Improving health system quality in low- and middle-income countries that are expanding health coverage: a framework for insurance

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Abstract

Purpose. Low- and middle-income countries are increasingly pursuing health financing reforms aimed at achieving universal health coverage. As these countries rapidly expand access to care, overburdened health systems may fail to deliver high-quality care, resulting in poor health outcomes. Public insurers responsible for financing coverage expansions have the financial leverage to influence the quality of care and can benefit from guidance to execute a cohesive health-care quality strategy.

Data sources and selection. Following a literature review, we used a cascading expert consultation and validation process to develop a conceptual framework for insurance-driven quality improvements in health care.

Results of data synthesis. The framework presents the strategies available to insurers to influence the quality of care within three domains: ensuring a basic standard of quality, motivating providers and professionals to improve, and activating patient and public demand for quality. By being sensitive to the local context, building will among key stakeholders and selecting context-appropriate ideas for improvement, insurers can influence the quality through four possible mechanisms: selective contracting; provider payment systems; benefit package design and investments in systems, patients and providers.

Conclusion. This framework is a resource for public insurers that are responsible for rapidly expanding access to care, as it places the mechanisms that insurers directly control within the context of broader strategies of improving health-care quality. The framework bridges the existing gap in the literature between broad frameworks for strategy design for system improvement and narrower discussions of the technical methods by which payers directly influence the quality.

Keywords: universal coverage, insurance, access to health care, quality assurance, quality improvement, health systems strengthening, developing countries
Insurance programs participating in the JLN are affiliated with government health reform efforts, deriving their primary funding from varying combinations of general government revenues (n = 7 organizations), payroll contributions (n = 6), household premiums (n = 5) and/or value-added tax (n = 1) [5, 8]. The benefits design for each organization is varied but most include coverage for some primary health care as well as inpatient care including procedural services. The number of lives covered by the insurance programs in the JLN exceeds 400 million across the 9 member states at various income levels. In several cases, but not all, the universal coverage efforts have focused on low-income populations not already covered by existing insurance programs for private sector workers or civil servants. Details on each plan including the populations served, financing and benefits packages are all available on the JLN website [5].

As the payers for care, insurers in LMICs are uniquely positioned to influence the quality of care they purchase across for their many beneficiaries [4]. Health sector spending increases do not necessarily drive improvements in care or outcomes [9]; insurers looking to expand access to care that is of value to patients need guidance on how to spend their resources wisely [8].

Data sources and selection

To develop the framework, the authors scanned the available scientific and grey literature to identify specific approaches available to purchasers and government to influence the quality of health care and existing frameworks for their use. Three researchers independently sought relevant articles through iterative series of searches using PubMed, Google and Google Scholar, and by inspecting found articles’ reference lists and associated ‘Related Citations’ in PubMed. Search terms included combinations of MeSH terms such as ‘quality of health care,’ ‘health care quality, access and evaluation’, and ‘insurance, health’ and global search terms such as ‘purchasing,’ ‘quality’, and ‘developing countries’. Abstracts found by at least two of the three researchers were given priority for review for relevance. Titles found by only one researcher were reviewed separately and included only if there was consensus that they were relevant.

All strategies available to purchasers and governments to promote the quality that were described in this literature review were identified and organized into the initial framework. Additional literature was then sought, targeted to supplement those strategies not captured well by the initial searches. For each strategy identified, at least two ‘seminal articles’ were selected that best described the evidence base for their use. Priority was placed on meta-analyses of the best available study designs, reviews and articles using controlled comparison groups, and those that described interventions in a setting resembling those of the JLN member countries. The aim of the search was thus not meant to be systematic, but rather pragmatic, as the sources were often not found in the published scientific literature. The aim was to provide a broad evidence base from which to draw the landscape of plausible quality-promotion tools. Forty-nine articles were collected in the initial search; we continue to add references as the knowledge base expands.

Informed by this literature search, the research team developed a conceptual model that was refined through cascading expert review—a series of 15 interviews with a broad array of experts in the field of national-level quality of care. Interviewees included leaders of national quality-promotion efforts in diverse contexts (n = 4), leaders of insurance agencies and large payer/provider systems (n = 4), representatives of accreditation agencies (n=3) and academic researchers (n = 7). During these semistructured interviews, experts were asked to reflect on what mechanisms had been used in the countries in which they worked to improve health-care quality, and under what conditions they were most and least effective. Interviewees were then asked to provide direct feedback on the framework’s accuracy, usefulness and visual presentation. After all interviews had taken place, the notes were analyzed for repeating themes and for illustrative examples of the quality strategies identified in the literature search.
A draft of the framework was tested as a discussion tool with JLN members in January 2012 at the Prince Mahidol Awards Conference in Bangkok, Thailand. Sixty leaders from health systems, insurers, donor agencies and academia used the categories contained in the framework to discuss strengths and weaknesses of their countries’ quality management structures. After facilitating these discussions, the authors revised the framework to strengthen the implied link between strategies to influence quality and insurers’ financial controls.

