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Using a Human-Centered Design Lens to Examine Community Accountability Programs to Improve Quality of Maternal Health Care in India

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In India, the National Rural Health Mission (NRHM) seeks to *communitize* health, reflecting the global health community's focus on democratizing health care and giving people a say in the health care available and delivered to them. The NRHM particularly calls out community-based monitoring as an approach to empower health care consumers, or patients, to advocate for access to needed services and quality care. Additional community accountability mechanisms have emerged, such as help lines, maternal death reviews, and other legal strategies. The John D. and Catherine T. MacArthur Foundation's maternal health quality of care (MHQoC) strategy in India has supported a variety of these community accountability mechanisms. This brief draws on an adapted version of the human-centered design (HCD) framework to examine approaches taken by MHQoC community accountability grants, and the lessons learned from applying this framework to assessing grant activities.



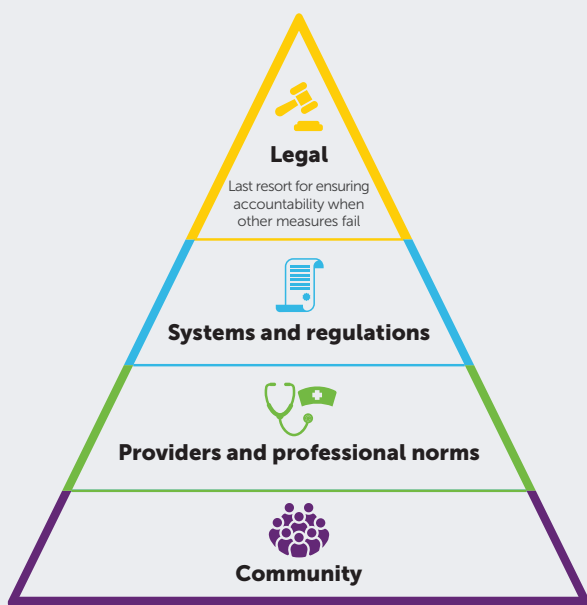
People have the right [and responsibility] to demand high quality health care.

—MacArthur grantee

Introduction

At a 2012 workshop convened in Oaxaca, Mexico, by the Population and Reproductive Health program of the John D. and Catherine T. MacArthur Foundation, civil society organizations (CSOs) from India, Mexico, and Nigeria gathered to examine community accountability approaches to improve maternal and reproductive health (Sociedad Mexicana Pro Derechos de la Mujer 2012). Collectively, the meeting produced the following definition for *accountability*: "The exercise of power constrained by external means or internal norms. Accountability can come either from external constraints (such as laws, regulations, and outside observers), or from internal norms (such as professionalism) that function as constraints. Efforts can be reactive (to abuses identified) or proactive (to prevent problems and promote compliance)."

Layers of accountability in the Indian health system



Source: Developed by Mathematica Policy Research for purposes of this brief.

Applied to community accountability, this definition places the community at the center of the health system, as the entity with the power to insist that the system provide people with the quality health care to which they are entitled.

This focus on community involvement in conceptualizing, designing, and implementing MHQoC services calls to mind human-centered design (HCD), which builds on participatory processes to promote innovation and learning. By putting communities at the center when developing public health solutions, an HCD approach to community accountability can provide practical and usable tools to hold the service or product providers answerable to the people served, as well as mechanisms for ensuring that institutions are responsive.

In this brief, we use an adapted HCD approach to describe and assess various community accountability approaches used under the MacArthur MHQoC strategy. Although grantees did not set out to follow an HCD approach, we use this framework to illuminate the extent to which their MHQoC community accountability efforts have understood and addressed community needs, prioritized the rights and well-being of women and their families, and created the systems and conditions necessary to institutionalize and sustain such efforts. We end with a reflection on the overall applicability of HCD to community accountability.

Viewing community accountability efforts through an HCD lens

Given the diversity in definitions and mechanisms for community accountability and its relatively recent arrival in the field, few frameworks are consistently used to understand

its implementation and success (Lynch et al. 2013). To assess community accountability under the MHQoC strategy in India, we choose the HCD framework because we aim to examine the extent to which implementers of community accountability efforts understand the key stakeholders and audiences and prioritize their perspectives as they implement community accountability process.

