather than making assumptions about the intended or unintended effects of fixed salary reforms that increase the salaries of health professionals, such policies should be evaluated, if possible using randomized trials or interrupted time series studies.

Who is this summary for?

Policy makers, managers, and health professionals employed in the public sector

! 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:

Carr SC, Leggatt-Cook C, Clarke M, et al. What is the evidence of the impact of increasing salaries on improving the performance of public servants, including teachers, doctors/nurses, and mid-level occupations, in low- and middle-income countries: Is it time to give pay a chance? EPPI Centre, Social Science Research Unit, Institute of Education, University of London 2011.

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

Basic salaries in the public sector for health professionals and teachers might be insufficient to motivate public servants to perform in the job. For example, they may not be motivated to turn up for work or to engage with the work itself. In addition, this could lead to involvement in diverse forms of moonlighting (in both teaching and health), seeking or accepting under-the-counter payments, and becoming part of the brain drain.

This review looked for studies of the effects of salary increases on the work performance of professionals employed in the public sector. It looked for studies of the effects of salary increases alone or as part of a remuneration package (pay and benefits combined). It focused on frontline professionals in health (doctors, nurses, and other cadre), education (teachers), and justice (judges).

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 available evidence of the impact of increasing salaries on the performance of public sector employees in the health, education and judicial sectors in low- and middle-income countries

Types of	What the review authors searched for	What the review authors found
Study designs & Interventions	Empirical research that used qualitative or quantitative methods to assess the effects of a change in salary or remuneration packages (pay and benefits combined)	One controlled before-after (“differences-in-differences”) study of increases in teachers’ wages
Participants	Public sector employees in health (nurses, doctors, and other cadres), education (teachers), or justice (judges)	Teachers
Settings	Low- and middle-income countries	Brazil
Outcomes	Measures of work performance including the quantity or quality of work	Student grades

Date of most recent search: 2010

Limitations: This was a well-conducted review, but the authors found only one study that met their inclusion criteria.

Carr SC, Leggatt-Cook C, Clarke M, et al. What is the evidence of the impact of increasing salaries on improving the performance of public servants, including teachers, doctors/nurses, and mid-level occupations, in low- and middle-income countries: Is it time to give pay a chance? EPPI Centre, Social Science Research Unit, Institute of Education, University of London 2011.

Summary of findings

Only one study met the inclusion criteria. The included study, conducted in Brazil, assessed the effects of increasing teachers' wages on students' grades in public schools. A comparison of state and municipal schools one year before and one year after an increase in wages (1997-99) found that the state schools, which had a higher average increase in salaries (36.4%), had greater improvements in students' grades than municipal schools, which had a lower average increase in salaries (35.7%). However, it is uncertain whether the increased wages caused the improvements in grades.

→ **It is uncertain whether increasing teachers' salaries improves their performance or the performance of their students because the certainty of this evidence is very low.**

→ **No studies were found that evaluated the impact of increasing the salaries of health professionals in the public sector on their performance.**

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.

Relevance of the review for low-income countries

→ Findings	▷ Interpretation*
APPLICABILITY	
→ Only one before-after study from Brazil of the effects of increases in teachers' wages was found.	▷ It is uncertain whether raising the salaries of professionals in the public sector in low-income countries improves their performance.
EQUITY	
→ No evidence of the impacts of increases in salaries on equity was found.	▷ Increasing salaries in the public sector might reduce inequities between the public and private sector. If increasing salaries improved performance, increasing salaries might reduce inequities for disadvantaged populations served by the professionals who received the increase.
ECONOMIC CONSIDERATIONS	
→ No evidence of the costs of increasing salaries for professionals in the public sector was reported in the review.	▷ The cost of increasing salaries depends on the size of the increase and the number of professionals affected.
MONITORING & EVALUATION	
→ The impacts of increasing salaries for professionals in the public sector on performance is uncertain.	▷ If salaries are increased with an expectation that this will improve performance, performance should be monitored and, if possible, evaluated using randomised trials or interrupted time series studies.

*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

Witter S, Fretheim A, Kessy FL, Lindahl AK. Paying for performance to improve the delivery of health interventions in low- and middle-income countries. *Cochrane Database of Systematic Reviews*. 2012; Issue 2. Art. No.: CD007899.

Flodgren G, Eccles MP, Shepperd S, et al. An overview of reviews evaluating the effectiveness of financial incentives in changing healthcare professional behaviours and patient outcomes. *Cochrane Database of Systematic Reviews* 2011; Issue 7. Art. No.: CD009255.

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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

Carr SC, Leggatt-Cook C, Clarke M, et al. What is the evidence of the impact of increasing salaries on improving the performance of public servants, including teachers, doctors/nurses, and mid-level occupations, in low- and middle-income countries: Is it time to give pay a chance? EPPI Centre, Social Science Research Unit, Institute of Education, University of London 2011.

The summary should be cited as

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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](http://www.cochrane.org). 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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