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Impact of a Health Governance Intervention on Provincial Health System Performance in Afghanistan

A quasi-experimental study

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Summary

Although there is wide recognition that weak health governance contributes to poor health outcomes, donors have been reluctant to invest in governance interventions. This is primarily because there is no clear body of evidence linking such interventions to better health systems performance. To fill this gap and inform future directions for governance programming, USAID's Leadership, Management, and Governance (LMG) Project conducted a study in Afghanistan to examine the causal impact of a health governance intervention on the performance of provincial health systems.

The six-month health governance intervention comprised three phases: (1) facilitator-led workshops to perform baseline measurement of governance and participatory development of health systems governance development action plans by provincial public health coordination committees (PPHCCs) in 16 of Afghanistan's 34 provinces; (2) action plan implementation and monitoring by the PPCHCCs; and (3) evaluation workshops held primarily to assist the PPHCCs in measuring provincial health systems governance post-intervention.

Eight months following the intervention, an LMG Project study team compared nine essential health system performance indicators between the 16 intervention provinces and the 18 remaining provinces where the intervention did not occur. Finding a statistically and practically significant impact of the intervention on six of the nine indicators, the research team concluded that a provincial health governance intervention has the potential to positively impact health system performance. However, given the limitations of the study, it could not be determined if positive impact would be experienced every time such interventions are implemented or when they are implemented at different levels of a health system. Thus, while interventions of this type are certainly worthy of consideration, they need to be studied more and results should be documented more systematically.

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TECHNICAL BRIEF

Context

History

Governance has infrequently been used as a lever to improve health sector and health system performance, arguably because of its perceived sensitivity and complexity [1, 2, 3, 4, 5]. Still, sustainable Development Goal (SDG) 16 emphasizes improving governance [6].

Environment

Evidence linking governance interventions to better health system performance is sparse and often anecdotal, or is limited to before and after studies, usually with no control or comparison group. A recent systematic review [14] showed that most such studies stop at demonstrating association and do not examine causation.

One of the reasons that donors have lacked interest in investing in governance interventions as a way to improve health system performance is that no clear body of evidence exists on the causal relationship between the two, especially in low- and middle-income country settings [14]. This lack of information also means that governments continue to remain largely indifferent because they do not know where to begin governance reforms. In addition, such reforms are politically sensitive in nature.

Problem Statement

Weak governance has contributed to poor health outcomes [7, 8, 9, 10, 11] and may constrain progress in reaching the SDG 3 health targets, whereas good governance could be instrumental in achieving these ambitious health targets [12, 13]. Donors are eager for actionable evidence demonstrating the link between interventions to improve governance and better health system performance.

Implementation

A six-month governance intervention was conducted with PPHCCs, which are formal multi-stakeholder committees whose essential purpose is to govern the provincial health system. However, it should be noted that their governance role is actually limited. They are more of an advisory, consultative and coordinating body with oversight authority, but no authority to hire and fire. Setting strategy, making rules and regulations, establishing policy and procedures, and allocating resources are all tasks predominantly performed by the Ministry of Public Health (MOPH) and the government at the national level. It should also be noted that the majority of PPHCCs tend to be weak in their capacity to perform their assigned role.

The intervention comprised three phases: (1) facilitator-led workshops to perform baseline measurement of governance and participatory development of health systems governance development action plans by PPHCCs in 16 of Afghanistan's 34 provinces; (2) action plan implementation and monitoring by the PPCHCCs; and (3) evaluation workshops held primarily to assist the PPHCCs in measuring provincial health systems governance post-intervention. Implementation was staggered over a period of 27 months—three provinces implemented the intervention from April to October 2012, nine provinces from July to December 2013, and the remaining four provinces from February to July 2014.

