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Editorial

Management Matters: A Leverage Point for Health Systems Strengthening in Global Health

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Abstract

Despite a renewed focus in the field of global health on strengthening health systems, inadequate attention has been directed to a key ingredient of high-performing health systems: management. We aimed to develop the argument that management – defined here as the process of achieving predetermined objectives through human, financial, and technical resources – is a cross-cutting function necessary for success in all World Health Organization (WHO) building blocks of health systems strengthening. Management within health systems is particularly critical in low-income settings where the efficient use of scarce resources is paramount to attaining health goals. More generally, investments in management capacity may be viewed as a key leverage point in grand strategy, as strong management enables the achievement of large ends with limited means. We also sought to delineate a set of core competencies and identify key roles to be targeted for management capacity building efforts. Several effective examples of management interventions have been described in the research literature. Together, the existing evidence underscores the importance of country ownership of management capacity building efforts, which often challenge the status quo and thus need country leadership to sustain despite inevitable friction. The literature also recognizes that management capacity efforts, as a key ingredient of effective systems change, take time to embed, as new protocols and ways of working become habitual and integrated as standard operating procedures. Despite these challenges, the field of health management as part of global health system strengthening efforts holds promise as a fundamental leverage point for achieving health system performance goals with existing human, technical, and financial resources. The evidence base consistently supports the role of management in performance improvement but would benefit from additional research with improved methodological rigor and longer-time horizon investigations. Meanwhile, greater emphasis on management as a critical element of global health efforts may open new and sustainable avenues for advancing health systems performance.

Keywords: Management, Health System Strengthening, Global Health

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Global health, formerly known as international health, has historically attracted physicians and public health experts, with particular interest in challenges that transverse national boundaries such as infectious diseases, water and sanitation, and maternal and child health and nutrition. These experts have made critical contributions to global health, particularly in identifying effective interventions to improve health. The evolution of terms from "international" to "global" marked a shift in philosophy[1] away from an "us-them" and toward an integrated "we" approach to improving human health around the globe. The field also called for more interdisciplinary efforts to health problems, defined now by their scope and not their location.

Consistent with this expansion, the World Health Organization (WHO) has developed over the last decade or more a health systems strengthening framework focused on 6 building blocks that form the fundamental inputs to improved access, quality, cost-effectiveness, and responsiveness of health systems.[2-4] The building blocks include service delivery, leadership and governance, healthcare financing, health workforce, medical products and technologies, and information and research.

Despite a renewed focus on strengthening health systems, inadequate attention has been directed to a key ingredient of high-performing health systems: management. Although the WHO recognized management as a priority in the context of service delivery,[5] we suggest it is a cross-cutting function necessary for success in all building blocks. Management is the process of achieving predetermined objectives through human, financial, and technical resources.[6,7] Management occurs at various levels of systems including top management and policy levels, middle management, and operational front line levels. Although closely related, we distinguish management from leadership, which we view as a process of engaging with others to achieve group objectives. The roles of management and leadership are distinct; however in practice a single individual or group may play both management and leadership roles from within the same position. While recognizing they are related, in this paper, we focus on management.

Management capacity is particularly critical in low-income settings where the efficient use of scarce resources is paramount to attaining health goals.[8-11] More generally, investments in management capacity may be viewed as a key leverage point in grand strategy,[12,13] as strong management enables the achievement of large ends with limited means.

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The currently limited focus on management is problematic given the substantial financial resources that flow through health systems, the complexity of hospital and health center daily operations, and strategic focus needed to maximize community and patient benefits given scarce resources. Furthermore, ample evidence exists that health worker motivation and retention is highly influenced by the quality of management in their work setting.[14-16] Nevertheless, management education, largely reserved in low- and middle-income countries for business curricula, is limited in medical or public health training globally.

As in just about every enterprise, good management is fundamental to high performance. Although the importance of management is well-established in private industry, its role in healthcare has been overshadowed by the more visible, clinical roles in healthcare organizations. To develop a robust field of management in global health efforts, we need to consider: (*a*) requisite core competencies, (*b*) personnel targets for management capacity building, and (*c*) strengthening the research supporting the role of management in improving health system performance. Principles from health policy and systems research,[17] particularly related to research paradigms and approaches may be helpful in this regard.