Results of data synthesis: the framework for insurer-driven improvement in health-care quality

The framework for insurer-driven improvement in health-care quality (Fig. 2) is a literature- and expert-informed model for how insurers interact with other healthcare stakeholders—policy-makers, providers, regulators, accreditors, patients and communities—to promote a cohesive, multi-level quality strategy in a country at scale. Built on Nolan’s three-component chain of ‘will, ideas and execution’ for system-level improvement results [11], the framework posits that insurers must choose a strategy appropriate to the local context, engage stakeholders whose will for reform is strong, select a cohesive set of change ideas and employ a specific and appropriate plan for execution of the strategy [11, 12]. The model represents these components as concentric circles, and illustrates within each component the strategies most frequently discussed in the literature and by our expert informants. These components demonstrate that by engaging other stakeholders, insurers can use their financial leverage to encourage implementation of core quality-enhancing interventions to improve the health system. Below we describe these components further and use illustrative examples from Mexico’s recent quality reforms.

Context

The backdrop for the framework is the local context within which the quality strategy operates. A country’s history, institutional structures, political moment, civil society, economic conditions, and current and past performance on health coverage and indicators have obvious ramifications on will and motivation to change the status quo, the prioritization of available ideas to make a change and the execution strategy that insurers will use to improve the quality. Some of these factors are known (history, economy, past performance of health system), but many are in constant evolution (political moment, economic conditions, etc.).

Mexico’s achievement of universal health coverage in 2012 centered on the success of its national health insurance program, Seguro Popular, launched in 2003 [13]. Accompanying this major structural change, the government along with other key stakeholders launched the National Crusade for Quality in Health Care [14, 15]. The Crusade used many of the approaches found in the quality framework to build a cohesive national strategy to improve the quality [14, 16]. At least two elements of the context facilitated the Crusade: first, information on gaps in performance created momentum for improvement efforts; secondly, the political timing of the Crusade gave it needed momentum.

Will

‘Will’ refers to the leadership that key stakeholders provide, the trust that exists among them and their enthusiasm for...
implementing real reforms. We have listed some of the stakeholders whose buy-in appears to be most important for improving health system quality: political figures, opinion leaders in the public and the media, clinical leaders and health professionals, and provider organizations.

For example, the Mexican President’s office lent unambiguous support to the Crusade; the General Health Council, the country’s medical professional association, supported reforms to the accreditation structure; and public support for reforms was clear in opinion surveys. A large group of stakeholders contributed to the Crusade’s design prior to its launch, contributing thousands of intervention ideas that were refined into the Crusade’s final strategy.

**Ideas**

The literature on national-level improvement offers a considerable range of strategies that can be used to promote the quality at a large scale [10, 17, 18]. For this framework, we sought to describe which strategies might be particularly important to insurers and most effectively contribute to achieving improvement in the quality at the system level. We have organized the specific strategies in the ‘ideas’ ring into three central domains, which represent key goals of quality assurance and improvement on both the supply and demand sides:

(i) Ensuring a standard, baseline level of quality across the system.

(ii) Motivating providers and professionals to continuously improve beyond the baseline level.

(iii) Activating patient and public demand for quality care.

Within each of these categories, we have detailed the most commonly cited approaches that were found in the literature or that policy-makers and quality experts have used in national strategies to improve the quality. Although the range of approaches available to all countries is the same, the unique needs and context of each country will determine the mix of specific approaches that are selected and the design of the execution strategy that is developed for that country.

**Actions to ensure standard quality.** The first domain of the quality framework refers to activities that ensure that all health-care providers and facilities offer a minimum standard level of quality. Insurers have at least three approaches at their disposal for enforcing a minimum standard. First, they can strongly encourage (e.g. through payment) or mandate that all listed facilities be accredited or practitioners be licensed by an internal review or an external authority [19, 20]. Secondly, they can provide caregivers access to, and encourage the use of clinical guidelines or protocols that guide caregivers to deliver evidence-based care [21–24]. Finally, they can mandate or incentivize the collection of data on compliance with these clinical pathways and guidelines.

