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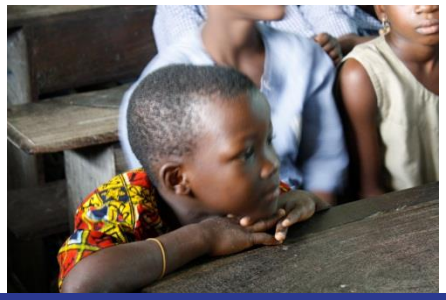

GOVERNING QUALITY IN HEALTH CARE ON THE PATH TO UNIVERSAL HEALTH COVERAGE: A REVIEW OF THE LITERATURE AND 25 COUNTRY EXPERIENCES

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The Health Finance and Governance Project
USAID's Health Finance and Governance (HFG) project helps to improve health in developing countries by expanding people's access to health care. Led by Abt Associates, the project team works with partner countries to increase their domestic resources for health, manage those precious resources more effectively, and make wise purchasing decisions. The five-year, $209 million global project is intended to increase the use of both primary and priority health services, including HIV/AIDS, tuberculosis, malaria, and reproductive health services. Designed to fundamentally strengthen health systems, HFG supports countries as they navigate the economic transitions needed to achieve universal health care.

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ACRONYMS

ASSIST	USAID Applying Science to Strengthen and Improve Systems Project
CQI	Continuous Quality Improvement
DGCES	Dirección General de Calidad y Educación en Salud
DOH	Department of Health
EPCMD	Ending Preventable Child and Maternal Deaths
HFG	Health Finance and Governance Project
HIS	Health Information System
HRH	Human Resources for Health
IMR	Infant Mortality Rate
IOM	Institute of Medicine
ISQua	International Society for Quality in Healthcare
JLN	Joint Learning Network for Universal Health Coverage
LGA	Local Government Authority
LMIC	Low- and Middle-Income Countries
MMR	Maternal Mortality Rate
MOH	Ministry of Health
MOHSW	Ministry of Health and Social Welfare
MOSA	Ministry of Social Affairs
NACTE	National Accreditation Council for Technical Education
P4P	Pay-for-Performance
PhilHealth	Philippine Health Insurance Corporation
QA	Quality Assurance
QI	Quality Improvement
RBF	Results-Based Financing
TWG	Technical Working Group
UHC	Universal Health Coverage
USAID	United States Agency for International Development
WHO	World Health Organization

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EXECUTIVE SUMMARY

Introduction

As countries work to promote and achieve Universal Health Coverage (UHC), maintaining and improving quality in health care is emerging as a priority. While research has been conducted on service delivery and financing schemes for UHC, little consolidated knowledge or guidance is available on institutional arrangements and their impact on quality of care in the context of UHC.

Responding to this need, the Health Finance and Governance project (HFG) conducted a literature review to attempt to document global experience in institutional roles and relationships governing quality of care in the health sector, and to identify successful features or factors when structuring institutional roles, responsibilities, and relationships. We used a decision tree and applied inclusion and exclusion criteria to narrow our analysis to a representative sample of 25 countries that showed low to high quality improvement over 10 years, with associated low to high human development, and with generally low enough corruption scores not to put in question the country's indicators of improvement and development. To obtain a representative country sample, criteria applied for country selection included a calculated composite score based on the percent rate of change in infant mortality and maternal mortality between 2000 and 2013; corruption perceptions scores; geographic location; level of human development attained; and expert knowledge of governance of quality in the countries. We searched published and gray literature and consulted with global and country experts to identify relevant documents.

Our proposed logical framework links governing functions to improved quality of health care, and, ultimately, to improved health outcomes. Recent literature on quality assurance and quality improvement suggests that a multi-actor/multi-faceted system for governing quality is more likely than a classic command-and-control system to produce the desired outcome of *safe, high quality health care delivered consistently*. The framework begins with the institutional processes involved in ensuring and improving the quality of health care delivered. We organized these processes into six governance "functions": leadership and stewardship, plans and strategies, laws and policies, regulation, financing, and monitoring.

For each function, using patterns identified across countries, we attempted to answer key questions around the processes used, the actors involved in carrying them out, and the interactions between the actors.

Findings

In addition to the summary findings below and in the body of the report, detailed findings and analysis can be found in Annex F.

Leadership and Stewardship

We found evidence of nonmonetary incentives to improve quality in six countries. Ten countries have departments, units, or programs within their Ministries of Health (MOHs) that are dedicated to quality. National entities most frequently lead quality improvement (QI), as opposed to subnational or community-level institutional structures.

Laws and Policies

Our review determined that 12 of the 25 countries have comprehensive laws or policies that include specific mention of aspects of quality of care. Provider registration, certification, and licensing are the aspects of quality most commonly regulated by law.

Plans and Strategies

Quality is included in health sector plans or strategies in 16 countries. Additionally, 10 countries have stand-alone plans or strategies in place for quality in health care. These are generally in the form of master plans, strategic plans for quality in health care, or QI frameworks.

Regulation

Our review determined that most countries (19 out of 25) have registration, licensing, or certification systems for individual providers. In 10 of the countries, these systems are mandatory for at least some categories of providers. Variation exists among countries in terms of renewals, periods of validity, and the categories of health providers regulated through these mechanisms. In most countries, professional councils, boards, or associations are primarily responsible for the regulation of individual providers.

Additionally, we found that accreditation is the most common form of health facility regulation; it was documented in 19 countries. As with individual providers, variation exists in whether accreditation is mandatory or voluntary, as well as in the institution responsible for the accreditation process.

Financing

In 15 countries, we found documentation of linkages between financing and quality, which take various forms: in some countries, accreditation is being linked to payment or eligibility for participation in health insurance; in others, insurance agencies consider quality criteria to determine participating providers.

Monitoring

Countries are attempting to monitor and evaluate quality in various forms. These include facility assessments or clinical audits, and client feedback mechanisms, such as patient or population satisfaction surveys. Eleven countries have also established systems or indicators for monitoring performance or measuring quality. In most countries, however, the literature indicates that quality monitoring data are not published or shared, nor used to inform QI.

Discussion

A review of our findings against key health outcome and governance indicators points to potential success factors in governing quality. These include: explicitly making quality a priority in health planning, creating dedicated quality units, establishing quality indicators and monitoring mechanisms, allocating dedicated resources for quality, defining a legal basis for quality and patient safety, linking quality to financing, and designating roles for health insurance agencies to ensure quality. Although the evidence provides some indication of how countries manage each function, and our analysis of the findings against key indicators provides some indication of what works, a major finding of our research is that the evidence base is thin.

Conclusions

Our findings show some connection between outcome improvement and what might be regarded as "better" institutional arrangements to support quality in health care. For instance, dedicated institutional structures, and financial and human resources to support quality initiatives, appear to make a difference

in health outcomes. While there is no statistical basis for drawing strong conclusions, this analysis has deepened our understanding of what seems to be working. Despite these encouraging findings, documentation is limited concerning governance tools or approaches that have the most sustainable impact on the quality of health care. A next step to enhance our understanding of what works in governing quality in health care would be to assess specific country experiences.

1. INTRODUCTION

Poor quality of health services can prevent countries from achieving expected improvements in health outcomes, while also increasing costs. For example, preventable medical errors, an indicator of poor quality, are estimated to harm 10 percent of patients in developed countries alone, and poor-quality care results in the wastage of 20–40 percent of all health spending (World Health Organization (WHO), 2014a). Advances in medical technology have the potential to help improve the quality of health services; however, as WHO, the Institute of Medicine, and other leading health organizations have long recognized, they do not always do so, and, moreover, can themselves result in an unnecessary escalation of costs (WHO, 2006). Making the most of new technologies when financial and human resources are limited requires efforts to address the systemic factors shaping the environment in which health care is delivered (WHO, 2006).

The wave of reforms in low- and middle-income countries (LMICs) to achieve Universal Health Coverage and get more health for money has rekindled long-held interest in how health systems can promote quality. In a multi-country survey of over 100 government officials, the Joint Learning Network for Universal Health Coverage (JLN) learned that the need to improve the quality of health care was the number one priority among its members (JLN, 2013).[1] These results reflect stakeholders' desire to ensure that service quality remains a key dimension in the quest to increase access to affordable services.

Health system reform in many LMICs may be creating opportunities for quality assurance (QA) and quality improvement as policies promoting UHC have also changed institutional roles and responsibilities. In some cases, an entirely new institution (such as an insurance provider) is taking over major governance and oversight roles in the health sector. JLN countries identified the challenge of setting institutional roles and responsibilities to govern national health care quality delivery as a key bottleneck for QI (JLN, 2013). Large-scale structural reform associated with efforts to progress towards UHC offers a potential opportunity to improve the institutional arrangements that govern health service quality.

Despite the timely interest in this topic, most existing research on quality has focused on challenges and interventions at the organizational and facility level rather than the health systems level. The body of existing work on health systems reform for QA and QI includes process guides and frameworks (WHO, 2006; Silimperi et al., 2002; Leatherman and Sutherland, 2007) and studies that focus on one or more aspect of the governance of health care quality—for example, regulation (Braithwaite et al., 2005; Bloom et al., 2014), accreditation (Mate et al., 2014; WHO, 2003), market-orientated regulatory strategies (Mate et al., 2013), monitoring (McGlynn, 1997), policy development (Shaw and Kalo, 2002), etc. However, these documents do not showcase country-level examples of past, ongoing, and planned interventions to address quality across a comprehensive set of health system entry points.

To address this gap, the United States Agency for International Development (USAID)-funded Health Finance and Governance project (HFG) collaborated closely with the JLN, the USAID Applying Science

[1] The JLN is a community of practitioners and policymakers from around the globe, as well as international, regional, and local partners, who share knowledge and co-develop new tools, guides, and resources that address the challenges of health systems reform to achieve UHC. See www.jointlearningnetwork.org (accessed June 15, 2016).

to Strengthen and Improve Systems project (ASSIST), and the WHO to conduct a literature review that documents global experience in institutional roles and relationships governing quality in the health sector; identifies features or factors associated with better health outcomes when structuring institutional roles, responsibilities, and relationships; and proposes a conceptual framework for the governance of quality. This review was the first step in a process that also included one-on-one qualitative interviews, and an in-person engagement meeting held in Tanzania in March 2016 (Tarantino et al., 2016), all intended to uncover the answers to the following research questions:

1. What are the essential roles, processes, and capacities for governing quality?
2. What institutions/organizations are best positioned to govern quality?
3. What institutions have roles related to the functions of governing quality?
4. What relationships are essential to consider?
5. What is the path to improving quality through effectively functioning institutions and relationships governing quality (i.e., policy and capacity development)?

This report summarizes the main findings from the literature review. It is intended to provide policymakers, civil society representatives, leaders of health care provider networks and associations, and other health system stakeholders with specific examples of what a wide range of LMICs are doing to promote quality within the health system. The framework in this report is intended to help readers link a comprehensive set of governance functions to improving and assuring the provision of quality health care at the facility level. The report targets stakeholders in LMICs—in particular, JLN member countries and the 25 countries included in USAID's Ending Preventable Child and Maternal Death initiative.[2]

[2] For more information on USAID-designated Ending Preventable Child and Maternal Death countries, see https://www.usaid.gov/what-we-do/global-health/acting-call-ending-preventable-child-and-maternal-deaths-report (accessed June 21, 2016)

2. METHODOLOGY

A small team of researchers conducted this literature review in consultation with a group of international health governance and quality experts.[3] Given the objectives of the literature review and the likely nature of available data, the project team agreed to include published and gray literature in the review. Qualitative information, including key informant interviews, further supplemented literature review findings.

2.1 Broad Review of Frameworks and Findings of Governing for Quality of Care

A set of governance functions essential to ensuring high quality of health services across all types of institutions serve as the analytical benchmark for this review. To compile them, the panel of governance and quality experts identified relevant existing literature with governance frameworks. Papers reviewed included nine examples that highlight governance execution levers and functions used by public and private entities to ensure that provider organizations institutionalize QI and deliver quality care. The nine papers reviewed included four papers with a global perspective (Lewis and Pettersson, 2009; The World Bank, 2001; WHO, 2006; Leatherman and Sutherland, 2007) and five papers focusing on governing quality within Albania (Chee and Jeffers, 2011), Australia (Braithwaite et al., 2005), Canada (Baker et al., 2010), Pakistan (Siddiqi et al., 2009), and the United States (Tang et al., 2004).

2.2 Country Selection

The research team used an inductive decision tree to narrow the review to 25 countries.

First, we calculated the percent rate of change in the infant mortality rate (IMR) and maternal mortality rate (MMR) between 2000 and 2013 for the 216 countries and territories included in the World Bank World Development Indicators database.4 We excluded countries that lacked data on this percent change. We selected the years 2000 and 2013 as the start and end dates because that was the range of years for which the maximum number of countries had complete data.

We further excluded 57 countries with a population of less than one million people. We then calculated and ranked the remaining 154 countries according to a composite score based on each country's percent rate of change in infant mortality and maternal mortality; a low score signified a greater percent rate of change in the two indicators, and thus greater improvements in maternal and child health outcomes during the study period. After compiling additional relevant country data, we examined whether countries had very high levels of corruption, as indicated by their Transparency International

[3]We held expert consultations with: Chris Lovelace, Catherine Connor, Jeremy Kanthor, and Lisa Tarantino, Abt Associates Inc.; Amanda Folsom and Gina Lagomarsino, Results for Development Institute; Rashad Massoud, University Research Co., LLC; Kedar Mate, Institute for Healthcare Improvement; Lopa Basu, Ruben Frescas, and Shams Syed, WHO; and Jim Heiby and Jodi Charles, USAID.

[4] Infant mortality and maternal mortality rates are considered particularly strong indicators of QI (Source: World Bank, Health Nutrition and Population Statistics; last updated: 04/15/2015).

corruption perceptions rank and score; and/or had been recently embroiled in large-scale conflict (within the time period of the data reported), which might potentially contribute to rapid improvements in quality after peace was reestablished. Countries with such problems were generally not included in our sample.

We strove to select a sample of countries that:

- Represented a mix of geographic regions (from Africa, Asia, Latin America and the Caribbean, and Europe)
- Were deemed high, medium, low, and very low "health performers" based on the composite IMR/MMR score
- Variously had, and lacked, policies or strategies in place for governing quality
- Had variously high, medium, and low Human Development Index 2014 scores
- Variously had or did not have a current or planned health financing benefit plan (i.e., health insurance or financial mechanisms for funding health)
- Variously had and did not have active JLN engagement

The panel of experts reviewed the list of countries, based on the data presented and their own knowledge of governance of quality in countries, to recommend the final list of 25 countries to include in this review. Based on this analysis, for example, we included Kenya, which was originally suggested for exclusion because of its score on the corruption index.

After establishing the proposed list of 25 countries, we consulted with the panel of experts for information on countries known to have instructive frameworks for governing quality. These consultations—along with a search of individual country documents and intergovernmental resources (from, e.g., WHO, the World Bank, JLN, and The International Society for Quality in Health Care (ISQua))—allowed HFG to assess the amount of publicly available relevant content on the topic of interest. Using these results, we finalized the list of 25 countries based on available information. Annex A contains the final list of countries, sorted by the order of their IMR and MMR percent rate of change ranking, from highest to lowest rank.

2.3 Search Methodology

We identified literature by searching in Pubmed, Google Scholar, and Google with a series of search terms that combined a key function of governing quality, a cross-cutting factor impacting governance, the words "health" and "quality," and the name of a sample country. We also searched directly on the websites of government agencies, the World Bank, WHO, and other key institutions. To supplement this database search, experts on health service quality in sample countries provided additional literature and documentation through web portals and consultations. Through this process, we identified over 300 documents. After screening them for relevance, researchers reviewed a total of 235 documents. For additional detail on the search methodology, please refer to Annex B.

3. DEFINITIONS AND FRAMEWORK

3.1 Definitions

3.1.1 Quality health care

This research adopts the WHO's definition of quality (WHO, 2006). It states that the "health system should seek to make improvements in six areas or dimensions of quality, which are named and described below. These dimensions require that health care be:

- Effective, delivering health care that is adherent to an evidence base and results in improved health outcomes for individuals and communities, based on need;
- Efficient, delivering health care in a manner which maximizes resource use and avoids waste;
- Accessible, delivering health care that is timely, geographically reasonable, and provided in a setting where skills and resources are appropriate to medical need;
- Acceptable/patient-centered, delivering health care which takes into account the preferences and aspirations of individual service users and the cultures of their communities;
- Equitable, delivering health care which does not vary in quality because of personal characteristics such as gender, race, ethnicity, geographical location, or socioeconomic status;
- Safe, delivering health care which minimizes risks and harm to service users."

3.1.2 Quality assurance and quality improvement

Quality assurance and quality improvement refer to approaches that can be taken to improve quality in health care.

Quality assurance entails identifying problems in the delivery of care and designing and implementing corrective steps to overcome those problems. Quality assurance activities are often retrospective and reactive in nature and can be perceived as punitive. Within the context of quality assurance, improvement efforts are focused on raising the level of quality to meet a predefined standard. (Goldstone, 1998)

In contrast, quality improvement, also referred to as continuous quality improvement (CQI) refers to actions that are taken systematically and proactively to continuously improve the processes involved in the delivery of care, based on data. CQI strives to achieve the highest quality possible rather than reaching a predefined level of quality. Processes, rather than individuals, are at the center of CQI, so the activities are intrinsically focused on preventing errors rather than placing blame. (Goldstone, 1998)

3.1.3 Governance of quality

Governance in the health sector has been defined as "the process of competently directing health system resources, performance, and stakeholder participation toward the goal of saving lives and doing so in ways that are open, transparent, accountable, equitable, and responsive to the needs of the people" (Health Systems 20/20, 2012). This research adopts this definition and WHO's definition of

quality to define the governance of quality in health care as the process of competently directing health system resources, performance, and stakeholder participation toward the goal of delivering health care that is effective, efficient, acceptable/patient centered, equitable, and safe. (Health Systems 20/20, 2012; WHO, 2006).

3.2 Barriers to Realizing the Delivery of Quality Health Services in LMICs

LMICs and donors dedicate significant resources each year to health provider training, continuing medical education, clinical guideline development, and other efforts such as inspections, accreditation, and certification. Yet surveys reveal persistently poor quality among both public and private providers in LMICSs (Box 1).[5]

Box 1: Poor health service quality in Kenya

Only 58 percent of public health providers could correctly diagnose at least 4 out of 5 very common conditions (like diarrhea with dehydration and malaria with anemia). Public providers followed less than half (44 percent) of the correct treatment actions needed for management of maternal and neonatal complications. Provider competence was correlated with level of training.

***Source**: Service Delivery Indicator Survey Kenya 2013*

Such contradictions expose barriers to realizing improvements in the quality of health care delivered. Some barriers are related to the environment in which providers deliver care, including policies and leadership, the institutional roles and responsibilities for QA, and the incentives shaping providers' actions related to QI (Silimperi et al., 2002). For example, insufficient resources can prevent policymakers in LMICs from ensuring that the burden of compliance with regulations is less than the cost of noncompliance (Bloom et al., 2014). That contributes to a misalignment between providers' incentives to make a living and health systems' efforts to improve quality. Structural problems in the health system can further contribute to this misalignment. For example, the lack of an effective referral system has forced general practitioners, easily side-stepped by patients seeking direct access to specialists, to make prescriptions counter to national medical protocol in order to retain patients and see enough volume to make ends meet (Mosadeghrad, 2014). Most insurers do not use all the tools available to them as the payer to encourage QI practices (Mate et al., 2013). Insufficient financial resources and high staff turnover at the facility level can also prevent QI initiatives from realizing long-term progress in the quality of health care delivered (Dana, 2010).

Lack of trust or knowledge can also color the environment in which health care providers deliver care. Some health care providers do not buy into QI initiatives, for several reasons. In some cases they are not familiar with the core concepts of QI. In other cases they mistrust management's objectives and fear that an underlying intent to cut costs will result in greater workloads without additional compensation (Wilkinson et al., 2011). Providers may also mistrust top-down decisions as efforts to limit their autonomy to treat patients, and in general believe that responsibility for QI should be left to medical professionals, armed with sufficient resources (Wilkinson et al., 2011). Some providers may also view training in university and continuing education as too theoretical, focusing more on rare conditions rather than common ones or not covering key skills such as communication with patients (Mosadeghrad, 2014).

[5] http://www.sdindicators.org/

3.3 The Goals and Role of Good Governance of Health Care Quality

Better governance of health care quality can address these failures. We propose that the goal of good governance of health care quality is the consistent practice of QI by health care providers. Stated alternatively, the goal is institutionalized QA among health care providers (Silimperi et al., 2002). This goal embodies the idea that national stewardship, and the laws, policies, plans, and strategies developed within government, contribute to creating an environment that facilitates self-administered, self-monitored QI among health care providers (Figure 1). In this ideal environment, health care providers, including "whole organizations, teams or individual health workers," will strive "to ensure that that the services they provide are of the highest possible standard and meet the needs of individual service users, their families, and communities" (WHO, 2006). This ideal is contrasted with the classic "command-and-control" approach to QA. The framework depicted in Figure 1 demonstrates the cyclical flow of support and information in a health system with good governance of health care quality among all actors, including national-level government decision makers, actors engaged in governing quality, and health care providers.

Figure 1: Role of Health Governance Functions in Creating an Enabling Environment for QI and QA

Source: Authors.

The systems supporting good governance of quality necessarily require contributions from a range of actors. Researchers of regulatory systems in LMICs are emphasizing the important role that various actors play as stakeholders in establishing laws, policies, plans, and strategies (WHO, 2006), and as cooperating implementers of those national-level initiatives to improve quality (Bloom et al., 2014). This type of responsive, multi-actor/multi-faceted system for governing quality is more likely to produce the desired outcome of *safe, high-quality health care delivered consistently*. Why? One reason is that LMICs lack sufficient resources to effectively administer and enforce a system fully reliant on command-and control approaches, given the high transaction costs associated with having an external body verify the quality of health products and services (Bloom et al., 2014). Another reason is that a multi-actor system can better incorporate the many actors who can support the QA process in a complex, ever-changing market that requires more than unilateral effort to regulate (Bloom et al., 2014).

Ideally, public and private actors engaged in governing quality support providers' continuous QI using a range of strategies that are responsive to the needs of the situation (Braithwaite et al., 2005). Developing guideline documents, such as clinical guidelines, can help providers improve quality of care. Guidelines and other facilitators of voluntary provider behavior are supplemented by providing "meta" oversight: government monitoring of the *process* through which providers implement continuous QI, rather than direct monitoring of specific quality-related indicators. Voluntary and meta oversight strategies rely on and also promote "an expectation of continuous improvement and a culture of safety" (Braithwaite et al., 2005). Drawn from the energy sector, meta-regulation means that "instead of the government inspectors directly enforcing rules, they moved to checking that the [oil rig] operator was both self-enforcing its safety management system, and continuously improving it" (Braithwaite et al., 2005). Regulatory strategies recommended for health markets in LMICs in one paper are primarily related to self-regulation, incentives and subsidies, and management improvements; and are established through "rules that are recognized as legitimate by all stakeholders in the provision and use of health products and services, and that are internalized as behavioral norms" (Bloom et al., 2014). In addition, regulatory agencies can use when necessary "command-and-control" systems that provide rewards (e.g., award accreditation) and punishments (e.g., fines) (Braithwaite et al., 2005). Payers also have various tools at their disposal to regulate quality, including selective contracting, provider payment mechanisms, public disclosure of information related to provider quality, incentives for consumers to seek care from higher-quality providers, etc. (Mate et al., 2013). Finally, community groups and civil society organizations can play an important role in holding providers accountable to improve and ensure quality. Evidence suggests that interventions to promote providers' accountability to communities can have significant positive effects on health outcomes (Hatt et al., 2015).

3.4 Functions and Related Characteristics of Governing Health Care Quality

Table 1 demonstrates several core functions that make up a system for governing health care quality. Dividing up the governance of health care quality into specific functions assisted the research team in describing and understanding what different countries are doing, and ultimately shed light on what works. There is no one way to organize these functions, and in fact literature on health system governance provides a variety of ways of understanding functions (Baker et al., 2010; Harding and Preker, 2003; Siddiqi, et al., 2009; Tang et al., 2004; Leatherman and Sutherland, 2007). We reviewed this literature and, working closely with a panel of experts, selected and organized those health governance functions that are particularly important to ensuring and improving the quality of care delivered. We present definitions for these functions and their relationship with improving the quality of care in Section 4, which is organized by function.

