

Draft for discussion

## **HUMAN RESOURCES FOR HEALTH – EXECUTIVE SUMMARY**

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# **Evidence from Systematic Reviews of Effects to Inform Policy-Making About Optimizing the Supply, Improving the Distribution, Increasing the Efficiency and Enhancing the Performance of Health Workers**

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A policy brief prepared for the International Dialogue on Evidence-Informed  
Action to Achieve Health Goals in Developing Countries (IDEAHealth)

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# Executive Summary

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## BACKGROUND

The increased commitment towards achieving real health gains in LMICs (whether articulated as health-related MDGs or national health goals) is associated with a growing realization that HRH will be critical for success. Two recent high profile international reports – *The Joint Learning Initiative: Human Resources for Health Report* and the *World Health Report of 2006: Working Together for Health* – identify a number of major HRH challenges and policy levers to address them. The policy levers described in these and other reports can be grouped into four categories (training, regulatory, financial and organizational mechanisms) and their potential effects grouped according to whether they include the optimization of supply, the improvement of the distribution, the increase of the efficiency, and the enhancement of the performance of health workers). In accordance with the HRH brief, we have provided an overview of systematic reviews related to the effects of these policy levers. This overview is one of the inputs into the country dialogues concerning how to address major challenges in this field.

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## METHODS

### Overview of systematic reviews of effects

A trained and experienced information specialist searched three databases (CDSR, DARE and Embase) for systematic reviews of the effects of HRH policy levers. Additionally, two overview team members hand-searched back issues of five journals – *Bulletin of the World Health Organization*, *Health Policy and Planning*, *Human Resources for Health*, *Human Resources for Health Development*, and *Implementation Science* (for ten years, or since a journal's launch, or since its demise if this was less than ten years ago) – and consulted experts. The quality of reviews was assessed independently by two overview team members using a checklist. Due to the dearth of eligible systematic reviews, these were included unless they lacked a methods section with explicit selection criteria. Evidence summaries were prepared for select systematic reviews (which included equity, applica-

bility and scaling up considerations), a table of summary of findings was drawn up for select systematic reviews, and/or GRADE evidence profiles were created for many combinations of policy levers and effects.

### **Systematic review of using lay health workers to deliver health services**

The overview team identified a Cochrane review published in 2005 that warranted updating and consideration as an example of a policy relevant systematic review. The review focused on the effects of using lay health workers to deliver health services. The lay health worker review team searched Medline, Embase and six other databases for RCTs up to August 2006. The relevance of all titles, abstracts and the full text of retrieved articles was assessed independently by two review team members, the risk of bias for each included study evaluated, and data extracted. Studies were grouped according to nine categories and, where feasible, results of the included studies were combined to obtain an overall estimate of effect using meta-analysis.

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## **RESULTS**

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The overview team found 757 potentially eligible articles and reports, of which 26 systematic reviews were deemed eligible and four literature reviews or overviews of systematic reviews were identified as helpful background materials. As listed in the key messages, the overview team found the following research evidence regarding the effects of HRH policy levers:

### ***Training and regulatory mechanisms***

No studies met the minimum eligibility criteria for studies of effects, however, admissions criteria and the location of training sites were identified as promising policy levers that warrant rigorous evaluation

### ***Financial mechanisms: payment for performance and remuneration method***

The effects of payment for performance and remuneration method on the performance of physicians were highly varied in developed country settings, which may be related to differences in organizational context

### ***Financial mechanisms: incentives for location in underserved areas***

No studies met the minimum eligibility criteria for studies of effects, however, direct financial incentives have been identified in developed country settings as a promising policy lever that warrants rigorous evaluation

### ***Organizational mechanisms: changes in workflow/workload***

Organizational interventions that involve changes to workflow/workload can increase efficiency in developed country settings

### ***Organizational mechanisms: changes in information flow/electronic health records***

The effects of electronic health records on efficiency are highly varied in developed country settings and could prove challenging to implement in many LMIC settings

***Organizational mechanisms: use of lay health workers***

Lay health workers can contribute positively by, for example, improving tuberculosis treatment outcomes, reducing childhood mortality and morbidity, increasing immunization uptake levels in children, and promoting exclusive breastfeeding (but not the initiation of breastfeeding or any breastfeeding up to six months of age)

