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TABLE OF CONTENTS

HEADER 1
ABSTRACT 1
PLAIN LANGUAGE SUMMARY 2
BACKGROUND 4
OBJECTIVES 5
METHODS 5
RESULTS 7
Figure 1. 8
DISCUSSION 11
AUTHORS' CONCLUSIONS 13
ACKNOWLEDGEMENTS 14
REFERENCES 15
ADDITIONAL TABLES 20
APPENDICES 52
CONTRIBUTIONS OF AUTHORS 82
DECLARATIONS OF INTEREST 82
SOURCES OF SUPPORT 82
INDEX TERMS 82

[Overview of Reviews]

Governance arrangements for health systems in low-income countries: an overview of systematic reviews

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ABSTRACT

Background

Governance arrangements include changes in rules or processes that determine authority and accountability for health policies, organisations, commercial products and health professionals, as well as the involvement of stakeholders in decision-making. Changes in governance arrangements can affect health and related goals in numerous ways, generally through changes in authority, accountability, openness, participation and coherence. A broad overview of the findings of systematic reviews can help policymakers, their technical support staff and other stakeholders to identify strategies for addressing problems and improving the governance of their health systems.

Objectives

To provide an overview of the available evidence from up-to-date systematic reviews about the effects of governance arrangements for health systems in low-income countries. Secondary objectives include identifying needs and priorities for future evaluations and systematic reviews on governance arrangements and informing refinements of the framework for governance arrangements outlined in the overview.

Methods

We searched Health Systems Evidence in November 2010 and PDQ Evidence up to 17 December 2016 for systematic reviews. We did not apply any date, language or publication status limitations in the searches. We included well-conducted systematic reviews of studies that assessed the effects of governance arrangements on patient outcomes (health and health behaviours), the quality or utilisation of healthcare services, resource use (health expenditures, healthcare provider costs, out-of-pocket payments, cost-effectiveness), healthcare

provider outcomes (such as sick leave), or social outcomes (such as poverty, employment) and that were published after April 2005. We excluded reviews with limitations that were important enough to compromise the reliability of the findings of the review. Two overview authors independently screened reviews, extracted data and assessed the certainty of evidence using GRADE. We prepared SUPPORT Summaries for eligible reviews, including key messages, 'Summary of findings' tables (using GRADE to assess the certainty of the evidence) and assessments of the relevance of findings to low-income countries.

Main results

We identified 7272 systematic reviews and included 21 of them in this overview (19 primary reviews and 2 supplementary reviews). We focus here on the results of the 19 primary reviews, one of which had important methodological limitations. The other 18 were reliable (with only minor limitations).

We grouped the governance arrangements addressed in the reviews into five categories: authority and accountability for health policies (three reviews); authority and accountability for organisations (two reviews); authority and accountability for commercial products (three reviews); authority and accountability for health professionals (seven reviews); and stakeholder involvement (four reviews).

Overall, we found desirable effects for the following interventions on at least one outcome, with moderate- or high-certainty evidence and no moderate- or high-certainty evidence of undesirable effects.

Decision-making about what is covered by health insurance

- Placing restrictions on the medicines reimbursed by health insurance systems probably decreases the use of and spending on these medicines (moderate-certainty evidence).

Stakeholder participation in policy and organisational decisions

- Participatory learning and action groups for women probably improve newborn survival (moderate-certainty evidence).
- Consumer involvement in preparing patient information probably improves the quality of the information and patient knowledge (moderate-certainty evidence).

Disclosing performance information to patients and the public

- Disclosing performance data on hospital quality to the public probably encourages hospitals to implement quality improvement activities (moderate-certainty evidence).
- Disclosing performance data on individual healthcare providers to the public probably leads people to select providers that have better quality ratings (moderate-certainty evidence).

Authors' conclusions

Investigators have evaluated a wide range of governance arrangements that are relevant for low-income countries using sound systematic review methods. These strategies have been targeted at different levels in health systems, and studies have assessed a range of outcomes. Moderate-certainty evidence shows desirable effects (with no undesirable effects) for some interventions. However, there are important gaps in the availability of systematic reviews and primary studies for the all of the main categories of governance arrangements.

PLAIN LANGUAGE SUMMARY

Effects of governance arrangements for health systems in low-income countries

What is the aim of this overview?

The aim of this Cochrane Overview is to provide a broad summary of what is known about the effects of different governance arrangements for health systems in low-income countries.

This overview is based on 19 relevant systematic reviews. These systematic reviews searched for studies that evaluated different types of governance arrangements. The reviews included a total of 172 studies.

This overview is one of a series of four Cochrane Overviews that evaluate health system arrangements.

Main results

What are the effects of different ways of organising authority and accountability for health policies?

Three reviews were included and the key findings are that:

- collaboration between local health agencies and other local government agencies may lead to little or no difference in physical health or quality of life (low-certainty evidence);

- placing restrictions on the medicines reimbursed by health insurance systems probably decreases the use of and spending on these medicines (moderate-certainty evidence);

- it is uncertain if fraud prevention, detection and response interventions reduce healthcare fraud and related spending (very low-certainty evidence).

What are the effects of different ways of organising authority and accountability for organisations?

Two reviews were included and the key findings are that:

- Contracting non-state, not-for-profit providers to deliver health services may increase access to and use of these services, improve people's health outcomes and reduce household spending on health (low-certainty evidence). No evidence was available on whether contracting out was more effective than using these funds in the state sector.

What are the effects of different ways of organising authority and accountability for commercial products such as medicines and technologies?

Three reviews were included and the key findings are that:

- systems in which the World Health Organization (WHO) certifies medicine manufacturers (prequalification) and medicines registration (in which medicine regulatory authorities assess medicine manufacturers to ensure they meet international standards) may decrease the proportion of medicines that are substandard or counterfeit (low-certainty evidence);

- establishing a maximum reimbursement for pharmacies dispensing similar medicines covered by insurance may increase the use of generic medicines and may reduce the use of brand-name medicines (low-certainty evidence), but it is uncertain whether this approach affects the overall amount spent on medicines (very low-certainty evidence);

- direct-to-consumer advertising increases people's requests for medicines and the numbers of prescriptions given (high-certainty evidence).

What are the effects of different ways of organising authority and accountability for healthcare providers?

Seven reviews were included and the key findings are that:

- training programmes for district health system managers may increase their knowledge of planning processes and their monitoring and evaluation skills (low-certainty evidence);

- reducing immigration restrictions in high-income countries probably increases the migration of nurses from low- and middle-income to these countries (moderate-certainty evidence);

- it is uncertain whether inspection by an external body of healthcare organisation adherence to quality standards improves adherence, quality of care or health-acquired infection rates in hospitals (very low-certainty evidence).

What are the effects of different ways of organising stakeholder involvement in governing health services?

Four reviews were included and the key findings are that:

- participatory learning and action groups for women probably improve newborn survival (moderate-certainty evidence) and may improve maternal survival (low-certainty evidence);

- disclosing performance data on health insurance scheme quality to the public may lead people to select health plans that have better quality ratings or to avoid those with worse ratings and may lead to slight improvements in clinical outcomes for health insurance schemes (low-certainty evidence);

- disclosing performance data on hospital quality to the public may lead to little or no difference in people's selection of hospitals (low-certainty evidence), probably encourages hospitals to implement quality improvement activities (moderate-certainty evidence) and may lead to slight improvements in hospital clinical outcomes (low-certainty evidence);

- disclosing performance on individual healthcare providers to the public probably leads people to select providers that have better quality ratings (moderate-certainty evidence).

No studies evaluated the effects of stakeholder participation in policy and organisational decisions.

How up-to-date is this overview?

The overview authors searched for systematic reviews that had been published up to 17 December 2016.

BACKGROUND

This is one of four overviews of systematic reviews of strategies for improving health systems in low-income countries (Ciapponi 2014; Pantoja 2014; Wiysonge 2014). The aim is to provide broad overviews of the evidence about the effects of delivery, financial and governance arrangements, and implementation strategies. This overview addresses governance arrangements.

We summarise the scope of each of the four overviews below.

1. Delivery arrangements include changes in who receives care and when, who provides care, the working conditions of those who provide care, coordination of care amongst different providers, where care is provided, the use of information and communication technology to deliver care, and quality and safety systems (Ciapponi 2014).
2. Financial arrangements include changes in how funds are collected, insurance schemes, how services are purchased, and the use of targeted financial incentives or disincentives (Wiysonge 2014).
3. Governance arrangements include changes in rules or processes that determine authority and accountability for health policies, organisations, commercial products and health professionals, and the involvement of stakeholders in decision-making.
4. Implementation strategies include interventions designed to bring about changes in healthcare organisations, the behaviour of healthcare professionals or the use of health services by healthcare recipients (Pantoja 2014).

The term 'governance' has been defined in several ways, as illustrated in Table 1. Although these definitions overlap, they may create confusion. We have defined governance here as rules or processes that affect the way in which powers are exercised, particularly with regard to authority, accountability, openness, participation, and coherence. Governance includes processes and institutions through which individuals and groups "articulate their interests, mediate their differences and exercise their legal rights and obligations" (Siddiqi 2009). Our focus accordingly is on the effects of governance arrangements to achieve health and related goals, such as efficiency, equity, human rights, responsiveness and fairness (Murray 2000). Attributes such as accountability, openness and participation can also be goals in and of themselves. For example, the World Health Organization (WHO)'s Declaration of Alma-Ata states that "The people have a right and duty to participate individually and collectively in the planning and implementation of their health care" (WHO 1978). Governance arrangements can potentially affect patient outcomes (health and health behaviours), the quality or utilisation of healthcare services, resource use, healthcare provider outcomes (such as sick leave) and social outcomes (such as poverty or employment) (EPOC 2017). Impacts on these outcomes can be intended and desirable, or unintended and undesirable. In addition, the effects of delivery arrangements on these outcomes can either reduce or increase inequities. Health systems in low-income countries differ from those in high-income countries in terms of the availability of resources and access to services. Thus, some problems in high-income countries are not relevant to low-income countries, such as governance arrangements that rely on expensive technologies that are not available in low-income countries. Similarly, some problems in low-income countries are not relevant to high-income countries, such as policies that regulate emigration of health workers. Our focus in this overview is specifically on governance arrangements in low-income countries, by which we mean countries that the World Bank classifies as low- or lower-middle-income (World Bank Group 2016). Because upper-middle-income countries often have a mixture of health systems with problems similar to both those in low-income countries and high-income countries, our focus is relevant to middle-income countries but excludes consideration of conditions that are not relevant in low-income countries and are relevant in middle-income countries.

Description of the interventions

It is possible to categorise alternative governance arrangements in a number of ways. For example, Health Systems Evidence (Lavis 2015) uses the following categories: policy authority, organisational authority, commercial authority, professional authority, and consumer and stakeholder involvement. Frenk 2013 and Murray 2000, as noted in Table 1, have described six sub-functions of stewardship (a particular type of governance): overall system design, performance assessment, priority setting, intersectoral advocacy, regulation and consumer protection. Furthermore, WHO has identified three basic tasks of stewardship (WHO 2000): formulating health policy (defining the vision and direction), exerting influence (approaches to regulation), and collecting and using intelligence. The types of interventions that we include in this overview are listed in Table 2 using a structure derived from the taxonomy developed by Lavis 2015. We used this framework as our starting point because it is not limited to stewardship, and it is comprehensive and detailed. We adapted the framework in order to clarify the classification of interventions where this was ambiguous.

How the intervention might work

Changes in governance arrangements can affect health and related goals in multiple ways. Generally, this is likely to occur through changes in authority, accountability, openness, participation, and coherence (promotion of mutually reinforcing policy actions). Table 3 presents examples of how changes in different types of governance arrangements might lead to better healthcare outcomes.

Why it is important to do this overview

Our objective is to provide a broad overview of current evidence from systematic reviews evaluating the effects of alternative governance arrangements for health systems in low-income countries. We recognise that there is a paucity of research that has evaluated the effects of governance arrangements (Bennington 2010; Frenk 2013). Nonetheless, a broad overview of the findings of systematic reviews can help policymakers, their technical support staff and other stakeholders to identify strategies for addressing problems with the governance of their health systems. It can also help to identify needs and priorities for evaluations of governance arrangements, as well as priorities for systematic reviews of the effects of governance arrangements. The overview also helps to refine the framework outlined in Table 2 for considering alternative health system arrangements for allocating authority and ensuring accountability, openness, participation and coherence.

Our focus is specifically on low-income countries in this overview because there are structural differences in health systems and country contexts compared to middle- and high-income countries. These differences make it difficult to select, analyse and summarise

the evidence for low-, middle- and high-income countries in a single overview. By focusing on low-income countries, we were able to exclude reviews that are not relevant to those countries and to consistently address the relevance of the evidence in included reviews for those countries. This makes the overview more helpful for people making decisions about governance arrangements in low-income countries.

Changes in health systems are complex. They may be difficult to evaluate, the applicability of the findings of evaluations from one setting to another may be uncertain, and synthesising the findings of evaluations may be difficult. However, the alternative to well-designed evaluations is poorly designed evaluations; the alternative to systematic reviews is non-systematic reviews; and the alternative to using the findings of systematic reviews to inform decisions is making decisions without the support of this rigorous evidence. Policymakers still need other types of information, including context specific information and judgments (e.g. judgments about the applicability of the findings of systematic reviews in a specific context) when making decisions about governance arrangements.

This overview can help people making decisions about governance arrangements by summarising the findings of available systematic reviews, including estimates of the effects of changes in governance arrangements and the certainty of those estimates, by identifying important uncertainties identified by those systematic reviews and by identifying where new or updated systematic reviews are needed. The overview can also help to inform judgments about the relevance of the available evidence in a specific context (Rosenbaum 2011).

OBJECTIVES

To provide an overview of the available evidence from up-to-date systematic reviews about the effects of governance arrangements for health systems in low-income countries. Secondary objectives include identifying needs and priorities for future evaluations and systematic reviews on governance arrangements and informing refinements of the framework for governance arrangements outlined in the overview (Table 2).

METHODS

We used the methods described below in all four overviews of health system arrangements and implementation strategies in low-income countries (Ciapponi 2014; Pantoja 2014; Wiysonge 2014).

Criteria for considering reviews for inclusion

We included systematic reviews that:

- assessed the effects of governance arrangements (as defined in the Background);
- had a Methods section with explicit selection criteria;
- reported at least one of the following types of outcomes: patient outcomes (health and health behaviors), the quality or utilisation of healthcare services, resource use (health expenditures, healthcare provider costs, out-of-pocket payments, cost-effectiveness), healthcare provider outcomes (such as sick leave, burnout), or social outcomes (such as poverty, employment);
- were relevant to low-income countries as classified by the World Bank (World Bank Group 2016);
- were published after April 2005.

Judgments about relevance to low-income countries are sometimes difficult to make, and we are aware that evidence from high-income countries is not directly generalisable to low-income countries. We based our judgments on an assessment of the likelihood that the governance arrangements considered in a review address a problem that is important in low-income countries, would be feasible, and would be of interest to decision-makers in low-income countries, regardless of where the included studies took place. So, for example, we excluded arrangements that require technology that is not widely available in low-income countries. At least two of the overview authors made judgments about the relevance to low-income countries and discussed with the other authors whenever there was uncertainty. Reviews that only included studies from a single high-income country were not eligible due to concerns about the wider applicability of the findings of such reviews. However, we did consider reviews that only included studies from high-income countries if the interventions were relevant for low-income countries.

We excluded reviews published before April 2005 as these were highly unlikely to be up-to-date. We also excluded reviews that had methodological limitations that were important enough to compromise the reliability of the review findings (Appendix 1).

Search methods for identification of reviews

We searched Health Systems Evidence in November 2010 using the following filters.

1. Health system topics = governance arrangements.
2. Type of synthesis = systematic review or Cochrane Review.
3. Type of question = effectiveness.
4. Publication date range = 2000 to 2010.

We conducted subsequent searches using PDQ ('pretty darn quick')-Evidence, which was launched in 2012. We searched PDQ up to 17 December 2016, using the filter 'Systematic Reviews' with no other restrictions. We updated that search, excluding records that were entered into PDQ-Evidence prior to the date of the last previous search.

PDQ-Evidence is a database of evidence for decisions about health systems, which is derived from the Epistemonikos database of systematic reviews (Rada 2013). It includes systematic reviews, overviews of reviews (including evidence-based policy briefs) and studies included in systematic reviews. Epistemonikos and PDQ-Evidence incorporate searches from the following databases with no language or publication status restrictions.

1. Cochrane Database of Systematic Reviews (CDSR).
2. PubMed.
3. Embase.
4. Database of Abstracts of Reviews of Effectiveness (DARE).
5. Health Technology Assessment Database.
6. CINAHL.
7. LILACS.
8. PsycINFO.

9. Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre) Evidence Library.
10. 3ie Systematic Reviews and Policy Briefs.
11. World Health Organization (WHO) Database.
12. Campbell Library.
13. Supporting the Use of Research Evidence (SURE) Guides for Preparing and Using Evidence-Based Policy Briefs.
14. European Observatory on Health Systems and Policies.
15. UK Department for International Development (DFID).
16. National Institute for Health and Care Excellence (NICE) public health guidelines and systematic reviews.
17. Guide to Community Preventive Services.
18. Canadian Agency for Drugs and Technologies in Health (CADTH) Rx for Change.
19. McMaster Plus KT+.
20. McMaster Health Forum Evidence Briefs.

Appendix 2 presents the detailed search strategies for PubMed, LILACS, Embase, CINAHL and PsycINFO. We screened all records in the other databases. PDQ staff and volunteers update these searches weekly for Pubmed and monthly for the other databases, screening records continually, and adding new reviews to the database daily.

In addition, we screened all of the Cochrane Effective Practice and Organisation of Care (EPOC) Group reviews in Archie (i.e. Cochrane's central server for managing documents) and the reference lists of relevant policy briefs and overviews of reviews.

Data collection and analysis

Selection of reviews

Two of the overview authors (CH and SL) independently screened the titles and abstracts found in PDQ-Evidence to identify reviews that appeared to meet the inclusion criteria. Two other authors (AO and SL) screened all of the titles and abstracts that we could not confidently include or exclude after the first screening to identify any additional eligible reviews. One of the overview authors screened the reference lists (CH).

One of the overview authors applied the selection criteria to the full text of potentially eligible reviews and assessed the reliability of reviews that met all of the other selection criteria (CH) (Appendix 1). Two other authors (AO or SL) independently checked these judgments.

Data extraction and management

We summarised each included review using the approach developed by the SUPPORT collaboration (Rosenbaum 2011). We used standardised data extraction forms to extract data on the background of the review: interventions, participants, settings and outcomes; key findings; and considerations of applicability, equity, economic considerations, and monitoring and evaluation. We assessed the certainty of the evidence for the main comparisons using the GRADE approach (Guyatt 2008; Schünemann 2011a; Schünemann 2011b; EPOC 2016).

