Response to Current and Future Public Health Threats Nathalie Alberto, Project Specialist Nicole Carbone, M&E Technical Advisor Building Capacity for National Public Health Institutes

Context

Global experience with COVID-19 and other pandemics has demonstrated the foundational need for a whole-of-society response built on broad community and privatesector mobilization and participation. A quick, flexible, and inclusive response demands effective leadership at all levels of society. Decision-makers must take into account profound social and personal disruptions, economic losses, and restrictions on personal freedom; work within constituted authority structures; and communicate effectively to build public trust, often the key determinant of a successful response. Planners and managers must design programs and actions inclusively and rationally, execute them efficiently, and coordinate consistently across institutions and sectors, with transparent oversight, governance, and reporting. These decision-makers need support to meet their enormous demands.

The United States Centers for Disease Control and Prevention (U.S. CDC) partnered with Management Sciences for Health (MSH) to design and deliver the Leading and Managing for Results in Pandemics (LMRP) program. The LMRP program is adapted from the Leadership Development Program Plus (LDP+), MSH's flagship approach to supporting local teams to systematically analyze their obstacles and develop local solutions and mobilize local resources to achieve health results. The LDP+ has been associated with statistically significant improvements in health services above and beyond effects of clinical training alone,¹ produced documented breakthroughs in priority indicators,² and resulted in health outcome gains that have been sustained beyond the end of a single project.³ An external evaluation found the approach 'unleashed the power of organizations to solve problems in the context of limited resources...[,] led to changes in mindset..., and built team cohesion."⁴ An evaluation of an LDP+ for multi stakeholder teams in 15 countries found it fostered new networks linking government, civil society, and providers; improved understanding of policy; strengthened data collection and use; and increased domestic financing and service coverage.⁵

As a team-based experiential learning program, the LMRP is a platform for enhancing the leadership and management capacities of public health teams-potentially including alumni of CDC's Field Epidemiology Training Program (FETP) and the Improving Public Health Management for Action Program (IMPACT)—to support them to successfully take on urgent challenges emerging from the COVID-19 pandemic and contribute to effective national and local preparation, response, and recovery efforts.

In collaboration with the Centro Nacional de Epidemiología, Prevención, y Control de Enfermedades de Perú (Perú CDC), the LMRP program was targeted towards participation by regional CDC directorates, specifically among departments charged with health surveillance and COVID-19 response. At a time when COVID-19 confirmed cases were skyrocketing in Perú, there were over 300k cases mid January 2022⁶, the LMRP program was a mechanism to increase leadership and management capacity among public health workers tasked with curtailing this public health emergency.

Baba Djara, M., et al. (2016) "Cameroon PPFP Endline Study Report: The Added Value of Combining a Leadership Development Program with Clinical Training on Postpartum Family Planning Service Delivery." Mansour, M., et al. (2010) "Scaling Up Proven Public Health Interventions Through a Locally Owned and Sustained Leadership Development Programme in Rural Upper Egypt." Human Resources for Health 8(1). doi: 10.1186/1478-4491-8-1 Seims, L. R., et al. (2012) "Strengthening management and leadership practices to increase health service delivery in Kenya: an evidence-based approach." Human Resources for Health 10(1):25. doi: 10.1186/1478-4491-10-25 Fosburgh, H. (2016) "Senior Leadership Program: Regional Evaluation Summary." Yale Global Health Leadership Institut

Activity Description

S Peru-WHO Coronavirus (Covid-19) Dashboard. https://covid19.who.int/region/amro/country/pe. Accessed May 18, 2023

The LMRP was delivered through a blend of digital and in-person learning and application. Participants engaged in online learning modules, participated in a virtual forum to discuss common governance, leadership, and management challenges, and strengthen corresponding competencies to address such challenges. Then, each team met biweekly to apply their learning to a real challenge that they prioritized in their own work. The program was designed for full teams or parts of teams already working together as part of the country's health system response to COVID-19 and other related public health threats. In Perú, all regional CDC directorates were given the opportunity to express their interest in voluntarily participating in the LMRP program. Nine regional teams and one constitutional province formed the LMRP cohort with a total of 93 participants. Teams participated in asynchronous e-learning activities and in-person team meetings to complete 7 modules over a period of 15 weeks. Teams then continued applying their learning through implementing an action plan that was developed during the modules and was aligned with their existing team responsibilities and mandate. This implementation phase lasted an additional 4 months.

