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.
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.

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

<table>
<thead>
<tr>
<th>Types of</th>
<th>What the review authors searched for</th>
<th>What the review authors found</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study designs &amp; Interventions</td>
<td>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</td>
<td>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)</td>
</tr>
<tr>
<td>Participants</td>
<td>Health professional nationals of a LMIC whose graduate training was in a LMIC</td>
<td>Nurses</td>
</tr>
<tr>
<td>Settings</td>
<td>Not restricted</td>
<td>USA and the Philippines</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Proportion (or other measure of change in number) of health professionals that emigrate from a LMIC to an HIC</td>
<td>Annual number of nurses migrating from the Philippines to the USA</td>
</tr>
</tbody>
</table>

Date of most recent search: March 2011

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

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.

## Interventions controlling the emigration of health professionals

<table>
<thead>
<tr>
<th>People</th>
<th>Nurses in the Philippines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Settings</td>
<td>USA and the Philippines</td>
</tr>
<tr>
<td>Intervention</td>
<td>Modification in USA immigration laws</td>
</tr>
<tr>
<td>Comparison</td>
<td>Before modification in USA immigration laws</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Impact</th>
</tr>
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</table>
| 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 |

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

#### APPLICABILITY

- The available evidence is based on an intervention in a HIC.

#### EQUITY

- No evaluations of emigration policies in low-income countries were found.

#### ECONOMIC CONSIDERATIONS

- The review did not assess the economic implications of health professional emigration.

#### MONITORING & EVALUATION

- The review found that the effectiveness of interventions to reduce emigration of health professionals from LMICs have not been evaluated.

### Interpretation*

- 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.
- 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.
- 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.
- 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


This summary was prepared by
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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

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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

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