Each completed SUPPORT Summary underwent peer-review and was published on the SUPPORT Summaries website, where we provide details about how we prepared the summaries and how we assessed the applicability of the findings, impacts on equity, economic considerations, and the need for monitoring and evaluation. We describe the rationale for the criteria that we used for these assessments in the SUPPORT Tools for evidence-informed health policymaking (Fretheim 2009; Lavis 2009; Oxman 2009a; Oxman 2009b). As noted there, "a local applicability assessment must be done by individuals with a very good understanding of on-the-ground realities and constraints, health system arrangements, and the baseline conditions in the specific setting" (Lavis 2009). In this overview we have made broad assessments of the applicability of findings from studies in high-income countries to low-income countries using the criteria described in the SUPPORT summaries database, with input from people with relevant experience and expertise in low-income countries.

Assessment of methodological quality of included reviews

We assessed the reliability of systematic reviews that met our inclusion criteria using criteria developed by the SUPPORT and SURE collaborations (Appendix 2; SUPPORT 2009, SURE 2011). Based on these criteria, we categorised each review as having:

- only minor limitations;
- limitations that are important enough that it would be worthwhile to search for another systematic review and to interpret the results of this review cautiously, if no better review is available;
- limitations that are important enough to compromise the reliability of the review and prompt its exclusion from the overview.

Data synthesis

We describe the methods used to prepare a SUPPORT Summary of each review in detail on the SUPPORT Summaries website. Briefly, for each included systematic review, we prepared a table summarising what the review authors searched for and what they found (Appendix 3), we prepared 'Summary of findings' tables for each main comparison, and we assessed the relevance of the findings for low-income countries. The SUPPORT Summaries include key messages, important background information, a summary of the findings of the review and structured assessments of the relevance of the review for low-income countries. We subjected the SUPPORT Summaries to review by the lead author of each review, at least one content area expert, people with practical experience in low-income settings, and a Cochrane EPOC Group editor (AO or SL). The authors of the SUPPORT Summaries responded to each comment and made appropriate revisions, and the summaries underwent copy-editing. The editor determined whether the comments had been adequately addressed and whether the summary was ready for publication on the SUPPORT Summary website.

We organised the review by modifying the taxonomy for health systems arrangements used by Health Systems Evidence (Lavis 2015), adjusting this framework iteratively to ensure that we appropriately categorised all of the included reviews and that we included and logically organised all relevant health system governance arrangements. We prepared a table listing the included reviews as well as the types of governance arrangements for which we were not able to identify a reliable, up-to-date review (Table 4). We also prepared a table of excluded reviews (Table 5), describing reviews that addressed a question for which another (more up-to-

date or reliable) review was available, reviews that were published before April 2005 (for which a SUPPORT Summary was available), reviews with results that we did not consider transferable to low-income countries, and reviews with limitations that were important enough to compromise the reliability of the review findings.

We described the characteristics of the included reviews in a table that included the date of the last search, any important limitations, what the review authors searched for and what they found (Appendix 3). We summarised our detailed assessments of the reliability of the included reviews in a separate table (Table 6) showing whether individual reviews met each criterion in Appendix 2.

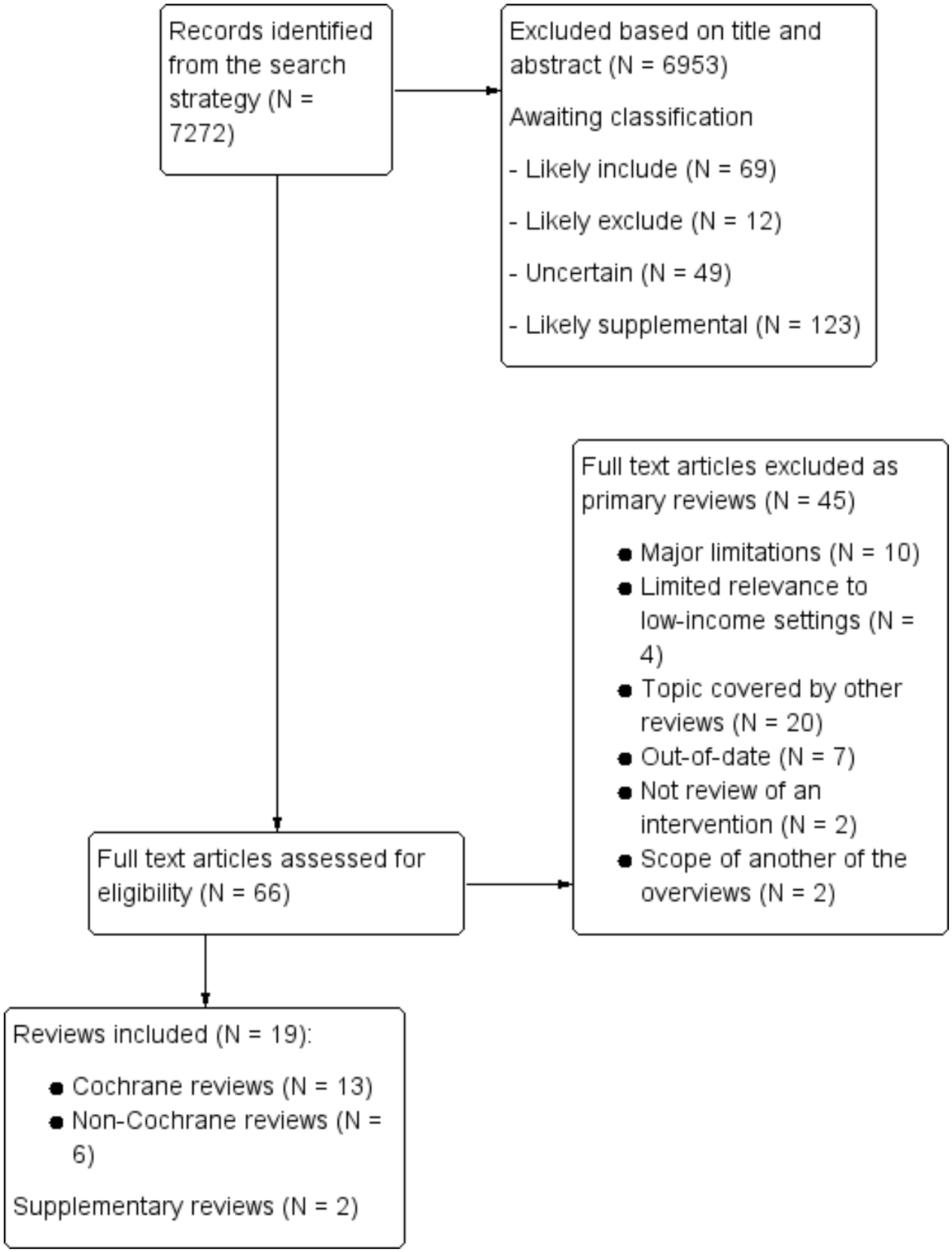
We based our structured synthesis of the findings of our overview on two tables (Table 7; Table 8). We summarised the main findings of each review in a table that included the key messages from each SUPPORT Summary (Table 7). In a second table (Table 8), we reported the direction of the results and the certainty of the evidence for each of the following type of outcomes: health and other patient outcomes; access, coverage or utilisation; quality of care; resource use; social outcomes; impacts on equity; healthcare provider outcomes; adverse effects (not captured by undesirable effects on any of the preceding types of outcomes); and any other important outcomes (that did not fit into any of the preceding types of outcomes) (EPOC 2016). We categorised the direction of results as: a desirable effect, little or no effect, an uncertain effect (very low-certainty evidence), no included studies, an undesirable effect, not reported (i.e. not specified as a type of outcome that was considered by the review authors), or not relevant (i.e. no plausible mechanism by which the type of health system arrangement could affect the type of outcomes).

We took into account other relevant considerations besides the findings of the included reviews when drawing conclusions about implications for practice (EPOC 2017). This includes considerations related to the applicability of the findings and likely impacts on equity. Our conclusions about implications for systematic reviews were based on types of governance arrangements for which we were unable to find a reliable, up-to-date review and on the limitations identified in the included reviews. This includes considerations related to the applicability of the findings and likely impacts on equity. Our conclusions about implications for future evaluations are based on the findings of the included reviews (EPOC 2017).

RESULTS

We identified 7272 systematic reviews of health systems arrangements and implementation strategies. We excluded 6953 reviews from this overview following a review of titles and abstracts. We retrieved the full texts of 66 reviews for further detailed assessment, excluding 43 for the following reasons (Table 5): they had important methodological limitations (10 reviews), were out-of-date (7 reviews), focused on an area already covered by one of the included reviews (20 reviews), did not focus on the effects of interventions (2 reviews), or were of limited relevance to low-income countries (4 reviews) (Figure 1). We considered two other reviews for inclusion but, after discussion, agreed that they were part of the scope of another of the overviews (Jia 2014; Maharaj 2015).We considered Ketelaar 2011 and WHO 2010 to be supplementary in that they contributed information about interventions for which other reviews were the main source of information (because those reviews, Fung 2008 and Grobler 2015, were more reliable, included more studies, or were more up-to-date). Appendix 5 lists the reviews still awaiting classification.

Figure 1. Review flow diagram.



Description of included reviews

We included 19 systematic reviews published between 2005 and 2015 in this overview (Table 4). Of these, 13 were Cochrane Reviews and 6 non-Cochrane reviews.

The reviews reported results from 172 studies and included the following study designs .

- 28 randomised trials (16.3%).
- 6 non-randomised trials (3.5%).
- 15 controlled before-after studies (8.7%).
- 62 interrupted time series studies (36.0%).
- 1 repeated measures study (0.6%).
- 56 observational study designs (32.6%).
- 3 studies used more than one design (1.7%).
- 1 before-after study, reanalysed as an interrupted time series study (0.6%).

The number of studies included in each review ranged from zero (Koehlmoos 2009; Kiwanuka 2011; Rutebemberwa 2014) to 45 (Fung 2008). The dates of the most recent searches in the reviews ranged from October 2004 in Gilbody 2005 to April 2014 in Grobler 2015.

Nine reviews did not include any studies from low- or middle-income countries (Gilbody 2005; Fung 2008; Pariyo 2009; Green 2010; Nilsen 2010; Hayes 2012; Rashidian 2012; Acosta 2014; Grobler 2015), and four reviews only included studies conducted in low- or middle-income countries (Lagarde 2009; Prost 2013; Rockers 2013; El-Jardali 2015). Overall, 74% of the studies from the included reviews took place in high-income countries. Study settings varied and included primary care; home, workplace and community settings; and outpatient and inpatient settings in hospitals and non-primary level health centres (Appendix 3). Health workers who participated in the studies included in the reviews included: physicians, nurses, pharmacists, psychologists, dentists, social workers and traditional healers. Recipients of care participating in studies included in the reviews included children, adults and pregnant mothers (Appendix 3). Outcomes examined by the reviews included: healthcare provider performance, patient outcomes, access to care, coverage, utilisation of health services, social outcomes, impacts on equity and adverse effects (Table 8).

We grouped the governance arrangements addressed in the reviews into five categories.

- Authority and accountability for health policies: 3 reviews.
- Authority and accountability for organisations: 2 reviews.
- Authority and accountability for commercial products: 3 reviews.
- Authority and accountability for health professionals: 7 reviews.
- Stakeholder involvement: 4 reviews.

Methodological quality of included reviews

We present the methodological quality (reliability) of the included reviews in Table 6. One of the 19 included reviews, Rashidian 2012, had important methodological limitations, but we retained it in the overview because no better review was available. We judged the other 18 reviews to have only minor limitations.

We found a number of problems with respect to the identification, selection and critical appraisal of the included studies in reviews. Five reviews had some limitations in relation to the comprehensiveness of the search, and three reviews had some limitations in relation to study selection. We found few problems with respect to the analysis of the available evidence. Two reviews had limitations related to either the description of the extent of heterogeneity or the examination of factors that might explain differences in the results of included studies (Rashidian 2012 and Heintze 2007, respectively).

Effect of interventions

Table 7 summarises the key messages from the included reviews, and Table 8 presents the key findings of the different governance interventions considered by each of the included reviews as well as the certainty of this evidence by outcome. Table 9 summarises the effects and certainty of the evidence from the included reviews according to whether the interventions had desirable effects, little or no effect, undesirable effects, or uncertain effects. In the following text, we report the main findings of the included comparisons.

Authority and accountability for health policies

Three reviews considered interventions related to authority and accountability for health policies (Green 2010; Hayes 2012; Rashidian 2012).

Interagency collaboration

Hayes 2012 examined the effects of interagency collaboration between local health and other local government agencies and services, comparing it with standard practice or no intervention. The review included 16 studies, all conducted in high-income countries. The findings suggested that it is uncertain whether local interagency collaborative interventions decrease mortality or mental health symptoms (very low-certainty evidence). The studies also suggest that these interventions may lead to little or no difference in physical health and quality of life but may slightly improve functional levels among people with psychiatric disorders, compared with standard ways of delivering services (low-certainty evidence).

Decision-making about what is covered by health insurance – restrictions on medicines reimbursement

Green 2010 included 29 studies in high-income countries and assessed the effects of placing restrictions on the medicines reimbursed by health insurance systems. The review found that restrictions on reimbursement probably decrease the use of the targeted medicines as well as expenditures on targeted medicines or medicine classes (moderate-certainty evidence). The impacts of such restrictions on health outcomes and health service utilisation were uncertain (very low-certainty evidence). Review authors could not assess the impacts of such restrictions on equity measures, as none of the included studies reported this outcome.

Policies to reduce corruption

Rashidian 2012 studied the effects of interventions to reduce healthcare fraud. It included four studies from high-income countries. The review found that it is uncertain if prevention, detection and response interventions reduce healthcare fraud and related expenditures (very low-certainty evidence).

Authority and accountability for organisations

Two reviews considered interventions related to authority and accountability for organisations (Koehlmoos 2009; Lagarde 2009). The review addressing the effects of social franchising, Koehlmoos 2009, did not identify any eligible studies, so we do not discuss it further below.

Contracting out

Lagarde 2009 examined the effects of contracting out (sometimes called sub-contracting) and included three studies conducted in middle-income countries. The review found that contracting out services to non-state, not-for-profit providers may increase access to and utilisation of health services (low-certainty evidence). In addition, patient outcomes may be improved and household health expenditures reduced (low-certainty evidence). None of the included studies presented evidence on whether contracting out was more effective than making a similar investment in the public sector. We are therefore uncertain of the effects of investing in contracting out compared to an equivalent investment in public sector health services.

Authority and accountability for commercial products

Three reviews considered interventions related to authority and accountability for commercial products (Gilbody 2005; Acosta 2014; El-Jardali 2015).

Registration of medicines

El-Jardali 2015 explored the effect of interventions for combating or preventing medicine counterfeiting (e.g. medicines with the wrong ingredients, without active ingredients, with insufficient active ingredients or with fake packaging). The review included 21 studies conducted in low- and middle-income countries and found that it is uncertain whether the licensing of drug or medicines outlets reduces the prevalence of counterfeit medicines or the failure rates of medicines undergoing quality testing (very low-certainty evidence). The review also found that medicine registration may decrease the prevalence of counterfeit and substandard medicines (low-certainty evidence) and that the prequalification of medicines by WHO (in which manufacturers receive WHO-approved certificates of good manufacturing practices) may lead to a decrease in the failure rates of medicines undergoing quality testing (low-certainty evidence). Finally, multifaceted interventions (that include a mix of regulations, training of inspectors, public-private collaborations and legal actions against counterfeiters) may be effective in decreasing the prevalence of counterfeit and substandard medicines (low-certainty evidence).

Pricing and purchasing policies for pharmaceuticals

Acosta 2014 evaluated the effects of reference pricing (a system that establishes a benchmark or reference price within a country as the maximum level of reimbursement for a group of drugs or medicines), maximum pricing (a fixed, maximum price that a medicine can have within a health system) and index pricing (maximum refundable price to pharmacies for medicines within an index group of therapeutically interchangeable medicines). The 18 included studies took place in high-income countries. Reference pricing may reduce insurers' cumulative medicine expenditures by shifting medicine use from cost-share medicines (more expensive medicines in the same group as the reference medicines, for which patients have to pay the difference between the reference price and the price of the medicine purchased) to reference medicines; and may increase the use of reference medicines and reduce the use of cost-share medicines (low-certainty evidence). Index pricing may increase the use of generic medicines and may reduce the use of brand-name medicines; may slightly reduce the price of generic medicines; and may have little or no effect on the price of brand-name medicines (low-certainty evidence). It is uncertain whether maximum pricing affects medicine expenditures (very low-certainty evidence). The effects of reference pricing, maximum pricing and index pricing on healthcare utilisation or health outcomes is uncertain, as the included studies did not assess these outcomes.

Marketing regulations

Gilbody 2005 explored the effects of direct-to-consumer advertising of prescription-only medicines. The review included four studies performed in high-income countries and found that direct-to-consumer advertising increases people's requests for advertised medicines as well as the number of related prescriptions by doctors (high-certainty evidence). The direction of the effect depends on the medicine. For instance, for essential medicines this may be a desirable effect but for non-essential medicines this may be a undesirable effect. The review did not identify any studies that evaluated the impact of direct-to-consumer advertising on health outcomes or the cost-effectiveness of such advertising.

Authority and accountability for health professionals

Seven reviews considered interventions related to authority and accountability for health professionals (Pariyo 2009; Flodgren 2011; Kiwanuka 2011; Peñaloza 2011; Rockers 2013; Rutebemberwa 2014; Grobler 2015). Kiwanuka 2011 examined the effects of interventions to improve the management of dual practice, in which healthcare providers hold more than one job, but did not identify any eligible studies. Likewise, Rutebemberwa 2014 assessed interventions to manage the movement of health workers between public and private organisations but did not include any studies. Therefore, we do not discuss either of these empty reviews below.

Training and licensing – pre-licensure education

Pariyo 2009 examined the effects of changes in pre-licensure education (the training of health professional students prior to their registration as professionals) on the supply of health workers. The review included two studies that addressed the effects of an academic advising programme for minority groups, in which training institutions in a high-income country provide additional support for minority group students. The review found that such programmes may increase the number of minority group health sciences students enrolled, slightly increase retention to graduation and decrease the difference in retention levels to graduation between a minority group and those in other population groups (low-certainty evidence). The review did not find any studies of the effects on the supply of health workers of other changes in pre-licensure education.

Rockers 2013 examined the effects of interventions to hire, retain and train district health systems managers and included two studies conducted in four middle-income countries. The review found that manager training programmes may increase knowledge of planning processes as well as managers' monitoring and evaluation skills, compared with no training (low-certainty evidence).

Recruitment and retention strategies

Grobler 2015 examined strategies for the recruitment and retention of health workers practising in underserved and rural areas. The review included one study from a high-income country (Taiwan), but it is uncertain whether educational or financial interventions, or regulatory, personal and professional support strategies to recruit or retain health professionals increase the number of health professionals practising in underserved areas, as the review did not identify any studies that evaluated such interventions.

Rockers 2013 examined the effects of interventions to hire, retain and train district health systems managers and included two studies conducted in four middle-income countries. The review found that hiring district health managers to work within the Ministry of Health system through private contracts ('contracting in') may improve access to health care (health facilities open 24 hours and supplies and equipment available) and may increase use of antenatal care and other publicly funded services, compared to hiring managers through public sector contracts (low-certainty evidence). However, it is uncertain whether this approach improves population health outcomes (very low-certainty evidence).