Leading and Managing for Results in Pandemics Timeline

Period	Preparatio Training Program: 15 weeks								Fulfilling	Result
	n	(2 hours individual work and 2 hours for a team meeting every week)							Action Plans	
Time	4-6 weeks	l week	2 weeks	3 weeks	3 weeks	2 weeks	3 weeks	l week	2-4 months	
Content	Rapid	Module I	Module 2	Module 3	Module 4	Module 5	Module 6	Module 7	Teams	Virtual o
	Assessment/	Introducti	Managers	Identifying	Analyzing	Aligning and	Inspired	Coming to a	complete the	in-persor
	Stakeholder	on to	Who Lead	Challenges	your	Mobilizing	Teams	Close of LMRP	implementation	event to
	Alignment	LMRP	Leading and	Visioning	Challenges	Stakeholders,	Team's work	Training	of their action	present
	Interviews	participants	managing in	success,	and	communication	climate &	Evaluate LMRP	plan	teams'
	with key	and	public health	analyzing the	developing a	& coordination	motivation,	training phase		results
	stakeholders	facilitators,	emergencies	current	project		building trust	and plan to		
	and potential	expectations		situation, and	action plan		and	continue with		
	participants to	concerns,		defining			improving	implementation		
	understand	organizing		measurable			interpersonal			
	the landscape	their team		results			skills			
	and context									
Output	Information	Participants	Basic	Challenges	Challenges	Actions to	Strategies to	Lessons learned	Action plans	Team
	for program	oriented to	concepts	identified	analyzed and	improve	improve	and	implemented	results
	design,	the program	shared and		action plan	communication	teamwork	commitments to		presente
	stakeholders		LMG		developed	and	and	implement their		
	aligned,		common		-	coordination	motivation	action plans		
	participants		language			defined	defined			
	registered		established							

The LMRP program was designed to bridge the gap between decision makers and their response to public health emergencies. By understanding and applying the eight leading and managing practices (scanning, focusing, aligning/mobilizing, inspiring, planning, organizing, implementing, monitoring/evaluating) teams of public health practitioners will be better equipped to work together through effectively managing the response at their levels, enabling better stewardship of scarce resources, conducting transparent decision-making, applying evidence-informed prioritization of urgent activities, improving coordination and collaboration, and attaining greater resilience in the face of current and future public health threats. As a result of participation in the program, the LMRP anticipated the following

- 1) To improve participants' and teams' (eight) leading and managing practices and ability to face identified challenges related to COVID-19 and other
- public health emergencies using these practices. 2) To contribute to trainees' ability to apply the eight leading and managing practices of the program during competition of their LMRP action plans (short term).

Evaluation of the Perú LMRP program is ongoing. The assessment team is interviewing participants from each LMRP team to assess how participation in the LMRP program has impacted participant knowledge, behavior, and use of the eight leading and managing practices in their work. This qualitative data will be analyzed along side the programmatic quantitative data (pre- and post-program self-assessments and team evaluations).





Question 3: What types of social and behavioral (SBC) changes or outcomes are commonly sought within health system strengthening projects or interventions? How are SBC methods useful in creating behavior or norm change among government, private sector, and community health system actors? What are lessons learned regarding explicitly incorporating SBC approaches within HSS programs? Leading and Managing for Results in Pandemics: Increasing Leadership and Management Capacities to Improve

Activity Impact

Aside from learning leading and managing practices, all ten teams were coached to apply these practices to develop a shared vision of success aligned to their team's mandate, select a challenge to be addressed throughout the program, and produce an implementation plan including a root cause analysis, priority actions, and desired measurable result. Following an implementation period of four months, LMRP teams produced the following results:

In Callao province, epidemiological surveillance was strengthened by implementing the International Sanitation and Health Regulations.

In Ucayali region, COVID-19 vaccination coverage in children between 5 to 11 years of age increased by 13% from 33% to 46% by February 2023.

to 65.9% by December 2022.

In Huancavelica region, by December 2022, the percentage of the population aged 12 years and older with the 3rd dose of the COVID-19 vaccine increased by 10%, from 53.5% to 63.3%.

In Jaen region, the percentage of the population of children aged 5 to 11 years with the 2nd dose of COVID-19 vaccine increased from 35.1% in August 2022 to 45.7% by January 2023.

