Interventions to reduce the impact of dual practice in the public health sector

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Abstract

Introduction

Dual practice (i.e. workers who work in the public and private sector) has an impact on health services in terms of quality and costs. However, the effectiveness of regulatory policies has not been proven.

Methods

We searched in Epistemonikos, the largest database of systematic reviews in health, which is maintained by screening multiple information sources, including MEDLINE, EMBASE, Cochrane, among others. We extracted data from the systematic reviews, reanalyzed data of primary studies, conducted a meta-analysis and generated a summary of findings table using the GRADE approach.

Results and conclusions

We identified three systematic reviews that included 23 primary studies overall, of which all correspond to observational studies. We concluded it is not clear whether the interventions to reduce the negative consequences of dual practice in the health system are effective because the certainty of the available evidence is very low.

Problem

Dual practice is a common phenomenon in mixed health systems with the participation of public and private actors. The definition most frequently used is 'to carry out more than one job' [1]. In low- and middle-income countries, it has negative effects on the public sector, leading to a deficit of human resources, low salaries and poor working conditions secondary to the growth of the private sector [1].

Although the impact of these practices depends on the context of each country, the negative effects on the public system seem to prevail. This translates, for example, into conflicts of interest where professionals provide suboptimal care, in terms of quality or timeliness, in order to transfer them to the private system[1]. Likewise, dual practice would cause difficulties for the public sector to retain the necessary human resources to satisfy the demand of the population[2]. Despite the observation of the potential negative

effects of dual practice on health systems, there is still controversy about the effectiveness of regulatory alternatives to avoid these consequences.

Key messages

- It is not clear whether interventions to reduce the negative consequences of dual practices in the health system are effective because the certainty of the available evidence is very low.

Methods

We searched in Epistemonikos, the largest database of systematic reviews in health, which is maintained by screening multiple information sources, including MEDLINE, EMBASE, Cochrane, among others, to identify systematic reviews and their included primary studies. We extracted data from the identified reviews and reanalyzed data from primary studies included in those reviews. With this information, we generated a structured summary denominated FRISBEE (Friendly Summary of Body of Evidence using Epistemonikos) using a pre-established format, which includes key messages, a summary of the body of evidence (presented as an evidence matrix in Epistemonikos), meta-analysis of the total of studies when it is possible, a summary of findings table following the GRADE approach and a table of other considerations for decision-making.

About the body of evidence for this question

What is the evidence. See evidence matrix in Epistemonikos later	We found three systematic reviews[1,3,4] that included 23 primary studies[5-28] of which, all correspond to observational studies.
What types of patients were included*	The 23 studies were carried out in countries from different income levels, analyzing physicians or heterogeneous groups that included all types of health professionals. Eight studies were conducted in high-income countries[5,6,13,16-18,20,24], seven studies in low- and middle-income countries[7,10-12,15,25,26] and three studies in countries in both categories [8,9,14]. Seventeen studies focused exclusively on physicians[5-11,13,14,16,17,19,20,24-27] and three in any health professional[12,18,15].
What types of interventions were included*	All the studies evaluated the effect on the public sector of regulatory policies at a national level. Three studies evaluated the total prohibition of dual practices [7,10,13], five financial restrictions[5,6,17,22,25], three restrictions on licenses of professional practice[11,12,17] and six total liberalization (absence of regulation)[9,15,24,19,20,26].
What types of outcomes were measured	The outcomes, as grouped by the systematic reviews, were the following: migration of professionals to the private sector, quality of care and migration of patients to the private sector.

* The information about primary studies is extracted from the systematic reviews identified, unless otherwise specified.

Summary of Findings

The information on the effects of regulation of dual practices in the public system is based on 21 of the 23 studies identified[5-15,17,18,20-27], since two studies did not report any of the outcomes of interest[16,19]. Twelve studies reported migration of professionals to the private system[6-14,17,22,24], fourteen reported quality of care[5,6,9-15,18,20,22,24,27] and nine migration of patients to the private system[9,11,12,15,17,18,20,24,26].

None of the identified reviews managed to extract the data in a way that could be incorporated into a meta-analysis, so the information presented below corresponds to a narrative synthesis of the information obtained from the reviews.