Emigration and immigration policies

Peñaloza 2011 examined the effects of interventions for controlling the emigration of health professionals from low- and middle-income countries. It included one study that evaluated the effect of a change to immigration legislation in the USA on the migration of nurses from the Philippines to the USA. It found that reducing immigration restrictions in high-income countries probably increases the migration of nurses from low- and middle-income to high-income countries (moderate-certainty evidence). The review did not identify any studies that evaluated the effectiveness of interventions implemented in low-income countries to decrease the emigration of health professionals.

Authority and accountability for quality of care

Flodgren 2011 examined the effects on healthcare organisation behaviour, healthcare professional behaviour and patient outcomes of external inspection systems to improve adherence to external quality standards in organisations delivering health care. The review included one study each from a middle- and a high-income country. The review found that it is uncertain whether external inspection of adherence to standards improves adherence and quality of care or decreases health-acquired infection rates in hospitals (very low-certainty evidence). This review did not find any studies of the effectiveness of external inspections of adherence to standards in ambulatory (outpatient) settings.

Stakeholder involvement

Four reviews considered interventions related to stakeholder involvement (Heintze 2007; Fung 2008; Nilsen 2010; Prost 2013).

Stakeholder participation in policy and organisational decisions

Nilsen 2010 examined the effects of interventions to involve consumers in developing healthcare policies and research, clinical practice guidelines and patient information material. The review included six randomised trials, all conducted in high-income countries. One of these studies evaluated consumer involvement in policy development and found that it is uncertain whether telephone discussions change consumer priorities for community health goals compared with face-to-face meetings (very low-certainty evidence). None of the other included studies assessed stakeholder participation in policy and organisational decisions, but rather assessed consumer involvement in developing patient information, delivering satisfaction with care interviews and developing informed consent forms for research.

Community mobilisation

Two reviews examined the effects of community mobilisation – strategies to empower people to organise themselves to address an issue of common concern, and to identify and employ available resources to change a given situation. Prost 2013 included seven cluster-randomised trials from low- and middle-income countries. The review found that women's groups practising participatory learning and action cycles may improve maternal survival and may slightly reduce stillbirths (low-certainty evidence), and these interventions probably improve survival in newborn babies (moderate-certainty evidence). Heintze 2007 included 11 studies of community-based interventions for dengue control: 9 from middle-income countries and 2 from high-income countries. The review found that community-based dengue control programmes that include some form of mobilisation may reduce mosquito larval indices (low-certainty evidence).

Patient information – public disclosure of performance data

Fung 2008 examined the effects of public disclosure of performance data on health plans (including health insurance schemes, health maintenance organisations, private health insurance, etc.) as well as on hospitals and healthcare professionals, and included 45 studies from high-income countries. The review found that public disclosure of performance data on health insurance scheme quality may lead people to select health plans with better quality ratings or to avoid those with worse ratings and may lead to slight improvements in clinical outcomes for health insurance schemes (low-certainty evidence). Public disclosure of performance data on hospital quality may lead to little or no difference in patient selection of hospitals (low-certainty evidence), probably stimulates hospitals to undertake quality improvement activities (moderate-certainty evidence), and may lead to slight improvements in hospital clinical outcomes (low-certainty evidence). Public disclosure of performance for individual healthcare providers probably leads to patients selecting providers that have better quality ratings (moderate-certainty evidence) and may improve clinical outcomes among individual providers (low-certainty evidence).

DISCUSSION

Summary of main results

The evidence from the 19 included systematic reviews of governance arrangements for health systems in low-income countries covers a range of strategies (e.g. at policy, organisational, commercial, health professional and stakeholder levels), involving diverse settings (geographical, health system level) and populations (managers, health professionals, patients). Of the 24 outcomes for which an intervention had a desirable effect, 7 were supported by evidence of moderate certainty and 17 by evidence of low certainty. The one outcome on which an intervention had an undesirable effect was supported by evidence of moderate certainty. For eight outcomes reported in the included reviews, we assessed the effects as uncertain (very low-certainty evidence). We

found high or moderate-certainty evidence that interventions in the areas of restrictions on medicine reimbursement, community mobilisation, public disclosure of provider's performance data and patient involvement in decision-making had desirable effects, with no undesirable effects.

Overall completeness and applicability of evidence

We identified reviews for 19 of 48 types of the governance arrangements. However, three of these reviews did not identify any eligible studies (Koehlmoos 2009; Kiwanuka 2011; Rutebemberwa 2014). We found only three reviews of strategies addressing authority and accountability for commercial products (Gilbody 2005; Acosta 2014; El-Jardali 2015). Table 8 summarises the outcomes examined in the individual reviews. Only two reviews in the overview reported on the impacts of governance interventions on equity (Pariyo 2009; Grobler 2015). Three reviews reported outcomes related to resource use (Green 2010; Rashidian 2012; Acosta 2014), with none addressing cost-effectiveness of the interventions. The sparse economic and equity data (in comparison to effectiveness data) limit assessment of the cost-effectiveness and equity impacts of the interventions examined.

We incorporated our judgments about the applicability of summarised evidence (particularly, indirectness in relation to settings, populations and outcomes) into the GRADE assessments of its certainty, and we reported these applicability judgments in each of the SUPPORT Summaries. In general, it is difficult to draw firm conclusions regarding the applicability of the overview findings to low-income countries. For many of the comparisons and outcomes, the evidence comes from studies conducted in high-income countries (mainly the USA, UK, Canada and Australia) with very different on-the-ground realities and health systems arrangements. These differences are particularly important in relation to interventions that require substantial resources for design and implementation or that may require advanced technology or specialised skills for delivery, for instance systems for reimbursement and reference pricing for medicines (Green 2010; Acosta 2014), for fraud detection and response actions (Rashidian 2012), and for public disclosure of performance data (Fung 2008). These differences may also affect the applicability of interventions that are complex and may require substantial changes to the organisation of care – for example, improved collaboration between local health and local government agencies (Hayes 2012). It is therefore uncertain whether similar effects are likely if the interventions assessed in these reviews are implemented in low-income countries.

Certainty of the evidence

Although some of the included reviews had methodological limitations, they were, for the most part, relatively well conducted (Table 6). The certainty of the evidence for the effect estimates for the interventions considered in these reviews ranged from very low to high (Table 8). Of the 39 outcomes considered by at least one study, the certainty of the evidence was high for 1 (3%), moderate for 8 (22%), low for 22 (56%) and very low for 8 (21%) (Table 10).

Potential biases in the overview process

Although our searches were relatively comprehensive, it is possible that we missed some relevant reviews. We also excluded reviews that were published before April 2005. It is possible that some of those reviews provide information that is still useful and that might supplement information provided by the included reviews. Although this cut-off was arbitrary, it is unlikely that we excluded a substantial amount of useful information. However, 6 of the 19 included reviews were published before 2010, and it is possible that more recent evidence has been published since then that would change the review conclusions. None of these considerations would likely bias the results of this overview, but they might limit its comprehensiveness.

Classifying the interventions in the included reviews was sometimes uncertain and required judgment. For example, Jia 2014 assessed strategies for expanding health insurance coverage in vulnerable populations, and we decided to include it in the implementation strategies overview (Pantoja 2014). Another review evaluated the effects of rapid response systems on clinical outcomes (Maharaj 2015), and we included that one in the delivery overview (Ciapponi 2014). On the other hand, Fung 2008 related to the public disclosure of information directed to patients, and we included it in this overview instead of the implementation strategies overview. Although these judgments and differences in approaches to characterising governance interventions are unlikely to have introduced bias into this overview, they might result in some confusion, since there is no universally agreed upon classification system for governance arrangements. Moreover, any system for categorising health system interventions is, to some extent, arbitrary. A unified taxonomy for classifying health system interventions could facilitate explicit and systematic synthesis and interpretation of the existing body of evidence on health systems interventions across studies.

Judgments about the relevance of some interventions to low-income countries (applicability, equity, economic considerations, and monitoring and evaluation) were sometimes difficult to make. While these judgments might have led to systematic errors, it seems unlikely. At least two overview authors made all of these judgments on the basis of the SUPPORT Summaries, which undergo peer review by the contact author of the summarised review and by individuals from low- and middle-income countries.

Our general approach towards including reviews of studies from high-income countries was inclusive rather than exclusive to enable readers to assess for themselves the relevance of the review findings. Similarly, our approach was to assume that findings are applicable to low-income countries unless we identified differences between the study settings and settings in low-income countries or factors that would likely modify the effects in low-income countries.

Agreements and disagreements with other studies or reviews

We identified three related overviews of reviews published in the last 10 years (Lewin 2008; Scott 2009; Brunton 2015). These overviews addressed a range of governance arrangements in diverse settings and populations. As with our overview, most of the studies included in those overviews were from high-income countries, and data on patient outcomes, equity, costs and cost-effectiveness were scarce. We describe the findings of the three overviews briefly below.

Brunton 2015 aimed to understand the components of community engagement and the contribution of active content to health and social outcomes. The overview included three reviews, which found that more extensive community engagement

(i.e. where community members design, deliver and evaluate health interventions) was associated with improved behavioural outcomes. More extensive engagement across design, delivery and evaluation was noted in studies where community engagement processes included bidirectional communication, collective decision-making and intervention delivery training support to community members.

Lewin 2008 reviewed the effects of governance, financial and delivery arrangements, and implementation strategies that have the potential to improve the delivery of cost-effective interventions in primary health care in low- and middle-income countries. It included 21 systematic reviews, one of which addressed governance strategies for working with the private for-profit sector – including franchising, regulation and accreditation – to improve the use of quality health services by people in low-income settings (Patouillard 2007). We excluded this particular review in the present overview and did not identify any other eligible reviews that addressed governance strategies for working with the private for-profit sector. Lewin 2008 did not find any systematic reviews that addressed other questions about governance arrangements for primary health care, including decentralisation of decision-making, the regulation of training, or the control of corruption.

Scott 2009 included 23 reviews and assessed public scorecards and performance reports, external accreditation and clinical governance arrangements. Review authors found that studies have not adequately evaluated these interventions. These quality improvement strategies are heterogeneous, and methodological flaws in much of the evaluative literature limit the validity and generalisability of results. The authors assert that, based on current best available evidence, clinician/patient-driven quality improvement strategies appear to be more effective than manager/policymaker driven ones. Some of the included reviews would have been excluded from our overview as they are more than 10 years old; some are covered in the delivery and implementation overviews; and some reviews address interventions that we did not consider to be highly relevant to low-income countries.

AUTHORS' CONCLUSIONS

Well-conducted, systematic Cochrane Reviews and non-Cochrane reviews have evaluated a wide range of governance arrangements relevant to health systems in low-income countries. The interventions assessed have targeted different levels of the health system and report a range of outcomes. However, in all the main categories of our taxonomy of governance arrangements for health systems there are important evidence gaps where primary studies and/or rigorous reviews are needed.

Implications for practice

We found the following governance arrangements to be **effective** (moderate or high-certainty evidence of *desirable effects* on at least one outcome and no moderate or high-certainty evidence of undesirable effects).

- Restrictions on medicine reimbursement for prescription medicines (Green 2010).
- Public disclosure of hospitals' and individual healthcare providers' performance data (Fung 2008).
- Consumer involvement in developing patient information materials (Nilsen 2010).
- Women's groups practising participatory learning and action, in relation to newborn survival (Prost 2013).

The following governance arrangements have **undesirable** effects (moderate or high certainty evidence of at least one outcome with an *undesirable effect*, and no moderate or high certainty evidence of desirable effects).

- Reducing immigration restrictions in high income countries for health workers from other settings (Peñaloza 2011).

The effects of the following governance arrangements are **uncertain** (low- or very-low certainty evidence (or no studies were found) for all outcomes examined).

- Interagency collaborative interventions (Hayes 2012).
- Prevention, detection, and response interventions to reduce healthcare fraud and abuse and related expenditures (Rashidian 2012).
- Contracting out service delivery to non-state, not-for-profit providers (Lagarde 2009).
- Social franchising within health services (Koehlmoos 2009).
- Regulatory measures and multifaceted interventions to decrease the prevalence of counterfeit and substandard medicines, and WHO prequalification of medicines to reduce medicine quality testing failure rates (El-Jardali 2015).
- Index pricing and reference pricing for prescription medicines (Acosta 2014).
- Pre-licensure academic advising programmes for minority groups (Pariyo 2009).
- Recruitment strategies for health professionals in underserved areas (Grobler 2015).
- Movement of health workers between public and private organisations (Rutebemberwa 2014).
- District manager training programmes, in relation to managers' knowledge of planning processes and monitoring and evaluation skills (Rockers 2013).
- Private contracting ("contracting in") of district health managers compared to direct employment by the Ministry of Health (Rockers 2013).
- Dual practice among health professionals (Kiwanuka 2011).
- External inspection for adherence to accreditation standards in hospitals (Flodgren 2011).
- Different communication forums (face-to-face, telephone discussions, mail surveys, etc.) for consumer involvement in healthcare policy (Nilsen 2010).
- Community mobilisation for dengue control (Heintze 2007).
- Public disclosure of data on the performance of health plans (Fung 2008).

Because the effects of these arrangements are uncertain, their health system impacts need to be monitored and evaluated if they are implemented.

Implications for research

Based on the included reviews, we have identified gaps in primary research because of uncertainty about the applicability of the evidence to low-income countries (Table 10) and low-certainty evidence or a lack of studies (Table 11). It is notable that in 9 out of the 19 included reviews, all of the studies took place in high-

income countries, and in 15 of the 19 reviews there was at least one comparison where the certainty of the evidence on effects was low, or no studies were included. Further studies evaluating the effects of these interventions are needed, particularly in low-income countries.

The included reviews rarely reported social outcomes, resource use, impacts on equity or adverse (undesirable or unintended) effects (Table 8). Systematic reviews and updates of reviews should include all outcomes that are relevant to decision-makers and those groups affected by governance arrangements. In addition, there is a wide range of interventions for which we did not find a reliable up-to-date systematic review (Table 12), including the effects of governance arrangements affecting what or who is covered by health insurance; policies to manage absenteeism; requirements for monitoring or evaluation; organisational policies for accrediting healthcare providers; regulation of insurance provision; multi-institutional arrangements for coordinating care; regulation of registration, patents, profits and liability for commercial products; regulation of professional competence and liability; and regulation of patients' rights.

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ADDITIONAL TABLES

Table 1. Definitions of governance and of stewardship

Governance: definitions
• Governance is about oversight and guidance of the whole system. Governance and leadership involve ensuring strategic policy frameworks exist and are combined with effective oversight, coalition building, regulation, attention to system design and accountability. It is about the role of the government in health and its relation to other actors whose activities impact on health. This involves overseeing and guiding the whole health system, private as well as public, in order to protect the public interest. While ultimately it is the responsibility of government, this does not mean all leadership and governance functions have to be carried out by central ministries of health (WHO 2007).
• Governance is defined as policy guidance to the whole health system, coordination between actors and regulation of different functions, levels and actors in the system, an optimal allocation of resources and accountability towards all stakeholders. Although many actors have an influence on governance, there is a central role for the state in ensuring equity, efficiency and sustainability of the health system (Van Olmen 2010).
• The process of collective action that organises the interaction between actors, the dynamics of processes and the rules of the game (informal and formal), with which a society determines its behaviour and makes its decisions (Hufty 2006).
• Governance is ultimately concerned with creating the conditions for ordered rule and collective action (Stoker 1998).
• The traditions and institutions by which authority in a country is exercised. This considers the process by which governments are selected, monitored and replaced; the capacity of the government to effectively formulate and implement sound policies and the respect of citizens and the state of the institutions that govern economic and social interactions among them (World Bank Group 2013).
• In broad terms, governance can be defined as the actions and means adopted by a society to promote collective action and deliver collective solutions in pursuit of common goals. Health governance concerns the actions and means adopted by a society to organise itself in the promotion and protection of the health of its population. The rules defining such organisation and its functioning can be formal or informal. Governance mechanisms can be situated at the local/subnational, national, regional, international or global level. Health governance can be public, private, or a combination of the two (Dogson 2002).
• Simply put, governance is the association of citizens, experts, and elected representatives in the creation and implementation of policies. It is the combination of these three elements – citizens, experts and representatives – that distinguishes governance from politics and management, two concepts that are also used in societies and organisations to describe the way policies are created and implemented (Forest 1999).
• Governance is not synonymous with government. Both refer to purposive behaviour, to goal-oriented activities, to systems of rule; but government suggests activities that are backed by formal authority, whereas governance refers to activities backed by shared goals that may or may not derive from legal and formally prescribed responsibilities and that do not necessarily rely on police powers to overcome defiance and attain compliance (Rosenau 1995).

Table 1. Definitions of governance and of stewardship *(Continued)*

- The activity of governing relates to decisions that define expectations, grant power, or verify performance. It consists either of a separate process or of a specific part of management or leadership processes. Sometimes people set up a government to administer these processes and systems (Wikipedia 2011).
- Governance is the combination of political, social, economic and institutional factors that affect the behavior of organisations and individuals and influence their performance (Savedoff 2011).

Stewardship: definitions and features distinguishing it from governance
Stewardship is similar to the concept of public governance but, as envisaged by the WHO, is more specifically focused on the state's role in taking responsibility for the health and well-being of the population, and guiding the health system as a whole (Travis 2003). Stewardship has been described as one of the four basic functions of health system organisations (Murray 2000). The other three functions in this model are financing, provision, and resource generation. Definitions of stewardship include the following.
• The term 'stewardship', as it relates to the state, has been defined in various related ways. The definitions reflect concerns similar to those underpinning the WHO World Health Report 2000 (WHO 2000), which views stewardship as "the effective trusteeship of national health". They all indicate stewardship to be a particular type of governance linked with agency theory and the concomitant role of the state as an agent for its citizens. The most basic approach defines stewardship as "the disinterested performance of a duty by government and/or its agents on behalf of a superior". The notion of stewardship can be viewed as an ethically informed or 'good' form of governance. Saltman 2000 defines governance as having very similar functions to stewardship. • Stewardship incorporates much of what is described as (public) governance. Stewardship differs from governance more in its style or approach to particular tasks than in its scope. More specifically, stewardship is 'good', 'ethical', 'inclusive' or 'proactive' governance (Murray 2000). • Stewardship is the function of a government responsible for the welfare of the population and concerned about the trust and legitimacy with which its activities are viewed by the citizenry (WHO 2000). • Stewardship goes beyond the conventional notion of regulation. It involves three key aspects: setting, implementing and monitoring the rules for the health system; assuring a level playing field for all actors in the system (particularly purchasers, providers and patients); and defining strategic directions for the health system as a whole. To deal with these aspects, stewardship can be subdivided into 6 sub-functions: overall system design, performance assessment, priority setting, intersectoral advocacy, regulation, and consumer protection (Murray 2000).

