



March 2017 – SUPPORT Summary of a systematic review

Do interventions for controlling the emigration of health professionals from low- and middle-income countries work?

Health professionals trained in low- and middle-income countries (LMICs) constitute a substantial proportion of the healthcare workforce in certain high-income countries (HICs). The migration of health professionals from LMICs to these HICs contributes to a shortage of health professionals in LMICs. The resources used to train health professionals in source LMIC countries therefore, in effect, subsidise the HICs that benefit from this migration.

Key messages

- Lowering immigration restrictions in HICs probably increases the migration of nurses from LMICs to HICs. The effectiveness of interventions implemented in LMICs to decrease the emigration of health professionals is uncertain. No studies were found that evaluated such interventions.
- LMICs should monitor changes in HIC immigration legislation, model the impact of proposed migration changes on their own retention of domestic health professionals, and lobby for immigration laws in HICs that consider the health system needs of source countries.
- Rigorous studies are needed of the effectiveness of interventions designed to decrease the emigration of health professionals, particularly the effectiveness of interventions in LMICs.



Who is this summary for?

People making decisions concerning interventions for controlling emigration of health professionals

! 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:

Peñaloza B, Rada G, Pantoja T, et al. Interventions for controlling emigration of health professionals from low- and middle-income countries. *Cochrane Database Syst Rev* 2011; (9): CD007673.

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

Health professionals from LMICs, most notably from South Asia and sub-Saharan Africa, constitute a substantial fraction of the healthcare workforce in certain HICs, particularly in English and French-speaking countries such as the UK, the USA, and France. The migration of educated health professionals from LMICs to HICs contributes to a shortage of health professionals in LMICs. It also acts as a subsidy to HICs, given that source countries lose the return on the investments they have made in health professional training. LMICs, however, may profit from remittances and, if migration is not permanent, from additional training that health professionals receive while working abroad.

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 policy interventions to control the emigration of health professionals from LMICs to HICs

Types of	What the review authors searched for	What the review authors found
Study designs & Interventions	Randomised trials, non-randomised trials, controlled before-after studies, or interrupted studies of any interventions in source or recipient countries (or both) as well as international agreements that could have an impact on the outcomes	1 interrupted time series study of the effects of a modification to USA immigration laws (The American "Act of October, 1965", which decreased barriers to emigration from countries outside the Americas to the USA)
Participants	Health professional nationals of a LMIC whose graduate training was in a LMIC	Nurses
Settings	Not restricted	USA and the Philippines
Outcomes	Proportion (or other measure of change in number) of health professionals that emigrate from a LMIC to an HIC	Annual number of nurses migrating from the Philippines to the USA

Date of most recent search: March 2011

Limitations: This is a well-conducted systematic review with only minor limitations.

Peñaloza B, Rada G, Pantoja T, et al. Interventions for controlling emigration of health professionals from low- and middle-income countries. Cochrane Database Syst Rev 2011; (9): CD007673.

Summary of findings

One study was included. This study examined the effects of a change to American immigration legislation on the migration of nurses from the Philippines to the USA.

No studies were found of the effectiveness of interventions implemented in low-income countries to decrease emigration, including studies of:

- Financial or non-financial strategies to improve the working conditions and career prospects of health professionals
- Education and training of health professionals, adjusted to the training needs and demands of local health systems (e.g. teaching methods, the use of local language training, or community-based curricula)
- The use of compulsory service schemes for health professionals
- Strategies to facilitate and support the return of health professionals working abroad
- Bilateral or multilateral agreements regulating the flow of health professionals from low- to high-income countries

➔ **Reducing immigration restrictions in HICs probably increases the migration of nurses from LMICs to HICs. 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.

Interventions controlling the emigration of health professionals		
People	Nurses in the Philippines	
Settings	USA and the Philippines	
Intervention	Modification in USA immigration laws	
Comparison	Before modification in USA immigration laws	
Outcomes	Impact	Certainty of the evidence (GRADE)
Annual number of Philippine nurses migrating to USA	First data point after intervention: +807.6 nurses, SE 166.7, 95% CI 480.9-1,134.3 Change in time trend: +33.4 nurses, SE 7.9, 96% CI 17.9-48.9	⊕⊕⊕○ Moderate
SE: standard error; CI: confidence interval; GRADE: GRADE Working Group grades of evidence (see above and last page)		

Relevance of the review for low-income countries

→ Findings	▷ Interpretation*
APPLICABILITY	
→ The available evidence is based on an intervention in a HIC.	<ul style="list-style-type: none">▷ Policies in HICs may have an effect on the number of health workers migrating from LMICs.▷ LMICs have little direct influence on HIC policies, including immigration policies. However, LMICs may attempt to influence such policies by means of diplomacy, lobbying, or public relations before they are enacted.
EQUITY	
→ No evaluations of emigration policies in low-income countries were found.	<ul style="list-style-type: none">▷ It is uncertain whether changes in emigration policies would have an impact on equity within LMIC countries. In addition to policies intended to reduce health professional emigration, consideration should be given to specific measures targeted at recruiting and retaining health professionals in underserved areas within LMICs.▷ There is a need for more rigorous studies on the effect of emigration policies on the recruitment and retention of health workers in underserved areas.
ECONOMIC CONSIDERATIONS	
→ The review did not assess the economic implications of health professional emigration.	<ul style="list-style-type: none">▷ LMICs lose their expected return on investments in health professional training.▷ LMICs may gain from revenue remittances sent by health workers back to their country of origin.▷ LMICs may deliberately train health professionals for “export” (for example, nurse training in the Philippines), and recoup the costs through taxes or loan repayments.
MONITORING & EVALUATION	
→ The review found that the effectiveness of interventions to reduce emigration of health professionals from LMICs have not been evaluated.	<ul style="list-style-type: none">▷ The effectiveness of interventions to decrease emigration of health professionals from LMICs should be 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-income countries. For additional details about how these judgements were made see:

www.supportsummaries.org/methods

Additional information

Related literature

Bach S. International migration of health workers: labor and social issues (Working paper #209). Sectoral Activities Programme, International Labour Office 2003.

Stilwell B, Diallo K, Zurn P, et al. Developing evidence-based ethical policies on the migration of health workers: conceptual and practical challenges. *Human Resources for Health* 2003;1:8.

Stilwell B, Diallo K, Zurn P, et al. Migration of health care workers from developing countries: strategic approaches to its management. *Bulletin of the World Health Organization* 2004;82:595-600.

Willis-Shattuck M, Bidwell P, et al. Improving motivation and retention of health professionals in developing countries: a systematic review. *BMC Health Service Research* 2008;8:247.

This summary was prepared by

Peter Steinmann, Swiss Tropical and Public Health Institute, Switzerland.

Conflict of interest

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

Acknowledgements

This summary has been peer reviewed by: Blanca Peñaloza, Elizeus Rutebemberwa, Simon Goudie, and Hanna Bergman.

This review should be cited as

Peñaloza B, Rada G, Pantoja T, et al. Interventions for controlling emigration of health professionals from low- and middle-income countries. *Cochrane Database Syst Rev* 2011; (9): CD007673.

The summary should be cited as

Steinmann P. Do interventions for controlling emigration of health professionals from low- and middle-income countries work? A SUPPORT Summary of a systematic review. March 2017. www.supportsummaries.org

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

To receive e-mail notices of new SUPPORT summaries or provide feedback on this summary, go to: www.supportsummaries.org/contact