Phase 1

The PPHCC teams participated in two-day workshops facilitated by public health and governance experts. The first day was spent working in groups discussing actions to apply effective governing practices in their work over the subsequent six months to better meet the health needs and expectations of the people. These practices included: cultivating accountability; engaging stakeholders; setting a shared strategic direction; and stewarding resources. Using a governance guide and a framework of governing practices, each committee identified actions to be taken in the following six months to improve their governance and developed a governance action plan. The four practices of governance provided the organizing framework to structure their committee deliberations and governance action plan. On the second day, participants carried out a self-assessment of their governance performance at baseline.

Phase 2

In implementing their governance action plans, the PPHCCs worked to improve engagement with the public and communities, in order to become more transparent, accountable, and responsive. No additional resources were made available to the provinces and districts to carry out their planned activities. Committees monitored implementation of their action plans so that underperformance could be identified and corrected along the way. The PPHCCs monitored actions in the plan on a monthly basis. Progress reports were sent to the Provincial Liaison Directorate of the MOPH.

Phase 3

The PPHCCs evaluated their performance during the governance action plan implementation period in two-day workshops held six months after the implementation began. They also re-assessed their governance as a committee for comparison to the baseline assessment they had conducted in Phase 1.

Approach

Assessing the impact of a governance intervention on health system governance

The LMG Project developed two self-assessment instruments for use by PPHCCs to measure governance performance. These instruments were based on the extant role of the committees, and also the expanded role they aspired to take on to make their governance more effective and people-centered.

The first of the two instruments was for assessing performance on governance responsibilities. Using this, the PPHCCs graded their own performance on a 1-10 scale on each responsibility of the committee. The second instrument was use to assess governance against established standards in 11 provincial public health core functions. The second instrument used a scale such that no progress on a standard was scored 0, 1-25% accomplishment was scored 1, 26-50% was scored 2, 51-75% was scored 3, and 76-100% was scored 4.

In addition, focus group discussions were held with the PPHCC members to obtain feedback on the intervention at the end of pilot implementation in the initial three provinces.

Measuring the impact of a governance intervention on health

To draw inference on the causal impact of the provincial health governance intervention on provincial health system performance, the study team employed difference-in-differences regression analysis in a quasi-experimental setting[1] using Health Management Information System (HMIS) data on nine indicators calculated against established MOPH targets:

1. Percentage of children less than one year of age who received the third dose of the pentavalent (Penta3) vaccine
2. Percentage of pregnant women who received the two doses of the Tetanus Toxoid vaccine (TT2+).
3. Percentage of pregnant women who delivered at a health facility
4. Percentage of pregnant women who received at least one antenatal care visit
5. Percentage of pregnant women who received at least one postnatal care visit
6. Tuberculosis case detection rate
7. Outpatient department visit rate
8. Community Health Worker home visit rate
9. New Family Planning users

In the pre-intervention period, the research team performed a significance test to see if the intervention and comparison provinces were similar in profile in terms of the indicators, i.e., if there was a parallel trend.

The post-intervention difference-in-differences regression analysis comprised three models. Model 1 had three key variables: Interventionit, Postit, and Interventionit*Postit. In Model 2, four covariates were added: poverty headcount rate of the province, labor force participation rate of the province, and female literacy rate of the province, and its security categorization. Finally, province and time fixed effects were added to Model 3. In all, 13 months of pre-intervention data and eight months of post-intervention data were analyzed; a total of 714 province-months were in the sample.

To verify whether results were mixing up the effect of the intervention with some other unobservable trend or confounding factor, the research team conducted a series of falsification and robustness checks. It then tested the power of the statistical model and statistical tests to detect the change in indicators.

1 In the difference-in-differences analysis methodology, outcomes are observed for two groups for two time periods: pre- and post-intervention. One group is exposed to an intervention while the other is not. The difference between post- and pre-intervention in the control group is subtracted from the difference in the intervention group. This methodology removes biases in the post-period comparisons between the intervention and control group that could result from permanent differences between the groups, as well as biases from comparisons over time in the intervention group that could be the result of a time trend [16].

