This paper serves as a background report to inform the Global Strategy for Human Resources for Health. The development of this paper has been coordinated through a thematic working group (TWG), comprising of 2 co-chairs and a group of experts drawn from various Global Health Workforce Alliance (GHWA) constituencies, operating under the oversight of the GHWA Board working group. The views expressed in the paper, do not necessarily reflect the official position of GHWA. All reasonable precautions have been taken by the co-chairs to verify the information presented in the papers.
IMPROVING HEALTH WORKER PRODUCTIVITY AND PERFORMANCE IN THE CONTEXT OF UNIVERSAL HEALTH COVERAGE: THE ROLES OF STANDARDS, QUALITY IMPROVEMENT, AND REGULATION – FINAL DRAFT

BY TECHNICAL WORKING GROUP #7

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INTRODUCTION

The Global Health Workforce Alliance (GHWA) has coordinated a global consultation, with the objective to inform a future strategy on human resources for health (HRH) that will be relevant to the post-2015 development agenda (2015-2030) for all countries at all stages of socio-economic development. The consultation builds on earlier work on the HRH implications of Universal Health Coverage (UHC), with additional analyses of: future scenarios in the period 2015-2030; multi-sectoral government activities, such as the International Labor Organization’s work with its Member States on strengthening social protection systems, and; opportunities arising from the anticipated economic, demographic, and epidemiologic transitions in many low- and middle-income countries. The consultation includes eight themes\textsuperscript{1} that can contribute to the overall development of a forward-looking strategy. The objective of this paper by Working Group #7 is to examine the evidence and provide recommendations on the roles of standards, quality improvement, and regulation for improving health worker productivity and performance at all levels of the health system (see Table 1 for working definitions used in the paper). We present a framework based on the review of selected evidence of factors promoting and impeding productive and performance (Figure 1).

Table 1: Working Definitions

<table>
<thead>
<tr>
<th>Human resources management</th>
<th>Interventions that aim for effective utilization of human resources in an organization\textsuperscript{1}</th>
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<tr>
<td>Incentives</td>
<td>All the rewards and punishments that providers face as a consequence of the organizations in which they work, the institutions under which they operate and the specific interventions they provide\textsuperscript{2}</td>
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<tr>
<td>Pay for performance</td>
<td>The transfer for money or material goods conditional on taking a measurable health related action or achieving a predetermined performance target\textsuperscript{3}</td>
</tr>
<tr>
<td>Performance</td>
<td>Performance of health workers includes the quality of their work, the technical skills they use, the care they deliver, and the impact of their work on health outcomes.\textsuperscript{4}</td>
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\textsuperscript{1} Working group themes: 1) The drivers of change in health labor markets; 2) The role of transformative education; 3) Data and measurement of HRH availability, accessibility, acceptability and quality; 4) Accountability and alignment for post-2015: the roles and responsibilities of state and non-state actors; 5) Leadership, governance and policy alignment in public/private health systems; 6) The drivers of change in Fragile States; 7) Improving productivity and performance: the roles of regulation, professional associations and standards; and 8) Building on human capability beyond the health sector.
Productivity of health workers is determined by the setting in which they work, their level of motivation, work organization, management capacity, the division of labor and other resources (e.g., equipment, drugs, examination rooms, and other characteristics of the setting) available.\(^5\)

Quality of care is the function of the healthcare delivery system to deliver safe, effective, and patient-centered care in an efficient, timely and equitable manner. The Institute of Medicine (IoM) defines quality of care as the “degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.”\(^6\)

A systematic approach or strategy to acknowledge, reward, and motivate the performance of health workers to provide quality health services through appropriate financial and non-financial incentives.\(^7\)

All those legitimate, appropriate and sustained means where order identify, consistency, control and accountability are brought to health systems through legally enforced and/or voluntary action.\(^8\)

Explicit statements of expected quality in the performance of a healthcare activity – i.e., how a particular healthcare activity will be performed in order to produce the desired results. May take the form of procedures, clinical practice guidelines, treatment protocols, critical paths, algorithms, standard operating procedures, or statements of expected healthcare outcomes.\(^9\)

**BACKGROUND**

Improving health workers’ performance and productivity is vital to improving health care delivery, the Millennium Development Goals, and commitments, policies, and actions beyond 2015. The evolving momentum for Universal Health Coverage offers an important opportunity to look at HRH challenges in the context of UHC.\(^10\) During the last decade, numerous intergovernmental resolutions as well as action plans have highlighted the importance of HRH investments.\(^11-16\) However, policy makers and program planners still struggle to determine the correct set of actions to improve worker performance and productivity.