Table 1: Definitions of the Governance of Quality Functions

Functions	Definitions and Linkages
Leadership and stewardship	Refers to the existence of an enabling environment and commitment at different levels of the government to improve quality and safety. National, health system-level definition of laws and policies governing health care quality. Ideally. a package of complementary regulatory measures is defined that maximizes self-regulation and continuous improvement.
Laws and policies	Public sector instruments to direct and codify how quality will be governed, including establishment of regulatory bodies/authorities, and legal frameworks that guide development of specific regulations.
Plans and strategies	They may take the form of governmental plans or strategies that include quality in health care as a specific goal or objective.
Regulation	Refers to a wide variety of levers/methods/tools to affect providers and health markets to improve safety and quality, such as standards, protocols, licensing, accreditation, adverse event registers, etc. For a menu of possible regulations, see the "Regulatory pyramid" (Annex C), "Regulatory strategies in health markets" (Annex D), and "Levers for building systemic capacity for quality" (Annex E).
Financing	Refers to the existence of a variety of market-orientated approaches that payers can use to incentivize and affect the provision of quality health care. These may include selective contracting, provider payments based on quality, the inclusion of quality considerations in benefit package design, public disclosure (e.g., Nursing Home Compare website), and consumer and provider education.
Monitoring	Almost all regulations and continuous QI processes call for some form of monitoring of provider performance, and therefore data capture and use, to regulate and improve quality. Electronic claims processing and/or electronic medical records are necessary for some regulatory strategies. One form of monitoring is by benchmarking, which is a standard of reference for measuring quality or performance. There is a trend for more open-data in recognition that data on medical errors, clinical guideline compliance, and other quality metrics are a public good that helps all providers learn and change behaviors.

A number of qualifying factors are associated with strong governance and positive health outcomes (Hatt et al., 2015; Siddiqi et al., 2009). That is, not all implementation of these governing functions is effective and achieves positive outcomes. Based on findings in the literature and expert consultation, we identified the following characteristics that impact the quality of governance (Table 2).

Table 2: Characteristics Related to the Functions of Governing Quality

Characteristics	Definitions and Linkages
Multi-stakeholder engagement (degree and quality of)	The degree to which nongovernmental stakeholders can and do voice their concerns and priorities for the health system to those in power; and the degree to which decisionmakers in government use formal multi-sectoral engagement mechanisms as part of conducting governance functions.
Use of data	The degree to which data at local and national levels and at the facility level are used to inform decisionmaking and adjustments/reforms that allow for improvements in the quality of care delivered.
Transparency	The degree to which the public and concerned stakeholders have access to information on allocation and use of resources and results, and the quality, cost, and availability of care.
Accountability mechanisms (existence and functionality of)	Accountability is the result of a process that ensures that health actors take responsibility for what they are obliged to do, and are made answerable for their actions (WHO, 2006). Accountability mechanisms are formal means by which this process takes place.
Institutional and stakeholder capacity	This refers to the human and other resources, knowledge, skills, structures, and authority needed to perform a governance function.
Stability (frequency of changes)	The frequency of changes in political leadership, policies, regulations, institutions, and structures (level of stability) can directly impact ability of a government and other stakeholders to manage, finance, and oversee the quality of health care[6] (Health Systems 20/20, 2012).
Control of corruption and rule of law	Control of corruption measures the extent to which public power is exercised for private gain, including petty and grand forms of corruption, as well as "capture" of the state by elites and private interests (Health Systems 20/20 project 2012). Corruption and rule of law can have a direct effect on life expectancy, child mortality, maternal mortality, and self-reported health status (Hatt et al., 2015).

[6] Adapted from the Health Systems 20/20 project

4. FINDINGS

For each function, using patterns identified across countries, we attempted to answer key questions around the processes used, the actors involved in completing them, and the interactions between the actors. In this section, we summarize our findings in response to each of the key questions. See Annex F for detailed country-specific findings and further analysis.

4.1 Leadership and Stewardship

Processes: Are there positive and negative nonmonetary incentives to improve quality?

Positive incentives to improve quality exist in four countries (Chile, Mexico, Mozambique, and Uganda). As of 1999, Chile has had a "Quality in Health Care" month in place as a mechanism to instill a culture of quality (Gnecco et al., 1999). Mexico's Ministry of Health grants a National Healthcare Quality Award as well as Merit Recognitions for continuous improvement (SS, 2016). In Mozambique, facilities receive awards for their achievement of Standards-Based Management and Recognition standards (Reis et al., 2010). Uganda has a QI strategy in place that outlines criteria for awards for staff recognition (Ugandan Ministry of Health, 2011).

Furthermore, two countries (the Philippines and South Africa) have negative incentives in place to improve quality. The Philippine Health Insurance Corporation (PhilHealth) denies accreditation to providers who violate patients' rights (PhilHealth, 2013). In South Africa, the Office of Health Standards Compliance can withdraw certification of health establishments based on inspections.

For 18 of the 25 countries reviewed, there was no information in the literature on nonmonetary incentives (positive or negative) to improve quality. These 18 were Bangladesh, Cambodia, Colombia, Estonia, Ethiopia, Ghana, Indonesia, India, Liberia, Malaysia, Malawi, Moldova, Mongolia, Namibia, Rwanda, Senegal, Tanzania, and Zambia.

Processes: Are there dedicated resources for quality improvement? At what level do those resources exist?

Eleven countries have departments, units, or programs within their MOHs that are dedicated to quality (Cambodia, Chile, Ghana, Mexico, Moldova, the Philippines, Rwanda, Senegal, Tanzania, Uganda, and Zambia). Two countries (Chile and Malawi) also have national initiatives dedicated to quality. Chile and Rwanda also have training programs in place for QI. Mexico is the only country that is creating a stand-alone regulatory agency for quality. In Ethiopia, the MOH has developed a Hospital Alliance for Quality to enable hospitals to share best practices, whereas Rwanda is the only country reviewed that has a program that was explicitly described as focusing on the subnational level.

In 11 of the 25 countries we did not find information in the literature on resources (budget for QI training or dedicated staff to manage quality initiatives in the country); these countries were Bangladesh, Colombia, Estonia, Indonesia, Kenya, Liberia, Malaysia, Mongolia, Mozambique, Namibia, and South Africa. Even among the countries that have dedicated units, programs, or training initiatives, we did not find budget information.

In two countries (Cambodia and Zambia), quality initiatives are known to rely on donor support, which presents a concern for long-term sustainability.

Actors: Is there leadership commitment to quality? At what level(s) are the champions?

National-level entities were cited as leading QI in 10 countries: Kenya (MOH, Health Information System, and National QI teams), Malawi (MOH and District Health Management Teams), Mexico (Dirección General de Calidad y Educación en Salud (DGCES)), Mongolia (Health Sector Development Program), Mozambique (MOH), the Philippines (Department of Health (DOH) and PhilHealth), South Africa (National Department of Health, provincial heads of health, and professional councils), Tanzania (MOH unit and facility-level leaders), Uganda (Ministry of Public Service and MOH), and Zambia (regulatory and service delivery statutory boards). In three countries (Malawi, South Africa, and Tanzania), subnational level entities were involved in QI leadership. South Africa also has professional councils providing QI leadership.

In 14 of the 25 countries reviewed we did not find information on quality leadership: Bangladesh, Cambodia, Chile, Colombia, Ethiopia, Ghana, Indonesia, India, Liberia, Malaysia, Moldova, Namibia, Rwanda, and Senegal. Additionally, we did not find information on individual champions in the literature.

Interactions: How are quality initiatives/processes/policies passed from a higher level of government to the next level?

Four countries (Chile, Ghana, India, and Mexico) have subnational-level quality units or programs, and five countries (Chile, Ghana, Mexico, Malawi, and Tanzania) have facility-level teams implementing national initiatives. In the Philippines, initiatives take place at the national level and are passed to providers and industry leaders through presentations in workshops and meetings. In Senegal, QI initiatives take place only at the facility level and are not integrated at the national level, whereas Moldova was cited as having no local-level quality initiatives.

For 12 other countries we did not find information on how QI processes/policies are passed from higher to lower levels or vice versa. These countries were Bangladesh, Cambodia, Colombia, Estonia, Ethiopia, Indonesia, Liberia, Malaysia, Mongolia, Mozambique, Namibia, Rwanda, South Africa, and Uganda.

We present key findings on leadership and stewardship in Annex G.

4.2 Laws and Policies

Processes: What processes related to quality (e.g., in regulation, financing, monitoring) have a basis in laws or official government policies?

Our review found that 12 of the 25 countries—Cambodia, Chile, Colombia, Estonia, Ghana, Kenya, Mexico, Mongolia, the Philippines, Rwanda, South Africa, and Tanzania—have comprehensive laws or policies that include aspects of quality, such as regulation parameters, financing processes, and monitoring mandates. These are often embedded within comprehensive health reform laws (Chile, Cambodia, Colombia, Estonia, Ghana, and the Philippines). Furthermore, 10 countries have specific laws and policies addressing various aspects of quality: Bangladesh, Estonia, India, Indonesia, Liberia, Moldova, Namibia, the Philippines, South Africa, and Zambia.

In 10 countries laws and policies regulate aspects of provider registration, certification, and licensing, making these the most common aspects of quality regulated by law. These countries are Bangladesh, Estonia, Ghana, India, Indonesia, Liberia, Mexico, Mongolia, Namibia, and the Philippines. Additionally, in nine countries, aspects of facility registration, accreditation, and licensing are regulated by laws and policies: Estonia, Ghana, India, Indonesia, Mexico, Moldova, the Philippines, South Africa, and Zambia. Two countries, Colombia and Indonesia, also have specific language in laws and policies that mandates decentralization of governing quality. Six countries have explicit patient rights or safety laws and policies

mentioned in the literature: Cambodia, Chile, Colombia, India, Indonesia, and the Philippines. Finally, three countries—Moldova, the Philippines, and Rwanda—have mandates in place around QI and quality management.

For five countries—Ethiopia, Malawi, Mozambique, Senegal, and Uganda—we did not find information in the literature related to quality processes that have a basis in laws or policies.

Actors: Which institution leads the development these laws? Are they public or private?

In eight countries the literature reviewed mentions public actors governing further refinement, development, and implementation of policies and laws: Estonia, India, Kenya, Malaysia, the Philippines, South Africa, Tanzania, and Zambia. However, in three other countries—Cambodia, Chile, and Ghana—both public and private actors are governing the further refinement, development, and implementation of policies and laws. Chile, Ghana, and Kenya appear to have wide stakeholder representation on coordinating committees that are refining or implementing laws and policies.

For 14 of the 25 countries reviewed, we did not find specific information in the literature on the actors and institutions that are leading the development of the laws and policies governing quality health care. These countries were Bangladesh, Colombia, Ethiopia, Indonesia, Liberia, Malawi, Mexico, Moldova, Mongolia, Mozambique, Namibia, Rwanda, Senegal, and Uganda.

Interactions: What other stakeholders are involved in the development of these laws, and what are their roles relative to the main actor?

Information on the interactions between actors who develop, refine, and implement laws and policies was limited in the literature, and for 20 of the 25 countries reviewed we did not find any evidence of such interactions. These 20 countries were Bangladesh, Colombia, Estonia, Ethiopia, Ghana, Indonesia, India, Liberia, Malawi, Mexico, Moldova, Mongolia, Mozambique, Namibia, the Philippines, Rwanda, Senegal, Tanzania, Uganda, and Zambia. In four countries (Cambodia, Kenya, Malaysia, and South Africa), nonpublic stakeholders are involved in supporting the refinements of laws and policies. Additionally, in Chile, we noted conflict between public oversight authority for public and private insurers (Bitran, 2014).

We present key findings on laws and policies in Annex I.

4.3 Plans and Strategies

Processes: Are stand-alone plans or strategies for quality in health care in place?

Ten countries—Bangladesh, Cambodia, Ghana, Mexico, Rwanda, Senegal, South Africa, Tanzania, Uganda, and Zambia—have documented stand-alone plans or strategies for quality in health care in place. These are generally in the form of master plans, strategic plans for quality in health care, or QI frameworks. However, in a few instances, their focus is narrower. For example, Senegal has a QI plan that is specific to laboratories.

Processes: Do other health sector plans or strategies or broader national plans or strategies include health care quality?

Sixteen countries have documented other health sector plans or strategies that include quality in some form: Bangladesh, Cambodia, India, Kenya, Malaysia, Malawi, Moldova, Mongolia, Mozambique, Namibia, the Philippines, Senegal, South Africa, Tanzania, Uganda, and Zambia. In most instances, quality is mentioned as a general priority, but in several cases (Malaysia, Moldova, and South Africa) specific steps or actions to improve quality are included. In three countries (Cambodia, the Philippines, and Tanzania), quality is part of human resource plans for the health sector, emphasizing the link between quality and

the capacity and regulation of human resources for health. Quality is also emphasized in Bangladesh's National Health Policy. In the Philippines, quality is incorporated in the UHC framework. Kenya and Namibia have broader national plans that include quality (namely, Kenya's Vision 2030 and Namibia's National Development Plan).

Actors: What institution(s) lead this planning?

In 12 countries, the central MOH (Cambodia, India, Indonesia, Kenya, Malawi, Malaysia, Mexico, Mongolia, Tanzania, and Zambia) or DOH (the Philippines and South Africa) leads this planning without any designation of specific units within these institutions that are responsible for it. In Uganda, the QA Department within the MOH is responsible for managing all strategic plans. In India, the planning process includes both the central level and the states. Similarly, in Malawi, this planning is conducted through collaboration between the MOH and multiple stakeholders, including providers, civil society and community members, and the private sector.

Interactions: What other stakeholders participate in this planning and what are their roles relative to the main actor?

In Mongolia and in the Philippines, international organizations are also involved in this planning process (respectively, the Asian Development Bank and WHO). In the Philippines, the health insurance agency is also involved. In Cambodia and Uganda, technical working groups (TWGs) participate in the planning. In Cambodia, the role of the TWG relates to the implementation and monitoring of the plan, whereas in Uganda the TWG merely has an advisory role.

We present key findings on plans and strategies in Annex H.

4.4 Regulation

While regulatory strategies vary widely (see Annexes C and D), the research found data on the more common types of regulations.

4.4.1 Regulation of health workers

Processes: Are there processes for licensing, registration, and certification for providers/health workers? Are they voluntary or mandatory? What is the period of validity?

Our review found that 19 countries have registration, licensing, or certification systems for individual providers (see Annex J). In 10 of the countries, these systems are mandatory for at least some categories of providers: Bangladesh, Cambodia, Chile, Colombia, Estonia, India, Mexico, Mongolia, Mozambique, and Tanzania. For another nine it is unclear whether these procedures are mandatory or voluntary: Ethiopia, Indonesia, Kenya, Liberia, Malaysia, Namibia, the Philippines, South Africa, and Zambia. Renewal of registration, licensing, or certification was reported in only five countries, and the period of validity varied significantly: in Bangladesh, Colombia, and Indonesia, the period of validity was 10, 3, and 5 years, respectively. In Liberia and Zambia, renewal processes exist but the period of validity was not specified.

Furthermore, we noted variation among countries in terms of the categories of health providers regulated through these mechanisms. In most countries, registration, licensing, or certification processes are in place only for a few categories of providers (e.g., medical doctors, nurses). In Bangladesh and Mozambique, for instance, registration is required for nurses, but not for doctors. However, in countries such as Indonesia and India, registration processes are in place for doctors, but not for nurses.

In two countries, we noted issues around enforcement. In Chile, only provider registration is enforced. Certification and accreditation processes also exist, but they are not enforced, because many providers do not meet the standards. Similarly, in India, almost one million health professionals operate without licenses. In both cases, enforcement presents challenges, because it would result in a significant reduction in the supply of providers.

The extent to which these processes apply to private sector providers was also unclear. Tanzania was the only example we found where mandatory licensing and accreditation includes both public and private providers. In Cambodia, we noted confusion about whether health professionals' regulation applies to the private sector. In the remaining countries, we did not find mention of the regulation of private sector providers in the literature.

For seven countries (Ghana, Malawi, Mexico, Moldova, Rwanda, Senegal, and Uganda), we did not find any information in the literature regarding provider regulation.

Actors: Which institution(s) is responsible for issuing these licenses/registrations/ certifications?

Professional councils, boards, or associations are primarily responsible for the regulation of individual providers in nine countries (Bangladesh, Cambodia, Indonesia, Kenya, Mozambique, Namibia, the Philippines, South Africa, and Uganda), whereas in another seven countries, both councils and government agencies have large roles (India, Liberia, Malaysia, Mexico, Mongolia, Tanzania, and Zambia). In four countries (Chile, Colombia, Estonia, and Ethiopia), government agencies seem to be largely responsible for health worker regulation. In most cases, the government agencies involved in individual provider regulation are ministries of health or education, or other central government agencies. However, India and Colombia are interesting examples in that the process seems led by local authorities. In Colombia, the local health authority issues provider certification; in India, state governments provide provisional licenses before associations/councils issue permanent registration.

Interactions: Who are the other stakeholders and what are their responsibilities and roles relative to the main actor?

Interactions between the various actors involved in the regulation of individual providers are largely undocumented, but those that were documented in the literature highlighted several different governance models. Professional associations are given the statutory authority to complete the regulation process (e.g., in Malaysia). In some countries (e.g., Mozambique), ministries of health or other national-level government agencies regulate the professional associations, who in turn carry out the regulation of the individual providers. Local governments seem to have various roles to play. For instance, in India, local governments first provide provisional licenses, and after that professional associations issue permanent registration. In Colombia, the national level sets standards, while local government authorities (LGAs) implement them. This can put LGAs in a difficult position, because they are responsible for both maintaining standards and ensuring access, which may be difficult when the number of providers of various services is limited. In Tanzania, zonal health resource centers facilitate human resources for health (HRH) connections between the national, regional, and council levels.

We present key findings on the regulation of health workers in Annex J.

4.4.2 Regulation of health facilities

<u>Processes:</u> Are there processes for licensing, registration, certification, and accreditation for health facilities? Are they voluntary or mandatory? What is the period of validity?

Our review found that accreditation is the most common form of health facility regulation. We identified documentation of accreditation processes for regulating health facilities in 19 countries (Cambodia, Chile, Estonia, Ethiopia, Ghana, India, Indonesia, Kenya, Liberia, Malawi, Malaysia, Mexico, Moldova, Mongolia, Namibia, the Philippines, Rwanda, South Africa, and Zambia). Twelve countries have documentation of registration, licensing, or certification (Bangladesh, Cambodia, Chile, Estonia, Ethiopia, India, Indonesia, Mexico, the Philippines, South Africa, Tanzania, and Zambia). Overall, only three countries did not have documentation of any form of facility regulation (Mozambique, Senegal, and Uganda). Where literature exists, it does not always provide information on the regulation of all sectors/types of facilities—e.g., no information was found in the literature on the accreditation of India's private facilities.

In countries that have documented accreditation processes, those processes take place in either mandatory or voluntary forms. Mandatory accreditation of hospitals was documented in two countries (Cambodia and Indonesia). Additionally, in Mexico and in the Philippines, accreditation is required for participation in the health insurance scheme. Accreditation is voluntary in four countries (Estonia, India, Malaysia, and Mongolia). In the remaining countries that have documentation of accreditation processes, it is unclear whether this is mandatory or voluntary.

We noted a number of challenges related to health facility regulation. In Chile, Colombia, and Mexico, weaknesses in enforcement or compliance exist. In Chile, as suggested above, the large number of providers who do not meet certification or accreditation processes would result in an insufficient number of providers if the processes were to be fully enforced (Bitran, 2013). In Ethiopia, variation across regions and lengthy processes are noted as the main challenges. In Moldova, an accreditation process is in place, but it is not independent.

<u>Actors:</u> Which institution(s) is responsible for issuing these licenses/registrations/ certifications/accreditations?

Licensing, registration, and certification of health facilities are generally conducted by government agencies. However, variation in the ownership of the accreditation processes is noted, with four countries (Liberia, Mexico, Mongolia, and Zambia) having government-led accreditation systems, and four others having systems led by private or independent organizations (India, Malaysia, Moldova, and South Africa). Government ownership has been reported to have strengthened the credibility of the accreditation process in Liberia (Cleveland et al., 2011). In Indonesia and the Philippines, both government-led and private or independent organizations are involved in health facility accreditation. In Estonia and Namibia, regional or international bodies, as opposed to national ones, are conducting facility accreditation. Of note were also accreditation systems led by social insurance agencies in Chile, Kenya, and the Philippines.

<u>Interactions:</u> Who are the other stakeholders? What are their responsibilities and roles relative to the main actor?

Information on other stakeholders involved in facility licensing, registration, certification, or accreditation was limited, and, for 15 of the 25 countries reviewed, we did not find any information in the literature. Specifically, in several countries additional actors are involved in defining or approving accreditation standards. Of interest is the involvement of the Ministry of Finance in Chile in defining standards and accreditation mechanisms for the health benefit plan (WHO, 2010). In Moldova, where accreditation is led by a nongovernmental organization, the MOH nonetheless approves the

accreditation standards and the recruitment of assessors for accreditation (Shaw, 2015). Other actors are also involved in providing training and preparing providers to comply with accreditation or licensing standards, as is the case with the Philippine Society for Quality in Healthcare and the Philippine Hospital Infection Control Society (Key Informant, the Philippines, 2016). Finally, international organizations can also support the accreditation process through technical assistance, as has been the case in Liberia, where the Clinton Health Access Initiative has been involved in assisting the Ministry of Health and Social Welfare (MOHSW) to design and implement the accreditation system (Cleveland et al., 2011).

We present key findings on the regulation of health facilities in Annex K.

4.5 Financing

Processes: Are provider payment systems linked to quality?

Our review found documentation of various linkages between financing and quality in 16 countries (Cambodia, Chile, Colombia, Estonia, Ghana, India, Kenya, Liberia, Malawi, Mexico, Moldova, the Philippines, Rwanda, Senegal, Tanzania, and Uganda).

In five countries (Cambodia, Ghana, Mexico, the Philippines, and Tanzania), accreditation is being linked to payment or eligibility for participation in health insurance. Quality criteria are considered by insurance agencies in determining participating providers (at least on paper): accreditation is required for participation in Chile and Mexico, while public insurers monitor/assess quality in Estonia and Moldova. In Colombia, households also consider quality when selecting among competing insurers, given the competitive insurer marketplace set up in the UHC reform.

Additionally, there is documentation of 11 countries experimenting at some level with pay-for-performance (P4P) or financial incentives for quality. Of them, three are conducting or rolling out P4P at the national level (Rwanda, Senegal, and Tanzania). Rwanda's P4P program is considered fairly successful, and an evaluation found that its incentives were significantly associated with increased quality of a number of services. Tanzania's program is more controversial. Senegal is actively moving forward with plans to roll out results-based financing (RBF) to the national level with USAID, World Bank, and other support. Liberia is also considering using P4P among hospitals. Additional pilots or smaller-scale implementation of P4P or RBF have been conducted in India, Malawi, the Philippines, and Uganda. Mongolia was interested in P4P, but found it difficult, given that the legal basis for financial accounting is inputs rather than outputs. Financial incentives for quality also exist in Estonia (voluntary quality bonus), Kenya (rebates based on assessment scores), and Moldova (positive rewards based on results, including reduction of adverse events).

Actors: If provider payment systems are linked to quality, who is the payer and what is its role relative to quality?

In five countries (Chile, Estonia, Ghana, Mongolia, and the Philippines), health insurance agencies are directly responsible for assessing quality or accreditation status, or for setting standards. For the remaining countries, we did not find information on the role of the payer relative to quality in the literature.

We present key findings on financing in Annex L.

4.6 Monitoring

<u>Processes:</u> Is the country attempting to use specific indicators to monitor quality of care? Are the following tracked: adverse events, malpractice/medical errors and incidents, and patient experience/satisfaction? Are there formal feedback mechanisms for nongovernmental groups?

Our review found that nine countries are using facility assessments or clinical audits on a periodic basis in an attempt to monitor quality: Cambodia, Estonia, India, Indonesia, Kenya, Malawi, Namibia, South Africa, and Zambia. Furthermore, client feedback is being captured in various forms: (1) through client or population satisfaction surveys conducted at the national, subnational, or facility levels; or (2) through national-, community-, or facility-level feedback or complaint mechanisms. In Estonia and Mexico, population-level surveys are conducted, whereas in Kenya and Namibia these surveys are conducted at the district and/or facility levels. Patient satisfaction is also measured in the Philippines and South Africa.