Exhibit 1 maps the approaches used by the MHQoC strategy community accountability grantees to the HCD framework. We then describe the main focus of each of the three HCD phases, with more detailed examples of the grantees' applications of these HCD processes.

Community accountability mechanisms used by the MHQoC strategy in India

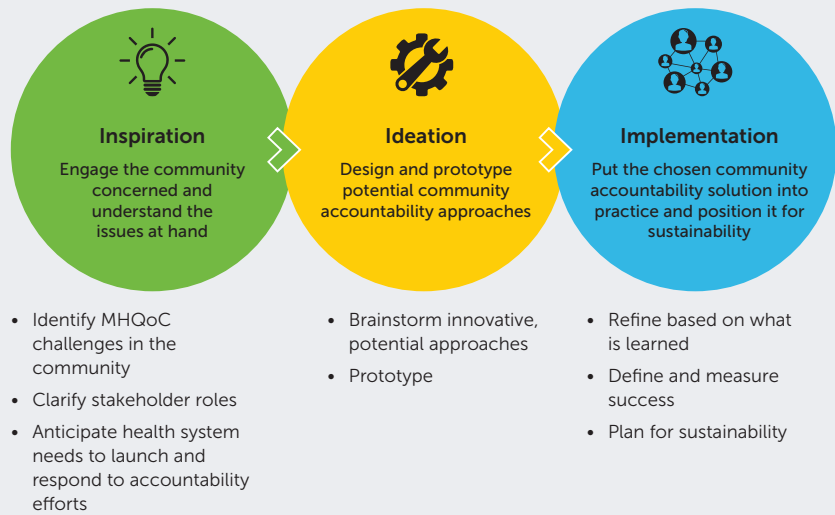
The community accountability mechanisms used by MacArthur grantees have moved toward a holistic and rights-based approach, which stipulates that all women in India should have access to high quality, appropriate, and respectful maternal health care. These mechanisms include community-based monitoring, maternal death reviews, verbal and social autopsies, help lines, hospital management societies, and legal approaches. The following table briefly describes each approach and related MHQoC strategy activities.

| Mechanism type | Description |
|---|--|
| Community-based monitoring | Develop monitoring and planning committees to monitor health services and review whether people's health needs and rights are met. |
| Help lines | Report fraud, abuse, and other issues with consumer care, and air and redress reported grievances with health officials. |
| Hospital Management Societies (Rogi Kalyan Samiti) | Oversee health care resource allocation, grievance redressal, and compliance with regulations and standards of care; develop a committee composed of members from local governing Panchayati Raj Institutions, nongovernment organizations, and local elected representatives. |
| Legal approaches | Provide last-resort recourse to legally enforce laws and regulations to protect maternal health and rights. |
| Maternal death reviews (verbal and social autopsy) | Interview medical and community caretakers in detail about causes of a maternal death (verbal autopsy). Interview caretakers in the community, such as family members, to assess symptoms before death and ascertain the personal, family, or community factors that might have contributed to a maternal death (social autopsy). |

Sources: Waiswa et al. 2012; WHO 2004; Brouwere et al. 2013.

Phases of the HCD framework

The HCD process involves three succeeding phases: (1) inspiration—engaging the community concerned and understanding the issues at hand, (2) ideation—designing and prototyping potential community accountability approaches, and (3) implementation—putting the chosen community accountability solution into practice and positioning it for sustainability. Within each phase are key steps (as shown below). Adhering to these steps should increase the chances of success—involving stakeholders while developing and implementing a community accountability approach will likely increase their use of the mechanism, because it was designed with their needs in mind.



Source: Adapted from IDEO.org (2015).



Inspiration: Engaging the community concerned and understanding the issues at hand

To position an intervention for success, the inspiration phase relies on three key ingredients: (1) identifying and understanding the nuances of key challenges that an intervention could address, (2) clarifying stakeholders' roles and responsibilities in the accountability process and mobilizing them, and (3) anticipating and heading off potential issues. The inspiration phase represents a necessary first step to developing and testing new accountability efforts because it helps to conceptualize the issues as the community understands them. It then sets the stage to identify potential solutions that are likely to work within the community context in the next phase of ideation.