Results

Impact of the governance intervention on health system governance

Self-assessment

PPHCCs self-assessment in the intervention provinces revealed significant improvements in governance scores. In relation to roles and responsibilities [47 items; α= 0.91], PPHCCs improved their governance score on average by 23.7%, and by 22.6% with respect to governance standards [46 items; α = 0.97]. The overall average improvement was thus 23.4%, with improvement being higher in the provinces that began with a lower baseline score.

The intervention provinces also scored higher on both the governance measurement scales. Out of a total score of 450 of **the scale based on PPHCC roles and responsibilities,** the intervention provinces scored higher after going through the governance intervention (359 ± 38) as opposed to before the intervention (252 ± 52); thus producing a statistically significant increase of 107 (95% CI, 61 to 153), t(11) = 5.11, p = 0.0002, d=2.34. Effect size is large and significant (Cohen's d = 2.34).

Similarly, out of a total score of 184 of **the scale based on PPHCC governance standards,** the intervention provinces scored higher after going through the governance intervention (137.5 ± 20) as opposed to before the intervention (96 ± 17); resulting in a statistically significant increase of 42 (95% CI, 25 to 58), t(11) = 5.52, p = 0.0001, d=2.23. Effect size once again is large and significant (Cohen's d = 2.23).

Focus Group Discussions

Overall, committees reported notable changes in their knowledge, skills, and behaviors, including feeling more capable, responsive, and accountable than they were before the intervention. Committee functioning became more systematic and regular, and members felt more responsible for their decisions. Committees also noticed improvements in their effectiveness; referral of TB cases for treatment improved in one district, un-served remote areas were identified, and 90% of them were covered through establishment of mobile teams in another district. One committee reported that antenatal and postnatal care visits increased, and other maternal and child health services improved. Because of increased community engagement, committees felt they could solve problems at the health facility level in collaboration with the local community. This experience showed them that they could build trust with the communities by working with them.

Committee members said they would continue applying effective governing practices in the future mainly because they felt their achievements in the short six month period were encouraging. They became aware of weaknesses in their governing skills and capacity and resolved to improve. Members thought they gained many benefits at a personal level because of changes in their attitudes and behavior. They also became aware of their stewardship role and wanted to do more for the communities they served. The intervention, PPHCC members told us, renewed their commitment to their governance responsibilities. They observed that periodic governance assessments developed their capacity in discharging their governance role (because they became aware of their governance responsibilities and their governance performance), as did the overall experience. The committees recommended that the MOPH officially introduce the approach in all the provinces and districts, and expressed interest in sharing their experience with the uncovered provinces.

Impact of the governance intervention on health system performance

The study team found a statistically and practically significant impact of the intervention on six indicators. Specifically, the intervention increased a province's rate of: outpatient department visits per capita by an average of 18 percentage points ($p<0.01$); achievements in Penta 3 immunization by 17 percentage points ($p<0.01$); antenatal visits by 14 percentage points ($p<0.01$); postnatal visits by 12 percentage points ($p<0.01$); tuberculosis case detection by 11 percentage points ($p<0.01$); and facility delivery by five percentage points ($p<0.01$). No impact was detected on the achievements in tetanus toxoid administration to pregnant mothers and tuberculosis cure. The secular trend was by far a stronger and more significant predictor of increasing rates of tetanus toxoid administration to pregnant mothers. Achievements in community health worker home visits and new family planning users decreased ($p<0.01$) by two and one percentage points, respectively. The size of the positive effects is large while that of the negative effects is small.

Discussion

There could be several reasons for the mixed results that were achieved (i.e., improvement to six indicators and either no change or decreases in four indictors):

- Although all ten result areas are national priorities, the PPHCCs in the intervention provinces might have given the six positive result areas even higher priority
- The six positive results might have been "low hanging fruit." It is possible that more difficult-to-achieve indicators (e.g., TB cure rate and new family planning users) could not be accelerated during the six months of the intervention. It is also possible that the PPHCCs did not sustain their improved governance practices long enough to have a statistically and also clinically significant impact on the four indicators that experienced no change or decreases
- Insecurity may have posed disproportionate hurdles in the provinces
- The governance intervention in and of itself might not be enough to make a difference to the four intractable indicators. In other words, those indictors may have also needed an intervention at the health service management level or service delivery level, or perhaps at both levels
- All of the intervention provinces have been assisted by USAID for more than a decade, whereas other provinces were assisted by other donors (the European Union and the World Bank) for a similar length of time. There might have been a qualitative difference in the support provided by USAID when compared to the other donors. It is possible that the intervention provinces were comparatively well-prepared to derive disproportionate benefit from the intervention, or at least in the six areas where improvements were seen