Table 2. Types of governance arrangements

Governance arrangement	Definition
Authority and accountability for health policies	
Interagency collaboration	Collaboration and partnerships for health and social development between the health sector and other different sectors
Centralisation and decentralisation	Policies to regulate the degree of which managerial responsibilities are transferred to regional or local authorities in contrast to having them at the central level
District management	Policies that regulate the management of district health systems
Decision-making about what or who is covered by health insurance	Processes for deciding what is reimbursed and who is covered by health insurance
Policies to reduce corruption	Policies for reducing corruption in the health sector
Policies to manage absenteeism	Regulations for managing absenteeism of health professionals
Requirements for monitoring or evaluation	Policies that regulate programme monitoring and evaluation

Table 2. Types of governance arrangements *(Continued)*

Authority and accountability for organisations	
Ownership	Policies that regulate who can own health service organisations
Stewardship of private health services	Policies that regulate health services provided by the private sector
Insurance	Policies that regulate the provision of insurance (e.g. who can provide insurance, mandatory open enrolment, coverage of essential drugs)
Accreditation	Processes for accrediting healthcare providers
Multi-institutional arrangements	Policies for how multiple organisations work together
Authority and accountability for commercial products	
Registration	Procedures for registering or licensing commercial products (e.g. drugs)
Patents and profits	Policies that regulate patents and profits
Pricing and purchasing policies	Policies that determine the price that is paid or how commercial products are purchased
Marketing regulations	Policies that regulate marketing of commercial products
Sales and dispensing	Policies that regulate the sale and dispensing of drugs or other healthcare products
Liability for commercial products	Policies that regulate liability for commercial products
Authority and accountability for health professionals	
Training and licensing	Policies that regulate training and licensure requirements for health professionals
Scope of practice	Policies that regulate what health professionals can do
Recruitment and retention strategies	Policies that regulate where health professionals work (e.g. restrictions on where they can work or requirements to work in rural areas)
Emigration and immigration policies	Policies that regulate emigration and immigration of health professionals
Dual practice	Policies that regulate dual practice, in which health workers hold two or more jobs, for example in both the public or private sectors
Quality of practice	Policies or systems for assuring quality of care
Professional competence	Policies or procedures for assuring professional competence
Policies to manage absenteeism	Policies for managing absenteeism of health professionals
Professional liability	Policies that regulate liability for health professionals
Stakeholder involvement	

Table 2. Types of governance arrangements *(Continued)*

Stakeholder participation in policy and organisational decisions	Policies and procedures for involving stakeholders in decision-making
Community mobilisation	Processes that enable people to organise themselves
Community monitoring	Monitoring of health services by individuals or community organisations
Patient information	Policies that regulate what information is provided to patients
Patients' rights	Policies that regulate patients' rights, including access to care and information

Table 3. Examples of how changes in governance arrangements might work

Governance arrangement	Definition
Authority and accountability for health policies	
Interagency collaboration	Policies to facilitate interagency collaboration, for instance, between local government and local health authorities in order to address social determinants of health, can contribute to improve health of the population.
Decentralisation and centralisation	Shifting authority closer to those who are affected might improve accountability, openness and participation, which might in turn lead to more appropriate priorities, more efficiency and less corruption, and in turn better health outcomes.
District management	Regulations that lead to improvements in the management of district health systems can improve access to and the quality of care, and in turn better health outcomes.
Decision-making about what or who is covered by health insurance	Changes in processes used to decide what is reimbursed or who is covered by health insurance might improve access to cost-effective interventions, and in turn lead to better health outcomes.
Policies to reduce corruption	Regulations that reduce corruption can increase the availability of resources for care, and in turn improve health outcomes.
Requirements for monitoring or evaluation	Policies that improve decisions about when and how healthcare programmes are monitored or evaluated can lead to better-informed decisions, and in turn better health outcomes.
Authority and accountability for organisations	
Ownership	For-profit health services might limit access for people who cannot afford to pay or divert funds from care to profits and taxes, which might result in poorer quality care and worse health outcomes.
Stewardship of private health services	Regulations that increase the accountability of the private sector might improve the quality of care, and in turn lead to better health outcomes.
Insurance	Changes in regulations that determine who can provide insurance, who receives it, who pays for it, and who makes decisions about reimbursement might affect coverage and access to care, and in turn health outcomes.
Accreditation	Changes in provider accreditation might improve the quality of care, and in turn health outcomes.

Table 3. Examples of how changes in governance arrangements might work *(Continued)*

Multi-institutional arrangements	Changes in how donors and governments work together might result in more effective and efficient use of resources, and in turn lead to better health outcomes.
Authority and accountability for commercial products	
Registration	Changes in how drugs or other health technologies are licensed might improve safety, and in turn health outcomes,
Patents and profits	Changes in patent regulations might affect the development and availability of drugs or other health technologies, and in turn health outcomes.
Pricing and purchasing policies	Regulations that reduce the price that is paid or how drugs or services are purchased might improve access to care, and in turn health outcomes.
Marketing regulations	Regulations that limit inappropriate marketing of drugs, other technologies or services might reduce inappropriate use and increase the availability of resources for cost-effective care, and in turn improve health outcomes.
Sales and dispensing	Changes in who can sell drugs or other healthcare products might improve access or improve quality, and in turn health outcomes.
Liability for commercial products	Changes in liability for drugs, other technologies or services might improve safety, and in turn health outcomes.
Authority and accountability for health professionals	
Training and licensing	Regulations that improve training or licensure of health professionals might improve the safety and quality of care, and in turn health outcomes.
Scope of practice	Regulations that determine what health professionals can do might improve access to care or safety, and in turn health outcomes.
Recruitment and retention strategies	Regulations that determine where health professionals can work might improve access to care, and in turn health outcomes.
Emigration and immigration policies	Regulations that determine emigration or immigration of health professionals might improve access to care, and in turn health outcomes.
Dual practice	Regulations that affect the extent of dual practice might improve access to care, and in turn health outcomes.
Quality of practice	Policies or systems for assuring quality of care might improve the quality of care, and in turn health outcomes.
Professional competence	Policies or procedures for assuring professional competence might improve the safety and quality of care, and in turn health outcomes.
Policies to manage absenteeism	Regulations that reduce absenteeism can improve access to care, and in turn health outcomes.
Professional liability	Changes in liability for health professionals might improve safety or remove impediments to evidence-based care, and in turn improve health outcomes.
Stakeholder involvement	

Table 3. Examples of how changes in governance arrangements might work *(Continued)*

Stakeholder participation in policy and organisational decisions	Involving stakeholders in decision-making might improve the overall decision-making about how to use resources and organise care, and in turn lead to better health outcomes.
Community mobilisation	Processes that enable people to organise themselves might raise awareness, change behaviours and lead to improvements in access and utilisation of health services, and in turn improve health outcomes.
Community monitoring	Monitoring of health services by individuals or community organisations might help to ensure quality, improve access to care, and reduce corruption, and in turn improve health outcomes.
Patient information	Regulations that improve the extent to which patients are well-informed might lead to better informed decisions, and in turn improve health outcomes.
Patients' rights	Policies that regulate patients' rights, such as access to care and information, might improve access and utilisation of health services and improve the quality of health services, and in turn improve health outcomes.

Table 4. Included reviews

Governance arrangement	Included reviews
Authority and accountability for health policies	
Interagency collaboration	Collaboration between local health and local government agencies for health improvement (Hayes 2012)
Decentralisation and centralisation	No eligible systematic review found
District management	No eligible systematic review found
Decision-making about what or who is covered by health insurance	
Policies that regulate what drugs are reimbursed	No eligible systematic review found
Policies that regulate what services are reimbursed	No eligible systematic review found
Restrictions on drug reimbursement	Pharmaceutical policies: effects of restrictions on reimbursement (Green 2010)
Restrictions on reimbursement for health insurance	No eligible systematic review found
Strategies for expanding health insurance coverage	No eligible systematic review found
Policies to reduce corruption	No evidence of the effect of the interventions to combat health care fraud and abuse: a systematic review of literature (Rashidian 2012)
Policies to manage absenteeism	No eligible systematic review found
Requirements for monitoring or evaluation	No eligible systematic review found

Table 4. Included reviews *(Continued)*

Authority and accountability for organisations	
Ownership	No eligible systematic review found
Stewardship of private health services	No eligible systematic review found
Contracting out	The impact of contracting out on health outcomes and use of health services in low and middle income countries (Lagarde 2009)
Accreditation	No eligible systematic review found
Regulation of insurance provision	
Provision of drug insurance	No eligible systematic review found
Provision of health insurance	No eligible systematic review found
Multi-institutional arrangements	
Policies that regulate interactions between donors and governments	No eligible systematic review found
Social franchising	The effect of social franchising on access to and quality of health services in low- and middle-income countries (Koehlmoos 2009)
Governance arrangements for coordinating care across multiple providers	No eligible systematic review found
Mergers	No eligible systematic review found
Authority and accountability for commercial products	
Registration	
Drugs	Interventions to combat or prevent drug counterfeiting: a systematic review (El-Jardali 2015)
Health technology	No eligible systematic review found
Patents and profits	
Drugs	No eligible systematic review found
Health technology	No eligible systematic review found
Pricing and purchasing policies	
Drugs	Pharmaceutical policies: effects of reference pricing, other pricing, and purchasing policies (Acosta 2014)
Health technology and services	No eligible systematic review found
Marketing regulations	
Drugs	Benefits and harms of direct to consumer advertising: a systematic review (Gilbody 2005)

Table 4. Included reviews *(Continued)*

Health technology and services	No eligible systematic review found
Sales and dispensing	
Drugs	No eligible systematic review found
Health technology	No eligible systematic review found
Liability for commercial products	No eligible systematic review found
Authority and accountability for health professionals	
Training and licensing	
Pre-licensure education	Effects of changes in the pre-licensure education of health workers on health-worker supply (Pariyo 2009)
Training district health system managers	Interventions for hiring, retaining and training district health system managers in low- and middle-income countries (Rockers 2013)
Licensure	No eligible systematic review found
Specialty certification	No eligible systematic review found
Scope of practice	No eligible systematic review found
Recruitment and retention strategies	Interventions for increasing the proportion of health professionals practising in underserved communities (Grobler 2015)
Recruitment and retention strategies	Interventions for hiring, retaining and training district health system managers in low- and middle-income countries (Rockers 2013)
Movement of health workers between public and private organisations	Financial interventions and movement restrictions for managing the movement of health workers between public and private organizations in low- and middle-income countries (Rutebemberwa 2014)
Emigration and immigration policies	Interventions for controlling emigration of health professionals from low- and middle-income countries (Peñaloza 2011)
Dual practice	Interventions to manage dual practice among health workers (Kiwanuka 2011)
Authority and accountability for quality of practice	
Authority and accountability for quality of outpatient care	External inspection versus external standards for improving healthcare organisation behaviour, healthcare professional behaviour or patient outcomes (Flodgren 2011)
Authority and accountability for quality assurance of hospital (inpatient) care	External inspection versus external standards for improving healthcare organisation behaviour, healthcare professional behaviour or patient outcomes (Flodgren 2011)
Professional competence	No eligible systematic review found
Professional liability	No eligible systematic review found
Stakeholder involvement	

Table 4. Included reviews *(Continued)*

Stakeholder participation in policy and organisational decisions	Methods of consumer involvement in developing healthcare policy and research, clinical practice guidelines and patient information material (Nilsen 2010)
Community mobilisation	Women's groups practicing participatory learning and action to improve maternal and newborn health in low-resource settings: a systematic review and meta-analysis (Prost 2013)
	What do community-based dengue control programmes achieve? A systematic review of published evaluations (Heintze 2007)
Community monitoring	No eligible systematic review found
Patient information	
Drug information	No eligible systematic review found
Public disclosure of performance data	Systematic review: the evidence that publishing patient care performance data improves quality of care (Fung 2008)
Patients' rights	No eligible systematic review found

Table 5. Excluded reviews

Review ID	Excluded reviews	Reasons for exclusion
Bärnighausen 2009	Financial incentives for return of service in underserved areas: a systematic review	Addressed by Grobler 2015
Berendes 2011	Quality of private and public ambulatory health care in low and middle income countries: systematic review of comparative studies	Addressed by upcoming Herrera 2013
Boote 2002	Consumer involvement in health research: a review and research agenda	More than 10 years out of date
Comondore 2009	Quality of care in for-profit and not-for-profit nursing homes: systematic review and meta-analysis	Not transferable to low-income countries
Crawford 2002	Systematic review of involving patients in the planning and development of health care	Addressed by Nilsen 2010
Devereaux 2002a	A systematic review and meta-analysis of studies comparing mortality rates of private for-profit and private not-for-profit hospitals.	More than 10 years out of date
Devereaux 2002b	Comparison of mortality between private for-profit and private not-for-profit hemodialysis centers	More than 10 years out of date
Devereaux 2004	Payments for care at private for-profit and private not-for-profit hospitals: a systematic review and meta-analysis	Not transferable to low-income countries
Ekman 2004	Community-based health insurance in low-income countries: a systematic review of the evidence	Addressed by Meng 2010
Faber 2009	Public reporting in health care: how do consumers use quality-of-care information? A systematic review	Addressed by Fung 2008

Table 5. Excluded reviews *(Continued)*

Faden 2011	Active pharmaceutical management strategies of health insurance systems to improve cost-effective use of medicines in low- and middle-income countries: a systematic review of current evidence.	Major limitations
Greenfield 2008	Health sector accreditation research: a systematic review	Major limitations
Greenfield 2012	The standard of healthcare accreditation standards: a review of empirical research underpinning their development and impact	Major limitations
Griffiths 2007	Effectiveness of intermediate care in nursing-led in-patient units	Not transferable to low-income countries
Henderson 2010	Provision of a surgeon's performance data for people considering elective surgery	Addressed by Fung 2008
Jia 2014	Strategies for expanding health insurance coverage in vulnerable populations	Scope of the Implementation overview
Lagarde 2006	Evidence from systematic reviews to inform decision making regarding financing mechanisms that improve access to health services for poor people. A policy brief prepared for the International Dialogue on Evidence-Informed Action to Achieve Health Goals in Developing Countries IDEAHealth	Addressed by Lagarde 2009
Lee 2009	Linking families and facilities for care at birth: what works to avert intrapartum-related deaths?	Major limitations
Lehmann 2008	Staffing remote rural areas in middle- and low-income countries: a literature review of attraction and retention	Addressed by Grobler 2015
Liu 2008	The effectiveness of contracting-out primary health care services in developing countries: a review of the evidence	Addressed by Lagarde 2009
Loevinsohn 2004	Contracting for the delivery of community health services: a review of global experience	Addressed by Lagarde 2009
Marshall 2000	The public release of performance data: what do we expect to gain? A review of the evidence	More than 10 years out of date
Meng 2010	Expanding health insurance coverage in vulnerable groups: a systematic review of options	Addressed by Jia 2014
Molyneux 2012	Community accountability at peripheral health facilities: a review of the empirical literature and development of a conceptual framework	Major limitations
Montagu 2011	Private versus public strategies for health service provision for improving health outcomes in resource-limited settings	Major limitations
Morgan 2009	Comparison of tiered formularies and reference pricing policies: a systematic review	Addressed by Acosta 2014
Ossai 2012	Rural retention of human resources for health	Addressed by Grobler 2015
Patouillard 2007	Can working with the private for-profit sector improve utilization of quality health services by the poor? A systematic review of the literature	Major limitations

Table 5. Excluded reviews *(Continued)*

Patterson 2010	Systematic review of the links between human resource management practices and performance	Major limitations
Peters 2004	Strategies for engaging the private sector in sexual and reproductive health: how effective are they?	More than 10 years out of date
Phillips 2010	Can clinical governance deliver quality improvement in Australian general practice and primary care? A systematic review of the evidence	Addressed by Flodgren 2011
Preston 2010	Community participation in rural primary health care: intervention or approach?	Addressed by Nilsen 2010
Puig-Junoy 2007	Impact of pharmaceutical prior authorisation policies: a systematic review of the literature	Addressed by Green 2010
Ranji 2007	Effects of rapid response systems on clinical outcomes: systematic review and meta-analysis	Scope of the Delivery overview
Schadewaldt 2011	Nurse-led clinics as an effective service for cardiac patients: results from a systematic review	Major limitations
Shah 2011	Can interventions improve health services from informal private providers in low and middle-income countries? A comprehensive review of the literature	Major limitations
Sharp 2002	Specialty board certification and clinical outcomes: the missing link	More than 10 years out of date
Shen 2007	Hospital ownership and financial performance: a quantitative research review	Not transferable to low-income countries
Socha 2011	Physician dual practice: a review of literature	Addressed by Kiwanuka 2011
Steinman 2006	Improving antibiotic selection: a systematic review and quantitative analysis of quality improvement strategies	Addressed by New Reference
Tait 2004	Clinical governance in primary care: a literature review	Addressed by Phillips 2010
Wafula 2012	Examining characteristics, knowledge and regulatory practices of specialised drug shops in Sub-Saharan Africa: a systematic review of the literature	Not a review of effects of interventions
Waters 2003	Working with the private sector for child health	More than 10 years out of date
Willis-Shattuck 2008	Motivation and retention of health workers in developing countries: a systematic review	Not a review of effects of interventions
Wilson 2009	A critical review of interventions to redress the inequitable distribution of healthcare professionals to rural and remote areas	Addressed by Grobler 2015

Table 6. Reliability of included reviews

Review	A. Identification, selection and critical appraisal of studies[a]						B. Analysis[b]						C. Overall[c]	
	1. Selection criteria	2. Search	3. Up-to-date	4. Study selection	5. Risk of bias	6. Overall	1. Study characteristics	2. Analytic methods	3. Heterogeneity	4. Appropriate synthesis	5. Exploratory factors	6. Overall	1. Other considerations	2. Reliability of the review
Acosta 2014	+	+	+	+	+	+	+	+	+	+	+	+	No	+
El-Jardali 2015	+	+	+	+	+	+	+	+	+	+	+	+	No	+
Flodgren 2011	+	+	+	+	+	+	+	+	NA	+	NA	+	No	+
Fung 2008	+	?	+	+	+	+	+	+	+	+	+	+	No	+
Gilbody 2005	+	+	–	+	+	+	+	+	+	+	+	+	No	+
Green 2010	+	+	+	+	+	+	+	+	+	+	+	+	No	+
Grobler 2015	+	+	+	+	+	+	+	+	+	+	+	+	No	+
Hayes 2012	+	+	+	+	+	+	+	+	+	+	+	+	No	+
Heintze 2007	+	?	+	?	+	+	+	+	+	+	?	+	No	+
Kiwanuka 2011	+	+	+	+	+	+	NA	NA	NA	NA	NA	NA	No	+
Koehlmoos 2009	+	+	+	+	+	+	NA	NA	NA	NA	NA	NA	No	+
Lagarde 2009	+	+	+	+	+	+	+	+	+	+	+	+	No	+
Nilsen 2010	+	+	+	+	+	+	+	+	+	+	+	+	No	+
Pariyo 2009	+	+	+	+	+	+	+	+	+	+	+	+	No	+
Peñaloza 2011	+	+	+	+	+	+	+	+	+	+	+	+	No	+
Prost 2013	+	+	+	?	+	+	+	+	+	+	+	+	No	
Rashidian 2012	?	–	+	?	+	–	?	+	?	+	NA	+	No	–

Table 6. Reliability of included reviews *(Continued)*

Rockers 2013	+	?	+	+	+	+	+	+	+	+	NA	+	No	+
Rutebemberwa 2014	+	?	+	+	+	+	NA	NA	NA	NA	NA	NA	No	+