Documentation on patient complaint mechanisms exists for seven countries (Cambodia, Estonia, Indonesia, Mexico, South Africa, Uganda, and Zambia). These mechanisms exist at individual facilities (Estonia, Indonesia) or through national systems (Mexico, South Africa). Bangladesh, Rwanda, and South Africa also have feedback mechanisms in place for communities. However, in Bangladesh, the effectiveness of these mechanisms is known to vary. In Estonia, the Philippines, and South Africa, systems are also in place for reporting and investigating malpractice and/or adverse events.

Countries are increasingly attempting to establish systems or indicators for monitoring performance or measuring quality; our review found evidence of such systems or indicators in 11 countries (Ethiopia, India, Kenya, Malaysia, Mexico, Moldova, Mozambique, South Africa, Tanzania, Uganda, and Zambia). Furthermore, Bangladesh, India, and Rwanda use performance-based financing indicators.

<u>Actors:</u> Who is doing this monitoring? If in the public sector, at what level of government?

In the majority of the countries, this monitoring and evaluation is conducted by the ministries of health (Bangladesh, Colombia, Estonia, Ethiopia, Kenya, Mexico, Mozambique, the Philippines, and South Africa) or QA units or programs (Chile, Ghana, Kenya, Namibia, and Rwanda). In Malawi and Uganda, this responsibility falls to providers or provider teams. Countries where other institutions take leading roles in conducting this monitoring and evaluation include Estonia (Estonia Health Insurance Fund, in addition to the Ministry of Social Affairs (MOSA)), India (National Health System Resource Centre), Mexico (National Commission for Medical Arbitration), Moldova (National Center for Health Management), the Philippines (PhilHealth), South Africa (Office of Standards Compliance, Government's Department of Planning, Monitoring and Evaluation, Auditor General, etc.), and Zambia (Health Professions Council of Zambia).

<u>Interactions:</u> Are these monitoring data public? Do they inform quality improvement? What stakeholders use them?

In most countries, quality monitoring data are not public. Only in four countries (Estonia, Ghana, Namibia, and Zambia) are quality monitoring data are published and/or made widely available. In Malawi, Mozambique, the Philippines, and Rwanda, quality monitoring data are shared among facilities but not made publicly available. Furthermore, we found evidence of these data being used to inform QI in only five countries (Estonia, Liberia, Malawi, Rwanda, and South Africa).

In Indonesia and Kenya, data are not shared and/or not used to inform QI, whereas in Tanzania and Uganda, the intention to publish the data and/or use it to inform QI is stated, but the extent to which this happens is not clear.

We present key findings on monitoring in Annex M.

5. DISCUSSION

A review of our findings against key health outcome and governance indicators—including each country's percent change in MMR and IMR between 2000 and 2013, MMR in 2015, corruption perceptions score, government effectiveness score, and regulatory quality score—points to potential associations. In the five countries that had the highest percent change in MMR and IMR between 2000 and 2013 (Cambodia, Zambia, Moldova, Tanzania, and Mozambique), quality is incorporated in health sector plans or strategies. This indicates the potential significance of explicitly making quality a priority in health planning. In four of those countries, dedicated quality units have also been created within ministries of health (Cambodia, Zambia Moldova, and Tanzania). Additionally, quality indicators or monitoring systems have been established (Zambia, Moldova, Tanzania, and Mozambique). Furthermore, in Cambodia and Zambia (the two countries with the highest percent change in MMR and IMR between 2000 and 2013) quality initiatives rely on donor support, indicating the potential importance of dedicated resources for quality.

Our analysis also suggests the importance of mechanisms for monitoring regulatory compliance and quality, specifically mechanisms that enforce accountability for quality of care. In the five countries with the highest MMR in 2015 in absolute terms, we found no evidence of patient complaint mechanisms, community feedback mechanisms, or systems for reporting and investigating malpractice and/or adverse events. We also did not find evidence of laws incorporating specific aspects of quality (facility regulation, explicit patient rights or safety laws, or mandates around QI and quality measurement) in any of those five countries. This points to the importance of defining a legal basis for quality and patient safety. We also found no evidence of renewal of registration, licensing, or certification of individual providers in all 10 countries that had the lowest percent change in MMR and IMR between 2000 and 2013.

Countries are increasingly linking quality to provider payments, often related to the pursuit of UHC. Our analysis suggests a plausible association between linking financing with quality on the one hand and positive health outcomes on the other. For example, in the three countries that had the lowest MMR in 2015, health insurance agencies assess quality, grant accreditation, or set quality standards. This contrasts with the five countries that had the highest MMR in 2015, where we did not find any evidence of such a role for health insurance agencies or payers. We also did not find evidence of a role for health insurance agencies in health care quality in the 10 countries that performed most poorly on governance indicators including corruption perceptions, government effectiveness, and regulatory quality.

Finally, we found indications of the potential importance of external or independent parties having a role in quality monitoring. In the five countries that are perceived to be the most corrupt as well as in the 10 countries with the highest maternal mortality, quality monitoring does not seem to be conducted by institutions other than the MOH, government QA units or programs, or health care providers.

While the literature provides some indication of how countries govern quality at national and subnational levels, a major finding of the research is that the evidence base on institutional roles and relationships associated and correlated with quality of care in LMIC is thin. While the available literature enabled us to identify processes that are in place to govern quality in health care in the 25 countries included in our review, as well as to identify the main actors involved in each of these processes, information on the involvement of additional actors in each process was limited. Furthermore, the effectiveness of these arrangements, the extent to which they are enforced, the resources required, and the challenges encountered were mostly undocumented.

6. CONCLUSIONS

Our findings show associations between what might be regarded as "better" institutional arrangements to support quality in health care, and outcomes improvement. The existence of dedicated institutional structures and financial and human resources to support quality initiatives appears to make a difference in health outcomes. Furthermore, quality initiatives seem to be more effective when supported by laws and policies and specifically incorporated into health sector planning. Other key predictors of success appear to be having monitoring systems or indicators for quality, as well as specific quality monitoring mechanisms, including monitoring by independent parties. While the majority of the countries included in this review conduct quality monitoring in some form, standard quality indicators do not exist. Furthermore, the information collected is seldom shared or used to inform QI. Linking provider payments to quality by granting health insurance agencies a regulatory role also seems to be a promising approach.

Clearly, a main finding is that documentation is limited with respect to governance roles, relationships, tools, or approaches that have the most sustainable impact on the quality of health care in LMICs. Complicating documentation and evaluation of effectiveness is the variation in how a regulatory strategy is implemented. For example, while accreditation seems to be a common approach for regulating facilities in many countries, variation exists in the type of agency responsible for accreditation (national versus international, governmental versus independent or private, etc.), Furthermore, there is variation in whether accreditation is mandatory or voluntary, whether it includes one or more levels of care, and whether it is tiered. Evaluations of links between financing and quality are extremely rare—we found only one such evaluation of performance-based financing, which included quality indicators in Rwanda—and therefore do not allow us to determine which approaches work best. In fact, many specific aspects related to the functions of governing quality have not been evaluated to determine their effectiveness. Nor have comprehensive evaluations of country experiences with governing quality, which include all the functions identified here, been conducted.

Additionally, when sharing findings of our literature review with key informants in a number of the countries included in our review, we determined that those findings did not always reflect the current situation in the countries. This indicates the potential value of documentation of experiences, lessons learned, and best practices.

A next step to enhance the global understanding of what works in governing quality in health care would be to comprehensively assess specific country experiences. There is a dearth of information on the effectiveness of governance of quality institutional arrangements, the extent to which policies and guidelines are enforced, the resources required, and the challenges encountered. A next step would be for interested countries to use implementation research to ask questions on the effectiveness of governance arrangements and interventions, and assess whether these are achieving results, determine how they might be adjusted to improve quality health outcomes, and test promising approaches or mechanisms to improve quality of health care.

ANNEX A: LIST OF COUNTRIES RESEARCHED

Country[7]	Composite Ranking Based on IMR and MMR Composite % Change Score	MMR (modeled estimate, per 100,000 live births) in 2015	IMR (per 1,000 live births) in 2015	Corruption Perceptions Score (out of 100)	Government Effectiveness Percentile Rank (1 to 100)	Regulatory Quality Percentile Rank (1 to 100)
Cambodia	1	161	24.6	21	25.48	37.02
Zambia	4	224	43.3	38	36.06	32.21
Moldova	9	23	13.6	35	39.9	53.85
Tanzania	9	398	35.2	31	26.92	41.35
Mozambique	15	489	56.7	31	24.04	37.98
Senegal	16	315	41.7	43	38.94	46.15
Colombia	19	64	13.6	37	49.52	67.79
Indonesia	22	126	22.8	34	54.81	49.04
Malaysia	23	40	6	52	83.65	75.96
Estonia	25	9	2.3	69	81.25	93.27
Namibia	28	265	32.8	49	58.65	53.44
Liberia	29	725	52.8	37	7.69	22.6
Kenya	37	510	35.5	25	43.27	42.31
Bangladesh	38	290	31.1	49	56.25	58.65
Rwanda	38	176	30.7	25	21.63	18.27
Malawi	42	634	43.4	33	25	27.4
Mexico	46	38	11.3	35	61.06	66.83
Mongolia	50	44	19	39	37.5	45.67
India	51	174	37.9	38	45.19	34.62
Ghana	52	319	42.8	48	44.23	50.96
Ethiopia	57	353	41.4	33	35.58	16.35
Philippines	76	114	22.2	38	61.54	51.92
Uganda	78	343	37.7	26	38.46	39.42

[7] Countries are listed in the order of their IMR and MMR percent rate of change, from highest to lowest.

Country7	Composite Ranking Based on IMR and MMR Composite % Change Score	MMR (modeled estimate, per 100,000 live births) in 2015	IMR (per 1,000 live births) in 2015	Corruption Perceptions Score (out of 100)	Government Effectiveness Percentile Rank (1 to 100)	Regulatory Quality Percentile Rank (1 to 100)
Chile	84	22	7	73	84.13	91.83
South Africa	131	138	33.6	44	65.38	63.94

ANNEX B: SEARCH METHODOLOGY

Sources:

- Databases:
  - Pubmed
  - Google Scholar
- USAID DEC
- Websites:
  - WHO
  - World Bank
  - The International Society for Quality in Health Care (ISQua)
  - IHI
  - ASSIST
  - HEALTHQUAL
  - JLN
  - HFG
  - LMG

Key words:

- Country name (refer to list of countries in Annex A)
- Health
- Quality
- Cross-Cutting Attributes[8]
  - Engagement
  - Data
  - Transparency
  - Accountability
  - Institution, organization, unit, association, working group
  - Capacity

[8] Cross-cutting attributes were used in the PUBMED search only.

    - Stability
    - Corruption
- Functions of governing quality (and relevant/related key words):
    - Regulation, standard, protocol, oversight, licensing, supervision, enforcement, accreditation, certification
    - Policy, law
    - Monitoring, evaluation, indicators, reporting, data, performance
    - Planning
    - Financing, provider payment, insurance, incentives

Search Example: Regulation function in Cambodia

PUBMED search:

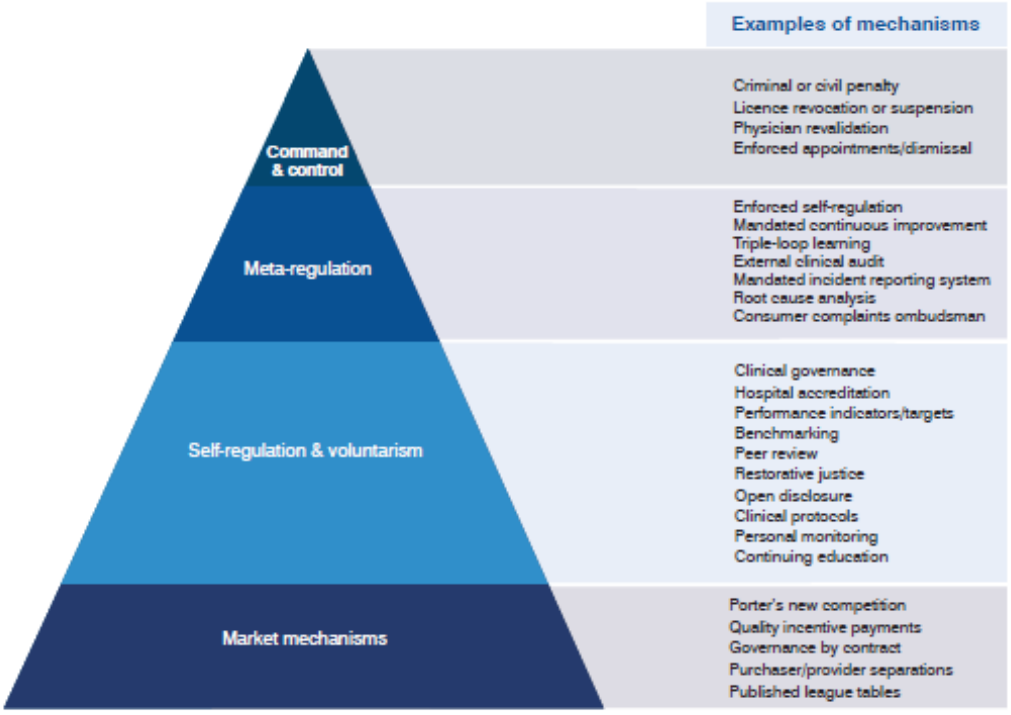
[Cambodia] AND [Health] AND [Quality] AND [Engagement OR Data OR Transparency OR Accountability OR Institution OR Organization OR Unit OR Association OR Working Group OR Capacity OR Stability OR Corruption] AND [Regulation OR Standard OR Protocol OR Oversight OR Licensing OR Supervision OR Enforcement OR Accreditation OR Certification]

Advanced Google/Google Scholar search:

[Cambodia] AND [Health] AND [Quality] AND [Regulation OR Standard OR Protocol OR Oversight OR Licensing OR Supervision OR Enforcement OR Accreditation OR Certification]

ANNEX C: REGULATORY PYRAMID

Figure 2. Regulatory pyramid and health care safety and quality mechanisms



Source: Braithwaite et al., 2005

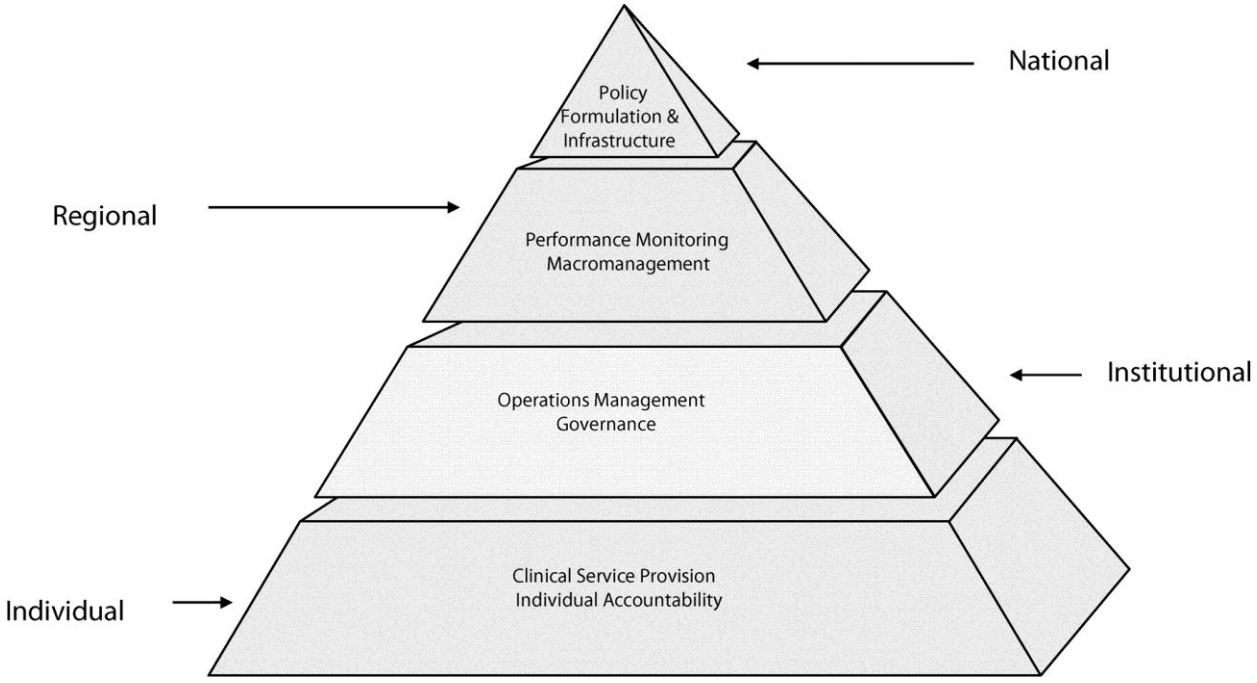
ANNEX D: REGULATORY STRATEGIES IN HEALTH MARKETS

Table 2 Regulatory strategies in health markets

Regulatory strategy	Action	Weaknesses
	Administrative and bureaucratic controls	
Criminalisation of malpractice	Standards of practice are backed by criminal penalties	Complex and inflexible rules. Enforcement may be difficult, time-consuming, and costly. High compliance costs and the courts and regulators must be seen as independent.
Licensing and accreditation of providers and facilities	Standards based requirement to provide services or sell product applying to health facilities, health workers, or products	Needs information available to all actors. High costs of maintenance and enforcement for some items.
Product registration (e.g. drugs, vaccines, medical equipment and supplies)	Health products must meet specified standards. Often extends to requirements for importation or for labelling and advertising.	Costly and complex to enforce if testing is required. Needs high information and testing capabilities.
Product surveillance	Post-marketing	Expensive and potential for bias in collecting information. May be difficult to attribute health outcome to product.
	Market supply-oriented	
Self-regulation	Association of providers or suppliers of goods and/or services sets standards which provide either a voluntary or enforceable code. Can be linked to a system of certification.	Requires government and public trust of providers. Danger of regulatory capture. Difficult to manage incentives collectively.
Contracting	Government purchases services from provider at verified quality, quantity, and/or price standards	Information gaps present. May have high administrative and technical requirements. Monopoly of providers may limit competition
Incentives and subsidies	Funds or other inducements provided for desired provider behaviour (e.g. location of practice, quality of service, permission for private practice, etc.)	Information gaps prevalent. May not prevent poor behaviour.
Disclosure	Offenders and poor performers are "named and shamed"	Requires assessment and communication seen as independent and trustworthy. Need viable alternatives for providers
Management improvement	Health providers (and organisations) trained and supported to improve quality and safety	Time consuming and potentially costly. May produce little change in incentives on its own – a supportive strategy dependent on additional regulatory strategies.
	Consumer or citizen-oriented	
Consumer education	Efforts to inform and educate consumers about the safety, quality and efficacy of health products and services and how to judge this at the point of provision	Difficult to reach and impact on most vulnerable consumers, namely the poor. Potentially very costly.
Right to information by citizens	Legal requirement to provide basic information.	Cost of collection and analysis of information and often difficult to enforce.
Consumer rights	Patient rights are identified and protected by law.	Places onus on individual to report violations that have already occurred. Need for possibly expensive system for arbitration.
Patient redress	Patients have ability to identify violations and seek resolution with provider organization or agreed arbitrator.	Places onus on individual to report violations that have already occurred.
Citizen empowerment	Communities or civil society organizations are provided with authority, resources, and capability to set local policy, assess performance, and sanction and reward.	Wide variation across communities in capabilities and interests; May be costly. Capture by local elites possible. May be hard to implement consistently on a large scale.
Liability norms	Definition of strict or liability standards that enable users of health products and services to sue for damages should injury occur.	Requires that citizens have access to the resources to pursue liability claims, or that class action is possible. Dependent on ability to relate cases of harm to specific health products or services.
	Collaboration oriented	
Co-production (of services and regulation across key stakeholders)	Health providers, along with government agencies, private companies and/or consumer groups negotiate and share power, authority, and resources to ensure quality, safety, price or coverage of health services and products.	Honest broker may be needed to facilitate collaboration. Information gaps present. Need to continuously assess and renegotiate arrangements (is this a weakness?). Danger of capture by the powerful.
Partnerships for transparency and accountability	Government, civil society actors, providers, and/or independent technical experts set locally measurable and enforceable standards for performance.	May require external facilitation and convening. May address limited scale and scope of issues.

Source: Bloom et al., 2014

ANNEX E: LEVELS FOR BUILDING SYSTEMIC CAPACITY FOR QUALITY



Source: Leatherman et al., 2007

ANNEX F: DETAILED COUNTRY FINDING

1. Regulation and Regulatory Strategies	
a. Regulation of Providers/Health Care Workers	
Question 1.1 - Processes: Are there processes for licensing, registration, and certification for providers/health workers? Are they voluntary or mandatory? What is the period of validity?	
Scope of answers per country: Do these processes exist? Do they apply to both public and private sector?	
Bangladesh	Bangladesh has a process for registering nurses, doctors, and dentists. Only nurses are required to become registered. Doctors and dentists who become registered are required to renew their registration every 10 years. (Asia Pacific Observatory on Health Systems and Policies, 2015).
Cambodia	Registration is required for doctors and medical assistants in order to open private practice. (WHO and MOH, Cambodia, 2012) Registration processes are in place for doctors, nurses, midwives, pharmacists and dentists. (WHO, 2015) There is confusion about whether the health professionals' regulation legislation applies to both public and private sector. (ASSIST, 2014)
Chile	Provider registration is required to provide and receive payments for the country's universal health benefit plan of essential services (hereafter "AUGE"). As of 2014, registration is the only requirement of providers that is enforced. (Escobar Bitran 2014) Certification and accreditation processes not yet complete because so many providers (esp. public) do not meet standards, and there is an insufficient supply of guaranteed medications (Bitran 2013 UNICO).
Colombia	Provider certification is required and is valid for a period of 3 years (Pinto and Hsiao, 2007).
Estonia	Provider registration is mandatory, and providers are required to register only once (World Bank, 2015).
Ethiopia	Process for provider registration is in place (El-Saharty et al., 2009).
Ghana	No information in the literature
Indonesia	Registration process is in place for doctors and dentists and is renewed every five years (Kemmentarian PPN/Bappenas, 2015).
India	There is a mandatory process for licensing medical doctors. (Medical Council of India, 1956). A significant amount of additional certifications are required of medical providers before they care for patients. However, almost one million health professionals are currently operating without licenses. Though the government would like to shut them down, the system relies on them to function well (Key Informant ASSIST, 2016).
Kenya	There is a process for licensing medical officers (doctors), nurse midwives, and clinical officers (Kenya MoH, 2014), which involves assessing minimum quality standards of practice. (Government of Kenya, N.D.).
Liberia	There are processes for licensing and relicensing health providers. (Fox et al., 2011)
Malaysia	There is a process for licensing medical practitioners. (Malaysian Society for Quality in Health, N.D.).

Malawi	No information in the literature
Mexico	Professional licenses that guarantee that professionals have met the requirements to practice their profession are mandatory and have no period of validity. Specialty certificates and academic endorsements are issued. (CONACEM, 2016)
Moldova	No information in the literature
Mongolia	There is a mandatory (World Bank, 2015) process for licensing medical practitioners. (Ministry of Health, 2013).
Mozambique	Only those at the "superior nursing level" and midwives are required to be licensed. (World Health Organization, N.D.).
Namibia	There is a process for registering doctors, dentists, nurses, pharmacists, allied health professionals, social workers, and psychologists. (Health Professions Council of Namibia, N.D.)
Philippines	There are processes for licensing nurses, doctors, dentists, pharmacists, midwives, physical and occupational therapists, surgeons, obstetricians, gynecologists, and pediatricians. (Romualdez Jr. AG et al., 2011).
Rwanda	No information in the literature
Senegal	No information in the literature
South Africa	There are processes in place for the regulation of health care providers (Muller, 1996).
Tanzania	The Ministry of Health and Social Welfare mandates the licensing/accreditation of all public and private providers (MOHSW, Health Sector Strategic Master Plan 2006-2015). These processes appear to apply to both the public and private sectors, though there are also public-private partnerships (MOHSW HSSP IV, 2015). In addition, a new Community-Based Health Strategy, finalized in 2015, includes the development of a one-year training course for Community Health Workers (CHWs), which would replace or be integrated with other (shorter) training programs (MOHSW, HSSP IV, 2015). The program will be accredited by the National Accreditation Council for Technical Education (NACTE). The fifth HSSP also notes that a system for re-registering health professionals will be introduced in the future (MOHSW, HSSP IV, 2015).
Uganda	No information in the literature
Zambia	There is registration for health providers (MOH, 2011 & MCZ Strategic Plan 2008-2013). Individuals must renew their accreditation but the timeline could not be found (HPCZ website, 2016).
Patterns	• 19 countries have documented registration, licensing or certification systems. Of them, 10 are mandatory for at least some categories of providers (Bangladesh, Cambodia, Chile, Colombia, Estonia, India, Mexico, Mongolia, Mozambique, Tanzania), while another 9 are unclear whether they are mandatory or voluntary (Ethiopia, Indonesia, Kenya, Liberia, Malaysia, Namibia, Philippines, South Africa, Zambia). • Variation across registration and licensing whether the country includes all categories of providers (e.g., medical doctors, nurses, etc.) or just one or two. In Bangladesh and Mozambique, registration is required for nurses, but not for doctors, while in other countries, such as Indonesia and India, registration processes are in place for doctors, but not for nurses. • In 2 countries, issues around enforcement were noted in the literature. In Chile, only provider registration is enforced. Certification and accreditation processes also exist, but they are not enforced because many providers do not meet the standards. Similarly, in India, almost one million health professionals operate without licenses. In both cases, enforcement is challenges because it would result in a significant reduction in the supply of providers. • For 6 countries (Ghana, Malawi, Moldova, Rwanda, Senegal, Uganda), we did not find information in the literature regarding provider regulation.