Accreditation is commonly seen as a major motivator for improving systems, but its effectiveness is highly dependent on details such as the surveyors’ training and incentives and the extent to which facilities feel ownership, the emphasis on structural versus process/outcomes standards, and the ability to implement these standards. In Mexico, while the national insurance system Seguro Popular required that participating facilities be accredited [13], the Crusade reformed the accreditation system to play a more active role in quality promotion. Volunteer auditors were used rather than private, for-profit auditors, and training for the auditors was revised.

**Actions to motivate providers and professionals to continuously improve.** Insurers can use the power of both financial and non-financial incentives to encourage quality improvement practices. Some of the non-financial incentives might include public recognition of health professionals and facilities for high quality care. Tiered accreditation, such as used in Colombia [25], or voluntary accreditation are thought to be effective as a point of pride for providers and/or a marketable characteristic for customers. Similarly, awards for quality serve to highlight deserving providers and to shine a spotlight on policy initiatives to improve quality themselves. Mexico used the National Health Care Award as part of its National Crusade for Quality. Public display of data is a marker of recognition; the pressure of possible scrutiny (from peers, leaders and the public)—even in the absence of evidence that these stakeholders actually see and use these data—can be a powerful motivator [26]. In Mexico, a culture of transparency was nurtured by compelling facilities to publicly post their data on quality indicators online.

Insurers can also encourage continuous improvement by investing in capacity to improve. Mexico’s Ministry of Health conducted nationwide quality training, reaching 60 000 providers over 3 years. In-depth training in improvement methods was provided for managers responsible for quality in facilities. Small grants were issued for improvement projects, introducing incentives and visibility to local improvement. In Brazil, the highest level of voluntary accreditation requires that facilities demonstrate the use of cycles of improvement with systematic impact [27].

**Actions to activate patient and public demand for quality.** Patients and communities are perhaps the most underutilized resource for quality advocacy and monitoring [28]. Berlan and Shiffman [29] argue that providers can be more responsive to patient expectations when there are official community participation mechanisms and when patients receive actionable information on their providers. For instance, Mexico instituted ‘Citizen Endorsement Groups’, non-governmental, non-profit and non-political civic organizations that worked with local health facilities to drive patient-centeredness and patients rights [30]. However, Berlan and Shiffman [29] demonstrate that community participation can have a limited effect when counteracted by other entrenched interests to which care providers pay more attention. Likewise, public transparency of data to consumers and competition among providers might drive demand-driven quality. However, the design of that information so that it is usable by consumers is critical. Some insurers seeking direct impact on health outcomes have used incentive programs (conditional and unconditional cash transfers) with patients to encourage optimal health-seeking behavior and adherence to complex treatment programs [31, 32]. In addition, some programs have used financial
incentives or reimbursement policies to encourage patients to select higher quality providers [33].

Execution

The Mexican National Crusade described throughout this paper was not itself executed by the national insurance program Seguro Popular; however, its tight integration with the insurance expansion demonstrates that financial reforms for universal coverage can instigate system-wide quality improvement and assurance. Indeed, insurers rarely directly implement any of the ‘ideas’ for quality interventions described above. Rather, their influence rests on the ability to finance a given strategy or incentivize its use. The ‘execution’ ring of the framework describes the central mechanisms that insurers directly control to implement the strategies in the ‘ideas’ ring. First, insurers have the basic tools related to their core function as payers: selective contracting (who is paid) [34], provider payment mechanisms (how they are paid) [34] and benefit package design (for what are they paid) [35]. In addition, insurers have the resources to invest in improvement for the longer term. Such investments might be directed at systems (e.g. IT infrastructure, emergency transportation, etc.) [36, 37], at patients (e.g. conditional cash transfers, patient education campaigns, etc.) [32] or at providers (e.g. education in improvement) [38]. Further definitions of these mechanisms, and examples of how they can be paired with the interventions in the ‘ideas’ ring, is offered in Table 1.