MHQoC strategy grantees' approaches to the inspiration phase have included conducting ethnographic studies and community scans, facilitating discussions among community stakeholders on challenges and solutions, and establishing shared goals for community accountability efforts. Using these approaches, MHQoC strategy grantees have *inspired* organization and action around the challenge—eventually developing an approach or intervention that resonates with the intended audience.

● **Inspire reflection: Identifying MHQoC challenges in the community.** HCD advocates for deeply engaging a product or solution's end users as an essential part of the design phase. Thus, the initial step in the HCD inspiration phase involves developing a deep understanding of the community, and particularly the women who would use MHQoC services. Taking the time to develop this understanding can avoid activities based on misconceptions and inaccurate assumptions.

Those working in the MHQoC field often hold preconceived ideas about the characteristics and needs of a typical woman served by maternal health programs. For example, CSOs often perceive

that their constituencies consist of women who are poor, married, members of disadvantaged groups such as Dalits, and subject to gender-based violence. These assumptions might be accurate, but they can also lead CSOs to not recognize that other groups of women face the same or similar issues. Through deep engagement and an ethnographic approach to understanding their constituencies, Sahayog and SAHAJ have formulated a more nuanced understanding of the maternal health challenges facing their communities. This understanding has helped them to work at the intersection of maternal health issues and other social sector areas, such as workplace practices.



There are unique concerns of people who often embody a lot of different kinds of vulnerability, and how those interact and the pathways to how those are created are important for us to understand.

—MacArthur grantee

● **Inspire mobilization: Clarifying stakeholders' roles.**

The quality of the interactions between stakeholders can drive an intervention's success. Community members alone cannot make a community accountability mechanism produce results unless government officials are willing to listen to the community and make changes. The community must also have the capacity to provide feedback and the government to act on it. To identify the critical relationships and areas in which capacities must be strengthened, all MHQoC strategy grantees work with people who have a deep knowledge and understanding of their communities to map out various stakeholder roles and relationships, such as frontline workers, leaders of women's groups, and local elected representatives.

Exhibit 1. MHQoC strategy community accountability approaches, by HCD step

| HCD step | Example MHQoC strategy activities |
|--|---|
| Inspiration: Engage the community concerned and understand the issues at hand | |
| Reflect: Identify MHQoC challenges in the community | <ul style="list-style-type: none"> Employ ethnographic approaches, including long-term assessments of the unique maternal health needs of marginalized women Review government audit reports to determine common causes of maternal deaths Survey and consult with local partners to develop an understanding of MHQoC challenges Consult with Hospital Management Society (Rogi Kalyan Samiti) members and frontline workers on evolving MHQoC issues and developing needs-based trainings to address these issues |
| Mobilize: Clarify stakeholders' roles | <ul style="list-style-type: none"> Select frontline workers and other community leaders to manage accountability efforts, based on their ability to raise consciousness, build awareness, and mobilize change Clearly define and assess roles and responsibilities for Rogi Kalyan Samiti members, frontline workers, and other community members leading accountability processes |
| Solve problems proactively: Anticipate the health system's needs to launch and respond to accountability efforts | <ul style="list-style-type: none"> Train and recruit local personnel to facilitate accountability activities Present analyses of expenditures on accountability mechanisms (such as Rogi Kalyan Samiti) to state officials and propose activities to improve spending and strengthen accountability Establish relationships with grassroots legal networks, which independently decide on cases to pursue and legal strategies to apply |
| Ideation: Design and prototype potential community accountability approaches | |
| Develop novel solutions: Brainstorm innovative potential approaches | [no examples were found of MHQoC strategy grant activities under this step] |
| Apply practical solutions: Prototype | <ul style="list-style-type: none"> Test the functionality of a mobile app to collect community-based monitoring data; iterative process to streamline the app's functionality and make it easy for people to use in the field Develop and test an electronic system to digitize Rogi Kalyan Samiti reporting processes Repeatedly test strategies to ensure government officials review MHQoC-related reports, including targeting their personal assistants and secretaries |
| Implementation: Put the chosen community accountability solution into practice and position it for sustainability | |
| Fine-tune: Refine based on what is learned | <ul style="list-style-type: none"> Modify Rogi Kalyan Samiti training based on feedback forms, helps desks, and routine visits with patients Expand community-based monitoring activities to advocate for marginalized women Modify the approach based on monitoring data |
| Set clear milestones for achievement: Define and measure success | <ul style="list-style-type: none"> Measure grassroots support for and participation in accountability efforts Define <i>culture of accountability</i> in communities and within the health system Measure improvements in access to care and maternal health outcomes |
| Implement with intent to endure: Plan for sustainability. | <ul style="list-style-type: none"> Provide intensive nongovernmental organization support over a multiyear period to ensure that accountability programs take root in communities Encourage other civil society organizations to adopt and spread the tools and processes developed by accountability programs Build relationships with local and state governments to encourage them to take on accountability work and to be responsive to issues raised through accountability processes |