	• Renewal of registration, licensing or certification was reported in only 5 countries, and the period of validity varied significantly: In Bangladesh, Colombia and Indonesia, the period of validity was 10, 3 and 5 years, respectively. In Liberia and Zambia, renewal processes exist but the period of validity was not specified.

Question 1.2 - Actors: Which institution(s) is responsible for issuing these licenses/ registrations/ certifications?

Scope of answers per country: List institutions as well as units within institutions (e.g., MOH and unit within the MOH). Specify type of institution (public, private, parastatal)

Bangladesh	The Bangladesh Medical and Dental Council (BMDC), a statutory body, is responsible for provider (doctor and dentist) registration. The Bangladesh Nursing Council (BNC), a statutory body, is responsible for nurse registration. The Ayurvedic, Homeopathy and Unani Board, a statutory body, registers homeopathic practitioners. (Asia Pacific Observatory on Health Systems and Policies, 2015).
Cambodia	The National Medical Council is responsible for provider registration. (WHO and MOH, Cambodia, 2012) Health professionals register with their respective professional councils. (WHO, 2015)
Chile	Office of Health Provider Oversight, part of the Superintendency of Health for AUGE (Escobar and Bitran 2014)
Colombia	The local health authority issues certification. (Pinto and Hsiao, 2007)
Estonia	The Health Board, which is a government agency under the authority of the Ministry of Social Affairs, is responsible for provider registration. (Koppel and Paat-Ahi, 2012)
Ethiopia	The Food, Medicine and Health Care Administration and Control Authority is responsible for provider registration. (El-Saharty et al., 2009)
Ghana	No information in the literature
Indonesia	The Medical Council (KKI) registers doctors and dentists. Its Board includes 17 members, including 3 members representing the public. (Kemmentarian PPN/Bappenas, 2015)
India	State Medical Registers issue provisional licenses before doctors are issued a permanent registration from the Indian Medical Council, a statutory body. (Medical Council of India, 1956).
Kenya	Medical practitioners are licensed by the Medical Practitioners and Dentists Board (Kenya MoH, 2014). A second source mentions that national quality improvement teams validate practice licenses for qualified individuals by assessing minimum quality standards of practice (Government of Kenya, N.D.).
Liberia	The Liberia Medical and Dental Council and the Liberia Medicines and Health Products Authority are responsible for licensing and re-licensing providers. (Fox et al., 2011)
Malaysia	Medical provider licensing falls under the purview of statutory health professional boards [e.g., the Malaysian Medical Association (MMA)] but ultimately, the Ministry of Health is the sole regulator of Malaysian health facilities and staff (Malaysian Society for Quality in Health, N.D.).
Malawi	No information in the literature
Mexico	The Ministry of Education issues the professional licenses that guarantee that professionals have met the requirements to practice their professions. 47 medical specialties committees (nongovernmental organizations) issue specialty certificates and academic endorsements. (CONACEM, 2016)

Moldova	No information in the literature
Mongolia	The Ministry of Health and the Medical Accreditation and Licensing Board (within the MOH). (Ministry of Health, 2013).
Mozambique	Professional associations such as the Mozambican Nursing Association (ANEMO) and the Association of Midwives of Mozambique issue licenses. (World Health Organization, N.D.).
Namibia	The Health Professions Councils, which include the Medical and Dental Council of Namibia, and the Nursing, Pharmacy, Allied Health Professionals, and Social Work/Psychology Councils. (Health Professions Council of Namibia, N.D.).
Philippines	The Professional Regulation Commission (PRC), a group of professional regulatory boards, is responsible for licensing of nurses, doctors, dentists, pharmacists, midwives and physical and occupational therapists. The Critical Care Nurses Association of the Philippines certifies critical care nurses (Critical Care Association of the Philippines, N.D.). Special societies for medical specialists such as surgeons, obstetricians, gynecologists, and pediatricians certify their own members. These special societies are sanctioned by the Professional Regulation Commission and are then officially recognized by the Philippine Medical Association (PMA). (Romualdez Jr. AG et al., 2011). Only medical specialty societies are recognized by the PMA, which is the accredited professional organization (APO) for the medical profession by the PRC. The PRC has an APO for each allied profession- e.g., for midwifery, the Integrated Midwives Association of the Philippines; for nursing, the Philippine Nurse Association, etc. (Key Informant Philippines, 2016)
Rwanda	No information in the literature
Senegal	No information in the literature
South Africa	The Medical and Dental Council, and Pharmaceutical and Nursing Councils, which fall under the Health Professionals Council of South Africa, oversee regulation processes (website, 2013).
Tanzania	The Ministry of Education and Vocational Training is responsible for training and registering health workers (Kwesigabo et al., 2012). The National Accreditation Council for Technical Education (NACTE) is the key institution within the Ministry that operationalizes the accreditation processes (NACTE website, 2015). Within the NACTE there are several Councils that govern each health function: Medical Council of Tanganyika, which licenses and registers physicians; the Tanzania Nurses and Midwives Council; the Pharmaceutical Council; the Health Laboratory Practitioners Council; the Medical Radiology and Imaging Professionals Council; the Optometry Council; the Environmental Health Practitioners Registration Council; and the Traditional and Alternative Health Practice Council (MOH, 1997; MOHSW, HSSP IV, 2015). These Councils accredit programs as well as license providers (Global Health Workforce Alliance, 2013). For the private sector, there are two boards: the Private Hospital Board and the Private Health Laboratory Advisory Board, which carry out accreditation of private facilities and continuing professional development for the health workers within them (MOHSW, HSSP IV, 2015).
Uganda	Councils for each type of health professional are charged with ensuring maintenance of professional standards (Ugandan MoH, 2010).
Zambia	Regulatory statutory boards fall under the MOH and are responsible for provider and training program certification. These boards include the Health Professions Council of Zambia (HPCZ) (previously known as the Zambia Medical Professionals Council (ZMPC, or MCZ)), the General Nursing Council (GNC), the Pharmaceutical Regulatory Authority (PRA), and the Occupational Health Services Board (OHSB) (MOH, 2011; HPCZ, 2010). The HPCZ is the key institution, and not only accredits health providers and programs but also has specific accreditation criteria for various health services (ART provider, male circumcision, etc.) (HPCZ website, 2016). Within the HPCZ there is an accreditation department, a registration department, and an inspectorate department, among other more operational (HR, legal) entities (HPCZ website, 2016).

Patterns	• Professional councils/boards/associations are primarily responsible for provider registration, licensing or certification in 9 countries (Bangladesh, Cambodia, Indonesia, Kenya, Mozambique, Namibia, Philippines, South Africa, and Uganda). • In 7 countries, both councils and government agencies have large roles (India, Liberia, Malaysia, Mexico, Mongolia, Tanzania and Zambia). • In 4 countries (Chile, Colombia, Estonia and Ethiopia), government agencies seem largely responsible. India and Colombia are interesting examples in that the process seems led by local authorities. In Colombia, local government authorities are responsible; in India, state governments provide provisional licenses before associations/councils issue permanent registration.

Question 1.3 - Interactions: Who are the other stakeholders and what are their responsibilities and roles relative to the main actor?

Scope of answers per country: List and describe roles of other institutions/stakeholders who participate in the processes, or who endorse/otherwise engage politically or technically in the processes.

Bangladesh	No information in the literature
Cambodia	No information in the literature
Chile	No information in the literature
Colombia	The Ministry of Social Protection defines the minimum quality, financial and administrative standards for provider certification. (Pinto and Hsiao, 2007) Local gov't authorities are in a conflict of interest: they are responsible for the quality of care among providers but also for disciplining them. It is especially hard when the provider is the only one in the area offering one or more services (Giedion and Canon 2014)
Estonia	No information in the literature
Ethiopia	No information in the literature
Ghana	No information in the literature
Indonesia	No information in the literature
India	No information in the literature
Kenya	No information in the literature
Liberia	No information in the literature
Malaysia	The statutory health professional boards [e.g., the Malaysian Medical Association (MMA)] (Malaysian Society for Quality in Health, N.D.).
Malawi	No information in the literature
Mexico	The Interagency Commission for the Development of Human Resources for Health is an organ of consultation, advice and technical support to the Ministries of Health and Education, and to other agencies and institutions of the public sector; it also facilitates consensus among various bodies of the public, social and private sectors on issues of common interest in training human resources for health. (SEP, 2006)
Moldova	No information in the literature
Mongolia	Medical Professional Societies (MPSs) have been responsible for conducting provider licensing exams since 2010 (MOH, Mongolia Health System Review, 2013).

Mozambique	Mozambique's Ministry of Health regulates all professional medical licenses. Técnicos de Medicina (mid-level practitioners), also, are trained and regulated by the MOH. (World Health Organization, N.D.).
Namibia	No information in the literature
Philippines	The Philippine Health Insurance Corporation (PhilHealth) has an accreditation program for physicians (both general practitioners and specialists), dentists and midwives. It is currently developing its accreditation policy for nurses. PhilHealth's accreditation requires that a health care professional be licensed first by the PRC, aside from complying with PhilHealth's accreditation standards and signing the performance commitment. Medical specialty societies have their own accreditation programs for specialty training in hospitals and only physicians who graduated from such accredited training programs can take their specialty board examinations and be certified as specialists. (Key Informant Philippines, 2016)
Rwanda	No information in the literature
Senegal	No information in the literature
South Africa	No information in the literature
Tanzania	Academic institutions and professional organizations are also involved through provision of Continuing Professional Development (CPD) programs, which the MOHSW aims to improve over the next five years (MOHSW, HSSP IV, 2015). The goal by 2020 is for all CPD programs to require accreditation - currently there is no system for accrediting or re-registered providers based on CPD (they are simply licensed initially) (MOHSW, HSSP IV, 2015). The MOHSW also plans to formalize the Federation of Tanzania Health Professionals' Associations, which oversees associations such as the Medical Association of Tanzania, Dental Association of Tanzania, Clinical Officers Association of Tanzania, which do not possess regulatory power (MOHSW, HSSP IV, 2015 & Global Health Workforce Alliance, 2013). In addition, zonal health resource centers (ZHRCs) have been implemented to help facilitate connections for HRH between the national, regional and Council levels - including support accreditation processes such as the Star Rating system - discussed in more detail in facility section (MOHSW, HSSP IV, 2015). Finally, at the national level, the President's Office – Public Service Management (PO-PSM) plays a role in coordinating training of health workers based on the country's needs. Coordination between the PO-PSM and the PMO-RALG (Prime Minister's Office – Regional Administration & Local Government), which is primarily involved in implementation, is necessary to ensure the standards/quality are established (MOHSW, HSSP IV, 2015).
Uganda	No information in the literature
Zambia	Accreditation of providers and training institutions is a joint concern of the HPCZ and the Ministry of Education and Ministry of Health. HPCZ plays the role of implementer, and the other two ministries support/provide oversight (HPCZ, 2010). It seems that the Ministry of Ed and Health were probably involved in the creation of forms/documents to assess a health training institution to determine whether it should be accredited or not - i.e. forms include whether educational resources are available and sustainable for up to five years, etc. (HPCZ, 2010).
Patterns	• Interactions are largely undocumented, but what exists has highlighted a few different governance models: a. Council/medical association is given statutory authority to complete the process (e.g., Malaysia). b. MOH (or potentially other national level government agency) regulates the council/medical associations who do the work (e.g., Mozambique). c. Local governments seem to have various roles to play: - In India, local governments first complete the process, and after that councils/medical

	practices also complete them. - In Colombia, national level sets standards, while LGAs implement. This can put LGAs in a difficult position, because they are responsible for keeping standards AND ensuring access, which may be difficult when there is a small number of providers of various services. - In Tanzania, zonal health resource centers facilitate HRH connections between the national, regional and council levels. d. Intergovernmental bodies play a coordinating role between the various government actors involved in the development of human resources for health, including Ministries of Health and Education. (Mexico) e. Health insurance agency is directly involved in accrediting individual providers (Philippines).

b. Regulation of Health Facilities

Question 1.4 - Processes: Are there processes for licensing, registration, certification, and accreditation for health facilities? Are they voluntary or mandatory? What is the period of validity?

Scope of answers per country: Do these processes exist? Do they apply to both public and private sector?

Bangladesh	Facility licensing requirements are in place based on a set of minimum criteria for public and private facilities. (Asia Pacific Observatory on Health Systems and Policies, 2015).
Cambodia	Registration process is mandatory only for private sector facilities. (WHO and MOH, Cambodia, 2012) Private facility licenses are renewed periodically, with the timeline for renewal depending on the type of facility. (WHO, 2015) Hospital accreditation is mandatory. (OECD, WHO 2014)
Chile	The 2005 reforms creating AUGE also created a new accreditation process. However, certification and accreditation processes not yet complete because so many providers (esp. public) not meet standards, and insufficient supply of guaranteed medications (Bitran 2013 UNICO).
Colombia	Most providers of health benefit plan begin providing services after submitting "authorization form"; by law only 25% of them need to be visited; this limits the extent to which quality is actually enforced through this financing scheme (Giedion Canon 2014)
Estonia	Facility licensing is mandatory. There is no accreditation system for hospitals, but some hospitals are voluntarily accredited by international accrediting bodies. A voluntary annual accreditation program exists for family practices. (World Bank, 2015)
Ethiopia	Certification for private hospitals and clinics is in place. Licensing procedures are lengthy and vary across regions. Accreditation processes are also inconsistent and vary in timeliness across regions. (El-Saharty, 2009)
Ghana	Accreditation criteria have been developed for the national health insurance scheme. (GHS, 2007)
Indonesia	Licensing procedures are in place. Hospital and primary health care accreditation processes are also in place. Hospital accreditation is mandatory and occurs every three years. (Kemmentarian PPN/Bappenas, 2015)
India	Public healthcare facilities are voluntarily accredited based on a combination of standards derived from the ISO 9001: 2008, the Bureau of Indian Standards, the Indian Public Health Standards (IPHS), and the National Accreditation Board for Hospital and Health Care Providers (NABH) itself (Sharma KD, 2012). The private sector is regulated by a separate process not specified in the literature (Sharma KD, 2012). The Clinical Establishment Act of 2010 also stipulates registration requirements (Joshi SK, 2013).
Kenya	There exists a process for accrediting public, faith-based, and private hospitals. Public hospitals are automatically accredited, while private and faith-based hospitals are evaluated based on the Kenya Quality Model for Health (KQMH) standards (Midiwo G, 2013), developed by the MoH with

	Deutsche Gesellschaft fur Internationale Zusammenarbeit (GIZ). (GIZ, 2013). Once accredited, external quality assessments are conducted every 3 months and a full accreditation assessment is performed every two years. (Lane J et al., 2014).
Liberia	There is an annual accreditation process for facilities implementing the basic health services package. (Fox et al., 2011)
Malaysia	A voluntary hospital accreditation is possible for public or private hospitals who are members of the Malaysian Society for Quality in Health (MSQH), a private organization. (Malaysian Society for Quality in Health, N.D.). The accrediting body issues one-or-three-year accreditations. (University Sains Malaysia Health Campus, 2011).
Malawi	An accreditation pilot is being conducted by the Malawi German Health Programme is working with the MoH at six health care facilities to accredit and bring all aspects of service delivery a standard level, which will then be separately assessed. The pilot is supported by the Council for Health Service Accreditation of Southern Africa (COHSASA). (Malawi German Health Programme, 2015).
Mexico	Accreditation process is in place and is required for participation in health insurance scheme. Requirement applies only to public facilities. In practice, compliance with this requirement is weak. (Lopez et al., 2015). Licensing for every health care facility is mandatory. It has no period of validity. (COFEPRIS, 2013) Accreditation is mandatory only for the providers of services to Seguro Popular. It is being updated to establish a period of validity. (DGCES) Certification is voluntary; it is valid for 3 years. (CSG, 2008)
Moldova	Accreditation process exists, but it is not independent. (Shaw, 2015)
Mongolia	There are voluntary processes for accreditation of health facilities. (World Bank, 2015).
Mozambique	No information in the literature
Namibia	There is a process for accrediting health facilities. (Management Sciences for Health (MSH), 2012).
Philippines	There is a process for licensing both private and public hospitals. (Romualdez Jr. AG et al., 2011; Ergo A et al., 2012; PhilHealth, 2013). Public hospitals licensed by the Department of Health (DOH) must renew licenses annually. (PhilHealth, 2013). A process for accreditation also exists. (Ergo A et al., 2012) Hospitals, both public and private, are licensed by the Department of Health. Licensing is mandatory and is a pre-requisite for accreditation by PhilHealth. Accreditation by PhilHealth is voluntary; however, hospitals that intend to participate in the National Health Insurance Program have to be accredited before they can be reimbursed by PhilHealth for their services. (Key Informant Philippines, 2016)
Rwanda	Hospital accreditation process exists. (IPH+, 2011)
Senegal	No information in the literature
South Africa	Processes exist and apply to both public and private facilities (SA, 2003, National Health Act 2003).
Tanzania	Certification of facilities is mandated by the MOHSW (MOH, 2003). Ensuring the quality of facilities is also listed as a strategic objective in the HSSP IV (2015) and will be operationalized through a Stepwise Certification Toward Accreditation (SCWA) Process, beginning with a Star Rating and Improvement System, to set minimum standards (MOHSW, HSSP IV, 2015). It will be rolled out first with PHC facilities targeted by the Big Results Now (BRN) initiative - a country-wide movement towards accelerated development and will be accessible to the public, promoting transparency (MOHSW, HSSP VI, 2015 & Key informant, ASSIST/Tanzania, 2016). In fact, the SCWA and Star Rating are components of the Big Results Now program (2015-2018) (Key informant, ASSIST/Tanzania, 2016 & MOHSW HSSP IV 2015).
Uganda	No information in the literature

Zambia	There is a national hospital accreditation program (Bukonda et al., 2002 & Bukonda et al., 2000) and processes for health facility licensing are in place (HPCZ, Licensing of Health Facilities, 2010).
Patterns	• Availability of information: 19 countries have documentation of accreditation (Cambodia, Chile, Estonia, Ethiopia, Ghana, India, Indonesia, Kenya, Liberia, Malawi, Malaysia, Mexico, Moldova, Mongolia, Namibia, Philippines, Rwanda, South Africa, Zambia); 12 countries have documentation of registration, licensing, or certification. (Bangladesh, Cambodia, Chile, Estonia, Ethiopia, India, Indonesia, Mexico, Philippines, South Africa, Tanzania and Zambia), 3 countries had no documentation on facility regulation at all (Mozambique, Senegal, Uganda). Even where literature exists, it does not always provide information on all sectors/types of facilities - e.g., no information in the literature on accreditation of India's private facilities. • Mandatory accreditation documented in 2 countries for hospitals (Cambodia and Indonesia). Additionally, in Mexico and in the Philippines, accreditation is required for participation in the health insurance scheme. • Accreditation is voluntary in 4 countries (Estonia, India, Malaysia, and Mongolia); For the remaining countries that have documentation of accreditation, it is unclear whether this is mandatory or voluntary. • Challenges include: insufficient number of providers problematic when linked to guaranteed benefits, so in practice linkage not strong (Chile); enforcement requirement in law too small (Colombia); variation across regions (Ethiopia); lengthy processes (Ethiopia); weak compliance with accreditation requirement (Mexico); accreditation process not independent (Moldova).

Question 1.5 - Actors: Which institution(s) is responsible for issuing these licenses/registrations/certifications/ accreditations?

Scope of answers per country: List institutions as well as units within institutions (e.g., MOH and unit within the MOH). Specify type of institution (public, private, parastatal)

Bangladesh	The Director General Health Services licenses health facilities. (Asia Pacific Observatory on Health Systems and Policies, 2015).
Cambodia	MOH issues registration to facilities. It also issues licenses to private facilities. (WHO, 2015)
Chile	Office of Health Provider Oversight, part of the Superintendency of Health for AUGE (Escobar and Bitran 2014)
Colombia	National Health Superintendency, territorial authorities, and private insurers participating in the national scheme (Giedion Canon 2014)
Estonia	The Health Board is responsible for licensing facilities. (World Bank, 2015) The Family Physicians Association runs the accreditation program for family practices. (World Bank, 2015)
Ethiopia	Regional health bureaus are responsible for certification of private hospitals and clinics. (El-Saharty, 2009)
Ghana	No information in the literature
Indonesia	District Health Offices license their own facilities, as well as private facilities within the district. The Directorate of Primary Health Care in the MOH is responsible for primary health care accreditation. KARS is responsible for hospital accreditation: it was initially set up within the MOH, but it is now an independent agency. (Kemmentarian PPN/Bappenas, 2015)
India	The National Accreditation Board for Hospital and Health Care Providers (NABH), a constituent board of the Quality Council of India (QCI), is responsible for accrediting public healthcare facilities. (Sharma KD, 2012). The private sector is regulated by a separate set of actors not specified in the literature. (Sharma KD, 2012).

Kenya	Public, faith-based, and private hospital accreditation is managed by the National Hospital Insurance Fund (NHIF). (Luoma M et al., 2010).
Liberia	The accreditation system is implemented by the MOHSW. MOHSW ownership has strengthened its credibility and ensured continued financial and political support. (Cleveland et al., 2011)
Malaysia	The Malaysian Healthcare Accreditation Program (MHAP), a partner of the nonprofit, the Malaysian Society for Quality in Health. (Malaysian Society for Quality in Health, N.D.).
Malawi	No information in the literature
Mexico	COFEPRIS, a decentralized public agency of the Ministry of Health, is responsible for licensing. DGCES, an administrative unit of the MoH, is responsible for accreditation. CSG, a health authority reporting directly to the President of the Republic, is responsible for certification. (Key Informant Mexico MOH, 2016)
Moldova	The National Assessment and Accreditation Council (CNEAS) is responsible for accreditation. It is governed by a presidium that is chaired by the MOH, but includes representation from health professionals, insurers, and patient associations. (Shaw, 2015)
Mongolia	The MOH is responsible for licensing new private hospitals, while the DOH is responsible for renewal and accreditation of already established enterprises. (World Bank, 2015).
Mozambique	No information in the literature
Namibia	The National Qualification Authority, which falls under the Ministry of Education, is responsible (Namibia Training Authority, Sector Skills Plan, 2015).
Philippines	Public facilities are accredited by: the Philippine Council on Accreditation of Health Care Organizations (PCAHO), PhilHealth (Romualdez Jr. AG et al., 2011) the country's social health insurance scheme (Ergo A et al., 2012), and, the Centres for Health Development within the Department of Health (Romualdez Jr. AG et al., 2011). In the private sector, it seems many hospitals are accredited by PCAHO. (Maramba TP and Peralta AP, 2011). The licensing office in the DOH is the Health Facilities and Services Regulatory Bureau. PCAHO is a private organization and is more involved (one of several) in accrediting outpatient clinics that conduct pre-departure medical examinations on sea-based workers deployed abroad. (Key Informant Philippines, 2016)
Rwanda	No information in the literature
Senegal	No information in the literature
South Africa	The Office of Health Standards Compliance (OHSC) has a unit called the Certification and Enforcement Unit, which is composed of a committee and inspectors, and advises and awards certifications to both public and private hospitals and health facilities, as well as withdrawals and renewals (OHSC website, 2014). This unit also regulates "repeat offenders" - facilities who are consistently noncompliant (OHSC website, 2014). The key accreditation body in South Africa is the COHASA, the Council for Health Service Accreditation of Southern Africa. COHASA is a private organization - the three other public accrediting organizations include: Council for Medical Schemes (at the national level), the Department of Health of Gauteng Province, and the LoveLife National Adolescent Friendly Clinic Initiative (NAFCI) (Whittaker, 2002 & Marawa, 2005). COHASA generally accredits for 2 year periods, sometimes three (Whittaker, 2002).
Tanzania	Both public and private health facilities in Tanzania must be registered by one or more of the following units within the Ministry of Health and Social Welfare: Health Inspectorate Unit (both private and public facilities), the MOH Voluntary and Private Hospitals Registration Unit (nonpublic facilities) or the Pharmaceutical Board (for private pharmacies) (Newbrander, 1999). The Health Inspectorate Unit was recently upgraded to a "Section" within the MOHSW: the Health Services Inspectorate and Quality Assurance Section (HSIQAS) indicating support and commitment to improving quality (MOHSW, 2012).