[a] **Identification, selection and critical appraisal of studies - details of assessment criteria**
1. **Selection criteria**: were the criteria used for deciding which studies to include in the review reported? (+ yes; ? can't tell/partially; − no)
2. **Search**: was the search for evidence reasonably comprehensive? (+ yes; ? can't tell/partially; − no)
3. **Up-to-date**: is the review reasonably up-to-date? (+ yes; ? can't tell/partially; − no)
4. **Study selection**: was bias in the selection of articles avoided? (+ yes; ? can't tell/partially; − no)
5. **Risk of bias**: did the authors use appropriate criteria to assess the risk for bias in analysing the studies that are included? (+ yes; ? can't tell/partially; − no)
6. **Overall**: how would you rate the methods used to identify, include and critically appraise studies? (+ only minor limitations, − important limitations)

[b] **Analysis - details of assessment criteria**
1. **Study characteristics**: were the characteristics and results of the included studies reliably reported? (+ yes; ? can't tell/partially; − no, NA: not applicable; e.g. no studies or data)
2. **Analytic methods**: were the methods used by the review authors to analyse the findings of the included studies reported? (+ yes; ? can't tell/partially; − no, NA: not applicable; e.g. no studies or data)
3. **Heterogeneity**: did the review describe the extent of heterogeneity? (+ yes; ? can't tell/partially; − no, NA: not applicable; e.g. no studies or data)
4. **Appropriate synthesis**: were the findings of the relevant studies combined (or not combined) appropriately relative to the primary question the review addresses and the available data? (+ yes; ? can't tell/partially; − no, NA: not applicable; e.g. no studies or data)
5. **Exploratory factors**: did the review examine the extent to which specific factors might explain differences in the results of the included studies? (+ yes; ? can't tell/partially; − no, NA: not applicable; e.g. no studies or data)
6. **Overall**: how would you rate the methods used to analyse the findings relative to the primary question addressed in the review? (+ only minor limitations, − important limitations)

[c] **Overall - details of assessment criteria**
1. **Other considerations**: are there any other aspects of the review not mentioned before which lead you to question the results?
2. **Reliability of the review**: based on the above assessments of the methods how would you rate the reliability of the review? (+ only minor limitations, − important limitations)

Table 7. Key messages of included reviews

Governance arrangement	Key messages
Authority and accountability for health policies	
Interagency collaboration Hayes 2012	➡ Local interagency collaborative interventions may lead to little or no difference in physical health and quality of life compared with standard care. ➡ It is uncertain whether local interagency collaborative interventions decrease mortality or mental health symptoms. ➡ This review did not include any evidence from low-income countries.
Decision-making about what or who is covered by health insurance - Restrictions on drug reimbursement Green 2010	➡ Restrictions on reimbursement in health insurance systems with substantial coverage for medicines probably decreases targeted drug use and expenditures on targeted drugs or drug classes. ➡ The effects of restrictions on reimbursement vary by drug and drug class, and by how the restrictions are implemented and enforced. ➡ The impacts of restrictions on health outcomes and health service utilisation are uncertain. ➡ All the studies were done in high-income countries and participants were mainly senior citizens or low-income adult populations whose medications were being paid for in whole or part through publicly funded drug benefit plans. ➡ There are no studies on the effect of reimbursement restrictions on equity.
Policies to reduce corruption Rashidian 2012	➡ It is uncertain if prevention, detection or response interventions reduce healthcare fraud and abuse and related expenditures. ➡ None of the included studies took place in a low-income country.
Authority and accountability for organisations	
Contracting out Lagarde 2009	➡ Contracting out services to non-state not-for-profit providers may increase access to and utilisation of health services. ➡ Patient outcomes may be improved and household health expenditures reduced by contracting out. ➡ None of the included studies presented evidence on whether contracting out was more effective than making a similar investment in the public sector. We are therefore uncertain of the effects of investing in contracting out compared to an equivalent investment in public sector health services.
Multi-institutional arrangements - Social franchising Koehlmoos 2009	➡ We found no evidence regarding the effects of social franchising on access to or the quality of health services in low- and middle-income countries. We are therefore uncertain of the effects of social franchising. ➡ There is a need for well-designed experimental studies that are informed by the theoretical and empirical literature.
Authority and accountability for commercial products	
Registration - Drugs El-Jardali 2015	➡ Certain regulatory measures, specifically drug registration, may decrease the prevalence of counterfeit and substandard drugs. It is uncertain whether licensing of drug outlets reduces the prevalence of counterfeit drugs or the failure rates of drugs undergoing quality testing. ➡ WHO prequalification of drugs may lead to a reduction in the failure rates of drugs undergoing quality testing.

Table 7. Key messages of included reviews *(Continued)*

	➡ Multifaceted interventions (including a mix of regulations, training of inspectors, public-private collaborations and legal actions against counterfeiters) may be effective in decreasing the prevalence of counterfeit and substandard drugs. ➡ All studies identified took place in low- and middle-income countries. ➡ The transferability of the findings may be influenced by a country's existing pharmaceutical supply chain and infrastructure, the availability of routine data on drug quality, qualified and skilled personnel, and financial resources.
Pricing and purchasing policies - Drugs Acosta 2014	➡ Reference pricing may reduce insurers' cumulative drug expenditures by shifting drug use from cost-share drugs to reference drugs. ➡ Index pricing may increase the use of generic drugs, reduce the use of brand-name drugs, slightly reduce the price of generic drugs, and have little or no effect on the price of brand-name drugs. ➡ It is uncertain whether maximum pricing affects drug expenditures. ➡ The effects of these policies on healthcare utilisation or health outcomes is uncertain. ➡ None of the included studies took place in a low-income country. ➡ The effects of other pharmaceutical pricing and purchasing policies are uncertain.
Marketing regulations - Drugs Gilbody 2005	➡ Direct-to-consumer advertising increases patient demand for advertised medicines and the number of related prescriptions by doctors. ➡ We found no studies that reported on the impact of direct-to-consumer advertising on health outcomes. We are therefore uncertain of their effects. ➡ In light of the lack of evidence of the benefits, potential harms, and costs of direct-to-consumer advertising: - the value of policies that allow for the increased use of direct to consumer advertising is uncertain at best; and - rigorous monitoring and evaluation are warranted if such policies are implemented.
Authority and accountability for health professionals	
Training and licensing - Pre-licensure education Pariyo 2009	➡ There is little evidence of the effects of interventions to increase the capacity of health professional training institutions, reduce student dropout rates or increase the number of students recruited from other countries into health professional training institutions. ➡ Academic advising programmes for minority groups may: - increase the number of minority students enrolled in health sciences; - slightly increase retention through to graduation; - decrease differences in retention levels through to graduation between minority and non-minority students in the health sciences. ➡ We found no studies of the effects of other pre-licensure measures to increase health worker supply.
Training and licensing - Training district health system managers Rockers 2013	➡ Private contracting ("contracting in") of district health managers compared to direct employment by the Ministry of Health may improve access and utilisation of healthcare. It is uncertain whether contracting in improves health outcomes. ➡ Intermittent training programmes may increase knowledge of planning processes and monitoring and evaluation skills of district managers.

Table 7. Key messages of included reviews *(Continued)*

	➡ The effects of other interventions are uncertain, including changes in how district managers are hired, strategies for retaining district managers such as making the positions more attractive, and other training programmes such as in-service workshops with onsite support.
Recruitment and retention strategies Grobler 2015	➡ It is uncertain whether any of the following types of interventions to recruit or retain health professionals increase the number of health professionals practising in in underserved areas - Educational interventions (e.g. student selection criteria, undergraduate and postgraduate teaching curricula, exposure to rural and urban underserved areas) - Financial interventions (e.g. undergraduate and postgraduate bursaries or scholarships linked to future practice location, rural allowances, increased public sector salaries) - Regulatory strategies (e.g. compulsory community service, relaxing work regulations imposed on foreign medical graduates who are willing to work in rural or urban underserved areas) - Personal and professional support strategies (e.g. providing adequate professional support and attending to the needs of the practitioners family)
Recruitment and retention strategies Rockers 2013	➡ Private contracting ("contracting in") of district health managers compared to direct employment by the Ministry of Health may improve access and utilisation of healthcare. It is uncertain whether contracting in improves health outcomes. ➡ Intermittent training programmes may increase knowledge of planning processes and monitoring and evaluation skills of district managers. ➡ The effects of other interventions are uncertain, including changes in how district managers are hired, strategies for retaining district managers such as making the positions more attractive, and other training programmes such as in-service workshops with onsite support.
Movement of health workers between public and private organis**ations** Rutebemberwa 2014	➡ No rigorous studies have evaluated the effects of interventions to manage the movement of health workers between public and private organisations. ➡ There is a need for well-designed studies to evaluate the impact of interventions that attempt to regulate health worker movement between public and private organisations in low-income countries.
Emigration and immigration policies Peñaloza 2011	➡ Lowering immigration restrictions in high-income countries probably increases the migration of nurses from low- and middle-income countries to high-income countries. The effectiveness of interventions implemented in low- and middle-income countries to decrease the emigration of health professionals is uncertain. No studies were found that evaluated such interventions. ➡ Low- and middle-income countries should monitor changes in high-income countrie immigration legislation, model the impact of proposed migration changes on their own retention of domestic health professionals, and lobby for immigration laws in high-income countries 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 low- and middle-income countries.
Dual practice Kiwanuka 2011	➡ No studies met the inclusion criteria for the review, as no rigorous studies have evaluated the effects of interventions to manage dual practice. ➡ There is a need for well-designed studies to evaluate the impact of interventions that attempt to regulate health worker dual practice in low-income countries.
Authority and accountability for quality of practice - Authority and accountability for quality of outpatient care	➡ It is uncertain whether external inspection results in improved compliance with accreditation standards, improved quality of care or decreased healthcare-acquired infection (i.e. methicillin-resistant *Staphylococcus aureus*) rates in hospitals.

Table 7. Key messages of included reviews *(Continued)*

- Authority and accountability for quality assurance of hospital (inpatient) care Flodgren 2011	➡ This review found no direct evidence on the effectiveness of external inspections of compliance with standard in ambulatory settings. We are therefore uncertain of the effects in this setting. ➡ This review found no direct evidence on the effectiveness of external inspections of compliance with standards in low-income countries.
Stakeholder involvement	
Stakeholder participation in policy and organisational decisions Nilsen 2010	➡ Consumer consultations in developing patient information probably: - facilitate the development of material that is more relevant, readable and understandable to patients; - improve patient knowledge; - make little or no difference in decreasing the anxieties that patients may associate with clinical procedures. ➡ Consumer interviewers may lead to small differences in the results of satisfaction surveys compared to healthcare professional interviewers. ➡ It is uncertain whether telephone discussions compared with face-to-face meetings change consumer priorities for community health goals. ➡ Consumer consultation in the development of consent documents may have little or no impact on self-reported participant understanding of the trial described in the consent document, satisfaction with study participation, adherence to the protocol or refusal to participate ➡ There are good arguments for introducing consumer involvement in low-income countries. To accomplish this: - strategies to overcome barriers such as low baseline levels of social participation, organisation and education should be explored; - efforts to include consumers or families of disadvantaged groups should be considered in order to achieve inclusive representation; - evaluations are needed of the effects of consumer involvement on healthcare decisions and how to achieve more effective consumer involvement.
Community mobilisation Prost 2013	➡ Women's groups practising participatory learning and action probably improve newborn survival, may improve maternal survival, may slightly reduce stillbirths, and may be a cost-effective strategy in rural areas in low- and middle-income countries. ➡ The effectiveness of women's groups may depend on participation of a substantial proportion of pregnant women, adequate supervision and support, home visits, access to care, improving the quality of care, and adequate resources.
Community mobilisation Heintze 2007	➡ Multi-component community-based dengue control programmes may reduce mosquito larval indices. ➡ Multi-component community-based dengue control programmes combined with chemical larvicides may reduce mosquito larval indices. ➡ Multi-component community-based dengue control programmes combined with fish and chemical larvicides may reduce mosquito larval indices. ➡ Multi-component community-based dengue control programmes combined with the use of crustaceans that eat mosquito larvae (*Mesocyclops* copepods) may reduce mosquito larval indices. ➡ It is uncertain whether multi-component community-based dengue control programmes combined with the use of crustaceans that eat mosquito larvae (*Mesocyclops* copepods) reduce dengue incidence.

Table 7. Key messages of included reviews *(Continued)*

	➡ Most studies took place in low- and middle-income countries.
Patient information - Public disclosure of performance data Fung 2008	➡ Public disclosure of performance for health plans: - may lead to patients selecting health plans that have better quality ratings; - has uncertain effects on quality improvement activities; - may slightly improve health outcomes. ➡ Public disclosure of performance for hospitals: - may lead to little or no difference in patient selection of hospitals; - probably stimulates quality improvement activities; - may improve health outcomes. ➡ Public disclosure of performance for individual healthcare providers: - probably leads to patients selecting providers that have better quality ratings; - has uncertain effects on quality improvement activities; - may improve health outcomes. ➡ All of the included studies took place in high-income countries. - Public disclosure of performance may be difficult to implement in low-income countries because of limitations of the ability of health facilities and providers to produce accurate data, the capacity to disseminate the data, the ability of patients to interpret the data and, in some places, the lack of choice available in terms of facilities or providers.

Table 8. Intervention-outcome matrix for included reviews

	Direction of effects and certainty of the evidence[a]								
Governance arrangement	**Patient outcomes**	**Access, coverage, utilisation**	**Quality of care**	**Resource use**	**Social outcomes**	**Impacts on equity**	**Health care provider outcomes**	**Adverse effects [b]**	**Other**
Authority and accountability for health policies									
Interagency collaboration Hayes 2012	? ⊕⊖⊖⊖ ⊘⊕⊕⊖⊖[c]	NR	NR	NR	⊘⊕⊕⊖⊖[d]	NR	NR	NR	NR
Decision-making about what is covered by health insurance – restrictions on drug reimbursement Green 2010	? ⊕⊖⊖⊖[e]	#⊕⊕⊕⊖[f]	NR	#⊕⊕⊕⊖[f]	NR	NR	NR	NR	NR
Policies to reduce corruption – fraud detection and response actions Rashidian 2012	NR	NR	NR	?⊕⊖⊖⊖[g]	NR	NR	NR	NR	NR
Authority and accountability for organisations									
Contracting out – to non-state not-for–profit providers Lagarde 2009	#⊕⊕⊖⊖[h]	#⊕⊕⊖⊖[i]	NR	NR	NR	NR	NR	NR	NR
Multi-institutional arrangements – social franchising Koehlmoos 2009	NS	NS	NS	NS	NS	NS	NS	NS	NS
Authority and accountability for commercial products									
Registration – drugs El-Jardali 2015	NR	NR	NR	NR	NR	NR	NR	NR	#⊕⊕⊖⊖[j]
Pricing and purchasing policies – medicines – reference pricing	NR	#⊕⊕⊖⊖[k]	NR	#⊕⊕⊖⊖[k]	NR	NR	NR	NR	NR

Table 8. Intervention-outcome matrix for included reviews *(Continued)*

Acosta 2014									
Pricing and purchasing policies – medicines – index pricing Acosta 2014	NR	#⊕⊕⊖⊖[l]	NR	⌀⊕⊕⊖⊖[m]	NR	NR	NR	NR	NR
Marketing regulations – **medicines** direct-to-consumer advertising Gilbody 2005	NS	##⊕⊕⊕⊖[n]	NR	NS	NR	NR	NR	NR	NR
Authority and accountability for health professionals									
Training and licensing – pre-licensure education – minority academic advising programme Pariyo 2009	NR	NR	NR	NR	NR	#⊕⊕⊖⊖[o]	NR	NR	NR
Training and licensing – manager training programme versus no training Rockers 2013	NR	NR	NR	NR	NR	NR	NR	NR	#⊕⊕⊖⊖[p]
Recruitment and retention strategies – health professionals in underserved areas Grobler 2015	NS	NS	NS	NS	NS	?⊕⊖⊖⊖[q]	NS	NS	NS
Recruitment and retention strategies – private versus public contracts of district health managers Rockers 2013	?⊕⊖⊖⊖[r]	#⊕⊕⊖⊖[r]	NR	NR	NR	NR	NR	NR	NR
Movement of health workers between public and private organisations Rutebemberwa 2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
Emigration and immigration policies – reducing immigration restrictions Peñaloza 2011	NS	#⊕⊕⊖⊖[s]	NS	NS	NR	NR	NR	NR	NR

Table 8. Intervention-outcome matrix for included reviews *(Continued)*

Dual practice Kiwanuka 2011	NR	NS	NS	NS	NS	NS	NS	NR	NR
Authority and accountability for quality of practice – authority and accountability for quality of outpatient care – external inspection Flodgren 2011	NS	NS	? ⊕⊖⊖⊖[t]	NR	NR	NR	NS	NR	NR
Stakeholder involvement									
Stakeholder participation in policy and organisational decisions – communication forums Nilsen 2010	NS	NS	NS	NS	NS	NS	NS	NS	? ⊕⊖⊖⊖[u]
Stakeholder participation in policy and organisational decisions – consumer involvement in research Nilsen 2010	NS	NS	# ⊕⊕⊖⊖[v]	NS	NS	NS	NS	NS	∅⊕⊕⊖⊖[w]
Stakeholder participation in policy and organisational decisions – consumer involvement in preparing patient information Nilsen 2010	∅⊕⊕⊖⊖[x]	NS	NS	NS	NS	NS	NS	NS	# ⊕⊕⊖⊖[y]
Community mobilisation – women's groups practising participatory learning and action Prost 2013	# ⊕⊕⊖⊖[z] # ⊕⊕⊖⊖[aa]	NS	NS	NS	NS	NS	NS	NS	NS
Community mobilisation – community-based dengue control Heintze 2007	# ⊕⊕⊖⊖[bb] # ⊕⊕⊖⊖[cc] ? ⊕⊖⊖⊖[dd]	NS	NS	NS	NS	NS	NS	NS	NS
Patient information	∅⊕⊕⊖⊖[ee]	# ⊕⊕⊖⊖[ff]	NS	NS	NS	NS	NS	NS	NS

Table 8. Intervention-outcome matrix for included reviews *(Continued)*

– public disclosure of performance data – health plans Fung 2008									
Patient information – public disclosure of performance data – hospitals Fung 2008	#⊕⊕◯◯[gg]	#⊕⊕◯◯[hh]	#⊕⊕◯◯[ii]	NS	NS	NS	NS	NS	NS
Patient information – public disclosure of performance data –individual healthcare providers Fung 2008	#⊕⊕◯◯[jj]	#⊕⊕◯◯[kk]	NS	NS	NS	NS	NS	NS	NS

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 the following definitions.