We advocate for 8 core competencies in management of global health efforts (Table), which align with health management competencies more broadly but includes domains that can be tailored across resource and care settings. While the competencies apply across levels of management, the level of control and portion of time spent in each area will vary based on the structure and level of the hierarchy within the larger health system. The competencies are: (1) strategic thinking and problem solving, (2) human resource management, (3) financial management, (4) operations management, (5) performance management and accountability, (6) governance and leadership, (7) political analysis and dialogue, and (8) community and customer assessment and engagement. Strategic thinking and problem solving refers to the ability to set an objective, calculate risks and align resources for problem solving such that the organization may be well-positioned to achieve its goals. This competency requires an ability to see the connections among elements of the system and to understand enabling and impeding forces in the alignment of resources and objectives. Skills within this domain include defining a problem and setting SMART (specific, measureable, assignable, realistic, and time-bound) objectives,[18] conducting root causes analyses, comparing alternative strategies, planning implementation, managing friction and dissent, and evaluating outcomes. Within human resources management, we include skills in recruitment and retention, employment, education and training, compensation, employee relations, performance evaluation and mentoring. The competency of financial management encompasses budgeting and budget variance analysis, financial accounting, and capital project evaluation. Operations management activities vary based on the organizational form and function and may include (but are not limited to) registration and patient flow, patient master index and medical records, environmental services, supply chain, pharmacy and laboratory/diagnostics management, patient referral and discharge processes, payment processes and cash flow tracking, and information technology. Performance management and accountability may include logic models, process and outcome measurement, balanced scorecards, quality improvement, and data feedback and accountability systems. Accountability may include accountability for performance to both internal and external constituents within the health system and community at large. Governance and leadership refers broadly to creating facilitative environments[19,20] and engaging with other to achieve group objectives,[6] and may include, but are not limited to, conducting governing board activities, developing organizational and corporate cultures, and ensuring succession planning. Political analysis and dialogue comprise understanding political and regulatory environments, making policy tradeoffs, conducting stakeholder analysis and advocacy. Community and customer assessment and engagement includes skills of epidemiology, survey techniques, and community-based participatory research, health education and marketing, and understanding the customer and having a customer service orientation. Management may fulfill these competencies by direct implementation or by creating the enabling environment in which these activities can be executed effectively by others. The roles to be targeted for management capacity building are most fundamentally middle managers including both facility-based staff and policy or regulatory staff who oversee the facilities. Middle managers are crucial to translating the top-level policies and strategies into practical improvements at the front line in the delivery of healthcare and health

Table. Core Management Competencies for Health System Strengthening

Competency	Description and Illustrative Topics
Strategic thinking and problem solving	Ability to set an objective and align resources for problem solving to achieve organizational goals
Human resource management	Recruitment and retention, employment, education and training, compensation, employee relations, performance evaluation and mentoring
Financial management	Budgeting and budget variance analysis, financial accounting, capital project evaluation
Operations management	Registration and patient flow, patient master index and medical records, bed management, operating theater management, environmental services, infection prevention, nursing management, supply chain, pharmacy and laboratory/diagnostics management, patient referral and discharge process, information technology
Performance management and accountability	Logic models, process and outcome measurement, balanced scorecards, quality improvement, data feedback and accountability systems
Governance and leadership	Creating facilitative environments, conducting governing board activities, developing organizational and corporate culture, ensuring succession planning
Political analysis and dialogue	Understanding political and regulatory environments, making policy tradeoffs, conducting stakeholder analysis and advocacy
Community and customer assessment and engagement	Epidemiology, survey techniques, community-based participatory research, health education and marketing, understanding the customer, having a customer service orientation

promotion efforts. Facility-based middle managers include hospital or health center directors, chief executive officers, and management teams, including clinical managers. The district and regional health teams also require enhanced management capacity as they often supervise facility-level management and have their own programs and projects to direct. Although practical examples, particularly within the operations domain, might vary depending on the type and location of the manager, the 8 competencies are relevant to both facility and district or regional management. Both clinical and administrative staff can benefit from enhanced management capacity and can form a cadre of people who translate ministry-level and global strategies into practice at the front line, while also ensuring information from the front line is recognized in high-level strategy development.

Although management has been recognized as fundamental to health worker performance and motivation,[14-16] peer-reviewed studies on management, including quality improvement efforts, in global health are limited in their size, scope, and rigor. About 2 dozen studies[21-37] including a literature review[38] have examined the link between management and health system performance in low- and middle-income settings in the last 20 years. These studies are largely uniform in their findings, demonstrating that interventions to build management capacity in facilities and district health teams can influence performance. Most studies demonstrate improved outcomes related to specific problems. For instance, one study[21] shows improvements in tuberculosis (TB) case detection rates, patient adherence to TB medication regimens, specimen quality, supply stock outs and timely deliveries. Other studies have documented[22,28,32-35] improvements in live birth registrations, percentage of fully immunized children, improved medical records, enhanced infection prevention procedures, clinical guideline adherence, and reduced emergency room and cardiac catheterization waiting time. Although this research is helpful, most studies include data related only to a single organization or district and employ pre-post interventional designs without a comparison to nonintervention sites, with limited statistical analysis. Three studies[27,36,37] have used larger samples and examined statistical trends showing improvements in performance over time with management interventions, but these lacked nonintervention group comparisons and were conducted in a single country; results may differ in other settings.