Conclusions

Given the results obtained, the study team concluded that a provincial health governance intervention has the potential to positively impact health system performance, but that this potential cannot be taken for granted. That is, the limitations of the study were such that it was not clear if the positive impact would likely be experienced every time such interventions are implemented or when they are implemented at different levels of a health system. Ultimately, beneficial impact was seen in only in 67% (six out of nine) of the health system performance indicators that were included in this study. This result does not imply that these interventions are unworthy of consideration, but instead that they need to be studied more, with specific attention to the following:

- This intervention lasted six months. It is recommended that longer duration governance interventions be the subject of future studies. Governance improvements might need time to translate into improvements in health system performance at health facility level. They might need to be implemented over sustained period of time to realize gains in the health system performance
- This intervention focused on governance from the perspective of the people who govern; it did not directly involve health managers or service providers. All three groups have a role to play in improving health governance. In addition, the intervention only focused on the provincial level, which sits between the national ministry at the top, and the districts, health facilities, and communities below. Governance happens at all of these levels. It is recommended that future studies consider interventions at the different levels, and that complex multi-dimensional and multi-level studies also be conducted.
- There is also a case to be made for conducting similar interventions and research in different types of organizations delivering health services (e.g., public organizations, civil society organizations and private for-profit organizations) to examine the link between their governance and their organizational or health system performance. There is a multitude of sophisticated studies examining the link between corporate governance and profitability of a firm [25, 26, 27, 28], but it is rare to find such studies examining the link between health systems governance and its performance.

- Cost effectiveness studies are also lacking in this arena, including comparing the cost-effectiveness of implementing a governance intervention on the top of a public health intervention to implementing only a public health intervention.
- Finally, this is mainly a quantitative study. More qualitative studies should be done in the future to open the "black box" that sits between governance and organizational performance [29].

Although the need for further research was confirmed by this study, two key conclusive findings were still made by the study team:

The study showed that **health system governance can be improved even in fragile and conflict-affected environments**. Focus group discussions showed that when health governing bodies in the communities, the district, and the province worked in coordination, community health concerns could be effectively represented and addressed and health systems could become more responsive to the community needs within the available limited resources.

The study also definitively showed that **the way an organization or health system is governed is a determinant of its performance**. When PHCC members designed and implemented their governance action plans based on effective governing practices (cultivating accountability, engaging with stakeholders, setting a shared strategic direction, and stewarding resources), their governing behavior and, consequently, the governance of their provincial health systems, improved. Inter-sector and inter-departmental collaboration received a boost, which is important because the work of many sectors other than health influences the health status of the population.

The PPHCC members designed their action plan in a participatory and consultative manner. This seemed to foster a sense of responsibility to successfully implement it. The intervention was focused on people, i.e., health system leaders governing in close partnership with health managers, health providers, health workers, community leaders, health service users, and governance leaders in other sectors. This helped ensure the intervention was meaningful for the governance leaders as well as for the community.

As health systems become decentralized, sub-national structures and committees are entrusted with the responsibility to coordinate, implement, and oversee health services; they are expected to play a governance role. That they are closer to the people helps. Governing bodies at the community level can represent the unresolved health needs of their communities to governing bodies at the district and provincial levels, which may have more resources to address them.

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Funding was provided by the United States Agency for International Development (USAID) under Cooperative Agreement AID-OAA-A-11-00015. The contents are the responsibility of the Leadership, Management, and Governance Project and do not necessarily reflect the views of USAID or the United States Government.