

Annex 2. Best practices for each lever in the WHO Operational framework for primary health care

Strategic levers

Political commitment and leadership

Mixed methods country-level case studies provide compelling evidence that political commitment and leadership (by heads of state and government, other political leaders, civil society, and influential community, religious and business leaders) have played a major role in successful PHC reforms.¹ Kruk and colleagues looked at LMICs that had implemented PHC initiatives at a large scale. These countries included Bolivia, Brazil, Costa Rica, Cuba, The Gambia, Ghana, India (focusing on the state of Kerala), Iran, Mexico, Nigeria, Sri Lanka, Thailand and two fragile states, Afghanistan and Liberia.² A common factor in the success of these national programmes

was that they did not focus only on service delivery but, rather, took a “health in all policies” approach to multisectoral reforms, especially important given that spending decisions are made by heads of state and ministries of finance rather than decision-makers in the health sector.¹ Financing reform to boost PHC and public health system funding was critical, as these sectors are traditionally the “poor cousin” of the hospital sector. Another success factor in these countries was a sustained focus on demand generation through community mobilization.¹ This in turn requires strong leadership from civil society organizations to ensure participation in decision-making at the highest levels.

Other case studies have highlighted the influence of pivotal historical moments in driving reforms. One determinant of Bangladesh’s sustained success has been that, since its independence in 1971, there has been a decades long commitment to the guiding principles of PHC, such as preventive care, community participation, social justice and equity. This led to major institutional reforms, multisectoral collaboration, prioritization of community-based approaches and “pluralistic service provision (i.e., involvement of various types of service providers working in different capacities, modalities, and locations)”.³ Rwanda, similarly, has accelerated progress towards achieving UHC in the past decade, primarily through strong political commitment to strengthening PHC.⁴ Its health system reforms have resulted in marked increases in health spending (16.5% of total government spending in 2015/2016), with increased insurance coverage, increased primary care service utilization, especially among those in the lowest socioeconomic categories, increased physician and nurse workforce density, and major reforms in health information systems.⁵

Governance and policy frameworks

A review of several countries looking at governance-enhancing activities (accountability and transparency, governance frameworks and political economy analysis, institutional arrangements in health sector reforms, fair and transparent procurement principles) identified four key lessons on improving health system performance: (i) include a governance perspective to ensure the success and sustainability of health system reforms; (ii) establish clear institutional arrangements for governing quality of care in all national efforts; (iii) harness political will to enhance impact and sustainability; and (iv) foster bottom-up accountability for sustainability and scale-up of health care reform.^{6,7}

Case studies from Brazil, China, Costa Rica and Thailand have shown the role of robust PHC policy and governance systems and their impact on improving health system performance.^{8–12} However, the relationship between governance and health system performance is underexplored. One empirical study examined whether expansion of the Brazilian *Estratégia de Saúde da Família* (ESF), a community-based primary care programme, reduced amenable mortality (mortality avoidable with timely and effective health care) in 1622 municipalities over the period 2000–2012. Overall, increasing ESF coverage from 0% to 100% was associated with a reduction of 6.8% in rates of amenable mortality, compared with no increase in ESF coverage.^{13,14} Despite these improvements, subsequent policies have potentially eroded the gains made by the Brazilian *Sistema Unico de Saude*,

highlighting the importance of sustained political commitment to health reform initiatives.^{13–16}

Health system architecture plays an important role in governance structures and service delivery. There is emerging evidence of the importance of decentralization and strengthening meso-tier organizations to support PHC reforms. For example, Chinese PHC reforms have encouraged township hospitals to own and manage village clinics.⁸ Ghana’s Community-Based Health Planning and Service initiative relocates primary care services from subdistrict health centres to convenient community locations.¹⁷ However, the impact of governance changes on service delivery and outcomes is not well established, in part due to challenges in measuring such far-reaching and multifaceted system-level changes.¹⁸ Studies on the impact of accreditation of primary care centres suggest that such regulatory processes lead to improved documentation, reinforcement of quality standards, strengthened relationships between primary care centres and multiple stakeholders, and improved staff and patient satisfaction.¹⁹ There are also studies of gatekeeping policies that require patients to access non-emergency hospital care or specialist services via primary care, and they have demonstrated reduced utilization of hospital services with no impact on patient satisfaction.²⁰