Despite the shortcomings of this literature, several lessons emerge. First, country engagement and ownership of management capacity building efforts are necessary for national improvements in healthcare delivery and in population health. Improving management challenges the status quo and may trigger changes to multiple systems including procurement processes, hiring and evaluating staff, and managing budgets. Additionally, empowering middle managers to think strategically and problem solve can upset traditional hierarchies and power structures in the name of efficiency and performance. Hence, while external technical inputs are helpful, internal political leadership is essential to address and manage friction that is inevitable with transformational change. Second, management capacity building takes time, as it involves the development of habits and cultures that are more transparent and accountable. Interventions may provide support for several years before documenting management and performance improvements. Third, management is both an individual capacity and a system-level capacity. Hence, while individuals and groups benefit from mentoring, coaching, and providing technical support for system redesign and performance measurement, these interventions are likely to be most effective when supported with adequate institutional design and financing as well. In many cases, although turnover of key individuals can be challenging, management capacity can be institutionalized by valuing management positions in the healthcare sector and establishing educational programs to equip staff with management tools and skills. Last, a new paradigm of global accountability must underpin such interventions. The global pressures for recipient countries to account for progress on health goals to donor countries, for donor countries to understand and value the priorities of the recipient countries, and for all to meet global standards of transparency highlight the need for and reinforce efforts to build management capacity, which enables a culture of performance management and accountability. These global influences create the environment in which country-based management efforts can thrive.

A tri-part strategy is needed to build the field of management as a key pillar of global health. This strategy incorporates training and education, practice, and research. In the area of training and education, management curricular offerings that impart knowledge and experience regarding the 8 competencies are needed in undergraduate and graduate degree programs globally. Although some exposure to management concepts would be helpful in medical, nursing, other clinical, and public health programs, specialists with extensive management education are also needed. Examples of such programs can be found described on the internet in Masters of Hospital and Healthcare Administration (MHA) programs in the United States, Rwanda, and Ethiopia as well as in Masters and Bachelors of Public Health programs with management concentrations, or Masters or Bachelors of Business Administration with healthcare concentrations. Ministries of health supporting such programs and requiring some management education to perform key health management positions (in hospitals, health centers, and districts or regions) would go a long way to improving management capacity in global health efforts.

In addition, partners, experienced in general management, may benefit the field of management in global health efforts. These may arise from private sector organizations and economics and management experts rather than the traditional clinical and public health partners in global health. Expanding global health to include such partners requires explicit negotiation of what may be distinct goals and norms, but may uncover creative and impactful approaches not typically applied to health systems strengthening.

Last, the field needs to strengthen the evidence base through rigorous, mixed methods research. We have some examples of well-researched quality improvement initiatives, but the field needs more efforts that apply careful measurement and statistical analysis of changes in performance, ideally with comparison groups, as some guidelines have suggested.[39,40] Moreover, longer-term follow-up studies are critical – both

because the fruits of management improvements take time to materialize but also because we still know very little about how new management practices become integrated into organizational routines, which is fundamental to sustainability. Finally, greater examination of positive deviants[41] or exemplars might provide insights about management models that work best in different contexts to achieve improved performance of health systems. Using both quantitative and qualitative methods, health management research could help decipher not only what management interventions work but also *how* they work. Such knowledge would help policy-makers and practitioners responsibly replicate effective interventions for large-scale impact.

In summary, the field of management holds promise as a fundamental leverage point for global efforts to achieve health system performance goals with existing human, technical, and financial resources. The field is comprised of distinct competencies and key facility, district, and regional positions with management responsibilities can be identified that would most benefit from management capacity building efforts. The evidence base supporting the role of management in performance improvement is consistent but would benefit from additional research in global settings with improved methodological rigor and longer-time horizon investigations. Meanwhile, greater emphasis on management as a critical element of global health may open new and sustainable avenues for advancing health systems performance.

Ethical issues

Not applicable.

Competing interests

Authors declare that they have no competing interests.

Authors' contributions

EHB, LAT, CJC conceptualized and EHB drafted the manuscript. All authors provided critical revisions and approved the final version.

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