Critical human resources shortages, particularly in low-resource settings, require that we not only develop long-term strategies for increased production and retention of health workers\(^17\) but more importantly that we strengthen the productivity and performance of the workforce we have so as to get the best possible results and the highest impact with existing resources.

Health worker performance barriers such as unclear roles and expectations, unclear guidelines, poor processes of work, inappropriate skills mix within the work setting, competency gaps, lack of feedback, difficult work environments and unsuitable incentives mean that even where there are no critical workforce shortages, health workers may still fail to provide quality care. While substantive evidence of the effectiveness of different types of interventions to improve worker performance and productivity is still limited, salient features are emerging from existing studies and country experiences that can help inform a strategy for optimizing the performance and productivity of health workers and health worker teams.\(^18-19\)
METHODS

This paper was developed by a group of experts comprised of representatives of professional associations, non-governmental organizations, multi-lateral organizations and bilateral organizations representing all regions of the world. The paper and its recommendations were informed by a targeted desk study of published and grey material. In addition, detailed feedback from a group of expert reviewers on the roles of quality improvement, regulation in HRH, and standards in addressing health worker performance and productivity was obtained on drafts of the paper. An adaptation of the Dieleman et al. framework formed the focus and direction of the paper (Figure 1).

IMPROVING HEALTH WORKER PERFORMANCE AND PRODUCTIVITY

FRAMEWORK OVERVIEW

Figure 1 highlights that the determinants of health workers’ performance and productivity are rooted in factors related to: 1) the macro, or overall health systems, socio-economic/labor market, and political level; 2) the micro level, such as the workplace itself or the communities in which health workers live; and 3) the individual characteristics of health workers themselves. HRH interventions such as standards of health care, quality improvement and regulation (inputs and processes) work in a dynamic relationship with each other to improve health worker performance and productivity: Standards should codify the evidence based interventions that should be incorporated into practice and the performance expectations in the delivery or implementation of quality of health services. Standards drive the improvement efforts needed to ensure their reliable implementation in everyday practice, yet at the same time the experience of improving care can shed light on the realities of how to implement the standards and can consequently inform the revisions of these standards. Through regulatory approaches, governments can establish expectations for the competence of healthcare providers and the standards of the services.

Other inputs and processes such as strong human resource management and recognition systems to support quality services and ongoing monitoring and evaluation of care processes are also needed to improve the availability, responsiveness, and competence of the health workforce. As will be described in the following sections, there is no clear linear relationship between inputs, processes and outcomes, and between outcomes and effects. Instead, these issues are intricately related to each other and interventions must be comprehensive and multifaceted, taking place simultaneously and at different levels of the health system.

KEY FINDINGS FROM EVIDENCE, RECOMMENDATIONS, AND AGENDA ITEMS THAT NEED TO BE ADDRESSED IN THE FUTURE

STANDARDS

Global standards, or those adapted to a local situation, are explicit statements of expected quality in the performance of a health care activity. They may take the form of procedures, clinical practice
guidelines, treatment protocols, critical paths, algorithms, standard operating procedures, or statements of expected health care outcomes, among other formats.

Standards communicate expectations for how a particular health care activity will be performed in order that it achieve the desired results and define, for both health workers and clients, what is needed to produce quality services. Standards are thus the cornerstone of most health care improvement approaches, including accreditation of health facilities, external quality evaluation, continuous quality improvement, and performance improvement. In fields like health care that are continuously evolving with the development of new technologies, drugs, and procedures and that have an enormous body of scientific evidence available to support clinical decision-making, ensuring that standards are regularly updated, communicated to providers, and “evidence-based” is critical to assuring health care effectiveness and outcomes.