In Pasco region, by February 2023, anemia in children under 3 years of age in the district of Chaupimarca decreased from 100% to 63.6%. In Ayacucho region, the percentage of the population aged 60 years and older with the 3rd dose of the COVID-19 vaccine increased from 71.4% to 73.3% by January 2023.

In Cajamarca region, health facilities providing COVID-19 and non-COVID-19 related medical attention increased by 63% from 50 to 80 facilities by January 2023.

In Ica region, anti-COVID community committees increased from 10 to 675 by February 2023.

In Lima Norte region, there was a 61% increase in vaccination coverage against COVID-19 among children aged 5 to 11 years old by January 2023.



Evidence

Based on quantitative data captured from the team effectiveness and behavioral self assessments, changes in individual and team behavior were evident. **Behavioral Self-Assessment**

Individual responses matched between the pre-/post behavioral self-assessments highlight the following behaviors practiced more frequently post participation in the LMRP program: (1) conducted participatory activities to identify priorities; (2) discussed the challenges with people you work with to find a solution; (3) regularly collected and used data to make decisions during implementation; and (4) used data trends to identify work challenges that could prevent achieving your goals. Figure 1 illustrates these changes.

When looking at group data in Figures 2 and 3, the teams collectively saw increases in all leading and managing behaviors, notably in: (1) conducting activities to identify best practices that could be applied to the current local context; (2) using data and trends to identify critical work challenges that could prevent achieving objectives; (3) meeting regularly and using data for decision-making during implementation; and (4) using data to identify obstacles and make necessary adjustments to activities or resource allocations to achieve objectives.



Fig. 1 – Matched individual responses

Fig. 2 – Participants reported use of data

Team Effectiveness

From the team effectiveness survey, there were improvements in morale among teams which can help to inspire members to practice the leading and managing principles as well as support team members in applying those practices. Additional evidence of improvements was found in challenge, recognition, and reward in "each group member has a strong personal commitment to one another's growth and success" which can also help to inspire support to group members in applying practices of SBC.

Preliminary insights from the qualitative data collected has also validated changes in team effectiveness. One participant stated "*I think everyone has*" experienced a change, not only in their management competencies and skills, but also in teamwork competencies, soft skills, as I was saying. Two particularly good things that the team at the end, when we made the report, recognized, and there has been a strengthening, something that you knew, but a refreshment was needed. It was necessary to refresh some concepts and, above all, to put them into practice." Increased competency among teams to respond to future public health emergencies was additionally highlighted by an LMRP participant who expressed that "this program helped me to easily face the problem, we elaborated plans, we planned, organized and executed, as well as monitoring and constantly evaluating, they have been very useful tools, and I am socializing and sharing with the rest of the health facilities and colleagues to be able to solve these problems."







Fig. 3 – Participants identification of best practice

Facilitators

Stakeholder Commitment

The Centro Nacional de Epidemiología, Prevención, y Control de Enfermedades de Perú (Perú CDC) was a key authority in providing permission for the LMRP program to operate within Perú. With the support and guidance from Perú CDC, participating regions were identified. Additionally, Perú CDC was a steady stakeholder throughout the implementation of the LMRP program. They requested and participated in meetings with implementing partner, MSH Perú, to remain informed of the latest LMRP related developments. Commitment by Perú CDC culminated in their officiation of the LMRP results presentation, a virtual event where all ten LMRP teams gathered to discuss the implementation of their activities and results achieved.

MSH Perú, an affiliate of MSH, was essential to the implementation of the LMRP program. Through a sub-award agreement, MSH Perú, led the implementation of the LMRP program by communicating and coordinating with CDC-Peru and other stakeholders to clarify the context, define the implementation strategy, scope, participating teams, and generally the organization of the program, and providing on the ground facilitation and support to teams. Successful implementation of the LMRP program was also contributed to MSH Perú's prior knowledge and experience with the LDP program from which the LMRP was adapted. The three facilitators of the LMRP program were former LDP facilitators and possessed a strong understanding of the LMRP material which translated into efficient and effective team facilitation and learning.

Participating regional and national teams demonstrated exemplary commitment to the success of the LMRP program by remaining engaged throughout the nine-month period of program implementation. Throughout these months, teams were steadfast with their presence in team meetings, consistent with online module completion, and dedicated to conducting activities to accomplish their desired measurable results.