Uganda	No information in the literature
Zambia	The Central Board of Health (now the Ministry of Health) oversees the National Hospital Accreditation Program (Bukonda et al., 2002). The HPCZ's Inspectorate Department oversees health facility licensing (HPCZ, Licensing of Health Facilities, 2010).
Patterns	• 14 of 19 countries with documented accreditation systems had information on the actors responsible for them. • 6 countries have systems led by a government agency (Indonesia for PHC facilities, Liberia, Mexico, Mongolia, Philippines, and Zambia). • 6 countries have systems primary led by private/independent organizations (India, Indonesia for hospitals, Malaysia, Moldova, Philippines, and South Africa). • 2 countries have accreditation by regional or international bodies (Estonia, Namibia) 3 countries have systems led by social insurance agency (Chile, Kenya, Philippines) - (*note Chile example more complicated because the insurers who pay providers not same as the Superintendency over the social insurance program that does the accreditation).* • In Liberia, it has been reported that MOH ownership strengthened the credibility of the accreditation process.

Question 1.6 - Interactions: Who are the other stakeholders, what are their responsibilities and roles relative to the main actor?

Scope of answers per country: List and describe roles of other institutions/stakeholders who participate in the processes, or who endorse/otherwise engage politically or technically in the processes.

Bangladesh	No information in the literature
Cambodia	No information in the literature
Chile	MOF defines standards and accreditation mechanisms for the health benefit plan (WHO 2010). FONASA, the public insurer, and ISAPRES, the private insurers, are responsible for paying for services by accredited providers.
Colombia	No information in the literature
Estonia	No information in the literature
Ethiopia	No information in the literature
Ghana	No information in the literature
Indonesia	No information in the literature
India	No information in the literature
Kenya	Private hospitals are also regulated by the Kenya Private Sector Alliance (KEPSA), limited liability membership organization, though their role in facility accreditation is unclear (Luoma M et al., 2010). National quality improvement teams validate practice licenses for qualified medical practitioners. (Government of Kenya, N.D.).
Liberia	The Clinton Health Access Initiative has been involved in assisting the MOHSW to design and implement the accreditation system. (Cleveland et al., 2011)

Malaysia	The Malaysian Society for Quality in Health (MSQH) (Malaysian Society for Quality in Health, N.D.), the Ministry of Health, the Malaysian Medical Association (MMA), and the Association of Private Hospitals of Malaysia (APHM) collaborated to develop a well-defined process for accreditation of MHAP members, which involves training and action to address performance gaps prior to even requesting accreditation. (University Sains Malaysia Health Campus, 2011).
Malawi	No information in the literature
Mexico	No information in the literature
Moldova	The MOH approves standards and recruitment of assessors for accreditation. (Shaw, 2015)
Mongolia	No information in the literature
Mozambique	No information in the literature
Namibia	The Council for Health Service Accreditation of Southern Africa (COHASA). (Management Sciences for Health (MSH), 2012)
Philippines	The Philippine Society for Quality in Healthcare (PSQua) provides training for hospital personnel on quality, especially in relation to complying with accreditation and licensing standards. Other organizations also provide training to hospital personnel on specific areas of hospital operations, e.g. the Philippine Hospital Infection Control Society (PHICS) for hospital infection control, safety, etc. (Key Informant Philippines, 2016)
Rwanda	No information in the literature
Senegal	No information in the literature
South Africa	According to Marawa et al., provincial governments can decide which accreditation system they would like to adopt (Marawa, 2005). For instance, four provinces have been accredited by COHASA, while one province set up a Directorate of Quality Assurance to oversee quality in their catchment area (Marawa, 2005).
Tanzania	More recently, seemingly in order to coordinate the above organizations, a decentralized quality management structure has been established, led by an officer within the MOH (MOH, 2005). This was named the Decentralization-by-Devolution approach in the third HSSP and continued to guide the development of the fourth and current HSSP (MOHSW, HSSP IV, 2015).
Uganda	No information in the literature
Zambia	Other organizations that facilitated the development of the accreditation program include the Medical Council of Zambia and the General Nursing Council. The Zambia Health Accreditation Council also was developed concurrently with the accreditation program and included multisectoral representation (Bukonda, 2000).
Patterns	• Though it is now led by the MOH, the development of accreditation system in Zambia had multi-sectoral representation. Conversely, in Malaysia, the MOH had a role in setting standards, although accreditation is now led by an NGO. In the Philippines, independent associations including the Philippine Society for Quality in Healthcare and the Philippine Hospital Infection Control Society train health facility personnel to comply with standards for accreditation and licensing. • International TA providers can support the accreditation process (e.g., CHAI provided support to Government of Liberia).

2. Regulation of Provider Payments

Question 2.1 - Processes: Are provider payment systems linked to quality?

Scope of answers per country: For example, is there a quality component to existing Performance Based Financing programs? Do insurers only purchase/contract with accredited facilities? Other linkages?

Bangladesh	No information in the literature
Cambodia	Accreditation status is linked to payment. (OECD, WHO, 2014) A quality assessment is required in order to start new health equity funds at government facilities. (WHO, 2015)
Chile	Yes - AUGE. Quality is one of the four "explicit guarantees" of the 2005 reform.
Colombia	Health plans select network of providers based on price and quality, and then compete for enrollees based on service and quality features of their benefits packages. (Pinto and Hsiao, 2007)
Estonia	EHIF selectively contracts with providers based on defined criteria, including quality criteria. (Habichta et al. 2015) A voluntary Quality Bonus Scheme is also in place. (World Bank, 2015)
Ethiopia	No information in the literature
Ghana	Accreditation criteria have been developed for the national health insurance scheme. (GHS, 2007)
Indonesia	No information in the literature
India	The Janani Suraksha Yojana (JSY) scheme is not necessarily linked to quality, but it pays accredited social health activists (similar to community health workers/birth attendants) to ensure women deliver in facilities (Carvalho, et al., 2014). As of 2015, the state of Haryana is developing a performance-based incentives demonstration to better motivate health workers, and increase the use and quality of primary health care services with the support of the USAID Health Finance & Governance project. (USAID HFG, 2015).
Kenya	The NHIF offers rebates to the highest scorers (hospitals) on their assessments. (Lane J et al., 2014).
Liberia	There is a shift toward linking quality to payment through performance based financing at the hospital level. (Bawo et al., 2015)
Malaysia	No information in the literature
Malawi	Currently in Malawi, there are many PBI and PBI-style schemes that exist, in particular those supported by USAID's Support for Service Delivery Integration (SSDI) project. The government has an output-based budgeting that encourages different sector ministries to focus attention on results and outputs. SSDI-Systems has worked with the MoH to design and implement a pilot PBI scheme, which began in September 2014 (USAID/Malawi Support for Service Delivery-Integration Performance Evaluation, 2014).
Mexico	Facilities must be accredited in order to participate in the insurance scheme. (Lopez et al., 2015)
Moldova	Health insurance contract terms include quality. Positive rewards are provided to institutions and clinical teams based on results, including reduction of adverse events. (Shaw, 2015)
Mongolia	Provider payment systems are not linked to quality because implementing performance-based financing schemes has been difficult due to the Budget Law, under which health finance systems must account for funds through input-based, rather than output-based systems. (World Bank, 2015)
Mozambique	No information in the literature
Namibia	No information in the literature

Philippines	There have been studies in the Philippines that pilot pay-for-performance schemes [e.g., women's health teams being offered incentive payments for each disadvantaged woman they bring to facilities for delivery (Ergo A et al., 2012), or clinicians being paid "bonus amounts" for clinical competence], but it does not appear that this has been put into practice nationwide. (Ergo A et al., 2012).
Rwanda	Payments are linked to quality of services under the national P4P scheme. Study found that the incentives in the P4P program are significantly associated with increased quality of a number of MCH services, but not with others. (Basinga et al., 2010) Performance-based provinces had higher overall quality scores than non-performance-based ones. Based on Rwanda experience, PBF can work in a resource constrained environment, but a functioning supply chain system, adequate staffing levels and autonomy for personnel recruitment and dismissal are necessary. (Eichler and Levine, 2009)
Senegal	Quality is linked to payment through a pilot results-based financing program in two regions. At the hospital level, only quantitative targets are used currently, whereas at other health facilities, quantitative score is adjusted for a quality rating. (KIT Health, n.d.)
South Africa	No information in the literature
Tanzania	The National Health Insurance Fund notes that it will reimburse only those claims made by members visiting accredited facilities (Newbrander, 1999). In 2009, a P4P (pay for performance) scheme was introduced for public providers in Tanzania, apparently as a means to improving the quality of MNCH services (Chimhutu et al., 2015, & Songstad 2012). However, the decision has been very controversial among stakeholders, particularly the international donor community. There were a few policy documents (Payment for Performance Strategy 2008–2015 and the Implementation Guideline Payment for Performance), which could not be found online, which may explain process in more depth (Songstad, 2012). Moreover, the latest HSSP notes that linking insurance payments to quality improvement will be a component of the Star Rating and SWCA system, and should help incentivize facilities to improve their rating.
Uganda	Two RBF pilots have been conducted: one was conducted in 2003 by the Government of Uganda and The World Bank, and involved performance-based contracting with private not-for-profit facilities (Morgan, n.d.); and the second pilot was a trial comparing results-based financing to input-based financing in Northern Uganda (NU Health Programme, n.d.).
Zambia	No information in the literature
Patterns	• 16 countries have documentation of various linkages between quality and financing (Cambodia, Chile, Colombia, Estonia, Ghana, India, Kenya, Liberia, Malawi, Mexico, Moldova, Philippines, Rwanda, Senegal, Tanzania, and Uganda). • In 5 countries (Cambodia, Ghana, Mexico, Philippines and Tanzania), accreditation was being linked to payment or eligibility for participation in health insurance. • Quality criteria are considered by insurance agencies in determining participating providers (at least on paper): accreditation is required for participation in Chile and Mexico while quality is monitored/assessed by public insurers in Estonia and Moldova. In Colombia, quality is also considered by households selecting among competing insurers given the competitive insurer marketplace set up in the UHC reform. • There is documentation of 11 countries experimenting at some level with P4P or financial incentives for quality. Of them, 3 are conducting or rolling out P4P at the national level (Rwanda, Senegal and Tanzania). Rwanda's P4P program is considered fairly successful and an evaluation found that its incentives were significantly associated with increased quality of a number of services. Tanzania's program is more controversial. Senegal is actively moving forward with plans to roll-out RBF to the national level with USAID, World Bank, and other support. Liberia is considering using P4P among hospitals. Additional pilots or smaller scale implementation of P4P have been conducted in India, Malawi, the Philippines, and Uganda. Mongolia was interested in P4P but found it difficult to do given legal basis for financial

	accounting based on inputs and not outputs. Financial incentives for quality also exist in Estonia (voluntary quality bonus), Kenya (rebates based on assessment scores), and Moldova (positive rewards based on results, including reduction of adverse events).

Question 2.2 - Actors: If provider payment systems are linked to quality, who is the payer and what is their role relative to quality?

Scope of answers per country: List the payer, specify their role, and indicate at what level of government they are located (national, subnational). Also indicate the type of institution (public, private, parastatal).

Bangladesh	No information in the literature
Cambodia	No information in the literature
Chile	See above on Superintendency, FONASA, and Isapres.
Colombia	Private insurers are the payers and supervise their provider networks along with lower levels of gov't. At the national level, the quality system is managed by the National Health Superintendency (Giedion and Canon 2014)
Estonia	EHIF is the payer. The quality bonus system was developed by EHIF in collaboration with the Estonian Society of General Practitioners. (MOSA, 2005)
Ethiopia	No information in the literature
Ghana	The National Health Insurance Authority develops accreditation criteria. (GHS, 2007)
Indonesia	No information in the literature
India	The government of India is the exclusive player, but the program is managed by the states. (Carvalho, et al., 2014)
Kenya	No information in the literature
Liberia	No information in the literature
Malaysia	No information in the literature
Malawi	The major financing agent in Malawi is the Ministry of health. The budget for the HSSP (2011-2016) provided a budget allocation for development of guidelines, standards and SOPs but did not provide budget allocation for monitoring (central, zonal, district) mentoring, developing of a QA policy (C. Chaulagi, C. Moyo, J. Koot, et al. 2005).
Mexico	Seguro Popular is the payer. (Lopez et al., 2015)
Moldova	The National Health Insurance Company (CNAM) is the payer and is responsible for providing control of quality of care delivered and assessing compliance with contract terms. (Shaw, 2015)
Mongolia	No information in the literature
Mozambique	No information in the literature
Namibia	No information in the literature
Philippines	PhilHealth also accredits facilities. (Romualdez Jr. AG et al., 2011) Accreditation, which requires that quality standards should be met by the providers, is required before PhilHealth can reimburse providers. (Key Informant Philippines, 2016)
Rwanda	No information in the literature

Senegal	No information in the literature
South Africa	No information in the literature
Tanzania	The MOHSW has established an Open Performance Review and Appraisal System (OPRAS) for government employees, in which one's salary is tied to quality and performance of job (Tanzania, 2011). In the latest Health Sector Strategic Plan, pay for performance is mentioned, with Health Insurance Funds, companies, or result-based financing programs listed as the payers (MOHSW, HSSP IV, 2015). Little detail is given about the operationalization of this scheme at this point, though it is noted the performance management will take place at both the facility (Star Rating) and the individual (OPRAS) levels and that both financial and nonfinancial incentives will be included (MOHSW, HSSP IV, 2015). Reference is made to more work to be done in this areas once more standards are established (MOHSW, HSSP IV, 2015).
Uganda	No information in the literature
Zambia	No information in the literature
Patterns	• Health insurance agencies or platforms assess quality or accreditation status or set standards in 5 countries (Chile, Estonia, Ghana, Mongolia and Philippines).

3. Laws and Policies

Question 3.1 - Processes: What processes related to quality (e.g., in regulation, financing, monitoring) have a basis in laws or official government policies?

Scope of answers per country: Can include laws/policies that address licensing, accreditation, registration, malpractice, monitoring, etc.

Bangladesh	Provider registration is mandated by the BMDC Act of 1983. Nurse registration is mandated by the 1983 BNC Act. Also, with approval of the MoH, the BMDC can punish doctors and dentists for malpractice. (Asia Pacific Observatory on Health Systems and Policies, 2015).
Cambodia	Charter on client and provider rights has been developed. (GTZ, 2009) There is a 2005 National Policy for Quality in Health (GIZ, 2014)
Chile	The Regime of Explicit Health Guarantees AUGE framework (passed in 2003 and 2004) includes the creation of the oversight body "the Superintendency of Health" (Escobar and Bitran 2014). It also includes activities, procedures, and technologies needed to treat the medical condition (for quality guarantee). Comprehensive framework providing regulation, monitoring and financing aspects (WB 2008); The successful passage of rights based health reforms (early 2000s) and subsequent AUGE legal framework that incorporated quality, access, and financial protection principles is attributed to: (a) consistent support of the Executive Power; (b) communication campaigns counter to political opposition of reforms; (c) human rights perspective applied in discussion of the reforms; (d) the Senate's mediation of conflicting interests of stakeholders and made acceptable modifications; (e) the Government's direct engagement with health professionals on the demands made by citizens for their quality services; and (f) the mediating actors, including civil society organizations that managed to involve all actors in less politicized engagement (Drago 2006, p. 54).
Colombia	Ratified in 1993, Law 100 transformed the organization and financing of the health system with the purpose, among others, of improving quality, mandating the following: (1) health is a right of all citizens, (2) the Social Security System should coordinate, provide and control effective, universal public health service, (3) decentralized health service management and delivery to increase role of departments and municipalities, (4) the private sector is part of insurance and health services delivery functions, and (5) basic services are free and compulsory. (Pinto and Hsiao, 2007). Capitation is the primary provider payment mechanism under the law.

Estonia	Requirements for education of healthcare providers are based on several legal acts. (MOSA, 2005) A National Health Policy is in place and defines quality as a priority. (Polluste et al., 2006) The Estonian Health Care Quality Policy defines responsibilities of the different levels of the health sector. (Kalda and Lember, 2000) Requirements for registration and licensing, the development of minimum requirements, the implementation of population satisfaction surveys and complaint procedures, drug authorization are set in legislation. (The Health Systems and Policy Monitor, 2015)
Ethiopia	No information in the literature
Ghana	Accreditation of health facilities is included in the National Health Insurance Act 2012. (World Bank, 2012) Along with accreditation, the following are also discussed: quality assurance, medicines list, safe guards to prevent over/under use of services, licensing and registration of private and public providers, credentialing, malpractice, monitoring service delivery to detect fraud/malpractice (National Health Ins Act 2012)
Indonesia	Many laws and policies address quality in health care. Hospital accreditation is compulsory based on the hospital law. Laws on medical malpractice, patient safety, registration of providers, etc. also exist. (Kemmentarian PPN/Bappenas, 2015)
India	Consumer forums mandated by the 1986 Consumer Protection Act (COPRA) recognize patient rights within and demand resolutions from private healthcare facilities (Balarajan Y et al., 2011). The Indian Medical Council Act of 1956 mandates provider registration. (Medical Council of India, 1956) and the Indian Penal Code, 1860 specifies the law and circumstances under which a provider could be charged with criminal negligence (Med India Network for Health, N.D.). Additionally, the Clinical Establishments Act describes the regulatory guidelines and minimum standards for services provided by healthcare facilities, including registration, health record maintenance, and other aspects (Joshi SK, 2013).
Kenya	Healthcare quality is mandated by Kenya's constitution (developed in 2010) (USAID Applying Science to Strengthen and Improve Systems (ASSIST), 2015) and the Kenya Health Policy 2014-2030 (Kenya MoH, 2014).
Liberia	Regulation of providers has a basis in legislation. (Fox et al., 2011)
Malaysia	The Private Health Care Facilities and Services Act of 1998 requires that private health facilities offer patient complaint systems and hospital facility employees are protected from retaliation by employers under the 2010 Whistle Blower Act (Malaysian Society for Quality in Health, N.D.).
Malawi	No information in the literature
Mexico	The accreditation of facilities as a condition for participating in the insurance scheme is a requirement under the General Health Law. (Lopez et al., 2015) Additionally, licensing and certification are included in the General Health Law (LGS, 2015).
Moldova	MOH Order No. 139 instructs the implementation of a quality management system as part of the management of a health facility. (Shaw, 2015) MOH Order No. 569 establishes list of quality indicators and designates monitoring responsibility to the CNMS. (Shaw, 2015)
Mongolia	The Health Law of 1998, which requires health professionals be licensed (World Bank, 2015). The Health Act, validated in 2011 includes quality of care (WHO, 2015).
Mozambique	No information in the literature
Namibia	Health Professional Councils were endowed with regulatory power through the Health Professional Act of 2004. (Health Professions Council of Namibia, N.D.).

Philippines	PCAHO was mandated by DOH to be the accrediting body for medical tourism. (Maramba TP and Peralta AP, 2011). RA 7875 mandates PhilHealth to promote health care quality and the National Health Insurance Act of 2013 outlines processes for quality assurance, accreditation for providers and health care institutions, as well as a grievance system. (PhilHealth, 2013). Patients' rights are protected under the Penal Code and Medical Act of 1959 and the Code of Ethics of the Medical Profession in the Philippines, Act number 4224. (Romualdez Jr. AG et al., 2011). The authority of the DOH to grant licenses to hospitals emanates from the Hospital Licensure Act (Republic Act 4226). Its latest implementing guidelines is Administrative Order 2012-0012A. PhilHealth's authority to accredit health care providers (both professionals and institutions) is based on R.A. 7875 passed in 1995, and amended most recently in 2013 with R.A. 10606. RA 7875 mandates PhilHealth to administer the mandatory National Health Insurance Program and implement a quality assurance program (part of which is accreditation) for participating professional and institutional health care providers. (Key Informant Philippines, 2016)
Rwanda	The National Health Sector Policy includes quality improvement as one of its objectives and guiding principles (Government of Rwanda, 2005)
Senegal	No information in the literature
South Africa	Health Act No 61 (2003) includes section justifying the establishment of the Office of Standards Compliance, Inspectorates for Health Establishments (Republic of SA, 2003). The OSC's regulatory power to certify facilities, etc., however, is derived from the National Health Amendment Act of 2013, which amends the original National Health Act of 2003 (OHSC website, 2014 & Republic of South African, 2013). There is also a national policy on quality in Health Care, which became official in 2001 and was updated in 2007 (NDoH, 2007) It specifically notes the governing of both public and private sectors under the policy (NDoH, 2007).
Tanzania	The National Health Policy supports quality as an overarching goal of the MOHSW (Songstad et al., 2012).
Uganda	No information in the literature
Zambia	The National Health Service Act gives the MOH its authority (Bossert, 2000). The Health Profession Act of 2009 gives the HPCZ its regulatory authority and states that health facilities cannot operate without a license (Gov't of Zambia, 2009).
Patterns	• 5 of 25 countries had no information in the literature (Ethiopia, Malawi, Mozambique, Senegal, Uganda). • 12 of 25 countries (Cambodia, Chile, Colombia, Estonia, Ghana, Kenya, Mexico, Mongolia, Philippines, Rwanda, South Africa, and Tanzania) have comprehensive laws or policies that include aspects of quality, such as regulation parameters, financing processes, monitoring mandates, etc. These are often embedded within comprehensive health reform laws (Chile-reform, Cambodia- national policy on quality, Colombia-reform, Estonia- national health policy, Ghana- reform, the Philippines-reform). • 10 of 25 countries (Bangladesh, Estonia, India, Indonesia, Liberia, Moldova, Namibia, Philippines, South Africa, and Zambia) have specific laws and policies addressing various aspects of quality. In 10 of 25 countries, aspects of provider registration, certification, and licensing are regulated by laws and policies (Bangladesh, Estonia, Ghana, India, Indonesia, Liberia, Mexico, Mongolia, Namibia and Philippines). • In 9 of 25 countries, aspects of facility registration, accreditation, and licensing are regulated by laws and policies (Estonia, Ghana, India, Indonesia, Mexico, Moldova, Philippines, South Africa, and Zambia). • 2 of 25 countries mentioned in the literature have specific language in laws and policies that mandate decentralization of governing quality (Colombia and Indonesia). • 6 of 25 countries mentioned in the literature have explicit patient rights or safety laws and

	policies mentioned in the literature (Cambodia, Chile, Colombia, India, Indonesia and Philippines). • 3 of 25 countries mentioned in the literature mandates around quality improvement and quality management (Moldova, Philippines, and Rwanda). • Country examples: a. Chile information provides great governance examples related to reforming the laws and policies needed to improve health coverage and achieve UHC, though still facing challenges. b. Moldova is the only country that mentions having quality management systems in place as instructed by laws and policies. Rwanda mentions Quality Improvement as part of health policy mandates.