Funding and allocation of resources

Countries need to mobilize sufficient financial resources to provide or purchase essential primary care services for their populations.²¹ The vast majority of these resources are generated by the government and through out-of-pocket costs, with international donors and the private sector being relatively small contributors.²² A recent study of 27 LMICs found that the majority (55%) of primary care spending comes mainly from out-of-pocket costs and that the level and definition of primary care spending vary greatly across these countries.²³

Many LMIC governments are seeking to resource-pool and define essential benefit packages; however, the success of this strategy is dependent on an adequate absolute level of funding, robust management and accountability structures, and an ability to translate increased resources into quality services.²¹ There is reasonably robust evidence that national health insurance schemes, social health insurance schemes for low-paid workers and community-based health insurance can reduce or eliminate user fees, improve service coverage, reduce financial barriers to accessing care and provide financial protection against catastrophic losses.^{24–29} Such strategies are generally associated with improved service coverage; however, there can be high variability in the uptake of such programmes, suggesting that implementation needs to be carefully calibrated to the local context and measured to assess fidelity.

In terms of purchasing, most health systems rely on fee-for-service models, with few examples of capitation-based payment models. There is growing interest in strategic purchasing of tightly defined services, allocation mechanisms built over time (not visits), and greater focus on performance monitoring and outcomes.³⁰ However, there are few robust evaluations of strategic purchasing interventions. In terms of disease-specific benefit packages, one study examined the impact of large-scale implementation of the WHO Package of Essential Noncommunicable Disease Interventions in Bhutan and found

that the intervention was cost effective, with efficiency gains to be made based on different population-screening criteria.³¹ Another large-scale evaluation, of a Mexican noncommunicable disease (NCD) policy involving funding primary care longitudinal management and prevention of NCDs, found reduced NCD mortality rates over a 13-year period.³²

Engagement of communities and other stakeholders

The SDGs explicitly recognize the importance of the development of effective, accountable and transparent institutions at all levels. Participation, inclusion, transparency and accountability (PITA) structures and mechanisms are key to promoting empowerment of individuals and communities. Several studies have examined citizen engagement and empowerment.^{3,33–39} One systematic review and meta-analysis assessed 35 citizen engagement programmes in LMICs and found that enhanced citizen engagement occurred primarily through four routes: participation, inclusion of marginalized groups, transparency and/or citizen efforts to ensure public service accountability, and PITA mechanisms collectively.⁴⁰ Intervention targets were at the level of political systems (e.g. national referendums to set policies), internal institutional systems (e.g. decentralization of and community engagement in decision-making)^{38,41–46} and external engagement with citizens (e.g. interventions to disseminate information on performance, quality or cost).^{34,37,47} The review found that citizen engagement efforts improved access to and the quality of public services by an overall pooled effect size of 0.10 standard deviations. However, they did not systematically improve health outcomes, partly as a result of broader system barriers.

Operational levers

Models of care

New primary care models that promote service integration across sectors (public health, primary health care, hospital care) and integration between horizontal and vertical programmes are a core element of the WHO *Framework on integrated, people-centred health services*.⁴⁸ Efforts to integrate care can substantially change organization of service delivery, leading to efficiency gains from organizational, operational and managerial perspectives, and may lead to more equitable delivery of care across disease-specific conditions.⁴⁹ A global review of 67 articles on service integration experiments identified the following categories of integration: collaboration between medical staff from different disciplines and between patients and medical staff, development of care packages for specific and multiple medical conditions, specialist services integrated with PHC services, and service delivery in community locations.⁵⁰ It concluded that positive outcomes can be generated from such service integration efforts without incurring additional costs.⁵⁰ Similarly, a scoping review of 39 articles relating to community-oriented primary care models identified the following principles: a defined community, community participation, multidisciplinary teams, a comprehensive and equitable approach, local needs and assets analysis, prioritization of interventions, evidence-informed decision-making and person-centred service integration.^{51–53}