Source: Analysis of MHQoC strategy documents and data collected by Mathematica Policy Research.

For maternal health, grantees such as SAHAJ and PFI have frequently identified frontline workers or Hospital Management Society (Rogi Kalyan Samiti) members as knowledgeable and potentially effective people to run community accountability programs, collect data, and manage relationships with health officials. However, these grantees have noted that existing job duties and responsibilities can make it challenging for these community members to absorb additional community accountability work.

● **Inspire proactive problem-solving: Anticipate health system needs to launch and respond to accountability efforts.**

As part of mobilizing for community accountability, implementers must determine potential community capacity and other contextual factors that could influence the success of the effort. Recognizing that each community will have different needs and capacities, MHQoC strategy grantees have played various roles

to launch community accountability efforts, such as convenor of stakeholders, intermediary between government and other stakeholders, and catalyst to mobilize around an issue.



Because government officials can view accountability programs as inherently confrontational, [we] are especially sensitive to how it is framed to government agencies and have sought to create a collaborative and collegial working relationship with them, often serving as the go-between to manage relationships between government and community members.

—MacArthur grantee

In addition to playing these roles in the community, grantees have anticipated and headed off potential issues that could derail the success of their community accountability efforts. For instance, officials and providers often view community accountability efforts as trying to stir the pot and threaten the order of their oversight. To navigate these dynamics, PFI, SAHAJ, and Sahayog have stressed the importance of involving community members and government representatives in identifying current challenges together. The grantees have taken opportunities to explain to all stakeholders how community accountability can benefit their overall interests.



Ideation: Designing and prototyping potential community accountability approaches

In the ideation phase, stakeholders generate creative ideas for innovative solutions and identify the challenges that stand in the way of these solutions' success. Then, using information gathered about the community, stakeholders converge on and test the solutions that can most likely address the identified challenges.

MHQoC strategy grantees did not explicitly consider HCD when they structured their community accountability approaches. As a result, it is not surprising that they did not address the ideation phase as separate from their other preparatory activities or adhere to this phase of HCD. For instance, most of the MHQoC strategy accountability efforts do not integrate creating novel prototypes and rapidly testing them. Instead, they take a more service-focused approach to exploring potential solutions, such as convening stakeholders to surface feasibility and acceptance of various existing options.

● **Ideate on novel solutions: Brainstorming innovative potential approaches.** Grassroots involvement in designing any community accountability mechanism is essential for the success of these programs, as is encouraging thinking outside the box. This stage involves gathering stakeholders together to generate and design potential new solutions so that they do not only fall back on what already exists. It is important not to discard fantastical ideas: when examined systematically, these ideas can lead to innovative and appropriate solutions.



Community accountability programs are often [created and implemented] as top-down, led by technical experts rather than serving as mass movements, and thus fail to be effective or sustainable.