Ratings	Definitions	Implications
⊕⊕⊕⊕ High	This research provides a very good indication of the likely effect. The likelihood that the effect will be substantially different is low.	This evidence provides a very good basis for making a decision about whether to implement the intervention. Impact evaluation and monitoring of the impact are unlikely to be needed if it is implemented.
⊕⊕⊕◯ Moderate	This research provides a good indication of the likely effect. The likelihood that the effect will be substantially different is moderate.	This evidence provides a good basis for making a decision about whether to implement the intervention. Monitoring of the impact is likely to be needed and impact evaluation may be warranted if it is implemented.
⊕⊕◯◯ Low	This research provides some indication of the likely effect. However, the likelihood that it will be substantially different is high.	This evidence provides some basis for making a decision about whether to implement the intervention. Impact evaluation is likely to be warranted if it is implemented.
⊕◯◯◯ 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 evidence does not provide a good basis for making a decision about whether to implement the intervention. Impact evaluation is very likely to be warranted if it is implemented.

[a]✓: a desirable effect; ∅: little or no effect; ?: an uncertain effect; #: an undesirable effect; NS: no studies found by this review that reported this outcome; NR: outcome not reported by this review.

[b]Other than adverse effects on any of the outcomes in the previous columns.

[c]Local interagency collaborative interventions may lead to little or no difference in physical health and may slightly improve functional level in patients with psychiatric disorders, compared with standard care. It is uncertain whether local interagency collaborative interventions decrease mortality and mental health symptoms.

[d]Local interagency collaborative interventions may lead to little or no difference in quality of life.

[e]It is uncertain whether pharmaceutical policies that restrict reimbursements change health outcomes.

[f]Restrictions to pharmaceutical reimbursement probably decrease targeted drug use in the short and long term and reduce expenditures on target drug or drug class.

[g]It is uncertain if prevention, detection and response interventions reduce healthcare fraud and abuse and related expenditures.

[h]Patient outcomes (auto-reporting of being sick in the past month, diarrhoea incidence) may be improved and household health expenditures reduced by contracting out.

[i]Contracting out services to non-state not-for-profit providers may increase access to and utilisation of health services.

[j]Medicine registration and multifaceted interventions (including a mix of regulations, training of inspectors, public-private collaborations and legal actions against counterfeiters) may decrease the prevalence of counterfeit and substandard medicines; WHO prequalification of medicines may lead to a decrease in the failure rates of medicines undergoing quality testing.

[k]Reference pricing (a system in which a reference price is established within a country as the maximum level of reimbursement for a group of medicines) may reduce insurers' cumulative medicine expenditures; may increase the use of reference medicines; and may reduce the use of cost-share medicines.

[l]Index pricing (a maximum refundable price to pharmacies for medicines within an index group of therapeutically interchangeable medicines) may increase the use of generic medicines and reduce the use of brand-name medicines.

[m]Index pricing may slightly reduce the price of generic medicines and may have little or no effect on the price of brand-name medicines.

[n]Direct-to-consumer advertising increases people's requests for advertised medicines as well as prescription volumes for advertised medicine. The direction of the effect depends on the medicine. For instance, for essential medicines this may be a desirable effect but for non-essential medicines this may be a harmful effect.

[o]Minority academic advising programmes may increase the number of black health sciences students enrolled and slighlty increase retention to graduation.

[p]Manager training programmes may increase knowledge of planning processes and monitoring and evaluation skills.

[q]It is uncertain whether educational or financial interventions or regulatory or personal and professional support strategies to recruit or retain health professionals increase the number of health professionals practising in in underserved areas.

[r]Hiring district health managers to work within the Ministry of Health system through private contracts may improve access to health care and service use, but it is uncertain if this improves population health outcomes.

[s]Reducing immigration restrictions in high-income countries probably increases the migration of nurses from low- and middle-income countries to high-income countries.

[t]It is uncertain whether external inspection adherence to accreditation standards improves quality of care.

[u]It is uncertain whether telephone discussions compared with face-to-face meetings change consumer priorities for community health goals.

[v]Consumer interviewers may slightly improve responses regarding patient satisfaction, compared to staff interviewers.

[w]Consumer consultation in the development of consent documents may have little or no impact on self-reported participant understanding of the trial described in the consent document, satisfaction with study participation, adherence to the protocol or refusal to participate.

[x]Patients probably experience little or no difference in their levels of worry or anxiety associated with procedures when they receive information material that has been developed following consumer consultation.

[y]Consumer consultation in developing patient information material probably results in material that is more relevant, readable and understandable to patients, and probably improves the knowledge of patients who read the material.

[z]Women's groups practising participatory learning and action cycles may improve survival in mothers and may slightly reduce stillbirths. .

[aa]Women's groups practising participatory learning and action cycles probably improve survival in newborn babies.

[bb]Multi-component community-based dengue control programmes may reduce mosquito larval indices, and such programmes combined with fish and chemical larvicides may reduce mosquito larval indices.

[cc]Multi-component community-based dengue control programmes combined with the use of crustaceans that eat mosquito larvae may reduce mosquito larval indices.

[dd]It is uncertain whether multi-component community-based dengue control programmes combined with the use of crustaceans that eat mosquito larvae reduce dengue incidence.

[ee]Public disclosure may lead to slight improvements in clinical outcomes for health plans.
[ff]Public disclosure may lead patients to select health plans with better quality ratings or to avoid those with worse ratings.
[gg]May lead to slight improvements in hospital clinical outcomes.
[hh]May lead to little or no difference in patient selection of hospitals.
[ii]Probably stimulates hospitals to undertake quality improvement activities.
[jj]Public disclosure of performance data may improve clinical outcomes (risk-adjusted mortality rates for surgeons) among individual providers.
[kk]Public disclosure probably influences users of health care services to select providers with better quality ratings or to avoid those with worse ratings.

Table 9. Summary of effects of interventions and certainty of evidence

Interventions found to have desirable effects on at least one outcome with moderate- or high-certainty evidence and no moderate- or high-certainty evidence of undesirable effects

Authority and accountability for health policies

Decision-making about what is covered by health insurance

- Restrictions on drug reimbursement (Green 2010)
  - Outcomes improved: drug utilisation and drug expenditure

Authority and accountability for commercial products

Marketing regulations

- Direct-to-consumer advertising of prescription-only medicines (Gilbody 2005)
  - Outcomes improved: people's requests for advertised medicines and the number of related prescriptions by doctors[a]

Stakeholder participation in policy and organisational decisions

Community mobilisation

- Women's groups practising participatory learning and action cycles (Prost 2013)
  - Outcomes improved: neonatal mortality

Patient information

- Public disclosure of hospital performance data (Fung 2008)
  - Outcome improved: hospitals' quality improvement activities
- Public disclosure of individual healthcare providers performance data (Fung 2008)
  - Outcome improved: users' selection of providers

- Consumer involvement in preparing patient information (Nilsen 2010)
  - Outcomes improved: quality of the material and patient knowledge

Interventions for which the certainty of the evidence was low or very low (or no studies were found) for all outcomes examined

Authority and accountability for health policies

- Interagency collaboration (Hayes 2012)
- Policies to reduce corruption – fraud detection and response actions (Rashidian 2012)

Authority and accountability for organisations

- Subcontracting to non-state not-for-profit providers (Lagarde 2009)
- Social franchising (Koehlmoos 2009)

Authority and accountability for commercial products

- Registration – drugs (El-Jardali 2015)
- Pricing and purchasing policies – reference pricing and index pricing (Acosta 2014)

Authority and accountability for health professionals

- Pre-licensure education – minority academic advising programme (Pariyo 2009)
- Location of practice – recruitment and retention strategies for health professionals (Grobler 2015)

Table 9. Summary of effects of interventions and certainty of evidence *(Continued)*

- Movement of health workers between public and private organisations (Rutebemberwa 2014)
- Training and licensing – manager training programmes (Rockers 2013)
- Recruitment and retention strategies – private versus public contracts for district health managers (Rockers 2013)
- Dual practice (Kiwanuka 2011)
- Authority and accountability for quality of inpatient and outpatient care – external inspection (Flodgren 2011)

Stakeholder participation in policy and organisational decisions

- Stakeholder participation in policy and organisational decisions – communication forums and consumer involvement in research (Nilsen 2010)
- Community-based dengue control (Heintze 2007)
  * Outcome improved: mosquito larval indices
- Public disclosure of performance data – health plans (Fung 2008)

[a]For this intervention, the direction of the effect depends on the medicine. For instance, for essential medicines this may be a desirable effect (and is therefore listed as such above) but for non-essential medicines this may be a undesirable effect.

Table 10. Priorities for primary research based on the applicability limitations to low-income countries of the governance arrangements identified[a]

Governance arrangement	Applicability limitations	
	Findings	**Interpretation**
Authority and accountability for health policies		
Interagency collaboration Hayes 2012	All studies included in this review took place in high income countries.	The reality of local agencies in low-income countries is probably very different to that in high-income countries so results reported in this review should be applied with caution in low-income countries settings.
Decision-making about what is covered by health insurance – **restrictions on drug reimbursement** Green 2010	All of the included studies took place in high-income countries. Thus there is uncertainty regarding the transferability of the results to low- and middle-income country settings. Participants were mainly senior citizens or low-income adult populations in publicly subsidised or administered pharmaceutical benefit plans. Only two of the studies included in this review reported health outcome data, precluding any conclusions about the impact of the policies on patient outcomes.	Applicability of these interventions to low-income country settings depends on there being: – a regulatory framework; – an administrative and managerial system which support the implementation of the policy; –an insurance system with relatively broad medicines benefit; – efficient, timely access to patient-specific information; – availability of preferred products incentivised by the re-imbursement policy; – product quality assessments and prescriber and patient trust in the quality of preferred products.
Policies to reduce corruption – fraud detection and response actions Rashidian 2012	There is no study from low income-countries and only two from middle-income countries.	Low-income countries might be more prone and vulnerable to health care fraud and its consequences. When assessing the transferability of these findings to low-income countries the following factors should be considered.

Table 10. Priorities for primary research based on the applicability limitations to low-income countries of the governance arrangements identified[a] *(Continued)*

		– The availability of human and technical resources to combat fraud. – The acceptability and costs of the interventions.
Authority and accountability for organisations		
Subcontracting to non-state not-for-profit providers Lagarde 2009	All of the studies took place in low- and middle-income countries In the three included studies, the contracts were carried out with non-governmental organisations (NGOs); no studies were found that evaluated contracts with private for-profit providers. The studies provided very little description of the actual measures implemented by the contractor (management, organisation, salaries, and incentives) to achieve the goals established in the contract.	Differences in health systems; patient and physician attitudes to NGOs; and legal restrictions may limit applicability of the findings. Subcontracting can be a potentially effective strategy in particular settings but it may be difficult for governments to re-deploy public funds to private providers when available funds are already committed to public services. Factors that need to be considered to asses whether the intervention effects are likely to be transferable include: – the availability of not-for-profit organisations to carry out the contracts; – the capacity within the public sector for set up and monitor the contracts.
Multi-institutional arrangements –s**ocial franchising** Koehlmoos 2009	The review did not find any studies conducted in low- and middle-income countries that met its inclusion criteria.	Although social franchising is currently used and advocated in low- and middle-income countries, no rigorous evaluations of its impacts (both positive and negative) are available.
Authority and accountability for commercial products		
Registration – **drugs** El-Jardali 2015	The studies were all undertaken in low- and middle-income countries. The results suggest that drug registration, WHO prequalification of drugs, and multi-faceted interventions may be effective in reducing the prevalence of counterfeit drugs.	The findings are applicable to low- and middle- income settings. However, a country's existing pharmaceutical supply chain and infrastructure, availability of routine data on quality of drugs, qualified and skilled personnel, and financial resources may facilitate the transferability of the findings. While registration may be effective, it should probably encompass both domestic manufacturers and importers and be complemented with routine postmarketing surveillance to sustain the quality of drugs circulating in the market. Countries that rely heavily on imported drugs may consider opting for drugs that are WHO-prequalified. However, even among WHO-prequalified products, the quality may vary depending on the country of export. The success of multifaceted interventions requires collaborations with drug regulatory bodies, skilled human resources, and technical capacity for routine drug inspections.
Reference pricing	All of the 18 studies included were in high-income countries.	The effectiveness of reference pricing policy in low-income countries may depend on factors such as:

Table 10. Priorities for primary research based on the applicability limitations to low-income countries of the governance arrangements identified[a] *(Continued)*

Acosta 2014		– health systems structure and settings as copayments, reimbursment and cost share; – access to prices data sources; – availability of adequate incentives for healthcare providers, patients, physicians, pharmacists and pharmaceutical companies to comply with the reference pricing policy; – significant price differences between the drugs in the intervention group before reference pricing is introduced; – clear information for managers, clinicians and patients; – availability and access to drugs in the reference group; – a regulatory framework that allows generic substitution or prescribing by international non-proprietary name (INN); – appropriate exemptions (exemptions that are too limited could lead to higher co-payments for appropriate use of more expensive drugs and incentives to use a less effective drug. Exemptions that are too broad could reduce savings by not shifting drug use towards appropriate use of less expensive drugs.).
Marketing regulations – Drugs direct-to-consumer advertising Gilbody 2005	The studies, all conducted in high-income countries, show that direct-to-consumer advertising alters prescribing behaviour and volume, but no studies examined the impact of such advertising on health outcomes	Given the absence of any evidence of improvement in health outcomes from direct-to-consumer advertising, its benefits are uncertain in any setting.
Authority and accountability for health professionals		
Pre-licensure education Pariyo 2009	All included studies took place in high-income countries.	The challenges faced in health care worker education in high- and low-income countries are qualitatively and quantitatively different (e.g. the availability of funds, laws regarding equity and awareness of these, job prospects including remuneration, and curricula). Appropriate interventions could be expected to have a comparatively higher impact in low-income countries, where alternatives and opportunities are generally more limited than in high-income countries. However, there is no evidence regarding the effects of such interventions.
Recruitment and retention strategies Grobler 2015	Some observational studies, mostly from high-income countries, suggest that some interventions, such as selecting students from rural areas, exposing students to clinical rotations	Economic and cultural differences, differences between health system structures, and differences in state and educational institutional capacity to regulate and manage various types of interventions may limit the applicability of findings from high- to low-income countries.

Table 10. Priorities for primary research based on the applicability limitations to low-income countries of the governance arrangements identified[a] *(Continued)*

	in rural areas, or financial incentive programmes might increase the number of health professionals in underserved areas. However, the certainty of this evidence is very low.	
Training/recruitment and retention strategies Rockers 2013	The two included studies took place in low and middle income countries. Tested in a low income country, there is uncertainty about the impact of having private contracts (contract-in districts) compared to public contracts of district health managers.	The capacity and strength of the government to oversee and supervise districts with private contracts could be an important issue to consider when it comes to assure the attainment of public regulations and goals. The level of power decentralisation in the districts might change the impact of policies related with health managers. The higher the degree of decentralisation, the higher the impact they might have.
Movement of health workers between public and private organisations Rutebemberwa 2014	No studies met the inclusion criteria for the review.	Health worker availability remains one of the key barriers to strengthening health systems in low-income countries. Effective interventions to manage the movement of health professionals could help to address this and need to be evaluated rigorously.
Emigration and immigration policies – reducing immigration restrictions Peñaloza 2011	The available evidence is based on an intervention made in a high-income country.	Policies in high-income countries may have an effect on the number of health workers migrating from low- and middle-income countries. Low- and middle-income countries have little direct influence on high-income country policies, including immigration policies. However, low- and middle-income countries may attempt to influence such policies by means of diplomacy, lobbying, or public relations before they are enacted.
Dual practice Kiwanuka 2011	No studies met the inclusion criteria for the review.	Dual practice may be more of a problem in low-income countries, due to low wages in the public sector, and interventions to manage it may have different effects, e.g. the risk of health professionals migrating is likely to be greater in low-income countries compared to high-income countries.
Authority and accountability for quality of practice – **authority and accountability for quality of outpatient care** – external inspection Flodgren 2011	Neither of the two studies included in this review took place in a low-income country: one was done in South Africa and the other in England. Both studies assessed the effect of external inspection of compliance of different stan-	External inspection of compliance standards may have varying acceptability and impact across different healthcare and cultural settings; may involve different components from training to organisational restructuring; and may impact in different ways on consumer and provider satisfaction across different settings Although quality of care is an objective of care in all health systems, it is not possible to be confident about the applicability of the reported interventions to low income countries and to settings other than hospital care

Table 10. Priorities for primary research based on the applicability limitations to low-income countries of the governance arrangements identified[a] *(Continued)*

	dards on quality of hospital services. According to the findings in this review, it is uncertain whether external inspection contributes or not to improve quality of health services in hospital setting.	
Stakeholder involvement		
Stakeholder participation in policy and organisational decisions – consumer involvement in preparing patient information Nilsen 2010	All the studies took place in high-income countries. Some interventions used technologies such as telephones and email. Baseline levels of consumers involvement were not reported.	Strategies to overcome barriers such as low baseline levels of social participation and education should be explored when considering consumer involvement in low-income countries. Training and support may be essential. The attitudes and the perspectives of health professionals and policymakers regarding consumer involvement should also be considered. As the availability of communication technologies may be a problem, face-to-face involvement may be most appropriate.
Community mobilisation – women's groups practising participatory learning and action Prost 2013	All 7 studies took place in low-and middle-income countries, including Bangladesh, Malawi, India and Nepal.	The use of women's groups practicing participatory learning and action probably decreases newborn mortality and may reduce maternal mortality in rural areas in low-income countries. However, its effectiveness may depend on participation of a substantial proportion of pregnant women. It might also depend on adequate supervision and support, home visits, access to care, improving the quality of care, and adequate resources. The intervention might be less effective in urban areas if there is less community cohesion and interaction among women included in women's groups, and higher baseline use of health services.
Community mobilisation – community-based dengue control Heintze 2007	10 out of 11 studies included in the systematic review took place in low- and middle-income countries.	These findings are applicable to low-income countries; however, the availability acceptability and costs of the interventions should be considered.
Patient information – **public disclosure of performance data** Fung 2008	The studies, all conducted in high-income countries, provided mixed evidence for using the public disclosure of performance data to improve the quality of care.	There is no evidence to date that the public disclosure of performance data affects the quality of care. Even if public disclosure were effective in improving quality of care in high-income countries, the results would not be directly transferable to low-income country settings because of differences in health infrastructure, the ability of health facilities and providers to produce accurate data, the capacity to disseminate the data, and the ability of consumers to interpret the data. There is a need for high-quality studies of public disclosure of performance data in high-, middle- and low-income countries.

[a]Priorities for primary research are based on the applicability limitations to low-income countries of the governance arrangement interventions identified by the included reviews. We did not search for additional primary studies.