Question 3.2 - Actors: Which institution leads the development these laws? Are they public or private?	
Scope of answers per country: N/A	
Bangladesh	No information in the literature
Cambodia	The GTZ and the government led the development of the charter. (GTZ, 2009)
Chile	Special reform commission outside the MOH including private sector, health worker union members, Medical Doctor Association involved in establishing priority reforms. Members of Parliament, Executive power, MOF and civil society involved (Bitran 2013 politics case study). The Regime of Explicit Health Guarantees (AUGE framework) passed in 2003 and 2004 and includes the creation of the oversight body "the Superintendency of Health" (Escobar and Bitran 2014).
Colombia	No information in the literature
Estonia	The MOSA leads the development of these laws. (World Bank, 2015)
Ethiopia	No information in the literature
Ghana	Governing body implementing the National Health Insurance Act 2012 is mostly made up of government representatives (MOH, MOF, MOSW, Ghana Health Service, National Insurance Commission, Social Security and National Trust) with some participation from private representatives including medical, dental, pharmacy providers, and legal and organized labor representatives
Indonesia	No information in the literature
India	The Health, Nutrition and Family Welfare Division of the Planning Commission for the Government of India is engaged in developing laws and policies for quality. (Planning Commission for Government of India, 2014).
Kenya	The Joint Inter-agency Coordinating Committee (JICC), a national government agency that encompasses the Ministry of Health among other constituencies, (Okeyo, 2003), leads policy development (Luoma M et al., 2010) along with the Ministry of Medical Services and Ministry of Public Health & Sanitation (Kenya MoH, 2014).
Liberia	No information in the literature
Malaysia	The Ministry of Health (Malaysian Society for Quality in Health, N.D.).
Malawi	No information in the literature
Mexico	The General Health Law was decreed by the Congress of the United Mexican States. (LGS, 2015)

Moldova	No information in the literature
Mongolia	No information in the literature
Mozambique	No information in the literature
Namibia	No information in the literature
Philippines	The DOH proposes the passage of health-related laws, including those for the National Health Insurance Program, licensing, and other regulatory bills. Such bills are deliberated in the Congress (House of Representatives and Senate) and require the signature of the President of the Philippines to become laws. (Key Informant Philippines, 2016)
Rwanda	No information in the literature
Senegal	No information in the literature
South Africa	Government - NDoH (NDoH, 2007)
Tanzania	The MOHSW spearheads the National Health Policy (MOH, 2003).
Uganda	No information in the literature
Zambia	Government (MOH, 2011)
Patterns	• For 14 of 25 countries, literature did not elaborate on the actors and institutions developing the laws and policies governing quality health care services in these countries (Bangladesh, Colombia, Ethiopia, Indonesia, Liberia, Malawi, Mexico, Moldova, Mongolia, Mozambique, Namibia, Rwanda, Senegal and Uganda). • For 3 of 25 countries, the literature reviewed mentions public and private actors governing further refinement, development and implementation of policies and laws (Cambodia, Chile, Ghana). • For 8 of 25 countries, the literature reviewed mentions public actors governing further refinement, development and implementation of policies and laws (Estonia, India, Kenya, Malaysia, Philippines, South Africa, Tanzania and Zambia); 3 countries (Chile, Ghana and Kenya) appear to have wide stakeholder representation on coordinating committees that are refining/implementing laws and policies.

Question 3.3 - Interactions: What other stakeholders are involved in the development of these laws and what are their roles relative to the main actor?

Scope of answers per country: N/A

Bangladesh	No information in the literature
Cambodia	MoH, NGOs, patients' representatives, the nurses' association, the medical doctors' association, trade unions, lawyers and human rights groups were involved in the development of the charter. (GTZ, 2009) Professional Councils and Professional Associations are involved in development of health sector legislation. (MOH, 2010)
Chile	FONASA (public) and Isapres (private) insurers implement AUGE. As of 2014, the Office of Health Provider Oversight has been more diligent in oversight over private insurers rather than FONASA. FONASA has pushed back on oversight, identifying a different agency (General Comptroller of the Republic) as the one that should have this authority. (Bitran 2014)
Colombia	No information in the literature
Estonia	No information in the literature

Ethiopia	No information in the literature
Ghana	No information in the literature
Indonesia	No information in the literature
India	No information in the literature
Kenya	NGOs and development partners under the coordination of the JICC. (Luoma M et al., 2010).
Liberia	No information in the literature
Malaysia	As of 2003, a Patient Safety Council advises MOH on how to address patient-related issues. (Malaysian Society for Quality in Health, N.D.).
Malawi	No information in the literature
Mexico	Ministry of Health proposes updates and changes to the General Health Law. (Key Informant Mexico MOH, 2016)
Moldova	No information in the literature
Mongolia	No information in the literature
Mozambique	No information in the literature
Namibia	No information in the literature
Philippines	Aside from DOH, PhilHealth is involved whenever the bills have provisions affecting PhilHealth. The deliberations in Congress also involve other stakeholders such as the Philippine Medical Association and the associations of allied professions (nursing, midwifery, pharmacy, etc.), specialty societies, local government units, hospital organizations, patient organizations, civil society, and academic institutions, among others. (Key Informant Philippines, 2016)
Rwanda	No information in the literature
Senegal	No information in the literature
South Africa	Private sector is also involved, as are professional associations, in participating in developing quality measurement strategies and engaging in other pertinent activities related (NDoH, 2007). The National Health Council was involved in the approval of the National Core Standards for Health Establishments (Marshall, 2013).
Tanzania	No information in the literature
Uganda	No information in the literature
Zambia	No information in the literature
Patterns	• 20 of 25 countries had no information in the literature. The literature did not elaborate on the interactions between actors who develop, refine, and implement laws and policies (Bangladesh, Colombia, Estonia, Ethiopia, Ghana, Indonesia, India, Liberia, Malawi, Mexico, Moldova, Mongolia, Mozambique, Namibia, Philippines, Rwanda, Senegal, Tanzania, Uganda and Zambia). • 5 countries mentioned nonpublic stakeholders involved in supporting the refinements to laws and policies (Cambodia, Kenya, Malaysia, Philippines and South Africa). In the Philippines, the health insurance agency, professional associations, and local government units are also involved. • 1 country mentioned conflict between public oversight authority for public and private insurers (Chile) (representative of health reform growing pains).

4. Leadership and Stewardship	
Question 4.1 - Processes: Are there positive and negative nonmonetary incentives to improve quality?	
Scope of answers per country: Includes both explicit and implicit incentives. E.g., awards for good quality are an example of a positive incentive; punitive culture that does not encourage transparency would be a negative incentive. Excludes financing incentives, which are included under the financing function.	
Bangladesh	No information in the literature
Cambodia	No information in the literature
Chile	"Quality in Health Care" month serves as a mechanism to instill culture of quality. (Gnecco et al., 1999)
Colombia	No information in the literature
Estonia	No information in the literature
Ethiopia	No information in the literature
Ghana	No information in the literature
Indonesia	No information in the literature
India	No information in the literature
Kenya	No information in the literature
Liberia	No information in the literature
Malaysia	No information in the literature
Malawi	No information in the literature
Mexico	Through the Program in Healthcare Quality, the MoH through DGCES provides financing to Quality Improvement Projects and grants the National Healthcare Quality Award and the Merit Recognition for Continuous Improvement (SS, 2016).
Moldova	No information in the literature
Mongolia	No information in the literature
Mozambique	Facilities are awarded for their achievement of Standards-Based Management and Recognition (SBM-R) standards. (Reis V et al., 2010).
Namibia	No information in the literature
Philippines	Health care providers who violate patient rights become ineligible for renewal of accreditation. (PhilHealth 2013). Noncompliance with accreditation standards will lead to denial of accreditation. Noncompliance with practice standards (clinical practice guidelines that PhilHealth has adopted) may lead to the issuance of warning to providers and eventually lead to suspension of their accreditation. Patient rights are just one aspect of the standards. In public hospitals and other public facilities, accreditation means additional income from the pooled professional fees, which is shared among salaried hospital personnel. (Key Informant Philippines, 2016)
Rwanda	No information in the literature
Senegal	No information in the literature
South Africa	The Office of Standards Compliance – even the name – emphasizes set standards, and notes the

	ability to withdraw certification of health establishments based on inspections, as well as ensures that all complaints will be investigated. The website for the OHSC has a prominent link displayed for reporting complaints, and given the number of resources dedicated (separate office within the OHSC for Complaint Management) perhaps this gives the facilities an incentive to at least maintain a certain level of quality (OHSC website, Strategic Plan 2015-2020). To illustrate, one of the strategic objectives of the Office of the CEO within the OHSC is "Enforcement action is effected with respect to persistently noncompliant health establishments". (Strategic Plan 2015-2020).
Tanzania	No information in the literature
Uganda	The Health Sector Quality Improvement Framework and Strategic Plan 2010/11-2014/15 outlines criteria for staff recognition, but the literature does not indicate whether or not awards have been issued (Ugandan Ministry of Health, 2011). Draft criteria for recognizing and awarding health professionals have been developed by members of the National QI Coordination Committee, which will be presented to the full committee in March 2016. (Key Informant ASSIST, 2016).
Zambia	According to a key informant, QI activities are not monitored or assessed systematically. Proper implementation is also poorly incentivized as it often falls to clinical entities at regional and district, which focus primarily on clinical aspects. The attitude toward it by frontline health care workers is described as "apathetic" - neither positive nor negative incentives seem to exist (Key Informant, ASSIST/Tanzania, 2016).
Patterns	• In 18 of the 25 countries there was no information on nonmonetary incentives (positive or negative) in the literature (including Bangladesh, Cambodia, Colombia, Estonia, Ethiopia, Ghana, Indonesia, India, Liberia, Malaysia, Malawi, Moldova, Mongolia, Namibia, Rwanda, Senegal, Tanzania and Zambia). • Negative incentives (2 countries): One payer - PhilHealth in the Philippines - denies accreditation to providers who violate patients' rights. In South Africa, the Office of Health Standards Compliance can withdraw certification of health establishments based on inspections. • Positive incentives (4 countries): Uganda has a QI strategy in place that outlines criteria for awards for staff recognition. (Ugandan Ministry of Health, 2011). In Mozambique, facilities are awarded for their achievement of Standards-Based Management and Recognition standards. (Reis V et al., 2010). As of 1999, Chile had a "Quality in Health Care" month as a mechanism to instill culture of quality. (Gnecco et al., 1999) Mexico's Ministry of Health grants a National Healthcare Quality Award as well as Merit Recognitions for continuous improvement.

Question 4.2 - Processes: Are there dedicated resources for quality improvement? At what level do those resources exist?

Scope of answers per country: Includes dedicated budget for quality and budget for quality-improvement training and staff dedicated to quality programs.

Bangladesh	No information in the literature
Cambodia	A Quality Assurance Office has been created within the Hospital Services Department within the MOH. (GIZ, 2014) To date, quality initiatives have been driven by donor support. The challenge of obtaining government financing for the sustainability of these initiatives remains. (Key Informant, ASSIST, 2016)
Chile	A National Program for the Evaluation and Improvement of Quality (EMC) has been developed within the MOH. A Quality and Regulation Unit has been established within the MOH. QA training is provided and has been standardized in 16 modules. (Gnecco et al., 1999)
Colombia	No information in the literature
Estonia	No information in the literature

Ethiopia	The Ethiopian Hospital Alliance for Quality has been developed by the MOH to enable hospitals to share best practices. (Africa Health Workforce Observatory)
Ghana	A Quality Assurance Department exists within the Ghana Health Service. (GHS, 2007)
Indonesia	No information in the literature
India	The resources and structure necessary for quality improvement are not currently in place. (Key Informant ASSIST, 2016).
Kenya	No information in the literature
Liberia	No information in the literature
Malaysia	No information in the literature
Malawi	A Performance and Quality Improvement Initiative was launched by the MOH in 2001. (Rawlins et al., 2013) National mechanisms to ensure quality service provisions are needed but are not in place. At both the national and district level, the capacity and understanding on quality management is very limited (Malawi German Health Programme, 2015)
Mexico	Currently, the DGCES dictate the policy of quality health care (DGCES, 2012), and the states implement it. Each state has a person in charge of quality issues, aligned with the national strategy. Also, every health unit has a quality office. (Key Informant Mexico MOH, 2016) A federal autonomous regulatory agency for quality is being created. (Lopez et al., 2015) The National Crusade for the Quality of Health Services program was launched to address various aspects of quality. (Frenk et al., 2003)
Moldova	There is no central institution responsible for quality, and it is unclear how responsibilities are allocated between different actors. (Shaw, 2015) A Division for Performance and Quality of Health Care Services exists within the MOH. (Shaw, 2015)
Mongolia	No information in the literature
Mozambique	No information in the literature
Namibia	No information in the literature
Philippines	Resources for quality improvement are part of the hospital budget. Hospitals need to show proof of budget for such activities during pre-accreditation surveys. Both the DOH and PhilHealth have offices in charge of quality assurance for health care institutions. (Key Informant Philippines, 2016)
Rwanda	Mentoring and Enhanced Supervision at Health Centers (MESH) program trained nurse-mentors in QI and mentoring techniques and integrated them into district supervisory teams. (Anatole et al., 2013) A Quality Assurance Unit has been created at the MOH. (IHP+, 2011)
Senegal	A national quality program (PNQ) has been established within the MOH. (Mbengue et al., 2009)
South Africa	No information in the literature
Tanzania	No specific budget information, but there is a unit within the MOHSW specifically dedicated to quality (Health Services Inspectorate and Quality Assurance Section (HSIQAS) (MOH Health Sector Strategic Plan 2006-2015). It was noted by a key informant that resources for dedicated research and knowledge management around quality improvement seem to be lacking and must be prioritized in order to adjust to ever changing demands (ASSIST, 2016).
Uganda	No information in the literature
Zambia	No explicit budgetary information but as of 2002, there is a Zambia Quality Assurance Program, which was umbrella-ed under the Directorate of M&E through the CBOH's Quality and Performance Audit Unit (Bouchet, 2002). Unsure whether this program still exists. Support for

	QI/QA initiatives seems to come from international donors/community, and there has evidently been training of MOH staff on QI/QA, though follow-up on this training has not occurred. (Key Informant, ASSIST/Zambia, 2016)
Patterns	• 10 countries have departments, units or programs within their MOHs that are dedicated to quality (Cambodia, Chile, Ghana, Mexico, Moldova, Philippines, Rwanda, Senegal, Tanzania, and Zambia). • 2 countries have national initiatives dedicated to quality (Chile and Malawi). • 2 countries had training programs for quality improvement (Chile and Rwanda). • Mexico is the only country creating a stand-alone regulatory agency for quality (in process). • In Ethiopia, the MOH has developed a Hospital Alliance for Quality to enable hospitals to share best practices. • Only one country had a program that was explicitly described as focusing on subnational (Rwanda). "Mentoring and Enhanced Supervision at Health Centers (MESH) program trained nurse-mentors in QI and mentoring techniques and integrated them into district supervisory teams." (Anatole et al., 2013) • In 12 of the 25 countries (including Bangladesh, Colombia, Estonia, Indonesia, Kenya, Liberia, Malaysia, Mongolia, Mozambique, Namibia, South Africa, and Uganda, there was no information on resources (budget for QI training and dedicated staff) in the literature. • Even among the countries that have dedicated units, programs, or training initiatives, budget information was not found. • In 2 countries (Cambodia and Zambia), quality initiatives are known to rely on donor support, which presents a concern for long-term sustainability.

Question 4.3 - Actors: Is there leadership commitment to quality? At what level(s) are the champions?

Scope of answers per country: "Levels" can mean national, provincial, district, facility, etc. "Champions" refers to individuals leaders/managers who advocate for quality.

Bangladesh	No information in the literature
Cambodia	No information in the literature
Chile	No information in the literature
Colombia	No information in the literature
Estonia	There is a lack of leadership for quality in the health sector. (World Bank, 2015)
Ethiopia	No information in the literature
Ghana	No information in the literature
Indonesia	No information in the literature
India	No information in the literature
Kenya	The Ministry of Health (Luoma M et al., 2010), Kenya's health information system staff (Luoma M et al., 2010), and national health quality improvement teams all lead healthcare quality initiatives. (Government of Kenya, N.D.)
Liberia	No information in the literature
Malaysia	No information in the literature
Malawi	The Ministry of Health and the District Health Management Teams (DHMTs) are the principal

	champions of implementing interventions to strengthen quality management and improve service delivery. (Malawi German Health Programme, 2015).
Mexico	DGCES dictate the policy of quality health care. (DGCES, 2012)
Moldova	No information in the literature
Mongolia	Mongolia receives funding from the Health Sector Development Program (HSDP), which initially set licensing standards and procedures for health professionals. (O'Rourke, 2001).
Mozambique	The Ministry of Health (Seebregts S, 2015).
Namibia	No information in the literature
Philippines	Aside from DOH and PhilHealth, the PMA, specialty societies, the hospital association, the Philippine Society for Quality in Healthcare, PCAHO, and other associations work on quality improvement and actively participate in multi-stakeholder programs to promote quality. (Key Informant Philippines, 2016)
Rwanda	No information in the literature
Senegal	No information in the literature
South Africa	National - NDoH, Office of Health Standards Compliance, Provincial - Provincial Heads of Health, Professional Councils (NDoH docs, Whittaker 1998, 2000), District level - including Nursing Council, Health Professions Council, Pharmacy Council and Council for Medical Schemes (Key Informant, ASSIST/SA, 2016 & OHSC, Strategic Plan, 2015).
Tanzania	National Level - see answer to previous question. There are also quality units within facilities at the secondary and tertiary levels (MOH, 2005). In addition, the HSSP VI indicates that all Regional Referral Hospitals will have Health Services Boards by 2020, and that the MOHSW has dedicated resources to improving the capacity of hospital management teams and boards over the next several years as they are implemented. HSBs will have community representation and will be trained in M&E. Furthermore, QI representatives have been appointed for some programs at the regional and district levels (Key informant, ASSIST/Tanzania, 2016) - Key informant also noted in general that leadership and provider government is central to the success of QI initiatives (ASSIST, 2016); "where the leadership bought into our program we were able to start and maintain improvement more effectively and efficiently."
Uganda	The Ministry of Public Service and the Ministry of Health have issued performance contracts to senior government officers. This was coordinated by the Resource Centre, a division of the Health Planning Department with the involvement of relevant partners and local government officials. (Key Informant ASSIST, 2016).
Zambia	National level commitment evident in the institution of regulatory and service delivery statutory boards (MOH, 2011 - NHSP). However, efforts may be fragmented and generally less effective given the frequent changes in the structure of the relevant government offices based on the political leadership of the country. A key informant notes that the government has "made headway" in operationalizing these functions but progress is often stalled due to constant bureaucratic shifts following elections, which result in an “ever changing goal post” and “reversal of decisions before the ministry and its staff can absorb the changes.” (Key Informant, ASSIST/Zambia, 2016) Progress is also stunted because ownership for QI efforts and the structure is still fundamentally supported by international donors/partners (Key Informant, ASSIST/Zambia, 2016).

Patterns	• 14 of the 25 countries had no information on quality leadership (Bangladesh, Cambodia, Chile, Colombia, Ethiopia, Ghana, Indonesia, India, Liberia, Malaysia, Moldova, Namibia, Rwanda, and Senegal). • National level entities were cited as leading quality improvement in 10 countries: Kenya (MOH, health information system, & National QI teams), Malawi (MOH and District Health Management Teams), Mexico (DGCES), Mongolia (Health Sector Development Program), Mozambique (MOH), Philippines (DOH and PhilHealth), So. Africa (National Department of Health, provincial heads of health and professional councils), Tanzania (MOH unit and facility level leaders), Uganda (Ministry of Public Service and Ministry of Health), and Zambia (regulatory and service delivery statutory boards). • In 3 countries, subnational level entities were involved in QI leadership (Malawi, South Africa and Tanzania). • 1 country was cited to have a professional organization among the leadership (professional councils in South Africa). • In Zambia, frequent government changes resulted in fragmentation of QI efforts. • No information on individual champions was found in the literature.

Question 4.4 - Interactions: How are quality initiatives/processes/policies passed from a higher level of government to the next level?

Scope of answers per country: This question can be about bottom up programs (the extent to which lower levels get support for them) or top down programs (the extent to which they get implemented at lower levels).

Bangladesh	No information in the literature
Cambodia	No information in the literature
Chile	The EMC has QA programs operating in the decentralized Health Services. Quality Committees have been created at the regional, hospital and health center levels, and quality monitors in the Health Services have been trained by the EMC central staff. (Gnecco et al., 1999) QA leadership follows the organizational structure of the MOH (e.g., regional directors are also in charge of QA program); SEREMIs (one per region) represent the president and provide additional oversight. (Legros et al., 2000)
Colombia	No information in the literature
Estonia	No information in the literature
Ethiopia	No information in the literature
Ghana	Regional, district and institutional QA teams have been established. (GHS, 2007)
Indonesia	No information in the literature
India	Elements of the country's M&E is meant to be regulated by State and District Quality Assurance Committees (SQAC and DQAC), but they are not particularly functional. These committees fall under the MoH and are meant to enforce regulation and laws in addition to their other MoH responsibilities. (Key Informant ASSIST, 2016).
Kenya	The implementation of the six health policy objectives, which aim to deliver, "the highest possible standard of health in a responsive manner" to Kenyans, is regulated at the national level through referral facilities, capacity building and technical assistance to counties (Kenya MoH, 2014).
Liberia	No information in the literature
Malaysia	No information in the literature

Malawi	Quality Improvement Support Teams at the facility level lead the implementation of the PQI. (Rawlins et al., 2013) Currently, the MoH at the national level and the DHMTs and service providers at the district level are the main implementers of interventions to improve quality management. (Malawi German Health Programme, 2015). The MoH developed, in 2005, "Guidelines for the Management of Devolved Health Service Delivery", which outlines the managerial authority given to District Assemblies to help them achieve improved health outcomes. (Malawi HSSP, 2011-2016) Service providers lack mentorship, supervision, recognition, and rewards, with missing written standards, targets and timelines for reviewing performance. The MoH has recognized this and the need to improve its quality improvement efforts. (Rawlins et al., 2013)
Mexico	DGCES dictate the policy of quality health care (DGCES, 2012), and the states implement it. Each state has a person in charge of quality issues, aligned to the national strategy. Also, every health unit has a quality office. (Key Informant Mexico MOH, 2016)
Moldova	There are no authorities responsible for monitoring quality of health care at the local level. (Turcanu et al., 2012)
Mongolia	No information in the literature
Mozambique	No information in the literature
Namibia	No information in the literature
Philippines	DOH's licensing standards and PhilHealth's accreditation standards define the level of performance that health care providers aspire for in order to operate legally and participate in the national health insurance program. Such standards are presented in workshops and meetings with providers, and industry leaders have adopted them as the standards towards which their peers should work for. (Key Informant Philippines, 2016)
Rwanda	No information in the literature
Senegal	Quality improvement interventions to date have taken place only at the facility level, and haven't been integrated or centralized. (CTB, 2014)
South Africa	No information in the literature
Tanzania	Quality units have been established at secondary and tertiary level hospitals (following the successful implementation of quality managers at these centers) (MOH, 2005). According to a situational analysis of QI in health care in TZ, Quality Improvement Teams (QITs) do exist at the facility level, which monitor performance and remain responsive to the Health Services Inspectorate Unit at the national level (MOHSW, Situational Analysis, 2012 & MOHSW, HSSP IV, 2015). It is unclear how responsive they are to the Tanzania Quality Improvement Framework 2011- 2016. There are also Medicines and Therapeutics Committees in Regional Referral Hospitals, which have been instructed in the HSSP VI to create internal M&E systems and established clinical and death audits (MOHSW, HSSP IV, 2015). A National Quality Improvement Committee is noted to have been proposed, but was not yet established (MOHSW, Situational Analysis, 2012). In terms of community-level stakeholders, such as patients, key informants note that this area has "room for improvement".
Uganda	No information in the literature
Zambia	The lack of ownership mentioned above is also true at the regional and district levels -- international donors drive the activities and they are viewed by the staff as "extra work". (Key Informant, ASSIST/Zambia, 2016)

Patterns	• 12 countries had no information on how QI processes/policies are passed from higher to lower levels or vice versa (Bangladesh, Cambodia, Colombia, Estonia, Ethiopia, Indonesia, Liberia, Malaysia, Mongolia, Mozambique, Namibia, Rwanda, South Africa, and Uganda). • 4 countries have subnational level quality units or programs (Chile, Ghana, India, and Mexico). • 5 countries have facility level teams implementing national initiatives (Chile, Ghana, and Mexico, with subnational support cited above, and Malawi and Tanzania without mention of subnational units). • 1 country was cited as having no local level quality initiatives (Moldova). • In the Philippines, initiatives take place at the national level and are passed to providers and industry leaders through presentations in workshops and meetings. • In Senegal, QI initiatives take place only at the facility level and are not integrated at the national level.

5. Plans and Strategies

Question 5.1 - Processes: Are stand-alone plans or strategies for quality in health care in place?