—MacArthur grantee

We found MHQoC strategy grantees did not generally apply this step in design thinking to develop a community accountability approach. Instead, they used a lighter-touch method. For example, to develop solutions, C3 invited Rogi Kalyan Samiti members to attend village meetings during which stakeholders talked about their difficulties accessing high quality maternal

health care and Rogi Kalyan Samiti members documented key community concerns. Rather than co-creating novel solutions with the community, Rogi Kalyan Samiti members used this information to improve existing systems. They urged local health officials to fill key human resources gaps (such as hiring nurse anesthetists and ensuring that village health sanitation and nutrition days were staffed with auxiliary nurse midwives), ensure that cash incentives were paid in a timely manner, and provide the equipment required for quality maternal health care in public facilities.

● **Ideate on practical application of solutions: prototyping.**

A hallmark of HCD is the use of rapid testing or prototyping—generating and testing multiple solutions in a relatively short period. This style of prototyping requires involving stakeholders in repeatedly testing and refining potential solutions. In-depth knowledge and insight into the norms and resources of their community enables stakeholders to quickly develop and assess feasible approaches to solving local issues.

With potential solutions in hand, rapid and iterative testing can help grantees select an end solution that produces desired outcomes, is streamlined to include only the necessary components, is practical for applying in the setting, and yields intended behaviors. Few MHQoC strategy grantees took this particular step as part of their community accountability approach because they were not actively applying, or expected to apply, an HCD approach. However, CHSJ did test a mobile phone-based app to support frontline workers' community-based monitoring activities. Based on frontline workers' feedback on multiple versions of the app, CHSJ streamlined the interface to collect fewer data elements and added video functionalities to better support frontline workers' ability to provide health education.



Implementation: Putting the chosen community accountability solution into practice and positioning it for sustainability

Implementing the selected solution offers opportunities to refine and adjust it in a real-world context and to identify key components necessary to support sustainability. Consistent with the HCD approach, grantees have modified their community accountability programs based on learnings from early implementation, developed definitions of and measured success, and considered how to make their programs sustainable over time.

● **Implement to allow fine-tuning: Refining based on what is learned.**

The HCD implementation process includes continually refining a selected solution based on learnings. This concept is akin to that for continuous quality improvement and, unlike the rapid prototyping phase, it does not include time-limited testing and iterating on multiple processes. Rather, it involves a built-in, systematic, and ongoing approach using evidence to adjust a current process to improve outcomes. Examples of parameters to adjust might include the appropriate community members to undertake accountability activities, the target audience or core constituencies for the program, and the program's key topics or areas of focus.

An example of how a grantee adjusted their community accountability approach during implementation involved PFI revising curricula and training materials to make explicit the Rogi Kalyan Samiti's role in ensuring the quality of health services. PFI based these revisions on feedback from patients, health staff, and Rogi Kalyan Samiti members as implementation launched. Other grantees such as CHSJ have relied on monitoring data—such as how often key stakeholders participate in community-based monitoring activities—to determine whether existing tools (such as phone-based apps) require updating or whether other real-time changes to implementation are needed to keep a program running. Beyond minor program adaptations, continuous improvement processes have also led to large changes in one community accountability program. CHSJ mentioned that after implementing the first phase of its community accountability program and receiving feedback from community leaders, it changed the scope of the program and expanded its community-based monitoring work to include advocacy about the intersection of maternal health and rights with other issues facing vulnerable women (including unmarried and Dalit women), such as labor rights and economic justice.

● Implement with clear milestones for achievement:

Defining and measuring success. Community accountability programs have varying goals and objectives, and each might define success for its program very differently. For example, programs run by C3 and PFI seek to ensure that key stakeholders such as frontline workers and Rogi Kalyan Samiti members understand their role in holding the health system accountable and take this work seriously. Others, such as CHSJ and SAHAJ, focus on cultivating a culture of accountability at all levels of the health system, including among government health officials, who might not value community accountability data. Exhibit 2 provides examples of key outcomes grantees track to assess the success of their community accountability work.

● Implement with intent to endure: Planning for sustainability.