Adherence to evidence-based standards has been shown to be associated with improved health outcomes.24 Similarly/conversely failure to provide clinical care in accordance with evidence-based standards has serious negative effects on patient outcomes.25 A substantial body of research on guidelines implementation suggests many reasons why standards-based performance is often difficult to achieve and sustain. At the most basic level, health workers may simply not be familiar with standards because these have not been clearly communicated or disseminated from national to facility level. In other cases, systemic factors such as lack of the necessary supplies or equipment to perform according to standards; poor monitoring and evaluation of guideline implementation; and lack of human resources can affect implementation of standards. Evidence has shown that combinations of interventions are more effective than single interventions to induce and maintain health workers’ adherence to evidence based-standards (e.g., graphic aids; clarity and repetition of messages; provision of opportunities to discuss and try out new behaviors; making desired behaviors compatible with existing practices; and approval and support of patients, peers, and supervisors).26

Proposed agenda:

1. Better tools and processes are needed that help health care providers know about evidence-based standards in order to apply standards in their daily work. Further research is needed to test locally appropriate and sustainable strategies for helping healthcare providers perform according to standards in diverse and resource constrained conditions, including primary health care facilities with non-physician health workers.

QUALITY IMPROVEMENT

The science of improvement aims at making systematic changes in the way healthcare is delivered to increase the likelihood that those changes will result in better care. Despite an abundance of evidence-based guidelines and consensus on what should be done, many simple, high-impact interventions capable of saving lives and alleviating suffering are not reaching the people who most need them. Much of this implementation gap is related to poorly designed processes of care delivery and weak health systems. The fundamental concept of improvement science is that improvement requires change.
Because not every change makes care better, changes must be tested to determine whether the change improves care. Quality improvement approaches (e.g., implementation, execution, delivery, etc...) aim to enable the health system, teams, and individuals to find ways in which to provide evidence based interventions to performance expectations on a routine basis for every patient, every time in the most safe, effective, patient-centered, timely, efficient, equitable way.

**Improving health worker engagement, performance, and productivity:**

To achieve UHC so that all sectors of the population have access to quality care involves improving the performance of the health workforce at every system level – sub-national management levels, local facilities, and communities. To do so, we need to strengthen the capacity of managers, frontline providers, community health workers, and volunteers to manage their own performance, identify strategies for improving care, and monitor and evaluate best practices and health outcome results, so that evidence will inform decisions and shape policies. This capacity, developed at all delivery levels, results in strengthened systems and sustained quality of care.

Much of the current focus of quality improvement has been on redesigning care delivery processes to enable providers to follow evidence-based guidelines. These experiences in adapting improvement methods to work across organizations levels are showing promising results. Employee involvement through quality improvement teams has resulted in improved processes of care and patient outcomes. Bringing teams of health workers from across the levels of the health system to work together in improvement teams allows the system to tap into their knowledge of the system’s inner workings and develop potential solutions that can work. Engaging health workers in the design, testing and implementation of changes enables clinical and non-clinical health workers at all levels of the system to innovate and test practical ways that better utilize existing resources to improve health care.

Educating health workers may only further magnify the “know-do” gap if health workers do not see themselves as agents of change and are not empowered to make changes. Increased engagement among nurses, for example, in high income countries has been associated with greater patient satisfaction, nurse retention, and morale; lowered complications; and improved clinical measures such as reduced infections and medication errors. Similarly, a recent unpublished study from Tanzania found that health facilities with health workers with below average levels of engagement had three times the proportion of HIV clients that were lost to follow-up. Since most providers who participate in improvement activities carry out this work without compensation, suggests that non-material incentives are at play. Research in this area is just beginning and we need to understand better what motivates providers to participate in improvement activities and build these factors into their improvement work.

**Improving health worker in-service training effectiveness, efficiency, and sustainability**

A large portion of funding has been spent on in-service training (IST) to rapidly build health worker competence to provide quality services. IST has gained prominence as a method to rapidly build health worker competencies at scale. However challenges such as unnecessary duplication in training and significant service disruptions have raised questions of the effectiveness, efficiency, and sustainability of
training investments. Organizations such as the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project have responded by developing and launching the Global Health Worker In-service Training Improvement Framework, which codifies 40 training recommendations.\textsuperscript{38}

\textit{Integrating improvement competencies into pre-service and in-service training}

All health systems have some aspect of dysfunction, inefficiency, and ineffectiveness and continuous improvement is a necessary part of day to day work for all health workers. While health worker education and training systems have been doing increasingly better to build specific competencies to practice in their profession, most health professions’ education and training systems are not equipping health workers with the competencies to brainstorm, test, study, implement, and spread changes. Consequently, improvement initiatives depend on ad hoc in-service training, while staff turnover and rotations dilute the capacity of improvement teams.\textsuperscript{39}

A key precondition to the sustainability of past and current investments in health care improvement is the availability of a current and future workforce across the health system that has the competence to lead and participate in improving care. Work is being conducted in the East Africa Region to define basic core improvement competencies that can be integrated into health worker education and training, as well as incorporating improvement competencies into pre-service training.\textsuperscript{40} There is currently a dearth of literature and opportunities for shared learning to integrate improvement competencies into health worker education and training. Going forward, a platform is needed to bring together key stakeholders to share learning, curricula, evaluations, and adult learning methodologies.