Scope of answers per country: N/A

Bangladesh	A draft of a stand-alone strategic plan for quality has been recently developed. (Ministry of Health & Family Welfare, n.d.)
Cambodia	There is a Master Plan for Quality Improvement in Health 2010-2015. (GIZ, 2014) A Road Map for Quality Improvement, aiming to institutionalize QI was also developed in 2006. (MOH, 2010)
Chile	No information in the literature
Colombia	No information in the literature
Estonia	No information in the literature
Ethiopia	No information in the literature
Ghana	A Quality Assurance Strategic Plan was in place for 2007-2011. (GHS, 2007)
Indonesia	No information in the literature
India	No information in the literature
Kenya	No information in the literature
Liberia	No information in the literature
Malaysia	No information in the literature
Malawi	No information in the literature
Mexico	The National Strategy for Strengthening Quality in Establishments and Health Services is aligned with the Health Sector Program, developed by the MoH, and the National Development Plan, developed by the Presidency of Mexico. (DGCES, 2013)
Moldova	No information in the literature
Mongolia	No information in the literature
Mozambique	No information in the literature
Namibia	No information in the literature

Philippines	Quality is part of the DOH's performance scorecard, which is attached to budget incentives for government hospitals. PhilHealth's accreditation standards also focus on quality. Quality is incorporated in the UHC framework as an important intermediate outcome that will lead to financial risk protection, improved health outcomes and patient satisfaction. (Key Informant Philippines, 2016)
Rwanda	A quality assurance strategy exists. (IPH+, 2011)
Senegal	A laboratory quality improvement plan is in place. (MOH, 2013)
South Africa	There is a Policy on Quality in Health Care (NDoH, 2007) that delineates objectives for improving quality in both the public and private sectors (NDoH, 2007). There is also the National Core Standards for Health Establishments in South Africa document, developed by the OSC (NDoH, 2011).
Tanzania	In 2011, the MOHSW published the Tanzania Quality Improvement Framework (TQIF) 2011-2016 (MOHSW, 2011). There is also a National Quality Improvement Strategic Plan (2013 – 2018) (Key informant, ASSIST/Tanzania, 2016).
Uganda	The Health Sector Quality Improvement Framework and Strategic Plan 2010/11-2014/15 is in place.
Zambia	In 2011, the MOH reestablished a QA/QI unit, along with a Technical Working Group, which developed of "Guidelines on QI for Health Workers in Zambia" in 2012. Key objectives of the guidelines include: • "To provide guidance for programme performance assessment, gap identification and appraisal of strengths; • To provide a national framework to certify health facilities as compliant with standards (accreditation with health professions council and other legal entities)." (MOH, 2011).
Patterns	• 10 countries (Bangladesh, Cambodia, Ghana, Mexico, Rwanda, Senegal, South Africa, Tanzania, Uganda and Zambia) have documented stand-alone plans or strategies for quality in health care in place. • These are generally in the form of master plans or strategic plans for quality in health care, quality improvement frameworks. However, in a few instances, their focus was narrower. For example, Senegal has a quality improvement plan that is specific to laboratories.

Question 5.2 - Processes: Do other health sector plans or strategies or broader national plans or strategies include health care quality?

Scope of answers per country: Do the plans/strategies simply identify quality as a priority? Do they include specific sections/steps related to quality? Distinguish between the two.

Bangladesh	The 2000 National Health Policy addresses community-level health worker shortages (especially those of midwives in an effort to reduce infant mortality rates) to improve the overall quality of the healthcare workforce. The Health, Nutrition, and Population Sector Program (2003-11) improved training guidelines with a focus on serving communities. (El-Saharty et al., 2015). Quality is part of the Health, Population, and Nutrition Sector Development Program (2011-16). (El-Saharty et al., 2015).
Cambodia	The Health Workforce Development Plan 2006-2015 put an emphasis on workforce regulation as a means to improve clinical quality. (WHO and MOH, Cambodia, 2012) Quality is also emphasized in the health sector strategic plan 2008-2015. (MOH, 2008) The MOH's Strategic Plan 2008-2015 identifies internal contracting through Special Operating Agencies (SOAs) as a strategy to improve several aspects of health service provision in Cambodia, including quality. (Khim and Annear, 2013)
Chile	No information in the literature

Colombia	No information in the literature
Estonia	No information in the literature
Ethiopia	No information in the literature
Ghana	No information in the literature
Indonesia	No information in the literature
India	Annual health care plans are developed. The 12th 5-year plan aims to improve efficiency and quality of services generally, which includes the quality of healthcare. (Bhat, 1996).
Kenya	The following laws and strategies address healthcare quality in some way: the Kenya Health Policy Framework (KHPF) 2012-2013 (Government of Kenya, N.D.), the Kenya Health Policy 2014-2030 (Kenya MoH, 2014), the National Implementation Plan (NIP) for family planning (1995) (Whittaker S et al., 1998), the Kenya National e-Health Strategy 2011-2017 (Ministry of Medical Services and Ministry of Public Health & Sanitation, 2011), Kenya's constitution (developed in 2010) (USAID Applying Science to Strengthen and Improve Systems (ASSIST), 2015), and Vision 2030, Kenya's development blueprint (GIZ, 2013).
Liberia	No information in the literature
Malaysia	Quality is prominently featured in the 10th Country Health Plan 2011-2015. (Ministry of Health Malaysia, n.d.)
Malawi	Quality assurance and quality improvement are mentioned in the Malawi Health Sector Strategic Plan (2011-2016), as well as M&E, and national and regional level policies. (Malawi HSSP, 2011-2016) The previous Program of Work (PoW) and the National Quality Assurance Policy attempted to address these issues; although only a limited number of interventions have been addressed. Examples include filling the posts of QA managers for hospitals at the national and district level, establishment of QA committees, and operationalization of Action Teams at ZHSO. (Malawi HSSP, 2011-2016) There is also the Malawi German Health Programme with a focus on two principal approaches for improving quality management. (Malawi German Health Programme, 2015)
Mexico	The National Strategy for Strengthening Quality in Establishments and Health Services is aligned with the Health Sector Program, developed by the MoH, and the National Development Plan, developed by the Presidency of Mexico. (DGCES, 2013)
Moldova	The Healthcare System Development Strategy 2012-2017 and the Institutional Development Strategy of the National Health Insurance Company 2014-2018 include the objective of improving quality. (Shaw, 2015)
Mongolia	Mongolia's Health Sector Master Plan (2005-2015) outlines several goals: to further develop appropriate standards, guidelines, and clinical outcome indicators to drive quality of care; coordinate and evaluate self-assessment by health professionals; and develop professional associations. (O'Rourke, 2001).
Mozambique	The National Plan to Improve the Quality of Reproductive Health and Child Health Services (USAID, N.D.), the Strategic Plan for the Health Sector (PESS) (WHO, N.D.) which explicitly addresses the Millennium Development Goals (MDGs), and the Health Sector Strategic Plan 2014-2019. (WHO, 2014).
Namibia	The National Development Plan (Namibia Training Authority, 2015) and MOHSS Strategic Plan (MOHSS, 2014 - Quality Management Systems Assessment Report) both generally note the importance and goal of a quality health system.
Philippines	The 25-year human resource master plan (2005-2030), focuses on improving the capacity of health care employees through increased investments and improved management systems. (Romualdez Jr. AG et al., 2011). Quality is part of the DOH's performance scorecard, which is attached to budget

	incentives for government hospitals. PhilHealth's accreditation standards also focus on quality. Quality is incorporated in the UHC framework as an important intermediate outcome that will lead to financial risk protection, improved health outcomes and patient satisfaction. (Key Informant Philippines, 2016)
Rwanda	No information in the literature
Senegal	The National Health Sector Development Plan 2009-2018 includes QI as part of its strategic orientation. (CTB, 2014)
South Africa	The NDoH's 10 Point Plan (2012-2014) has quality as a priority ("Improving Quality of Health Services.") and also lists accreditation and improved patient satisfaction and care as pathways to achieving this goal (Whittaker, 2011). The NDoH's Strategic Plan 2011-2013 also notes in its vision that it aims to secure a quality health system (less specific) (Whittaker 2011). Thirdly, the Negotiated Service Delivery Agreement (NDSA) created in 2010, also highlighted quality in its recommendations to refocus on primary health care and national health insurance as means to a quality health system (Whittaker, 2000).
Tanzania	Quality is indicated as a priority in the HRH Strategic Plan and the Primary Health Services Development Program 2007-2017 (Songstad, 2012). Additional initiatives developed after the first iteration of the TQIF included an Infection Prevention and Control (IPC) initiative, Standard-based Management and Recognition, and Health Lab Accreditation (MOHSW, 2011). Quality also underlies the National Package of Essential Health Intervention (Jan 2000), which includes a section on Management Support and identifies the District and Regional Health Management teams as the key stakeholders responsible for implementing quality health services, and suggests activities and indicators which can be used to track quality, while the Central MOH is mainly plays the role of quality assurance (MOHSW, 2000).
Uganda	The National Health Policy Plan outlines a National Quality Improvement Framework. Quality is also part of the Second National Health Policy (Ugandan Ministry of Health, 2011), the Health Sector Strategic & Investment Plan (HSSIP) I & II, and the Health Sector Development Plan (HSDP) 2015-16 / 2019-20 (Key Informant ASSIST, 2016). A Health Sector Statistics Strategic Plan is currently being drafted. (Key Informant ASSIST, 2016).
Zambia	The National Health Strategic Plan lists quality as an overall priority (not specific) (MOH, 2011). Key informants note the importance of a strategy or plan for how to put QI/QA *into practice* (Key Informant, ASSIST/Zambia, 2016).
Patterns	• 16 countries (Bangladesh, Cambodia, India, Kenya, Malaysia, Malawi, Moldova, Mongolia, Mozambique, Namibia, Philippines, Senegal, South Africa, Tanzania, Uganda and Zambia) have documented other health sector plans or strategies that include quality in some form. In most instances, quality was mentioned as a general priority, but in several cases (Malaysia, Moldova, South Africa) specific steps or actions to improve quality were included. • In 3 instances (Cambodia, Philippines and Tanzania), quality is part of human resource plans for the health sector, emphasizing the link between quality and the capacity and regulation for human resources for health. The same link was also emphasized in Bangladesh's National Health Policy. In the Philippines, quality is also incorporated in the UHC framework. • 2 countries had broader national plans that included quality (Kenya's Vision 2030, and Namibia's National Development Plan).

Question 5.3 - Actors: What institution(s) lead this planning?	
Scope of answers per country: N/A	
Bangladesh	No information in the literature

Cambodia	The MOH oversees the implementation of the master plan. (MOH, 2010)
Chile	No information in the literature
Colombia	No information in the literature
Estonia	No information in the literature
Ethiopia	No information in the literature
Ghana	No information in the literature
Indonesia	The MOH leads planning for quality at the national level. (Kemmentarian PPN/Bappenas, 2015)
India	Annual plans are developed using detailed working group discussions that involve the Health and Family Welfare Division, all States/Union Territories and the Central Ministry of Health and Family Welfare (Bhat, 1996).
Kenya	The Ministry of Medical Services and Ministry of Public Health & Sanitation developed the Kenya Health Policy 2014-2020 (Key Informant ASSIST, 2016)
Liberia	No information in the literature
Malaysia	The Ministry of Health. (Asia Pacific Observatory on Health Systems and Policies, 2013).
Malawi	The Malawi Health Sector Strategic Plan (2011-2016) is a product resulting from collaboration between the Ministry of Health and service providers, civil society groups, community members, the private sector, co-operating partners and other stakeholders. Under the Malawi German Health Programme, the Department of Planning and Policy Development (DPPD) in the MoH and the District Health Management Teams (DHMTs) in Balaka, Dedza, Nytcheu, and Mchiniji districts, are working with 2 international public health and QA experts. Also supporting this Programme is the Council for Health Service Accreditation of Southern Africa (COHSASA) (Malawi German Health Programme, 2015).
Mexico	The National Strategy for Strengthening Quality in Establishments and Health Services is aligned with the Health Sector Program, developed by the MoH, and the National Development Plan, developed by the Presidency of Mexico. (DGCES, 2013)
Moldova	No information in the literature
Mongolia	The MOH (O'Rourke, 2001).
Mozambique	The National Health System (NHS), also the main provider of health services nationwide. (Republic of Mozambique Ministry of Health National Immunization Program, 2011).
Namibia	No information in the literature
Philippines	DOH (Romualdez Jr. AG et al., 2011).
Rwanda	No information in the literature
Senegal	No information in the literature
South Africa	NDoH
Tanzania	The Ministry of Health and Social Welfare, the PMO-RALG (Prime Minister's Office – Regional Administration & Local Government), the President's Office – Public Service Management (PO-PSM)
Uganda	Under the National Health Policy Plan, the MoH's Quality Assurance Department (QAD) will manage all strategic plans. (Ugandan Ministry of Health, 2011).
Zambia	MOH (MOH, 2011)

Patterns	• In 10 countries (Cambodia, India, Indonesia, Kenya, Malawi, Malaysia, Mexico, Mongolia, Tanzania, and Zambia) the planning is led by the central MOH, without any designation of specific units within the MOH that are responsible for this planning. In Uganda, the Quality Assurance Department within the MOH is responsible for managing all strategic plans. • In the Philippines and South Africa, this planning is led by DOH. • In India, the planning process includes both the central level and states. Similarly, in Malawi, this planning is conducted through collaboration between the MOH and multiple stakeholders, including providers, civil society and community members, the private sector, etc.

Question 5.4 - Interactions: What other stakeholders participate in this planning and what are their roles relative to the main actor?

Scope of answers per country: N/A

Bangladesh	No information in the literature
Cambodia	A Quality Improvement Working Group (QIWG) monitors the implementation of the master plan. Its role is to monitor progress, harmonize efforts, address issues related to quality. (GIZ, 2014)
Chile	No information in the literature
Colombia	No information in the literature
Estonia	No information in the literature
Ethiopia	No information in the literature
Ghana	No information in the literature
Indonesia	No information in the literature
India	No information in the literature /see previous question.
Kenya	No information in the literature
Liberia	No information in the literature
Malaysia	MOH mandates state and local MOH staff to conduct regular situational analyses that inform medium-term plans. (Asia Pacific Observatory on Health Systems and Policies, 2013).
Malawi	Many stakeholders (specific institutions unknown) are already implementing QA measures and are ready to synchronize their approaches with national guidelines. (Malawi HSSP, 2011-2016) Health services planning at the district level is done by all local stakeholders at this level, primarily the DHO, CHAM, NGOs, communities, civil society groups, and private sectors within the decentralized environment. The health service planning process is to be coordinated under the Health Services Directorate. District Health Management Teams (DHMT) and Zonal Health Support Offices provide technical support during planning. (Malawi HSSP, 2011-2016)
Mexico	No information in the literature
Moldova	No information in the literature
Mongolia	Asian Development Bank. (O'Rourke, 2001)
Mozambique	No information in the literature
Namibia	No information in the literature
Philippines	World Health Organization – Western Pacific Region. (Romualdez Jr. AG et al., 2011) and attached agencies of DOH including PhilHealth, the Food and Drug Administration, etc. (Key Informant

	Philippines, 2016)
Rwanda	No information in the literature
Senegal	No information in the literature
South Africa	No information in the literature
Tanzania	The MOHSW's Quality Improvement Framework 2011-2016 details a number of institutions involved in ensuring quality is infused into the leadership of healthcare in the country including: The Health Services Inspectorate Unit / National Quality Improvement Committee in collaboration with the Health Sector Reform Advocacy Unit and the Health Education Unit of MoHSW (MOHSW, 2011). The PMO-RALG (Prime Minister's Office – Regional Administration & Local Government), has a bottom-up program titled Opportunities and Obstacles to Development (OD&D) that includes a training program for community participant planning (budgeting including for health) at the community level and promotes the importance of monitoring and evaluation and measurement/quality improvement.
Uganda	The Supervision, Monitoring, Evaluation and Research Technical Working Group (SME&R TWG) collaborate with the MoH's QAD. Both groups advise the Health Policy Advisory Committee on strategic plans. (Ugandan Ministry of Health, 2011).
Zambia	No information in the literature
Patterns	• In some cases, such as in Mongolia and in the Philippines, international organizations are involved in this planning process (respectively, Asian Development Bank and WHO). In the Philippines, the health insurance agency is also involved. • In Cambodia and Uganda, technical working groups participate in this planning. In Cambodia, the role of the TWG is implementation and monitoring of the plan, whereas in Uganda the TWG merely has an advisory role.

6. Monitoring

Question 6.1 - Processes: Is the country attempting to monitor indicators that they are using to monitor and evaluate quality of care? Are the following tracked: adverse events, malpractice/medical errors and incidents, and patient experience/satisfaction? Are there formal feedback mechanisms for nongovernmental groups?

Scope of answers per country: If there is information on the actual indicators that are being tracked to monitor and evaluate quality of care, include that in the response as well.

Bangladesh	Quality standards for hospitals and their assessment criteria are still being developed (Directorate General of Health Services Hospital Services Management Division, 2014). Only the Performance-based financing (PBF) "Demand-Side Financing Program", a maternal voucher scheme that offers providers who help women deliver in facilities additional payment, has performance indicators. (Asia Pacific Observatory on Health Systems and Policies, 2015).
Cambodia	Health Facility Assessment Tools have been developed and are being used to assess facilities' performance. These assessments are conducted annually for referral hospitals and less frequently for health centers. A Client Satisfaction Tool and a Checklist for Monitoring Infection Control have also been developed. (WHO and MOH, Cambodia, 2012) Complaint procedures do not exist. (WHO, 2015) Feedback mechanisms for communities exist through Village Health Support Groups and Health Centre Management Committees. However, their level of effectiveness varies. (WHO, 2015) Quality of care assessments have been in place since 2007 for level 1 facilities, and since 2013 for level 2 facilities. Outcome measures for quality are yet to be developed. (Key Informant, ASSIST, 2016)

Chile	As of 2014, no institution has yet been assigned the responsibility of evaluating the population wide health effects of the AUGE reform (Escobar and Bitran 2014).
Colombia	There is a monitoring system in place but it isn't yet functioning sufficiently to ensure quality care of the compulsory insurance package (Giedion Canon 2014)
Estonia	Annual population satisfaction surveys are conducted. (The Health Systems and Policy Monitor, 2015) Clinical audits are conducted annually. Hospitals are required to have systems for addressing patient complaints and to report hospital infections, side effects of drugs and blood transfusions. (World Bank, 2015) Hospitals are required to develop quality management systems, but there are no uniform performance standards that they are required to assess. (World Bank, 2015)
Ethiopia	There is a national system in place for monitoring hospital performance. (Alebachew et al., 2014)
Ghana	No information in the literature
Indonesia	Clinical audits are conducted, but patient level data are not available to support them. Complaint and feedback mechanisms exist at individual institutions (particularly private sector) and in some districts. However, these mechanisms are weak and ineffective. (Kemmentarian PPN/Bappenas, 2015)
India	Medical and death audits, and timely reports of investigation results, among other indicators, are routinely measured (Sharma KD, 2012). As of 2015, the state of Haryana is developing a performance-based incentives demonstration to better motivate health workers, and increase the use and quality of primary health care services with the support of the USAID Health Finance and Governance project (USAID HFG, 2015).
Kenya	Under KQMH, facilities are evaluated based on indicators spanning five domains; clinical care, quality and safety, management, people, and interface between inpatients and outpatients (GIZ, 2013). National health quality improvement teams also monitor and evaluate health quality indicators and provide quarterly feedback to hospital/health facility management teams for planning (Government of Kenya, N.D.). Among the M&E elements to assess is patient experience. District- and facility-based client satisfaction surveys are administered from time to time under the Service Delivery Module administered by the Ministry of Health (Luoma M et al., 2010). Moving forward , several indicators will be assessed to evaluate the progress of the Kenya Health Policy 2014-2020: life expectancy at birth, annual deaths (per 1,000), and years lived with disability, client satisfaction, annual deaths due to communicable conditions (per 1,000 persons), annual deaths due to noncommunicable conditions (per 1,000 persons), annual deaths due to violence/injuries (per 1,000 persons), neonatal mortality rate (per 1,000 births), infant mortality rate (per 1,000 births), under-5 mortality rate (per 1,000 births), maternal mortality rate (per 1,000 births), adult mortality rate (per 1,000 births), deaths due to top 10 risk factors, disabilities due to top 10 risk factors, and coverage levels of health-related sectors outcomes (Kenya MoH, 2014).
Liberia	No information in the literature
Malaysia	Malaysia monitors and evaluates the implementation of WHO hand hygiene standards and the safe surgery checklist. (Asia Pacific Observatory on Health Systems and Policies, 2013).
Malawi	Quality Improvement Support Teams in facilities, in collaboration with external teams, conduct baseline assessments of services. Quarterly internal assessments are conducted to assess progress against interventions designed as a result of the baseline assessments. (Rawlins et al., 2013) Currently, there are no standardized systems and structures in Malawi's health sector to measure and improve quality of care objectively. (Malawi German Health Programme, 2015)
Mexico	The National Healthcare Quality Campaign introduced a process for submitting complaints and suggestions on how to improve services. (Frenk et al., 2006) User perceptions of quality are measured every six years in the National Health Surveys. (Lopez et al., 2015) DGCES has developed the National System of Health Quality Indicators (INDICAS); it is a tool for recording

	and monitoring quality indicators in the units of health services, and it also allows for making comparisons between health care units in the country. Information is self-reported, so it is not completely reliable. DGCES is developing a project with NICE International, to strengthen the existing monitoring system, taking into account international experience in the design and implementation of quality indicators (NICE International, 2016).
Moldova	An approved list of quality indicators exists. (Shaw, 2015)
Mongolia	No information in the literature
Mozambique	A National Monitoring and Evaluation System (SIS-MA) was slated to launch in 2015. (Seebregts S, 2015). Mozambique's Model Maternities Initiative (MMI) outcome indicators are tracked and reported through a routine health information system and maintained in each of the MMI facilities. (USAID, N.D.).
Namibia	Client satisfaction surveys, medical audits, and assessment of quality improvement activities are conducted. (Ministry of Health and Social Services (MoHSS), 2014).
Philippines	Adverse events monitoring and patient satisfaction surveys are mandatory requirements in PhilHealth accreditation standards. The aggregate data are not collected at national level; they remain at the provider level. However, individual provider data may reach the national level and be used as inputs in the peer review process. (Key Informant Philippines, 2016)
Rwanda	Community-provider partnership teams for quality assurance (PAQ, Partenariat pour l'amelioration de la qualite) have been established in 12 districts to regularly identify gaps in quality and solutions. Assessment indicated that these structures have the potential to improve quality and patient satisfaction. (Intrahealth International, 2009) HMIS does not capture quality assurance. (IPH+, 2011) For the purpose of P4P, quality is measured through both structural and process indicators. (Basinga et al., 2010) Rwanda P4P experience has shown that measuring and defining quality are challenging. Indicators should be easy to verify, limited in number, and verified only periodically. (Eichler and Levine, 2009)
Senegal	There is no standard tool for evaluating the quality of care. Several initiatives have been piloted in the past, but abandoned. (Mbengue et al., 2009)
South Africa	Part of the establishment of the Office of Standards Compliance (OSC) in South Africa includes an ombudsman, which can hear patient complaints (NDoH, 2013). There is a Complaints Management Team that also works collaboratively with the ombudsman to investigate complaints (OHSC website, 2014). Adverse drug reactions are reported to the National Adverse Drug Event Monitoring Centre (NDoH, 2012). Finally, the National Core Standards for Health Establishments, developed by the OSC also mandate audits to ensure standards are met, as well as baseline assessments of facilities (NDoH, 2011 - National Core Standards for Health Establishments in SA). The six core standards include: cleanliness, infection control, safety and security, waiting times, and drug stock outs. The NDoH also collects information on: - Number of primary health care clinics in the 52 districts that qualify as Ideal clinics (baseline = 0, 2018/19 target = 75%) - Number of provinces that are compliant with Emergency Medical Services regulations (baseline = 0, target = 9) -% compliance with extreme and vital measure of National Core Standards at central, tertiary, regional and specialized hospitals (baseline = noncompliance, target = 100% compliance) -Percentage of health establishments that have developed annual Quality Improvement Plan (QIP) based on a self-assessment (gap assessment) or OHSC inspection - Patient satisfaction surveys rate (NDoH, 2012 - Strategic Plan 2014-2019) Patient complaints are also tracked and handled at the provincial level by Provincial Heads of Health (PHOH) in coordination with Public Health Facility and Professional councils (NDoH, 2013 - National complaints Mgmt doc). Also supporting this function is the national eHealth strategy, which aims to enable the NDoH to

	conduct real-time patient satisfaction surveys. Furthermore, the government's Department of Planning/M&E has committed to Citizen Based Monitoring in 2013. The Office of the Premier, the National Police Service, the Social Security Agency, and the Department of Social Development are key partners. They are currently piloting the approach in all provinces. Health sector-focused methods for the pilot include engaging clinic committees, hospital boards, and district health councils to develop tools to support the work of OHSC. Tools may include scorecards, grievance redress mechanisms, mobile phone surveys, etc. One project that had already begun and is piloted CMB was the Our Health Citizen journalism project that allowed participants to convey their experiences of public health on a virtual platform. (The Presidency: Department of Performance Monitoring and Evaluation, 2013) The NDoH, in partnership UNICEF/Save the Children/Gates, commissioned several reports - Saving Mothers, Saving Babies, and Saving Children - focused on the causes of MNCH mortality in South Africa. The audit reports are meant to spur quality improvements - recommendations include strengthening leadership and management in health facilities and the report itself encourages accountability. Measurement and tracking are also key themes highlighted -- ensuring mortality rates, cause of death are accurate, comprehensive and equitable (i.e. capturing those women who die at home) (NDoH/Save the Children, "Every Death Counts" Report, 2008). The country also has established Ministerial Mortality Committees, including National Committee for the Confidential Enquiry into Maternal Deaths (NCCEMD), the National Perinatal Mortality and Morbidity Committee (NaPeMMCo) and the Committee on Morbidity and Mortality in Children under 5 Years (CoMMiC) (NDOH, Handbook for District Clinical Specialist Teams, 2014). District Clinical Specialist Teams (DCSTs) were then established in 2013 for clinical governance--specifically of MNCH care. They conduct clinical audits/mortality reviews, produce reports, and set targets and standards for care - in collaboration with MNCH and provincial technical specialists (NDOH Handbook for DCSTs, 2014).
Tanzania	According to the National Health Policy, health centers must collect and report on data as indicated in the Health Management Information System and Integrated Disease Surveillance, among these are measures of quality including proportion of health facilities accredited; hospitals with QA Units; blood safety; quality, safety, and efficacy of medicines (National Health Policy, GoT, 2003 & MOHSW Situational Analysis, 2012).
Uganda	Per the Health Sector Quality Improvement Framework and Strategic Plan 2010/11-2014/15, data are to be collected from Uganda's various data management databases: the Health Management Information System (HMIS), project databases, the human resource information system (HRIS), the logistics management information system (LMIS), the output budgeting tool (OBT) and other systems. Data collected include: results of baseline-, mid-, and end- stage evaluation surveys and providers' use of standardized checklists and patient complaint systems (e.g., complaint boxes) (Omaswa F et al., 1997). Sector performance indicators have been developed for the HSSIP I & II and the HDSP. A meta data dictionary, an HMIS manual and indicator manual, and SOPs outlining the use of HMIS are also available. Additionally, a health facility self-assessment has been disseminated. Non-governmental groups receive performance feedback at performance meetings (Key Informant ASSIST, 2016).
Zambia	Services that are contracted or outsourced by facilities undergo quarterly performance audits that include both clinical and nonclinical indicators of quality. The audits are described however, as being "erratic" and usually take place only one or two times per year, instead of quarterly (Mudenda, 2008). A 2012 report indicated that patient satisfaction surveys were not conducted in Zambia (MOH, 2013). However, the Mutual Accountability Framework developed by the MOH along with its development partners indicates M&E of the health sector is key (not specific to quality however) (MOH, 2012). The HPCZ monitors and moves to resolve complaints from the public based on experiences with health practitioners and has a Patients' Rights and Responsibilities document on its website (HPCZ, 2013).