The summary of findings is as follows:

- It is not clear whether interventions to reduce the negative consequences of dual practices in the health system reduces migration of professionals, because the certainty of the available evidence is very low.

- It is not clear whether interventions to reduce the negative consequences of dual practices in the health system improve the quality of care, because the certainty of the available evidence is very low.
- It is not clear whether interventions to reduce the negative consequences of dual practices in the health system reduce patient migration, because the certainty of the available evidence is very low.

Absence of regulation of dual health practices.

Population	Doctors
Exposition	Absence of regulation of dual practices.

Outcome	Effect	Certainty of the evidence (GRADE)
Migration of professionals	In high-income countries, the migration of professionals to the private sector increased[24].	⨁◯◯◯[1,2] Very low
Quality of care	Three studies reported negative effects on the quality of care[15,20,24] and one did not report effects[26].	⨁◯◯◯[1,2,3] Very low
Migration of patients	Four studies in low- and middle- income countries, reported an increase in patient migration to the private system[9,15,24,26].	⨁◯◯◯[1,2] Very low

GRADE: Degrees of evidence from the GRADE Working Group (see below).

[1] Since all the evidence comes from observational studies, the certainty of the initial evidence is low.
[2] We downgraded the certainty of the evidence in one level for risk of bias in the data provided.

Prohibition of dual health practices.

Population	Doctors
Intervention	Prohibition of dual practices
Comparison	No prohibition or less regulation (characteristics not reported clearly in the studies)

Outcome	Effect	Certainty of the evidence (GRADE)
Migration of professionals	One study reported an increase in the migration of professionals in high-income countries[17] and another an increase in low-income countries[7].	⨁◯◯◯[1,2] Very low
Quality of care	One study reported negative effects on the quality of care in low-income countries[7] and one a positive effect in high-income countries[13].	⨁◯◯◯[1,2] Very low
Migration of patients	One study reported an increase in high-income countries[17].	⨁◯◯◯[1,2] Very low

GRADE: Degrees of evidence from the GRADE Working Group (see below).

[1] Since all the evidence comes from observational studies, the certainty of the initial evidence is low
[2] We downgraded the certainty of the evidence in one level ford risk of bias in the data provided.

Regulation of dual practices.		
Population	Doctors from high- and middle-income countries	
Intervention	Financial regulation	
Comparison	No regulation or less regulation (not reported clearly in the studies)	
Outcome	Effect	Certainty of the evidence (GRADE)
Migration of professionals	Two studies reported an increase in the migration of professionals in high-income countries[6,22] and another two an increase in low-income countries[8,14].	⨁◯◯◯[1,2] Very low
Quality of care	Five studies reported positive effects on the quality of care in high-income countries[5,6,14,17,22]. One study reported negative effects in low-middle income countries[14].	⨁◯◯◯[1,2] Very low
Migration of patients	No study reported information.	--

GRADE: Degrees of evidence from the GRADE Working Group (see below).

[1] Since all the evidence comes from observational studies, the certainty of the initial evidence is low
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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 concept is also called 'quality of the evidence' or 'confidence in effect estimates'.

† Substantially different = a large enough difference that it might affect a decision

Other considerations for decision-making

To whom this evidence does and does not apply

The identified evidence comes from countries of different income levels and organization of their health system. Therefore, these results may be applicable to different realities of health systems.

The conclusions apply essentially to the regulation of dual practices in physicians, given that the information in the group of health workers or other subgroups of professionals is very scarce. However, it is not clear that there are a priori reasons to assume a different behavior of non-medical workers in the regulation of dual practices. Therefore, in the absence of direct evidence, it is reasonable to use the available evidence to inform decisions about these regulations.

About the outcomes included in this summary

The selected outcomes are those considered critical for the decision making, according to the opinion of the authors of this summary.

In general, the selected outcomes coincide with those used in the main systematic reviews analyzed. The lack of report of measurements related to the costs for the health system and for the patients must be highlighted.

Balance between benefits and risks, and certainty of the evidence

The absence of regulation of dual practices in low- and middle-income countries could reduce the quality of care of the public system and increase the migration of professionals to the private system, although the certainty of the available evidence is very low.

It is not possible to make an adequate balance between benefits and risks of the regulation of dual practices, due to the associated uncertainty.