Table 11. Priorities for primary research based on insufficient evidence for important outcomes[a,b]

Governance arrangement	Included review	No studies	Very low certainty of evidence	Low certainty of evidence
Authority and accountability for health policies				
Interagency collaboration	Hayes 2012	PO, ACU, QoC, RU	PO	PO
Decision-making about what is covered by health insurance – Restrictions on drug reimbursement	Green 2010	QoC	PO	—
Policies to reduce corruption – fraud detection and response actions	Rashidian 2012	PO, ACU, QoC	RU	—
Authority and accountability for organisations				
Subcontracting to non-state not-for-profit providers	Lagarde 2009	QoC, RU	—	PO, ACU
Multi-institutional arrangements **Social franchising**	Koehlmoos 2009	PO, ACU, QoC, RU	—	—
Authority and accountability for commercial products				
Registration – drugs	El-Jardali 2015	—	—	PO, ACU, QoC, RU
Reference pricing – reference and index price	Acosta 2014	PO, QoC	—	ACU, RU
Marketing regulations – drugs direct to consumer advertising	Gilbody 2005	PO, QoC, RU	—	—
Authority and accountability for health professionals	—	—	—	—
Training and licensing **Pre-licensure education** – minority academic advising programme	Pariyo 2009	PO, ACU, QoC, RU	—	—
Recruitment and retention strategies	Grobler 2015		PO, ACU, QoC, RU	—
Training and licensing/recruitment and retention strategies	Rockers 2013	QoC, RU	PO, ACU	—
Movement of health workers between public and private organisations	Rutebemberwa 2014	PO, ACU, QoC, RU	—	—
Emigration and immigration policies – reducing immigration restrictions	Peñaloza 2011	PO, QoC, RU	—	—
Dual practice	Kiwanuka 2011	PO, ACU, QoC, RU	—	—

Table 11. Priorities for primary research based on insufficient evidence for important outcomes[a,b] *(Continued)*

Authority and accountability for quality of practice	Flodgren 2011	PO, ACU, RU	QoC	—
Authority and accountability for quality of outpatient care – external inspection				
Stakeholder involvement				
Stakeholder participation in policy and organisational decisions - consumer involvement in preparing patient information	Nilsen 2010	PO, ACU, RU	—	QoC
Community mobilisation – women's groups practising participatory learning and action	Prost 2013	ACU, QoC, RU	—	—
Community mobilisation – community-based dengue control	Heintze 2007	ACU, QoC, RU	—	—
Patient information	Fung 2008	QoC, RU	—	PO, ACU
Public disclosure of performance data				

ACU: access, coverage and utilisation outcomes; **PO**: patient outcomes; **QoC**: quality of care outcomes; **RU**: resource use outcomes.
[a]We have included here only priorities for research on the effects of governance arrangements based on the included reviews for each category of the health systems taxonomy. Since we did not search for primary studies we cannot discard primary evidence outside this review-based approach.

Table 12. Priorities for new systematic reviews on governance arrangements in low-income countries

Governance arrangement	What we found
Authority and accountability for health policies	
Decentralised versus centralised authority for health services	No reviews identified
Policies that regulate what drugs are reimbursed	No reviews identified
Policies that regulate what services are reimbursed	No reviews identified
Restrictions on reimbursement for health insurance	No reviews identified
Strategies for expanding health insurance coverage	No reviews identified
Policies to manage absenteeism	No reviews identified
Requirements for monitoring or evaluation	No reviews identified
Authority and accountability for organisations	
Ownership	Review in progress (Herrera 2013)
Stewardship of private health services	No reviews identified
Accreditation	No reviews identified
Provision of drug insurance	Review in progress (Pantoja 2015)

Table 12. Priorities for new systematic reviews on governance arrangements in low-income countries *(Continued)*

Provision of health insurance	No reviews identified
Policies that regulate interactions between donors and governments	No reviews identified
Governance arrangements for coordinating care across multiple providers	No reviews identified
Mergers	No reviews identified
Authority and accountability for commercial products	
Registration of health technology	No reviews identified
Patents and profits of drugs	No reviews identified
Patents and profits of health technology	No reviews identified
Pricing and purchasing policies of health technology and services	No reviews identified
Marketing regulations for health technology and services	No reviews identified
Sales and dispensing policies for drugs	Review in progress (Peñaloza 2015)
Liability for commercial products	No reviews identified
Authority and accountability for health professionals	
Licensure of health professionals	No reviews identified
Specialty certification	No reviews identified
Scope of practice	No reviews identified
Authority and accountability for quality assurance of hospital care	No reviews identified
Professional competence	No reviews identified
Professional liability	No reviews identified
Stakeholder involvement	
Community monitoring	No reviews identified
Patient information about drugs	No reviews identified
Patients' rights	No reviews identified

APPENDICES

Appendix 1. PubMed and LILACS search strategies

PubMed

From 2000 to present. Update: weekly

#1. MEDLINE[Title/Abstract]

#2. (systematic[Title/Abstract] AND review[Title/Abstract])

#3. meta analysis[Publication Type]

#4. #1 OR #2 OR #3 **(Methods filter for systematic reviews – Clinical Queries – Max Specificity)**

#5. overview[Title] AND (reviews[Title] OR systematic[Title]

#6. meta-review[Title]

#7. review of reviews[Title]

#8. review[Title] AND systematic reviews[Title]

#9. umbrella[Title] AND (review[Title] OR reviews[Title] OR systematic[Title])

#10. policy[Title] AND (brief[Title] OR evidence[Title])

#11. #5 OR #6 OR #7 OR #8 OR #9 OR #10 **(Methods filter for overviews)**

#12. #4 OR #11 **(Methods filter for systematic reviews and for overviews)**

LILACS

From 2000 to present. Update: monthly

(TW:"revision sistematica" OR TW:"revisao sistematica" OR TW:"systematic review" OR MH:"review literature as topic" OR MH:"meta-analysis as topic" OR PT:"meta-analysis")

OR

(PT:revision **AND** (TW:metaanal$ OR TW:"meta-analysis" OR TW:"metaanalise" OR TW:"meta-analisis" OR TI:overview$ OR TW:"estudio sistematico" OR TW:"systematic study" OR TW:"estudo sistematico" OR TI:review OR TI:revisao OR TI:revision OR TI:systematic OR TI:sistematico))

OR

((TW:overview OR TW:"estudio sistematico" OR TW:"systematic study" OR TW:"estudo sistematico") **AND** (TI:review OR TI:revisao OR TI:revision OR TI:systematic OR TI:sistematico))

CINAHL (EBSCO)

From 2000 to present. Update: monthly

((TI meta analys* or AB meta analys*) or (TI systematic review or AB systematic review))

PsycINFO (EBSCO)

From 2000 to present. Update: monthly

meta-analysis OR search*

EMBASE (Ovid)

From 2000 to present. Update: monthly

meta-analysis.tw. OR systematic review.tw

Appendix 2. SUPPORT Summaries checklist for making judgments about how much confidence to place in a systematic review

Review:
Assessed by:
Date:

(Continued)

Section A: *Methods used to identify, include and critically appraise studies*

A.1 Were the criteria used for deciding which studies to include in the review reported?	_ Yes
Did the authors specify:	_ Can't tell/partially
_ Types of studies	_ No
_ Participants	
_ Intervention(s)	
_ Outcome(s)	
Coding guide - check the answers above	
YES: All four should be yes	
Comments (note important limitations or uncertainty)	
A.2 Was the search for evidence reasonably comprehensive?	_ Yes
Were the following done:	_ Can't tell/partially
_ Language bias avoided (no restriction of inclusion based on language)	_ No
_ No restriction of inclusion based on publication status	
_ Relevant databases searched (including Medline + Cochrane Library)	
_ Reference lists in included articles checked	
_ Authors/experts contacted	
Coding guide - check the answers above:	
YES: All five should be yes	
PARTIALLY: Relevant databases and reference lists are both ticked off	
Comments (note important limitations or uncertainty)	
A.3 Is the review reasonably up-to-date?	_ Yes
Were the searches done recently enough that more recent research is unlikely to be found or to change the results of the review?	_ Can't tell/not sure
Coding guide – consider how many years since the last search (e.g. if more than 10 years the review is unlikely to be up-to-date) and whether there is ongoing research	_ No
Comments (note important limitations or uncertainty)	
A.4 Was bias in the selection of articles avoided?	_ Yes
Did the authors specify:	_ Can't tell/partially
_ Explicit selection criteria	_ No
_ Independent screening of full text by at least 2 reviewers	
_ List of included studies provided	
_ List of excluded studies provided	

(Continued)

Coding guide - check the above

YES: All four should be yes

Comments (note important limitations or uncertainty)

A.5 Did the authors use appropriate criteria to assess the risk for bias in analysing the studies that are included? † (See Appendix for an example of criteria - Assessing Risk of Bias Criteria for EPOC Reviews)

_ The criteria used for assessing the risk of bias were reported

_ A table or summary of the assessment of each included study for each criterion was reported

_ Sensible criteria were used that focus on the risk of bias (and not other qualities of the studies, such as precision or applicability)

Coding guide - check the above

YES: All four should be yes

_ Yes

_ Can't tell/partially

_ No

Comments (note important limitations or uncertainty)

A.6 Overall – how would you rate the methods used to identify, include and critically appraise studies?

Summary assessment score A relates to the 5 questions above.

If the "No"or "Partial"option is used for any of the questions above, the review is likely to have important limitations.

Examples of major limitations might include not reporting explicit selection criteria, not providing a list of included studies or not assessing the risk of bias in included studies.

_ **Major limitations** (limitations that are important enough that the results of the review are not reliable and they should not be used in the policy brief)

_ **Important limitations** (limitations that are important enough that it would be worthwhile to search for another systematic review and to interpret the results of this review cautiously, if a better review cannot be found)

_ **Reliable** (only minor limitations)

Comments (note any major limitations or important limitations).

Section B: *Methods used to analyse the findings*

B.1 Were the characteristics and results of the included studies reliably reported?

Was there:

_ Independent data extraction by at least 2 reviewers

_ A table or summary of the characteristics of the participants, interventions and outcomes for the included studies

_ A table or summary of the results of the included studies.

Coding guide - check the answers above

YES: All three should be yes

_ Yes

_ Partially

_ No

_ Not applicable (e.g. no included studies)

Comments (note important limitations or uncertainty)

(Continued)

B.2 Were the methods used by the review authors to analyse the findings of the included studies reported?	_ Yes _ Partially _ No _ Not applicable (e.g. no studies or no data)
Comments (note important limitations or uncertainty)	
B.3 Did the review describe the extent of heterogeneity? _ Did the review ensure that included studies were similar enough that it made sense to combine them, sensibly divide the included studies into homogeneous groups, or sensibly conclude that it did not make sense to combine or group the included studies? _ Did the review discuss the extent to which there were important differences in the results of the included studies? _ If a meta-analysis was done, was the I^2, chi square test for heterogeneity or other appropriate statistic reported?	_ Yes _ Can't tell/partially _ No _ Not applicable (e.g. no studies or no data)
Comments (note important limitations or uncertainty)	
B.4 Were the findings of the relevant studies combined (or not combined) appropriately relative to the primary question the review addresses and the available data? *How was the data analysis done?* _ Descriptive only _ Vote counting based on direction of effect _ Vote counting based on statistical significance _ Description of range of effect sizes _ Meta-analysis _ Meta-regression _ Other: specify _ Not applicable (e.g. no studies or no data) *How were the studies weighted in the analysis?* _ Equal weights (this is what is done when vote counting is used) _ By quality or study design (this is rarely done) _ Inverse variance (this is what is typically done in a meta-analysis) _ Number of participants _ Other, specify: _ Not clear _ Not applicable (e.g. no studies or no data) *Did the review address unit of analysis errors?* _ Yes - took clustering into account in the analysis (e.g. used intra-cluster correlation coefficient)	_ Yes _ Can't tell/partially _ No _ Not applicable (e.g. no studies or no data)

(Continued)

_ No, but acknowledged problem of unit of analysis errors

_ No mention of issue

_ Not applicable - no clustered trials or studies included

Coding guide - check the answers above

If narrative OR vote counting (where quantitative analyses would have been possible) OR inappropriate table, graph or meta-analyses OR unit of analyses errors not addressed (and should have been) the answer is likely NO.

If appropriate table, graph or meta-analysis AND appropriate weights AND the extent of heterogeneity was taken into account, the answer is likely YES.

If no studies/no data: NOT APPLICABLE

If unsure: CAN'T TELL/PARTIALLY

Comments (note important limitations or uncertainty)

B.5 Did the review examine the extent to which specific factors might explain differences in the results of the included studies?

_ Were factors that the review authors considered as likely explanatory factors clearly described?

_ Was a sensible method used to explore the extent to which key factors explained heterogeneity?

_ Descriptive/textual

_ Graphical

_ Meta-regression

_ Other

_ Yes

_ Can't tell/partially

_ No

_ Not applicable (e.g. too few studies, no important differences in the results of the included studies, or the included studies were so dissimilar that it would not make sense to explore heterogeneity of the results)

Comments (note important limitations or uncertainty)

B.6 Overall - how would you rate the methods used to analyse the findings relative to the primary question addressed in the review?

Summary assessment score B relates to the 5 questions in this section, regarding the analysis.

If the "No" or "Partial" option is used for any of the 5 preceding questions, the review is likely to have important limitations.

Examples of major limitations might include not reporting critical characteristics of the included studies or not reporting the results of the included studies.

_ **Major limitations** (limitations that are important enough that the results of the review are not reliable and they should not be used in the policy brief)

_ **Important limitations** (limitations that are important enough that it would be worthwhile to search for another systematic review and to interpret the results of this review cautiously, if a better review cannot be found)

_ **Reliable** (only minor limitations)

Use comments to specify if relevant, to flag uncertainty or need for discussion

Section C: *Overall assessment of the reliability of the review*

(Continued)

C.1 Are there any other aspects of the review not mentioned before which lead you to question the results?	_ Additional methodological concerns _ Robustness _ Interpretation _ Conflicts of interest (of the review authors or for included studies) _ Other _ No other quality issues identified

C.2 Based on the above assessments of the methods how would you rate the reliability of the review?

_ **Major limitations** (exclude); briefly (and politely) state the reasons for excluding the review by completing the following sentence: *This review was not included in this policy brief for the following reasons:*

Comments (briefly summarise any key messages or useful information that can be drawn from the review for policy makers or managers):

_ **Important limitations** ; briefly (and politely) state the most important limitations by editing the following sentence, if needed, and specifying what the important limitations are: *This review has important limitations.*

_ **Reliable** ; briefly note any comments that should be noted regarding the reliability of this review by editing the following sentence, if needed: *This is a good quality systematic review with only minor limitations.*

Appendix 3. Characteristics of included reviews

Authority and accountability for health policies

Interagency collaboration

Hayes 2012

Review objective: to evaluate the effects of interagency collaboration between local health and local government agencies on health outcomes in any population or age group.

Types of	What the review authors searched for	What the review authors found
Study designs and interventions	Randomised trials , non-randomised trials, controlled before-after studies and interrupted time series studies that assess any interventions of interagency collaboration and partnership and local government agencies	This review included 16 studies: 7 randomised trials(7 studies), 4 non-randomised trials(4 studies), 4controlled before-after studies(4 studies) and 1 interrupted time series study. 11 studies were included in the meta-analysis. 7 studies reported on interventions to improve the care or treatment of patients and 9 studies about health education, health promotion or disease prevention
Participants	All population types and all age groups were included	Studies were delivered through community and primary care services (8 studies), in schools (5 studies), and in the wider community (3 studies).

(Continued)

Settings	Any local or national setting	Studies took place in the UK (7 studies), Denmark (1 study), Sweden (1 study), Norway and Sweden (1 study), the Netherlands (1 study), the USA (2 studies), Canada (1 study), Israel (1 study), and Australia (1 study).
Outcomes	Mortality, morbidity and behavioural change	A variety of outcomes were reported, including behavioural changes, morbidity and healthcare process

Date of most recent search: December 2011

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

Decision-making about what is covered by health insurance

Green 2010

Review objective: to determine the effects of a pharmaceutical policy restricting the reimbursement of selected medications on medicine use, healthcare utilisation, health outcomes and costs (expenditures).

Types of	What the review authors searched for	What the review authors found
Study designs and interventions	Randomised and non-randomised trials, interrupted time series studies including repeated measures studies, and controlled before-after studies assessing prescribing policies – introduction of restriction to reimbursement, relaxation of previously instituted restrictions to reimbursement, or exemption from restrictive policies for targeted cost-effective medicines	24 studies evaluating restrictions to reimbursement policies. Most interventions were prior authorization. 5 studies evaluated policies of releasing or relaxing past restrictions to reimbursement. All of the studies were interrupted time series.
Participants	Healthcare consumers and providers within a large jurisdiction or system of care (regional, national or international)	Participants were predominantly the beneficiaries of publicly subsidised or administered pharmaceutical insurance plans – most often senior citizens aged 65 years or over and low-income adult populations.
Settings	All settings	Health insurance systems with substantial coverage of medicines in the USA (14 studies), Canada (11 studies), Norway (2 studies) and Denmark (2 studies)
Outcomes	**Primary outcomes**: medicine use (prescribed, dispensed or actually used), healthcare utilisation, health outcomes, costs (expenditures). **Secondary outcomes**: changes in equity of access to medicines, changes in access to medically necessary medicines by disadvantaged groups, changes in the distribution of financial burden	Medicine use and medicine expenditures (24 studies), health outcome data (2 studies), healthcare utilisation (9 studies)

Date of most recent search: MEDLINE (2005 to January 2009) and other databases (2005 to October 2008)

Limitations: This is a well-conducted systematic review with only minor limitations; however, the most recent searches were in January 2009.

Policies to reduce corruption

Rashidian 2012

(Continued)

Review objective: to assess the effectiveness of interventions to combat healthcare fraud and abuse.

Types of	What the review authors searched for	What the review authors found
Study designs and interventions	Interventional studies with or without a concurrent control group assessing any intervention to combat healthcare fraud (including prevention, detection, and response interventions)	4 studies were included: 3 assessing detection actions and 2 response actions. The study designs were: longitudinal with concurrent control group (1 study), data mining (2 studies) and before-after study (1 study).
Participants	Providers, patients or insured people, insurers (third party payers)	Taiwan's National Health Insurance, Medicare and Medicaid (in USA)
Settings	Public and private health sectors	Taiwan (2 studies) and the USA (2 studies)
Outcomes	Prevention, detection, and response related outcomes	Detection of fraudulent claims, amount of anti-fraud expenditure, occurrence of healthcare fraud and abuse, fraudulent activities in diagnostic laboratories

Date of most recent search: December 2010

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

Authority and accountability for organisations

Contracting out

Lagarde 2009

Review objective: to assess the effects of contracting out healthcare services in health services utilisation, equity of access, health expenditure and health outcomes.