The underlying premise of the HCD process is that developing a solution that incorporates and adapts to people's needs and evolving systems will ensure its longevity. However, those who develop or begin implementing the solution might not want to or be able to sustain their involvement in it, and ideally should transition the solutions to local community-based agents. In the case of community accountability, MHQoC strategy grantees aimed to provide the starting resources to ensure community accountability, but anticipated that these activities would transition to the community, which ultimately would own and drive the activities.

Grantees noted that their exit from a community accountability program is often most successful if they have spent significant time helping to institutionalize accountability efforts; PFI estimated that its staff must support a community accountability program for a minimum of two years before it can reliably hand off the program to other stakeholders. Identifying allies and partners in the field can also help to sustain accountability programs. SAHAJ found that several other CSOs, even those that were not previously working in maternal health, were eager to adopt the accountability tools

Exhibit 2. Key community accountability outcomes

| Outcome domain | Example outcomes being measured by grantees |
|--|---|
| Community engagement in accountability activities | <ul style="list-style-type: none"> • Number of community members attending meetings about accountability • Number of calls to help lines • Number of public facilities visited and assessed by frontline workers or Rogi Kalyan Samiti members |
| Institutional responsiveness to accountability data | <ul style="list-style-type: none"> • Number of health officials attending meetings about accountability • Health officials' perceived responsiveness to or interest in accountability findings • Number and nature of legal rulings in favor of maternal health and rights • Availability of necessary supplies, equipment, and infrastructure at public facilities |
| MHQoC outcomes | <ul style="list-style-type: none"> • Availability of key staff at public facilities • Number of women seeking maternal health services at public facilities • Number of institutional deliveries • Maternal morbidity and mortality |

Source: Analysis of MHQoC strategy documents and data collected by Mathematica Policy Research.

and processes that the grantee had developed. This ensured the accountability work would continue, and potentially expand to other social sectors, after SAHAJ's work ended.

Government officials and the responsible government agencies are also key actors in any community accountability system; community accountability requires the government's action based on the information from the community. However, sustaining support of the government can be tricky because health officials might not have the incentives to hold themselves accountable. Some stakeholders worry that, without the external oversight, government-sponsored community accountability programs will become ineffective. Thus, all MHQoC strategy grantees have noted that although engaging the government in sustaining community accountability work is important, it can be particularly challenging.

Outcomes achieved by community accountability programs

All grantees implementing community accountability programs have undertaken activities that correspond to the three broad HCD phases (inspiration, ideation, and implementation)—though few grantees adhered to the specific components of the ideation phase as recommended by the HCD framework. Although our analysis does not connect the use of HCD elements to the outcomes we observe from the community accountability programs, we did observe such outcomes, particularly related to (1) community engagement, (2) institutional responsiveness, and (3) MHQoC (Exhibit 3).

Exhibit 3. Outcomes achieved by community accountability approaches

| Outcome domain | | |
|---|--|---|
| Community engagement in accountability activities | Institutional responsiveness to accountability data | MHQoC outcomes |
| Community-based monitoring | | |
| Increased participation of community members in community-based monitoring-related meetings | <ul style="list-style-type: none"> Increased material and monetary support from community leaders (such as hiring vehicles) to help pregnant women get to hospitals for delivery | <ul style="list-style-type: none"> Improved early pregnancy registration, understanding and awareness of high-risk symptoms, and increased use of government-funded (108) ambulances Increased institutional deliveries |
| Help lines | | |
| Increased number of calls from community members | <ul style="list-style-type: none"> Agreement from district health officials to review help line data and formulate plans for addressing issues Improved availability of equipment in public facilities and continuous electrical power in labor rooms | No evidence of MHQoC outcomes were found for this approach |
| Hospital management societies (Rogi Kalyan Samiti) | | |
| Increased awareness of responsibilities and increased activities among members | <ul style="list-style-type: none"> Improved mechanisms to redress and respond to grievances Improved availability of medicines and equipment, and improved attendance of health workers, at public facilities Improved facility infrastructure, such as curtains in the operating theaters, changes in tiling to make it less dangerous, and air conditioning | No evidence of MHQoC outcomes were found for this approach |
| Legal approaches | | |
| More than 500 legal cases related to MHQoC filed by national and local organizations | <ul style="list-style-type: none"> Short-term relief for families involved in MHQoC litigation (for example, counseling, resources, and school fees) Facilitated cases to support Supreme Court ruling to end sterilization camps | No evidence of MHQoC outcomes were found for this approach |
| Maternal death reviews (verbal and social autopsy) | | |
| Increased community engagement in monitoring and discussing maternal deaths | <ul style="list-style-type: none"> Willingness from district and state officials to review reports and identify systemic issues that might contribute to maternal deaths | No evidence of MHQoC outcomes were found for this approach |