Table 1 Examples for how insurers can use the tools they directly control to execute quality strategies described in the ‘ideas’ ring of the Framework

<table>
<thead>
<tr>
<th>Insurance execution mechanism</th>
<th>Description</th>
<th>Use with quality-promotion ideas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selective contracting</td>
<td>Basis for which providers are included in the scheme [34]</td>
<td>– Accreditation status [20]</td>
</tr>
<tr>
<td>Provider payment mechanisms</td>
<td>For example, pay-for-performance, capitation, fee-for-service, etc.</td>
<td>Payment differential based on the following:</td>
</tr>
<tr>
<td>Benefit package design</td>
<td>For example, catastrophic coverage vs. prevention/primary care; vertical vs. horizontal coverage [35]</td>
<td>– Compliance with standards/guidelines [34, 41]</td>
</tr>
<tr>
<td>Investment</td>
<td>System investments: IT, communication, transportation, etc. [36, 37, 44, 45]</td>
<td>– Collection of data [41]</td>
</tr>
<tr>
<td></td>
<td>Patients: conditional cash transfer, education campaigns [33, 46]</td>
<td>– Transparency of information [34]</td>
</tr>
<tr>
<td></td>
<td>Providers: education on quality, capacity for improvement [38, 47]</td>
<td>– Standards and guidelines [8, 42]</td>
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Conclusion

The Joint Learning Network began with the theory that peer-to-peer knowledge exchange within a group of 9 LMICs simultaneously seeking to expand access to healthcare would accelerate progress toward improving population health outcomes. The participating countries realized, however, that population health outcomes could not improve without accompanying improvements in the quality of service delivery. The framework we have outlined in this paper offers the first guide to insurers for how to conceptualize their role in promoting high-quality universal coverage.

This framework marks an important addition to our understanding of the role of insurers in improving the quality by placing the mechanisms they directly control within the context of broader strategies for quality assurance and improvement. The literature on the insurers’ role in health-care quality has been focused on the specific financial and market mechanisms available to purchasers such as pay-for-performance and selective contracting. The GTZ-ILO-WHO Consortium on Social Health Protection in Developing Countries’ 2007 conference focusing on the role of purchasers in quality assurance displays the tension with this framing well: its session on purchasers’ role focused on provider payment mechanisms and made mention of the importance of purchasers’ leverage. Later sessions discussed quality management and demand-side strengthening; no link is clearly made in the conference’s synthesis report between these needs and purchasers’ tools [53].
The framework presented here bridges the gap between the literature on broad, system-wide quality assurance and improvement and the more mechanism-targeted literature on the purchasers’ role. Sauerland [18] describes a legal framework for quality assurance, arguing that providers can be kept in or out of the health-care market based on quality. Once in the market, quality can be ensured through regulation; through information on structure, processes and outcomes; through sanctions; or through quality-based competition among providers. Our framework demonstrates how insurers can use their resources and clout to pursue similar strategies.

Leatherman and Sutherland’s [10] framework for national quality reforms outlines an extensive list of quality-promotion interventions and provides guidance for selecting among them for overall coherence. Ferlie and Shortell [17] likewise emphasized the need for coherence, particularly among four levels of change: individuals, groups or teams, overall organization and the larger system or environment within which organizations exist. Our model takes three main objectives—involving improvement and activating patients—ensuring a baseline, motivating improvement and activating patients—as the anchor for that coherence. Each of the ‘ideas’ it contains has an application at multiple levels, which insurers must consider. The strategies presented here are not mutually exclusive; rather, most of the literature and experts we spoke with emphasized that multiple strategies can be and should be used in synergy.

The framework is meant to provide insurers who are leading universal access efforts with a structured array of possible approaches to address problems in quality of care. At this stage, however, the framework offers little comparative information on the effectiveness of different approaches in different contexts. Table 1 provides a basis for future research. Programs utilizing the ideas described in the framework have been piloted and implemented in several LMIC countries with varying degrees of success and a great deal of context-based variability [20, 37, 54, 55]. Moreover, the impact of insurance schemes on quality remains inconclusive [4]. More research is needed to determine the contextual factors that impact success with measurement tools that are designed to evaluate the impact of insurance schemes on quality of care as an outcome.

The approaches available to all countries to improve payer-led health-care quality are similar; however, the needs and context of each country will determine what set of approaches are selected at any point in time. In most cases, this selection process is done tacitly and without full consideration of the options; we hope the framework will assist insurers and health system planners to recognize the full spectrum of options available and to apply an analytic perspective to the selection process. Further validation of the framework is planned through engagement with a number of countries in the JLN.

**Authors’ contribution**

The framework was conceived and developed by all authors. The initial manuscript was written by K.M. and Z.S. and all authors have read, edited and approved the final manuscript.

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