In terms of large-scale, population-specific models of care, the evidence base is strongest in the area of reproductive, maternal, newborn and child health (RMNCH). Several large-scale impact evaluations of new models of care have

been shown to improve RMNCH outcomes.^{38,54–56} Two notable examples include the Indonesian Safe Motherhood Project and India's National Rural Health Mission. The Safe Motherhood Project focused on both supply-side factors (professionalization, quality, technical and counselling capacity, and sustainability of midwives and other health providers) and demand-side factors to improve awareness of family planning and reproductive health. Net beneficial changes in under-5 mortality, total fertility rate, teenage pregnancy, unmet contraceptive need and percentage of deliveries overseen by trained health personnel were observed.⁵⁶ India's National Rural Health Mission is a transformational policy focused on changing care delivery through increasing public health funding, decentralizing village- and district-level health planning and management, strengthening public health service delivery infrastructure, and promoting social participation and community empowerment. It was associated with marked improvements in access to antenatal care and institutional delivery among all socioeconomic groups, with greater effects in the lowest and middle wealth and education terciles than in the highest tercile.³⁸ These two examples highlight the importance of combining strategic and operational levers in order to generate sustainable improvements.

Primary health care workforce

There is a large and growing body of evidence that workforce strengthening strategies are highly effective in achieving the core functions of PHC. Health workers of varying skill levels can be trained to perform core primary care services such as administering immunizations and other preventive treatments, advising communities on basic diagnostic screening examinations and tests, advising on prevention against communicable and noncommunicable diseases, systematically recording health information and enumerating community populations for performance tracking.^{57–75}

Investments to increase remuneration and improve these different cadres of health care providers' skills are effective in strengthening workforce recruitment, retention and satisfaction, and care quality.^{13,14,76,77} Some studies have also demonstrated efficiency gains from task-sharing models of care^{78–82} and equity gains for workers themselves in terms of access to paid employment and skill-building opportunities.⁸³

Eight country case studies, from Africa, Asia and Latin America, were used to assess the governance and policy environment for mid-level health worker programmes. The review recommended that policy-makers clearly define the type of cadres, the desired skill mix and roles to be performed; invest in training, licensing, supervision, monitoring and evaluation; and develop a coherent deployment and retention strategy.⁵⁷ Supportive supervision is an important enabler of quality health care. It is characterized by the involvement of informal supervisors and peers as well as line managers, and encompasses teamwork, communication and empowerment of staff alongside oversight of clinical skills.^{84–91} A scoping review of African family medicine also highlighted that family medicine physicians have a high degree of variation in roles and responsibilities throughout the region and that this poses challenges for their establishment as a specific cadre within health care systems.⁹² It recommended greater policy support in nurturing a critical mass of family physicians who are comprehensively supported and integrated into all aspects of the health system.

Physical infrastructure

A frequently neglected area in research evidence is the critical role of adequate physical infrastructure to support primary care service functions. One descriptive study from Ghana and Uganda looked at electrification in rural areas and found that improved access to reliable electricity was associated with increased availability of health services, access to communications and vaccine and medicine storage, and improved health worker motivation and satisfaction; however, the study also highlighted that other facility infrastructure barriers, such as poor transportation, amenities and drug stock facilities, were additional barriers.⁹³ Despite the lack of empirical research in this area, many of the country case studies of excellence in PHC reforms emphasized the issue of strong facility management and infrastructure as being essential enablers of success.^{70–72,94,95}

Medicines and other health products

The use of essential medicines lists and national pharmaceutical policies,^{96–99} regulatory and administrative controls,¹⁰⁰ specific training in rational prescribing and academic detailing,^{89,101–103} online feedback,¹⁰⁴ capitation-based payment systems and other pay-for-performance schemes,^{8,96} and health insurance schemes to reduce out of pocket costs¹⁰⁵ have all been shown to improve quality use of medicines, reduce prescription costs and lower inappropriate use of antibiotics.

Engagement with private sector providers

Several studies examining government contracting of primary care services to private and nongovernmental providers generally have demonstrated improvements in service utilization and community satisfaction.^{106–112} However, systematic reviews evaluating its impact on quality of care or coverage of services are contradictory and less clear.^{106,109,113} One review found that, although there is evidence that both vouchers and contracting can improve health service outcomes in underserved areas, these outcomes are influenced by the degree of collaboration and cooperation between key actors, the type of delivered services and community demand, provider autonomy and trust, and the availability of robust governance structures to provide oversight for such services.¹¹⁴