Challenges

The LMRP was modeled as a virtual learning program. Participants were expected to complete asynchronous e-learning activities and meet bi-weekly to discuss module learning and complete group activities together. Part of implementing a virtual learning program relies on the assumption that teams will self-organize to complete expected requirements. A common challenge was inconsistent completion of e-learning modules which then affected presence and participation in team meetings. This irregular self-organizing often resulted in members of a same team working at separate paces and falling behind with module completion. In response, LMRP facilitators engaged in frequent communication with participants and teams alike to help motivate teams working through module content together. Facilitators often provided reminders to participants falling behind via WhatsApp and email to encourage even engagement and participation.

Part of the evaluation of the LMRP program relied on quantitative data collected. Participants completed pre/post assessments on team effectiveness and a behavioral self-assessment. This quantitative data is predicated on self-reported behavior change which introduces bias in a few forms. Social desirability bias could have emerged if participants over reported on leading and managing practices to appear as a better leader. Recall bias may have also occurred as participants were asked to remember and evaluate behavior and team performance occurring over six months ago. In addition to the introduction of biases, the response rate between the pre/post assessments varied. Only about half of the participants completed the post assessment which makes it difficult to understand changes in behavior and teamwork among all participants. These are limitations to some of the conclusions we can draw from the evaluation.

Accurately measuring behavior change is also challenged by the limited time frame available. Behavior change evolves incremental over time. While the program seeks to understand how participation in the LMRP program impacted ownership and application of leading and managing practices and participant's ability to face public health emergencies, understanding of these changes are limited to the duration of time participants had to learn and apply these leading and managing practices which was overall less than one year in duration.

Towards the end of the LMRP program, the Peruvian government removed the declaration of a COVID-19 national emergency and ended all public health emergency declarations. In effect, government funding related to COVID-19 was drastically reduced which influenced the elimination of employment specifically created to support COVID-19 related activities. Various LMRP teams lost members whose government employment contracts were ended in response to reduced COVID-19 funding. These members that were no longer employed and unable to meet with teams in-person were granted to the opportunity to remain as part of the team by joining team meetings virtually.

Lessons Learned

The importance of actual teams working together to address real problems are vital factors in ensuring successful teamwork. Teams participating in the LMRP that worked together daily before the launch of the program encountered less challenges pertaining to the uneven distribution of LMRP assignments, insufficient participation in team meetings, and individual members struggling to maintain momentum with module completion. Similarly, teams were tasked with identifying a real-life problem that could be disrupted through the planning and implementation of routine work activities. Teams were encouraged to identify a challenge and solution which aligned to their existing work/departmental priorities and within their sphere of influence. All ten teams were coaching in this identification and as a result, all teams were able to implement activities and tackle their challenge.

Trained facilitators of the LMRP program play an important role in keeping virtual learners on track and providing essential feedback. Before the launch of the LMRP program, all four facilitators participated in a multi-session training of trainers (TOT) to either learn or refresh their understanding of leading and managing practices. The TOT provided a firm foundation for the facilitators to grasp LMRP concepts to better be able to coach teams through their own learning

LMRP implementation must be nimble in the face of shifting government priorities. As previously stated, the removal of public health declarations relating to COVID-19 disrupted the ability of a few LMRP members continuing with their participation in the program. Disruptions such as this one require teams to adapt and pivot their actions to re-align to emerging priorities. These management practices are taught in the LMRP program.

Teams required substantial guidance from facilitators throughout LMRP modules 3 and 4 which focused on the identification of a challenge and the development of an action plan to tackle the challenge. The program timeline granted teams three weeks and two weeks respectively for the completion of modules 3 and 4. Future iterations of the LMRP program may consider adding an additional week for module completion or increasing team meetings to a weekly basis during these modules to promote cohesive team participation and module completion.

Voluntary participation in the LMRP was a positive influence encouraging teams to remain engaged throughout the program. Participant selection criteria was spearheaded by Perú CDC. An application of interest was developed and distributed to all Perú CDC regional directorates across different departments in charge of surveillance/COVID-19 response. Teams within these departments willingly expressed interest to participate in the LMRP program. There were iterations of the LMRP program in other countries which did not encourage voluntary participation and resulted in several teams dropping from the program as there was no personal buy-in.



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