A common limitation in the reviews found is the absence of an adequate description of the comparator adopted when reporting the effects of the intervention.

Resource considerations

Dual practice has a negative effect on health systems, but it is generally poorly recognized as a problem, which generates a low level of regulation by countries[2].

It is not possible to make an adequate balance between costs and benefits of the potential regulations due to the existing uncertainty.

What would patients and their doctors think about this intervention

Most physicians and health professionals are inclined against the regulation of dual practices, especially in low- and middle-income countries where the remuneration gap between the public and private systems is greater[1].

Although most countries do not have regulation of dual practices due to the difficulties of implementation, especially in low- and middle-income countries, international organizations such as the World Health Organization recommend addressing these practices and their possible regulatory alternatives, in order to implement optimal human resources' health policies guarantee sufficient coverage[2].

Differences between this summary and other sources

Within the systematic reviews analyzed, the need to address the dual practices in the countries is mentioned as a common element, but it is necessary to have more and better studies regarding the effect of the interventions for their regulation.

On the other hand, in a publication of 2016[2], it is considered as a relevant factor to achieve the Sustainable Development Goals (SDG) of the World Health Organization and achieve universal coverage, including protection against financial risks and access to basic quality health services. This would be particularly necessary in low- and middle-income countries, which are more affected by the problem. It is important to recognize the challenges of implementation for these countries in contexts where institutions might lack the strength to incorporate effective regulations.

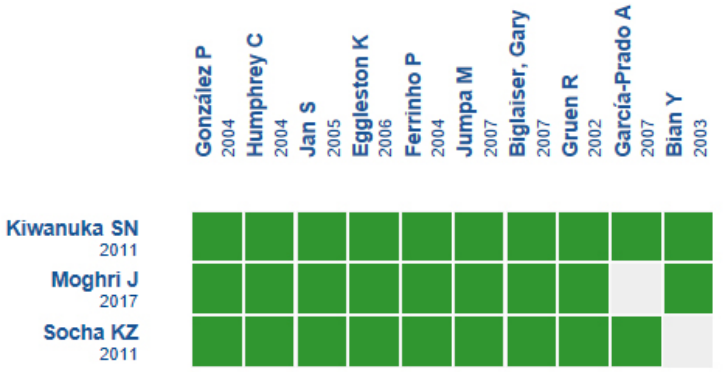
This publication also points out to the lack of evidence regarding the effectiveness of the regulatory mechanisms, which is consistent with the conclusions of the systematic reviews analyzed.

Could this evidence change in the future?

The probability that future evidence changes the conclusions of this summary is high, due to the uncertainty that the existing evidence provides.

No ongoing studies or reviews were identified in PROSPERO or in the International Clinical Trials Registry Platform (ICTRP) of the World Health Organization.

How we conducted this summary



An evidence matrix is a table that compares systematic reviews that answer the same question.
Rows represent systematic reviews, and columns show primary studies.
The boxes in green correspond to studies included in the respective revisions.
The system automatically detects new systematic reviews including any of the primary studies in the matrix, which will be added if they actually answer the same question.

Follow the link to access the **interactive version:** Regulation of dual practice in the health sector.

Notes

The upper portion of the matrix of evidence will display a warning of "new evidence" if new systematic reviews are published after the publication of this summary. Even though the project considers the periodical update of these summaries, users are invited to comment in *Medwave* or to contact the authors through email if they find new evidence and the summary should be updated earlier.

After creating an account in Epistemonikos, users will be able to save the matrixes and to receive automated notifications any time new evidence potentially relevant for the question appears.

This article is part of the Epistemonikos Evidence Synthesis project. It is elaborated with a pre-established methodology, following rigorous methodological standards and internal peer review process. Each of these articles corresponds to a summary, denominated FRISBEE (Friendly Summary of Body of Evidence using Epistemonikos), whose main objective is to synthesize the body of evidence for a specific question, with a friendly format to clinical professionals. Its main resources are based on the evidence matrix of Epistemonikos and analysis of results using GRADE methodology. Further details of the methods for developing this FRISBEE are described here (http://dx.doi.org/10.5867/medwave.2014.06.5997)

Epistemonikos foundation is a non-for-profit organization aiming to bring information closer to health decision-makers with technology. Its main development is Epistemonikos database

www.epistemonikos.org.

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