***Organizational mechanisms: integration of services***

The effects of service integration are highly varied in LMIC settings

***Organizational mechanisms: teamwork***

Teamwork is a promising intervention, with the potential to reduce costs and have a positive effect on practitioners and patients. These findings, however, were based on only one study conducted in a developed country setting and on only one study conducted in an LMIC setting

***Organizational mechanisms: substitution***

Substituting nurses for physicians can result in comparable or better patient outcomes and satisfaction but it is not clear whether any of the studies were conducted in LMIC settings. Cost reductions may be offset by greater numbers of tests and admissions, but this will depend upon the pay differentials between doctors and nurses in different settings. Substituting cheaper care assistants for nurses can have mixed effects in developed country settings but these effects have typically been examined in low-quality studies. Extending the role of pharmacists in developed country settings can result in comparable outcomes to services delivered by other health professionals. Substituting lay health workers for health professionals can have mixed effects in LMIC settings

***Organizational mechanisms: QI and CE strategies***

QI and CE strategies that focus on improving the knowledge, attitudes and behaviours of health workers (such as audit with feedback) can achieve, on average, a 10% improvement in performance. However, the effects for any single strategy can be highly varied and few studies have been conducted in LMIC settings. QI and CE strategies that focus on organizational strategies (such as multidisciplinary teams for patient care and integrated care services) can improve patient outcomes. None of these studies were conducted in LMIC settings.

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**DISCUSSION**

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Despite the widespread recognition that HRH are critical to achieving both health-related MDGs and national health goals, policy-makers and stakeholders (including civil society groups) there is remarkably little research evidence about the effects of training, regulatory, financial and organizational mechanisms on the supply, distribution, efficiency and performance of health workers. Much of the research evidence on effects that has been systematically reviewed pertains to organizational mechanisms that could increase efficiency (e.g., substituting for or extending the role of different types of health workers) or enhance the performance of health workers (e.g., undertaking QI or CE strategies). Much of this evidence comes from developed country settings and thus the applicability to LMICs may be limited.

This policy brief has identified a small number of policy levers found to be effective in some LMIC settings and some additional policy levers that can be considered promising by virtue of their having been found to be effective in some developed country settings and/or their having been found to be effective in certain lower quality studies conducted in LMIC settings. 'Effective' interventions need to be evaluated with reference to other types of evidence as well, notably local evidence about the presence of modifying factors, need (prevalence, baseline risk or status), values, costs and the availability of resources. For example, the cost-effectiveness of substituting nurses for doctors in any particularly country will hinge on (among other considerations) the two professions' current scopes of practice and rates of pay. The 'promising' interventions need to be evaluated as a planned component of their implementation.

Six key strengths make this particular policy document useful: 1) by identifying, selecting, assessing and synthesizing existing systematic reviews in a timely yet systematic way it allows policy-makers and stakeholders to get a quick sense of the state of research evidence about effects (i.e., about *one* important input to HRH policy-making); 2) by describing the overview of systematic reviews of effects in a transparent way it allows policy-makers, stakeholders and researchers to contest particular steps in the process and suggest ways to improve the process and the presentation of results; 3) by mapping the available research evidence against the taxonomy of policy levers and the outcomes the policy levers could affect, highlights the significant gaps in the current stock of systematic reviews; 4) by providing checklists to support the assessment of research evidence it provides tools that can be used by policy-makers (and those who support them) and by stakeholders; 5) by providing evidence summaries, summary of findings tables and GRADE evidence profiles for select systematic reviews it provides learning opportunities for policy-makers and stakeholders about possible policy levers, relevant applicability, equity and scaling up considerations, and approaches to evaluation; and 6) by providing an example of a systematic review (namely that of the effects of using lay health workers to deliver health services) it provides a learning opportunity for policy-makers and stakeholders concerning the nature of the evidence that underlies summaries and GRADE evidence profiles.

The policy brief has three weaknesses: 1) in emphasizing timeliness over comprehensiveness it neglects bibliographic databases outside the health sector (such as social science databases) and languages other than English; 2) in focusing on systematic reviews of effects it neglects research evidence of other types, such as research evidence that would inform problem definition (e.g., qualitative studies about stakeholders' views about and experiences with different policy levers); and 3) in focusing on research evidence it neglects other inputs to HRH policy-making (such as values and beliefs, stakeholder power, institutional constraints, and donor funding flows), which can be better considered at a country level.