Purchasing and payment systems

Financial incentives have been frequently studied, with variable outcomes observed.^{8,26,27,31,36,77,115–120} These studies suggest that performance-based incentives have a role to play in improving health worker performance; however, effect sizes are often modest, are variable and are rarely sustained over time. Some studies have demonstrated benefits in service utilization and reduction in hospitalizations from pay-for-performance schemes when used in conjunction with capitation-based payment.^{121,122} One study concluded that a direct link is needed between provider effort and the desired performance outcome for health workers to respond to incentives. Conversely, performance outcomes that require multiple actors to be engaged are less likely to meet with success.¹¹⁵ Incentives may also have unintended consequences on non-incentivized outcomes, and therefore careful consideration is needed when designing such incentives and monitoring their outcomes.¹¹⁵

Although studies of patient incentives alone are generally not associated with improved outcomes, some studies examining combined incentives to both providers and patients have shown benefits.¹²¹

Digital technologies for health

Digital health strategies that have sound evidence to support integration into primary care systems include data collection and formation of registries underpinned by portable electronic medical records, sensors and point of care diagnostics, patient behaviour change and education applications, point-of-care decision support systems, recall and reminder systems, telehealth models of care, workforce education and training, and human resource management.^{123–132}

However, to leverage technology fully, there is a need for an increased focus on health systems strengthening rather than on single-solution applications. There are relatively few examples of digital health interventions that have been implemented at scale and this remains an ongoing challenge. Factors such as data security, cost constraints, health provider privacy and technical barriers are well-known barriers.¹²⁹ The WHO mHealth Assessment and Planning for Scale Toolkit on scale-up of digital technologies describes six “axes of scale” that need to be considered to support scale-up and sustainability of digital health: (i) adequate formative groundwork to understand contextual influences and the scientific basis for the product; (ii) strategies for identifying, developing and sustaining fruitful partnerships; (iii) financial health, including business case development to understand projection of scale-up costs, and long-term revenue generation; (iv) fit for purpose technology and architecture that supports interoperability with existing and evolving information systems; (v) operations that can support implementation, use and maintenance of the product throughout the scaling-up process; (vi) and monitoring and evaluation activities to generate actionable knowledge that can support iteration and adaptation over time.¹³³

Systems for improving the quality of care

Most quality improvement interventions are small-scale studies of provider-level strategies such as reducing medical errors, training, patient education, changes to record sheets, and decision support tools.^{90,134–136} There is a need for organizational and system-level strategies with a focus on health outcomes and research examining national-level strategies on quality and performance-monitoring systems.^{137,138} In the few studies of such large-scale programmes, benefits were observed from national protocols and guidelines and quality improvement programmes.^{90,139–148} Similarly, use of public scorecards and performance reports, risk and safety management, educational outreach, audit and feedback, external accreditation and quality improvement, community-based interventions, supervision, and recruitment and retention strategies all hold promise in improving technical quality.⁹⁰ However, the evidence base is immature and tends to lack a health systems-oriented approach that takes into account complex environments and moves beyond merely documenting what works. Furthermore, the involvement of communities and service users in assessment of quality is a relatively nascent area.¹⁴¹

Primary health care-oriented research and monitoring and evaluation

In all the reviews and gap maps developed, there were recommendations for future implementation research to address prioritized knowledge gaps. However, there is recognition that there may be tension between the priorities of knowledge producers and knowledge users.¹⁴⁹ A recent journal supplement called for “embedded implementation research” with a core focus on involvement of programme/policy decision-makers in the research cycle.¹⁵⁰ Proactive engagement with decision-makers, communities and service users requires adequate funding and establishment of appropriate structures to facilitate participation, including a commitment to purposive translation and strengthening implementation research capacity.¹⁴⁸ Participatory action research, with its emphasis on equitable engagement of all actors, flexible action planning, sensitivity to power imbalances, and development of structures for ongoing learning is considered a particularly important method of enabling such engagement.¹⁴⁷

Case studies of successful research partnerships in Ethiopia, India, Nepal and Pakistan have demonstrated the value of such an embedded implementation research approach.¹⁴⁴ Such an approach has implications for traditional research funding agencies. The recent Global Alliance for Chronic Diseases call for implementation research to scale up proven interventions is an example of how decision-maker needs can be incorporated at the outset. In this funding call, academics were required to identify implementation partners who were prepared to cover the costs of the strategy to be implemented.¹⁵¹ Such strategies blur the boundaries between traditional programme monitoring and evaluation processes and implementation research.

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