Types of	What the review authors searched for	What the review authors found
Study designs and interventions	Randomised trials, controlled before-after studies and interrupted time series studies of contracting out of healthcare services via a formal contractual relationship between government and non-state providers	1 controlled before-after study, 1 interrupted time series study, and 1 cluster randomised trial
Participants	Populations that would potentially access health services (users and non-users) as well as health facilities in low- and middle-income countries	- Bolivia: a neighbourhood in the capital city of la Paz - Pakistan: the population of the rural district of Rahimyar Khan - Cambodia: 6 districts of the country (2 contracted out and 4 run by the government). It also evaluated a non-reported number of districts contracted in
Settings	Not limited to any level of healthcare delivery	2 studies (Pakistan, Cambodia) evaluated a contracting out motivated by weaknesses or absence of public system. Both took place in mostly rural areas. 1 study (Bolivia) included a programme based in an urban setting consisting of a network of 8 health centres and 1 hospital
Outcomes	Objective measures of health services utilisation, access to care, healthcare expenditure, health outcomes or changes in equity	Health services utilisation and access to care (3 studies), health expenditure (1 study) and health out-

(Continued)

		comes (1 study). No studies were found that measured changes in equity of access
Date of most recent search: April 2006		
Limitations: This is a well-conducted systematic review with only minor limitations, but the last search for studies was in 2006.		
Multi-institutional arrangements		
Koehlmoos 2009		
Review objective: to assess the effects of the social franchising of health service delivery on access to and the quality of services and health outcomes in low- and middle-income countries.		
Types of	**What the review authors searched for**	**What the review authors found**
Study designs and interventions	Randomised trials, non-randomised trials, interrupted time series studies, and controlled before-after studies reporting on social franchises delivering health services, driven by seeking social benefits	No studies meeting the inclusion criteria were identified.
Participants	All levels of healthcare delivery, all types of patients and healthcare providers	—
Settings	Low- and middle-income countries	—
Outcomes	Healthcare access, quality of care, health outcomes, adverse effects, equitable access or utilization, cost/service, patient satisfaction	—
Date of most recent search: October 2007 to March 2008		
Limitations: This is a well-conducted systematic review with only minor limitations, but the last search for studies was done in 2008.		
Authority and accountability for commercial products		
Registration - medicines		
El-Jardali 2015		
Review objective: to assess the evidence on the effectiveness of interventions implemented to combat or prevent medicine counterfeiting, particularly in low- and middle-income countries.		
Types of	**What the review authors searched for**	**What the review authors found**
Study designs and interventions	Randomised trials; non-randomised studies (e.g. cohort studies, retrospective studies, cross-sectional studies, before-after studies); and non-comparative studies	*Designs*: 21 studies with 25 comparisons: cross-sectional (17 studies); before-after (5 studies); retrospective (1 study); non-comparative (1 study); randomised trial (1 study)
	Any intervention at the health system level to combat or prevent medicine counterfeiting. The review excluded studies that focused on internet/online medicine counterfeiting, analytical techniques and medication errors. Studies that also considered substandard medicines were included only when they did not differentiate between substandard and counter-	*Interventions:* medicine registration (5 comparisons); WHO prequalification of medicines (3 studies); licensing of drug or medicine outlets (8 studies); multi-faceted interventions (6 studies); deployment of handheld spectrometers at the point of sale (1 study); a public awareness campaign (1 study); an international model of collaboration (1 study)

(Continued)

	feit medicines, or where it was unclear if the poor quality medicine was counterfeit or substandard	
Participants	"Counterfeit/spurious/falsely-labeled/falsified/medicines", as defined by WHO as medicines with the wrong ingredients, without active ingredients, with insufficient active ingredients or with fake packaging	Most of the studies did not distinguish between counterfeit and substandard medicines
Settings	Any setting	Studies from low- and middle-income countries
Outcomes	Changes in failure rates of tested medicines; changes in the prevalence of counterfeit medicines; changes in quality of medicine; changes in consumer behaviour; seizures of counterfeit medicines; and closures of illegal outlets/warehouses	Changes in failure rates of medicines (19 comparisons); changes in prevalence of counterfeit medicines (4 studies); changes in purchasing behaviour of consumers (1 study); confiscation of counterfeit medicines (2 studies); closure of illegal outlet(2 studies) Some studies reported more than one outcome.
Date of most recent search: April 2014		
Limitations: This was a well-conducted systematic review with only minor limitations. However, the included studies used largely observational designs.		
Pricing and purchasing policies		
Acosta 2014		
Review objective: to determine the effects of pharmaceutical pricing and purchasing policies on medicine use, healthcare utilisation, health outcomes and costs (expenditures).		
Types of	**What the review authors searched for**	**What the review authors found**
Study designs and interventions	Randomised trials, non-randomised trials, controlled repeated measures studies, interrupted time series studies and controlled before-after studies of pharmaceutical pricing and purchasing policies	18 studies were included. Some used more than one design: 14 interrupted time series, 1 interrupted time series/controlled before-after/controlled repeated measures, 1 controlled repeated measures/repeated measures and 2 controlled before-after/repeated measures studies. 17 studies evaluated reference pricing, one of which also assessed maximum prices, and 1 study evaluated index pricing.
Participants	Healthcare users and providers	In 8 Canadian studies, the patients were Pharmacare beneficiaries in British Columbia: senior citizens aged 65 years and older. The other studies included all beneficiaries of national medicine insurance plans, including vulnerable groups of people from all ages. 1 German and 1 Spanish study did not provide information about the participants.
Settings	Large jurisdictions or systems of care. Jurisdictions could be regional, national or international. Studies within organisations, such as health maintenance organisations, were included if the organisation was multi-sited and served a large population.	Canada (8 studies), USA (2 studies), Spain (2 studies), Germany (2 studies), Norway (2 studies), Australia (1 study) and Sweden (1 study)

(Continued)

Outcomes	Medicine use, healthcare utilisation, health outcomes, costs (expenditures), including medicine costs and prices, other healthcare costs and administration costs	Medicine use (10 studies), third party (insurance) medicine expenditures (9 studies), medicine prices (4 studies), medicine expenditures savings (5 studies), and patient costs

Date of most recent search: December 2012

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

Marketing regulations

Gilbody 2005

Review objective: to examine the benefits and harms of direct-to-consumer advertising of prescription-only medicines

Types of	What the review authors searched for	What the review authors found
Study designs and interventions	Randomised trials, controlled clinical trials, controlled before-after studies, interrupted time series studies, and cross-sectional studies with a control group	3 interrupted time series studies and 1 comparative cross-sectional survey were found
Participants	Not pre-specified	Patients and physicians in primary care
Settings	Not pre-specified	USA (2 studies), USA and Canada (1 study), Netherlands (1 study)
Outcomes	Health-seeking behaviours of patients at the point of access to care; requests for prescription-only medicines; patient-doctor communication and satisfaction with care; prescribing patterns; costs	Requests for prescription only medicines (4 studies); prescription volume (4 studies); patient-doctor communication and satisfaction with care (1 study)

Date of most recent search: October 2004

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

Authority and accountability for health professionals

Training and licensing

Pariyo 2009

Review objective: to assess the effect of changes in the pre-licensure education of health professionals on health-worker supply.

Types of	What the review authors searched for	What the review authors found
Study designs and interventions	Randomised trials, controlled before-after studies and interrupted time series studies of interventions that could increase the capacity of health professional training institutions; reduce the loss of students (and increase the likelihood that students will graduate); or increase the recruitment of students from other countries into health professional training institutions	2 controlled before-after studies of minority academic advising programmes consisting of academic, personal, financial and vocational advice, skills building, mentorships, supplementary training and annual evaluations

(Continued)

Participants	Health professional students prior to licensure	2 studies among minority groups and general health professional students
Settings	No restrictions	2 studies from the USA
Outcomes	Increased numbers of health workers ultimately available for recruitment into the health workforce, improved population-to-health professional ratios	2 studies of the numbers of health workers ultimately available for recruitment into the health workforce
Date of most recent search: February 2008		
Limitations: This is a well-conducted systematic review with only minor limitations		
Training and licensing		
Rockers 2013		
Review objective: to assess the effectiveness of interventions to hire, retain and train district health systems managers in low- and middle-income countries.		
Types of	**What the review authors searched for**	**What the review authors found**
Study designs and interventions	Randomised trials, quasi-randomised trials, controlled before-after studies, interrupted time series studies	One randomised trial: district managers were hired through private contracts to work within the Ministry of Health system.
	Interventions related to hiring, retaining and training managers	One controlled before-after study: 18-month manager training programme.
Participants	District health systems managers in low- and middle-income countries	District health systems managers
Settings	Districts in low- and middle-income countries	Cambodia (1 study); Mexico, Colombia, El Salvador (1 study)
Outcomes	Health systems: population health outcomes; access; utilization; quality; efficiency; equity. Operational: job-posting vacancy rates, skills	Health facility staffing and supervision, maternal and child health service use (e.g. immunisation, antenatal care), and population health outcomes (e.g. diarrhea incidence). Managers' competencies
Date of most recent search: December 2011		
Limitations: This is a well-conducted systematic review with only minor limitations.		
Rectruitment and retention strategies		
Grobler 2015		
Review objective: to assess the effectiveness of interventions to increase the proportion of healthcare professionals working in rural and other underserved areas		
Types of	**What the review authors searched for**	**What the review authors found**
Study designs and interventions	Randomised trials, non-randomised trials, controlled before-after studies and interrupted time series studies of any intervention to in-	1 interrupted time series study from Taiwan of the effects of National Health Insurance on the equality of distribution of healthcare professionals

(Continued)

	crease the recruitment or retention of health professionals in underserved areas	
Participants	Qualified healthcare professionals of any cadre or specialty	Physicians, doctors of Chinese medicine and dentists
Settings	All settings	Taiwan
Outcomes	Recruitment of health professionals: the proportion of health professionals who initially choose to work in rural or urban underserved communities as a result of being exposed to the intervention. Retention: the proportion of healthcare professionals who continue to work in rural or urban underserved communities as a consequence of the intervention	Equality of geographic distribution of healthcare professionals measured using the Gini coefficient
Date of most recent search: April 2014		
Limitations: This is a well-conducted systematic review with only minor limitations.		
Rectruitment and retention strategies		
Rockers 2013		
See characteristics above under 'Training and licensing'		
Movement of health workers between public and private organisations		
Rutebemberwa 2014		
Review objective: to assess the effects of financial incentives and movement restriction interventions to manage the movement of health workers between public and private organisations in low- and middle-income countries.		
Types of	**What the review authors searched for**	**What the review authors found**
Study designs and interventions	Randomised trials and non-randomised trials; controlled before-after studies; controlled interrupted time series and interrupted time series studies without controls	No studies were found eligible for inclusion in the review. 9 surveys, 1 review of government reports, 1 study of speeches in the national assembly, and 1 policy analysis paper were found.
Participants	All health professionals	No studies were found eligible for inclusion in the review.
Settings	Any public or private sector organisations	No studies were found eligible for inclusion in the review.
Outcomes	Change in the numbers or proportion of health workers entering or leaving the public or private sectors; duration of stay in a particular sector	No studies were found eligible for inclusion in the review.
Date of most recent search: November 2012		
Limitations: This is a well-conducted systematic review with only minor limitations.		
Emigration and immigration policies		

(Continued)

Peñaloza 2011

Review objective: to assess the effects of policy interventions to control the emigration of health professionals from low- and middle-income countries to high-income countries

Types of	What the review authors searched for	What the review authors found
Study designs and 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 low- and middle-income country whose graduate training was in a low- and middle-income country	Nurses
Settings	Not restricted	USA and the Philippines
Outcomes	Proportion (or other measure of change in number) of health professionals that emigrate from a low- and middle-income country to a high-income countrie	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.

Dual practice

Kiwanuka 2011

Review objective: to assess the effects of interventions implemented to manage dual practice.

Types of	What the review authors searched for	What the review authors found
Study designs and interventions	Randomised trials, non-randomised trials, controlled before-after studies, interrupted time series studies	No studies were found eligible for inclusion in the review
Participants	All health professionals	No studies were found eligible for inclusion in the review
Settings	Not specified	No studies were found eligible for inclusion in the review
Outcomes	Increased working hours by health workers in public facilities, reduced patient waiting times, reduced absenteeism, reduction in number of private sector licenses issued, reduction in private earning, reduced job satisfaction	No studies were found eligible for inclusion in the review

Date of most recent search: May 2011

Limitations: This is a well-conducted systematic review with minor limitations, but no studies were found that met the inclusion criteria.

(Continued)

Quality of practice

Flodgren 2011

Review objective: to evaluate the effectiveness of external inspection of compliance with standards in improving healthcare organisation behaviour, healthcare professional behaviour and patient outcomes.

Types of	What the review authors searched for	What the review authors found
Study designs and interventions	Randomised trials, non-randomised trials, interrupted time series studies and controlled before-after studies evaluating the effect of external inspection against external standards on healthcare organisation change, healthcare professional behaviour or patient outcomes	1 cluster-randomised trial conducted in South Africa and 1 before-after study reanalysed as an interrupted time series study, conducted in England. The study in South Africa assessed the effects of external inspection on compliance with hospital accreditation standards. The study conducted in England assessed the effects of the Healthcare Commissions Infection Inspection programme on compliance with standards related to healthcare-acquired infections.
Participants	Hospitals, primary healthcare organisations and other community-based healthcare organisations containing health professionals	20 public hospitals in Kwa Zulu province of South Africa, and all acute hospital trusts in England
Settings	Any health system	1 study was conducted in South Africa and 1 in England
Outcomes	Measures of healthcare organisational change (e.g. organisational performance, waiting list times, inpatient hospital stay time); measures of healthcare professional behaviour (e.g. referral rate, prescribing rate); measure of patient outcomes (e.g. mortality and condition-specific measures)	Outcomes assessed in 1 study were related to adherence to standards in: medical records, patient outcomes such as satisfaction and patient education, and outcomes related with health processes. The other study assessed the rate of hospital-acquired infections.

Date of most recent search: May 2011

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

Stakeholder involvement

Stakeholder participation in policy and organizational decisions

Nilsen 2010

Review objective: to assess the effects of consumer involvement and to compare different methods of involvement in developing healthcare policy and research, clinical practice guidelines, and patient information material.

Types of	What the review authors searched for	What the review authors found
Study designs and interventions	Randomised trials of ways to involve consumers and enable them to inform and participate in decisions about healthcare policy and research, clinical practice guidelines or patient information material	6 randomised trials of involvement compared with no involvement in developing patient information, satisfaction interviews conducted by patients compared with staff, informed consent forms developed by consumers versus investigators, and methods of consulting consumers regarding priorities for improving community health
Participants	Healthcare consumers or professionals involved in decisions about healthcare at the	Involvement in research (3 studies), developing patient information (2 studies) and healthcare policy (1 study)

(Continued)

	population level, or evaluating the effects of consumer involvement	
Settings	No specific settings	Canada (2 studies), USA (2 studies), Norway (1 study) and the UK (1 study)
Outcomes	Participation or response rates of consumers; consumer views elicited; consumer influence on decisions, healthcare outcomes or resource utilisation; consumer or professional satisfaction with the involvement process or resulting products; impact on participating consumers; costs	Levels of patient satisfaction with different health services, self-reported participant understanding, satisfaction with study participation, adherence to the protocol and refusal to participate; knowledge and anxiety with a specific medical procedure; impact on prioritising health concerns and determinants
Date of most recent search: October 2009		
Limitations: This is a well-conducted systematic review with only minor limitations		
Community mobilisation		
Prost 2013		
Review objective: to assess the impact of women's groups practising participatory learning and action cycles on birth outcomes in low- and middle-income countries.		
Types of	**What the review authors searched for**	**What the review authors found**
Study designs and interventions	Randomised trials of participatory women's groups in low- and middle-income countries	7 cluster-randomised trials of participatory women's groups in low- and middle-income countries
Participants	Women's groups in which most of the participants are of reproductive age (15–49 years)	7 studies that included a total of 111 women's groups and 119,428 births
Settings	Low- and middle-income countries	Rural areas in Bangladesh (2 studies), India (2 studies), Malawi (2 studies), and Nepal (1 study)
Outcomes	Maternal mortality, neonatal mortality and stillbirths	Maternal mortality (7 studies), neonatal mortality (7 studies), and stillbirths (7 studies)
Date of most recent search: October 2012		
Limitations: This is a well-conducted systematic review with only minor limitations.		
Community mobilisation		
Heintze 2007		
Review objective: to assess the effectiveness of community-based interventions in reducing vector populations for dengue control.		
Types of	**What the review authors searched for**	**What the review authors found**
Study designs and interventions	Randomised trials, non-randomised trials, controlled before-after studies and interrupted time series studies of community-based interventions aimed at reducing vector populations for dengue control.	11 included studies: 2 randomised trials, 6 controlled before-after studies and 3 interrupted time series studies assessing community-based dengue control interventions alone (5 studies); combined with chemical larvicides (2 studies); combined with fish and chemical larvicides (2 studies); and combined with larvae-eating crustaceans (*Mesocyclops* copepods) (2 studies)

(Continued)

		Studies used educational materials (7 studies); educational meetings such as workshops (9 studies); and educational outreach visits (8 studies). Studies described the involvement of local opinion leaders (6 studies) and national institutions (5 studies), or the use of mass media (5 studies).
Participants	Community people and professionals serving the community.	Household inhabitants (mostly housewives), the elderly, children, health committees, healthcare personnel, government officers, teachers and community organisations
Settings	Community	5 studies took place in the Americas: Honduras (3 studies), Mexico (1 study), and Cuba (1 study). 6 studies were carried out in Asia: Vietnam (2 studies), Thailand (1 study), Taiwan (1 study), French Polynesia (1 study), Fiji Islands (1 study).
Outcomes	Incidence of dengue disease or infestation of the community with Aedes mosquitoes	Classical entomological/larval indices such as the House Index (HI), the Container Index (CI) and the Breteau Index (BI) – all measures of larvae infestation in the home or in water containers; seroconversion or incidence of dengue disease
Date of most recent search: March 2005		
Limitations: This is a well-conducted systematic review with only minor limitations.		
Patient information		
Fung 2008		
Review objective: to synthesise the evidence for using public disclosure of performance data to improve healthcare quality.		
Types of	**What the review authors searched for**	**What the review authors found**
Study designs and interventions	Peer-reviewed articles published between 1986 and 2006. Type of studies not pre-specified	2 randomised trials, 2 non-randomised trials, 1 controlled before-after study, 9 interrupted time series studies, and 31 other observational studies
Participants	Not pre-specified	Hospitals, patients, and hospital staff (45 studies)
Settings	Not pre-specified	USA (43 studies), United Kingdom (1 study), Canada (1 study)
Outcomes	Selection of health plans, hospitals, and individual providers, quality improvement activity, clinical outcomes, unintended consequences	Selection of health plans (8 studies), selection of hospitals (9 studies), selection of individual providers (7 studies), quality improvement activity (11 studies), clinical outcomes (11 studies), unintended consequences (13 studies)
Date of most recent search: March 2006		
Limitations: Only peer-reviewed, English-language articles were included.		

Appendix 4. Supplementary and additional related reviews

Recruitment and retention strategies

Increasing access to health workers in remote and rural areas through improved retention (WHO 2010)

Public disclosure of performance data

Public release of performance data in changing the behaviour of healthcare consumers, professionals or organisations (Ketelaar 2011) (Supplementary review)

Appendix 5. Reviews awaiting classification

Likely included reviews

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CONTRIBUTIONS OF AUTHORS

All of the authors contributed to drafting and revising the overview. All of the authors contributed important intellectual input to the overview.

DECLARATIONS OF INTEREST

Cristian A Herrera, Simon Lewin, Elizabeth Paulsen, Newton Opiyo, Tomas Pantoja, Gabriel Rada, and Andrew D Oxman are editors of the Cochrane Effective Practice and Organisation of Care (EPOC) Group. Agustín Ciapponi, Tomas Pantoja, Gabriel Rada, Cristian A Herrera, Andrew D Oxman, and Blanca Peñaloza are authors on some of the included reviews. Charles S Wiysonge, Gabriel Bastías, Sebastian Garcia Marti, and Charles I Okwundu have no relevant conflicts to declare.

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INDEX TERMS

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