Patterns	• In 9 countries (Cambodia, Estonia, India, Indonesia, Kenya, Malawi, Namibia, South Africa and Zambia) facility assessments or clinical audits are conducted on a periodic basis to monitor quality. • Client or population satisfaction is measured in various forms. In Estonia and Mexico, population level surveys are conducted, whereas in Kenya and Namibia these surveys are conducted at the districts and/or facility levels. Patient satisfaction is also measured in the Philippines and South Africa. • Documentation on patient complaint mechanisms exists for 7 countries (Cambodia, Estonia, Indonesia, Mexico, South Africa, Uganda and Zambia). These mechanisms exist at individual facilities (Estonia, Indonesia) or through national systems (Mexico, South Africa). Bangladesh, Rwanda and South Africa also have feedback mechanisms in place for communities. However, in Bangladesh, the effectiveness of these mechanisms is known to vary. • In Estonia, the Philippines and South Africa, systems for reporting and investigating malpractice and/or adverse events are also in place. • 11 countries (Ethiopia, India, Kenya, Malaysia, Mexico, Moldova, Mozambique, South Africa, Tanzania, Uganda and Zambia) have some established indicators or systems in place for monitoring performance or measuring quality. Furthermore, in Bangladesh, India and Rwanda, performance based financing indicators are used.

Question 6.2 - Actors: Who is doing this monitoring and evaluation? If in the public sector, at what level of government?

Scope of answers per country: List the stakeholder and indicate at what level of government they are located (national, subnational). Also indicate the type of institution (public, private, parastatal).

Bangladesh	The Directorate General of Health Services Hospital Services Management Division is developing quality standards. (Directorate General of Health Services Hospital Services Management Division, 2014).
Cambodia	No information in the literature
Chile	QA program is involved in quality assessment and monitoring. (Legros et al., 2000) Superintendency of Health defined monitoring and evaluation processes for AUGE, including for the quality and timeliness guarantees (Escobar and Bitran 2014).
Colombia	MOH is responsible for monitoring and publishing information on the quality of health plans and providers. (Bossert et al., 1998)
Estonia	The annual patient satisfaction survey is conducted by the MOSA and the Estonian Health Insurance Fund. (Koppel and Paat-Ahi, 2012) EHIF conducts clinical audits and requires hospitals to develop quality management systems. It also collects data on waiting times. (World Bank, 2015)
Ethiopia	The MOH has developed the system for monitoring hospital performance; however, the quality of the routine information system is mixed. (Alebachew et al., 2014)
Ghana	The Quality Assurance Department of GHS publishes annual reports. (GHS, 2007)
Indonesia	Several regulatory bodies are involved in inspecting health facilities. There is no national system in place to receive and analyze complaints. (Kemmentarian PPN/Bappenas, 2015)
India	The National Health System Resource Centre (NHSRC), a technical support group with India's National Rural Health Mission (NRHM), routinely measures medical and death audits, and timely reports of investigation results, among other indicators. (Sharma KD, 2012). There is a significant amount of additional activity around M&E through the Health Management Information System and through specific government initiatives. (Key Informant ASSIST, 2016).

Kenya	The Ministry of Health (Luoma M et al., 2010), Kenya's Health Information System staff (Luoma M et al., 2010), and national health quality improvement teams all conduct M&E. (Government of Kenya, N.D.)
Liberia	No information in the literature
Malaysia	No information in the literature
Malawi	Baseline assessments are conducted by facility QISTs and external teams. (Rawlins et al., 2013)
Mexico	The National Commission for Medical Arbitration (CONAMED) resolves conflicts arising between patients and providers. (Lopez et al., 2015) DGCES has developed the National System of Health Quality Indicators (INDICAS); it is a tool for recording and monitoring quality indicators in the units of health services, and it also allows for making comparisons between health care units in the country. Information is self-reported, so it is not completely reliable. DGCES is developing a project with NICE International, to strengthen the existing monitoring system, taking into account international experience in the design and implementation of quality indicators (NICE International, 2016).
Moldova	The National Centre for Health Management (CNMS) is responsible for assessment and monitoring of standards, patient satisfaction and analyzing indicators); however, it lacks the resources needed to perform these functions. (Shaw, 2015)
Mongolia	No information in the literature
Mozambique	The Ministry of Health (Seebregts S, 2015).
Namibia	The Quality Assurance Unit of the MoHSS. (Ministry of Health and Social Services (MoHSS), 2014).
Philippines	Department of Health, PhilHealth (Key Informant Philippines, 2016)
Rwanda	The quality division within the MOH is responsible for monitoring and evaluating the quality of care in Rwanda (MOH, National Population Office, ORC Macro, 2003). MESH mentors monitor quality through facility assessments. (Anatole et al., 2013) Facilities report against P4P indicators to district P4P steering committees. The committees send auditors to facilities quarterly (on an unannounced day) to verify. (Basinga et al., 2010)
Senegal	No information in the literature
South Africa	The National Department of Health (NDoH) oversees the OSC (Whittaker 2002, and NDoH, 2011 - Nat'l Core Standards doc). More broadly, the Government's Department of Planning, Monitoring and Evaluation undertakes M&E-related operations. There is also an Auditor General who reports annually on all government entities and public institutions, including those of the health sector (Key informant, ASSIST, 2016 & AG website: https://www.agsa.co.za/Home.aspx)
Tanzania	The National Bureau of Statistics (public sector) is working with Johns Hopkins to create and house a National Evaluation Platform to evaluate health and nutrition programs in Tanzania (JHU, 2012). Other involved parties include the MOHSW, the Food and Nutrition Centre; the Prime Minister's Office of Regional Administration and Local Government Authority, and the Prime Minister's Office (Scaling Up Nutrition). Sokoine University of Agriculture and Muhimbili University of Health and Allied Science are also partners. There are Medicines and Therapeutics Committees in Regional Referral Hospitals, which have been instructed in the HSSP VI to create internal M&E systems and established clinical and death audits (MOHSW, HSSP IV, 2015). The HSSP VI indicates that all Regional Referral Hospitals will have Health Services Boards by 2020 that will be trained in M&E (MOHSW, HSSP IV, 2015). No indicators yet to include.
Uganda	Much of the data collection and analysis responsibility falls on multidisciplinary provider teams. (Ugandan Ministry of Health, 2011)

Zambia	At the national level, the HPCZ conducts National Healthcare Standards Assessment of Health Facilities (HPCZ, 2011) and also facilitates the resolution of complaints (HPCZ, 2013).
Patterns	• In the majority of the countries, this monitoring and evaluation is conducted by the MOH (Bangladesh, Colombia, Estonia, Ethiopia, Kenya, Mexico, Mozambique, Philippines and South Africa) or by QA units or programs (Chile, Ghana, Kenya, Namibia, and Rwanda). • In Malawi and Uganda, this responsibility falls with providers or provider teams. • Countries where other institutions take leading roles in conducting this monitoring and evaluation include Estonia (Estonia Health Insurance Fund, in addition to MOSA), India (National Health System Resource Centre), Mexico (National Commission for Medical Arbitration), Moldova (National Center for Health Management), Philippines (PhilHealth), South Africa (Office of Standards Compliance, Government's Department of Planning, Monitoring and Evaluation, Auditor General, etc.), and Zambia (Health Professions Council of Zambia).

Question 6.3 - Interactions: Are these monitoring data public? Do they inform quality improvement? What stakeholders use them?

Scope of answers per country: N/A

Bangladesh	No information in the literature
Cambodia	No information in the literature
Chile	No information in the literature
Colombia	No information in the literature
Estonia	The annual patient satisfaction surveys are published. Since 2013, EHIF has been requiring providers to develop improvement plans based on the clinical audit results. (World Bank, 2015)
Ethiopia	No information in the literature
Ghana	Annual reports are published. (GHS, 2007)
Indonesia	Feedback from inspections is not shared. (Kemmentarian PPN/Bappenas, 2015)
India	No information in the literature
Kenya	Health information is collected and passed up from the facility, district, and provincial levels, to the national level. It does not appear to be used to inform quality initiatives, policies or planning (Luoma M et al., 2010).
Liberia	Data from accreditation surveys is being used to identify features that high performing facilities have in common. (Cleveland et al., 2011)
Malaysia	No information in the literature
Malawi	Data from the baseline assessments is analyzed to determine causes of performance gaps and to design interventions. Results from quarterly internal assessments are shared among facilities and their individual performance in benchmarked against each other. (Rawlins et al., 2013)
Mexico	No information in the literature
Moldova	No information in the literature
Mongolia	No information in the literature
Mozambique	MMI outcome data are evaluated on an aggregate level across all MMI-participating institutions and maintained in each of the MMI facilities (USAID, N.D.).

Namibia	The Quality Assurance Unit of the MoHSS analyzes national data to identify benchmarks and publish benchmarking reports. (Ministry of Health and Social Services (MoHSS), 2014).
Philippines	The monitoring data are not public but there is a feedback mechanism from PhilHealth to the individual provider and patient. Such monitoring data are used as inputs in the peer review process. (Key Informant Philippines, 2016)
Rwanda	MESH program aggregated data are used to monitoring changes in quality across health centers and districts. They are used to guide QI projects. Findings are shared at the district level and with key health centers monthly. (Anatole et al., 2013)
Senegal	No information in the literature
South Africa	Baseline assessments (self) and external audits inform actions to improve quality (NDoH, 2011, National Core Standards).
Tanzania	Unknown whether data of the NEP will be made publicly available. However, the plan is to influence decision making at national and subnational levels, with the support of a High-Level Advisory Committee (HLAC) (JHU, 2012). In the National Quality Improvement Strategic Plan 2013-2018, it is noted that annual progress reports on QI should be posted on the MOHSW website, as well as highlighted in regional and council publications, if they exist (MOHSW, 2013). At the facility level, health facility governing committees will create and share progress reports on facility-level QI as well (MOHSW, 2013).
Uganda	The Health Sector Quality Improvement Framework and Strategic Plan 2010/11-2014/15 data are to be benchmarked internally and externally compared to other health facilities. (Ugandan Ministry of Health, 2011). Final analyses are then shared with Joint Review Missions, the National Health Assembly and the Ugandan Parliament. (Ugandan MoH, 2010). Data demand and use tools have been developed and data is reviewed at quarterly review meetings at all levels. (Key Informant ASSIST, 2016).
Zambia	In general, the frequent restructuring of the MOH and the Ministry of Community Development and Maternal Child Health (MCDMCH) have created confusion among "who does what" with respect to data collection/monitoring that support measurement of quality at the facility and district levels (MOH, 2012). On a different note, all HPCZ accreditation/inspection results are reported to the public (and the flowchart showing the course of events indicates this within the documents) (HPCZ website, 2016).
Patterns	• In Estonia, Ghana, Namibia, Zambia) quality monitoring data are published and/or made widely available. In Malawi, Mozambique and Rwanda, quality monitoring data are shared among facilities but not made publically available. • In 5 countries (Estonia, Liberia, Malawi, Rwanda and South Africa) monitoring data are used to inform quality improvement. • In Indonesia and Kenya, data are not shared and/or not used to inform QI. • In Tanzania and Uganda, the intention to publish the data and/or use it to inform quality improvement is stated, but the extent to which this happens is not clear.

ANNEX G: KEY FINDINGS ON LEADERSHIP AND STEWARDSHIP

Country (IMR and MMR % change rank)	Positive nonmonetary incentives	Quality department, unit or program within MOH	National initiatives dedicated to quality	QI training programs	Quality initiatives rely on donor support	QI led by national level entities	Subnational level involved in QI leadership	Subnational quality units or programs	Facility level quality teams
Cambodia (1)		√			√				
Zambia (4)		√			√	√			
Moldova (9)		√							
Tanzania (9)		√				√			√
Mozambique (15)	√ (positive)					√			
Senegal (16)		√							
Colombia (19)									
Indonesia (22)									
Malaysia (23)									
Estonia (25)									
Namibia (28)									
Liberia (29)									
Kenya (37)						√			
Bangladesh (38)									
Rwanda (38)		√		√					

Country (IMR and MMR % change rank)	Positive nonmonetary incentives	Quality department, unit or program within MOH	National initiatives dedicated to quality	QI training programs	Quality initiatives rely on donor support	QI led by national level entities	Subnational level involved in QI leadership	Subnational quality units or programs	Facility level quality teams
Malawi (42)			√			√	√		√
Mexico (46)	√ (positive)	√				√		√	√
Mongolia (50)						√			
India (51)								√	
Ghana (52)		√						√	√
Ethiopia (57)									
Philippines (76)	√ (negative)	√				√			
Uganda (78)	√ (positive)					√	√		
Chile (84)	√ (positive)	√	√	√				√	√
South Africa (131)	√ (negative)					√	√		

ANNEX H: KEY FINDINGS ON PLANS AND STRATEGIES

Country (IMR and MMR % change rank)	Stand-alone plans for quality	Health sector plans or strategies include quality	HRH plans include quality	Broader national plans include quality	Quality planning led by MOH or DOH	Quality planning includes multiple stakeholders
Cambodia (1)	√	√	√		√	
Zambia (4)	√	√			√	
Moldova (9)		√				
Tanzania (9)	√	√	√		√	
Mozambique (15)		√				
Senegal (16)	√	√				
Colombia (19)						
Indonesia (22)					√	
Malaysia (23)		√			√	
Estonia (25)						
Namibia (28)		√		√		
Liberia (29)						
Kenya (37)		√		√	√	
Bangladesh (38)	√	√				
Rwanda (38)	√					
Malawi (42)		√			√	√
Mexico (46)	√					
Mongolia (50)		√			√	
India (51)		√			√	√
Ghana (52)	√					
Ethiopia (57)						
Philippines (76)		√	√		√	
Uganda (78)	√	√				
Chile (84)						
South Africa (131)	√	√			√	

ANNEX I: KEY FINDINGS ON LAWS AND POLICIES

Country (IMR and MMR % change rank)	Comprehensive policies	Specific laws and policies	Provider regulation	Facility regulation	Decentralization of governing quality	Explicit patient rights or safety laws and policies	Mandates around QI and quality management	Law and policy development by government	Law and policy development by government and other private entities	Multi stakeholder engagement in law and policy development
Cambodia (1)	√					√			√	
Zambia (4)		√		√				√		
Moldova (9)		√		√			√			
Tanzania (9)	√							√		
Mozambique (15)										
Senegal (16)										
Colombia (19)	√				√	√				
Indonesia (22)		√	√	√	√	√				
Malaysia (23)								√		
Estonia (25)	√	√	√	√				√		
Namibia (28)		√	√							
Liberia (29)		√	√							
Kenya (37)	√							√		√
Bangladesh (38)		√	√							
Rwanda (38)	√						√			
Malawi (42)										
Mexico (46)	√		√	√						
Mongolia (50)	√		√							
India (51)		√	√	√		√		√		
Ghana (52)	√		√	√					√	√
Ethiopia (57)										
Philippines (76)	√	√	√	√		√	√	√		
Uganda (78)										
Chile (84)	√					√			√	√
South Africa 131)	√	√		√				√		

ANNEX J: KEY FINDINGS ON THE REGULATION OF HEALTH WORKERS

Country (IMR and MMR % change rank)	Registration licensing, or certification process documented	Registration, licensing or certification mandatory for some or all categories of providers	Renewal of registration, licensing of certification	Professional councils / boards / associations responsible for registration / licensing / certification	Government responsible for registration / licensing / certification
Cambodia (1)	√	√ (doctors and medical assistants)		√	
Zambia (4)	√		√ (unspecified)	√	√
Moldova (9)					
Tanzania (9)	√	√		√	√
Mozambique (15)	√	√ ("superior nursing level" and midwives)		√	
Senegal (16)					
Colombia (19)	√	√	√ (3 years)		√
Indonesia (22)	√		√ (5 years)	√	
Malaysia (23)	√			√	√
Estonia (25)	√	√			√
Namibia (28)	√			√	
Liberia (29)	√		√ (unspecified)	√	√
Kenya (37)	√			√	
Bangladesh (38)	√	√ (nurses)	√ (10 years)	√	
Rwanda (38)					
Malawi (42)					
Mexico (46)	√	√		√	√
Mongolia (50)	√	√		√	√
India (51)	√	√ (doctors)		√	√
Ghana (52)					
Ethiopia (57)	√				√
Philippines (76)	√			√	

Country (IMR and MMR % change rank)	Registration licensing, or certification process documented	Registration, licensing or certification mandatory for some or all categories of providers	Renewal of registration, licensing of certification	Professional councils / boards / associations responsible for registration / licensing / certification	Government responsible for registration / licensing / certification
Uganda (78)				√	
Chile (84)	√	√			√
South Africa (131)	√			√	

ANNEX K: KEY FINDINGS ON THE REGULATION OF HEALTH FACILITIES

Country (IMR and MMR % change rank)	Facility registration, licensing or certification process documented	Facility accreditation documented	Mandatory accreditation	Voluntary accreditation	Accreditation led by gov't agency	Accreditation led by private /independent org	Accreditation led by social insurance agency	Accreditation by regional or international bodies
Cambodia (1)	√	√	√					
Zambia (4)	√	√			√			
Moldova (9)		√				√		
Tanzania (9)	√							
Mozambique (15)								
Senegal (16)								
Colombia (19)								
Indonesia (22)	√	√	√		√	√		
Malaysia (23)		√		√		√		
Estonia (25)	√	√		√				√
Namibia (28)		√						√
Liberia (29)		√			√			
Kenya (37)		√					√	
Bangladesh (38)	√							
Rwanda (38)		√						
Malawi (42)		√						
Mexico (46)		√	√		√			
Mongolia (50)		√		√	√			
India (51)	√	√		√		√		

Country (IMR and MMR % change rank)	Facility registration, licensing or certification process documented	Facility accreditation documented	Mandatory accreditation	Voluntary accreditation	Accreditation led by gov't agency	Accreditation led by private /independent org	Accreditation led by social insurance agency	Accreditation by regional or international bodies
Ghana (52)		√						
Ethiopia (57)	√	√						
Philippines (76)	√	√			√	√	√	
Uganda (78)								
Chile (84)	√	√					√	
South Africa (131)	√	√				√		

ANNEX L: KEY FINDINGS ON FINANCING

Country (IMR and MMR % change rank)	Linkages between quality and financing	Link between accreditation and financing	P4P systems or financial incentives for quality exist	Health insurance agency assesses quality / accreditation or sets standards
Cambodia (1)	√	√		
Zambia (4)				
Moldova (9)	√		√ (positive rewards)	√
Tanzania (9)	√	√	√ (public providers)	
Mozambique (15)				
Senegal (16)	√		√ (pilot, national roll-out)	
Colombia (19)	√			
Indonesia (22)				
Malaysia (23)				
Estonia (25)	√		√ (bonus)	√
Namibia (28)				
Liberia (29)	√		√ (hospitals)	
Kenya (37)	√		√ (rebates)	
Bangladesh (38)				
Rwanda (38)	√		√ (national)	
Malawi (42)	√		√ (pilots)	
Mexico (46)	√	√		
Mongolia (50)				
India (51)	√		√ (pilot)	
Ghana (52)	√	√		√
Ethiopia (57)				
Philippines (76)	√		√ (pilot)	√
Uganda (78)			√ (pilot)	
Chile (84)	√			√
South Africa (131)				

ANNEX M: KEY FINDINGS ON MONITORING

Country (IMR and MMR % change rank)	Facility assessments or clinical audits conducted	Client or population satisfaction measured	Patient complaint mechanisms exist	Community feedback mechanisms exist	Systems for reporting and investigating malpractice and/or adverse events in place	Established quality indicators or systems	Quality monitoring conducted by MOH	Quality monitoring conducted by QA units or programs	Quality monitoring conducted by providers	Quality monitoring conducted by other institutions	Quality data shared widely or among facilities	Quality data used to inform QI
Cambodia (1)	√		√	√								
Zambia (4)	√		√			√				√	√ (widely)	
Moldova (9)						√				√		
Tanzania (9)						√						
Mozambique (15)						√	√				√	
Senegal (16)												
Colombia (19)							√					
Indonesia (22)	√		√									
Malaysia (23)						√						
Estonia (25)	√	√ (population surveys)	√		√		√			√	√ (widely)	√
Namibia (28)	√	√						√			√ (widely)	
Liberia (29)												√
Kenya (37)	√	√				√	√	√				
Bangladesh						√ (PBF)	√					

Country (IMR and MMR % change rank)	Facility assessments or clinical audits conducted	Client or population satisfaction measured	Patient complaint mechanisms exist	Community feedback mechanisms exist	Systems for reporting and investigating malpractice and/or adverse events in place	Established quality indicators or systems	Quality monitoring conducted by MOH	Quality monitoring conducted by QA units or programs	Quality monitoring conducted by providers	Quality monitoring conducted by other institutions	Quality data shared widely or among facilities	Quality data used to inform QI
(38)												
Rwanda (38)				√		√ (PBF)		√			√	√
Malawi (42)	√								√		√	√
Mexico (46)		√ (population surveys)	√			√	√			√		
Mongolia (50)												
India (51)	√					√ (and PBF)				√		
Ghana (52)								√			√ (widely)	
Ethiopia (57)						√ (national)	√					
Philippines (76)		√			√		√			√	√	
Uganda (78)			√			√			√			
Chile (84)								√				
South Africa (131)	√	√	√	√	√	√	√			√		√

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