\textit{Proposed agenda}

1. Further research of improvement applications in worker productivity and performance is necessary to determine how sustained results can be best achieved across time. Most experience in developing and even in developed countries of improvement applications and health worker productivity are based on time limited projects. There are very few examples where national spread of quality improvement has worked over extended periods of time to ensure sustained results.\textsuperscript{41, 42}

2. Use innovative approaches such as best practices benchmarking or institution to institution partnerships to share improvement approaches and results across thematic areas and sites with policy makers and program implementers. Replicating results across type of settings, i.e. taking improvement approaches usable in surgery and adapting them for safe childbirth, have rarely been done successfully. In many cases, the approach is designed from scratch rather than sharing approaches and results across sites.

3. Additional research is needed to address the role of improvement approaches to HRH interventions such as task sharing, referral systems, pre-service training for quality improvement, motivation of providers to carry out quality improvement work through non-material incentives, as well as integrating quality improvement approaches into the private sector (i.e., large networks of NGOs).\textsuperscript{43}

4. Improvement is top led, bottom fed. Priority-setting and empowerment for change is a leadership function. Insightful testing and implementing of changes happen by the staff delivering the work
processes. This top-bottom relationship and how it can be enhanced is worthy of further investigation.

5. There is limited research on the relationship between health worker engagement and healthcare improvement in low resource settings. Further research is required to strengthening our understanding of health worker engagement and interventions that can better engage health workers to improve care.

**REGULATION**

The purpose of health professional regulation is to define and set rules regarding standards for professional practice and education to ensure that health professionals are competent to practice at a standard acceptable to the public who are recipients of that care. Regulators do so by holding registers of individuals who meet their standards of education, training, professional skills, behavior and health. There are four recognized elements: registration, standard setting, accreditation and management of conduct, performance and impairment matters.

The 2006 World Health Report identified major deficits in regulator systems while outlining three basic models of regulatory systems: self-regulating professional associations; the command and control approach of institutional regulators; and the advocacy of civil society. The report highlights that, individually, none of these is sufficient to regulate the behavior of health workers and institutions and concludes that “regulations resulting from the participation of all three bodies, as well as health care institutions and the workforce, are more likely to generate trust and cooperation.”

As the scope of practice of existing practitioners has expanded, and the range of health workers has increased, the issue of unique scopes of practice and overlapping responsibilities have presented task-sharing as a challenge rather than a means of better meeting patient and population needs.

The evidence base on the whole focused on single profession or jurisdictional experience. With few exceptions studies have been descriptive in nature and rarely examined aspects of the most efficient and effective means of implementing regulatory systems and processes. Yet the aspects that need to be addressed from multiple country case studies are consistent – regulation that protects the public yet facilitates change; a register of the competent and practicing rather than those that have simply completed a program; oversight or accreditation of pre-service education programs; mechanisms to assure continuing competence; approaches that enable amendment of scopes of practice to meet changing health needs; fair and transparent processes that support practitioner mobility and simultaneously protect the public; and a range of conduct and competence approaches that are proportionate to risk and efficient and effective to operate.

A consistent legal framework enables regulators to uphold their duty to protect the public yet, dissonance between ministries of education, health, labor and others have contributed to fragmentation and inefficiencies in planning. It has been argued that a systems based approach is needed to address these and other performance gaps. Recently the African Health Professions Regulatory Collaborative for Nurses and Midwives (ARC), a 17-country initiative, introduced a system-based approach for country
assessment regarding regulatory reform and a methodology to track and assess change. Regulatory reforms cannot be done in isolation or without regard to the cultural and legal traditions of the jurisdictions concerned or other regulatory and quality assurance systems that interface and interact with professional regulation.

**Proposed agenda**

1. Distil from available evidence a systems based approach to the development and implementation of contemporary statutes and regulatory mechanisms and processes.
2. Undertake research to characterize/identify the impact of regulations and quality assurance features that need to be addressed by any regulatory system so as to underpin the attainment of UHC and improved population health.
3. Identify research gaps and propose a list of priorities for study that will focus on enhancing the performance of regulatory systems.

**OTHER FACTORS**

This paper has focused specifically on the roles of standards, quality improvement, and regulation for improving health worker productivity and performance at all levels of the health system. There are many other factors that influence workforce performance and productivity. For example, there is a growing body of research that shows that job satisfaction, productivity and organizational commitment – all “influencers” of quality and performance – are affected by management and governance systems and leadership practices. Recent reviews of human resources management, supervision and mentoring interventions identified key success factors to include: active involvement of staff to identify and implement solutions to problems, active involvement of stakeholders in program design, implementation and evaluation; organizational commitment and leadership; and networking and supportive relationships. Other important predictors of health worker performance and productivity include:

**Community involvement:** The role of communities is significant for community health workers, whose performance depends upon support from both the community and formal health system. Supervision and management of communities’ health workers is historically provided by the health system yet often reported as weak and ineffective. It is necessary that level and scope of supervision is clearly articulated to ensure that the supervisor and supervised understand what is expected of each in the particular context. Experience with community involvement in supervision of community health workers includes: provision of feedback on evaluations, public recognition of performance and contribution, and provision of feedback and monitoring through village health committees.

**Recognition systems:** Research is showing that nonmonetary incentives (linked to health workers’ career development, working environment – e.g., individualized mentoring, performance reviews with feedback, continuing education, supportive career structures, non-monetary recognition of good performance) are as important as financial incentives. There is mounting evidence that intrinsically motivated public service providers (i.e. desire to perform an activity for no apparent reward other than
the activity itself)\textsuperscript{70} “exert more effort and require fewer extrinsic incentives than self-interested providers”\textsuperscript{71-74} and that the provision of financial incentives can undermine motivation, conflict with or reduce intrinsic motivation, “worsen performance on complex cognitive tasks” and “reduce the desire to perform an activity for its inherent rewards (e.g. pride in excellent work, empathy with patients)”\textsuperscript{75-80}

Even in cases where financial incentives have worked, they were “not the sole reason, and often not the main reason, for motivation” but that other motivators such as recognition and esteem (i.e., from public, peer, manager, community), appreciation (i.e. from managers, peers, patients, community), conducive workplace norms and conditions, and opportunities for professional advancement and development are also key.\textsuperscript{81-83}

CONCLUSION

This paper has highlighted the theme of the roles of standards, quality improvement, and regulation for improving health worker productivity and performance in the context of UHC. As mentioned above, this theme is not exhaustive in the factors influencing health worker productivity and performance, however when addressed by a deliberate design can contribute to a forward looking strategy on HRH that will be relevant to the post-2015 development agenda. Specific recommendations include:

**Recommendation 1 (Standards):** Conduct further research to test locally appropriate and sustainable strategies for helping healthcare providers perform according to evidence-based standards in diverse conditions; continually improve tools and processes to help health providers know about evidence-based standards and apply them in their daily work.

**Recommendation 2 (Quality improvement):** Conduct further research and share results on the effect of quality improvement approaches as a core strategy for better healthcare and health workforce performance and productivity.

**Recommendation 3 (Regulation):** Adopt a systems based approach to develop and implement contemporary regulatory structures and processes that align with changing health, education, and social needs.
8 David B. please insert source here


27 USAID ASSIST Project. Improvement Science. 2014. Available at https://usaidassist.org/topics/improvement-science


34 Dieleman M, Gerretsen B, and van der Wilt, GJ. 2009.


36 Wuliji T and Kundy, USAID Health Care Improvement Project and Applying Science to Strengthen and Improve Systems Project [flyer]. Available at https://www.usaidassist.org/resources/health-worker-engagement-study


40 USAID ASSIST Project. Experience Improving HIV Services, 2014.


48 Insert source

49 Moran AM, Coyle J, Pope R et al. 2014.


Dieleman M, Gerretsen B, and van der Wilt, GJ. 2009.


The World Bank 2013.


Miller and Babiarz, 2013.