Source: Analysis of MHQoC strategy documents and data collected by Mathematica Policy Research.

Interestingly, all of the accountability approaches implemented under the MHQoC strategy have achieved at least some key outcomes in community engagement and institutional responsiveness. However, only grantees using community-based monitoring have reported achieving MHQoC outcomes, such as early entry into antenatal care and institutional deliveries. This could be in part because legal approaches require a long time frame during which outcomes might not be observable over the span of a few years, and reviews of individual maternal deaths might be difficult to link to systemic MHQoC changes.

Lessons learned from applying the HCD lens to community accountability approaches

Although no MHQoC strategy grantees explicitly stated using HCD to develop or test their community accountability programs, applying an HCD lens to this work highlights key achievements and gaps in their novel, rights-based approaches. In addition, an examination through the HCD lens draws out where and how to use this participatory approach and how to adapt it to apply to community accountability.

Brief, targeted investigations supported by HCD could help build a deep understanding of the underlying contexts driving MHQoC challenges relatively quickly and easily.

Grantees have found maternal health rarely exists in a vacuum; women in grantees' targeted communities experience multiple intersecting vulnerabilities related to health, caste and religious identity, marital status, and financial resources. As a result, grantees such as Sahayog and SAHAJ have invested in time-consuming and resource-intensive ethnographic and other landscaping studies to develop a deep and sophisticated understanding of community needs and experiences related to maternal health. At the same time, grantees and other organizations working on community accountability have had short timelines and small budgets limiting their ability to invest in such exercises. HCD offers approaches—such as activities, games, and interview and discussion guides—to facilitate in-depth investigations focused on specific topic areas that grantees can implement relatively quickly. These approaches might prove useful for community accountability implementers trying to find the right balance between lengthy and deep examinations of the community and shorter or more circumscribed approaches to identifying MHQoC challenges.

An expanded definition of prototype could help to support innovation.

As a central component of HCD that comes from manufacturing practices, *rapid prototyping* aims to develop concrete products. This concept is easier to apply when developing specific community accountability tools, such as mobile phone-based apps or electronic applications. However, community accountability rarely involves just one specific product, but rather a series of processes and products. Thus, implementers must adapt the concept of rapid prototyping for this use case. For example, Sahayog considered its efforts to identify successful approaches to ensuring that health officials read its reports as prototyping. The Socio Legal Information Centre's tested multiple different messages to obtain the support and buy-in of local advocates and legal networks spread across different states. Using an expanded definition of prototyping that encompasses process testing might help stakeholders apply and conceptualize this component of HCD in the context of community accountability, which could in turn spark new and innovative thinking for designing appropriate tools and processes.

It is important to define and measure success from a design perspective, in addition to a public health perspective.

Researchers and program implementers have described a common tension between HCD, which often defines success as developing an acceptable product, and global health, which typically defines success as attaining specific health outcomes (Bazzano 2017). MHQoC grantees have largely avoided this tension by acknowledging that good products and processes lead to desired outcomes. Consequently, in addition to tracking health outcomes, grantees have also tracked interim process measures, such as the extent of community empowerment and health officials' responsiveness. Grantees recognize that a community accountability program must be feasible and acceptable to all stakeholders to achieve health outcomes. Framing outcomes of interest as either design- or process-oriented and health outcomes-oriented could further help grantees clarify their thinking about how outputs or short-term outcomes (such as developing or testing a specific tool or process) could achieve MHQoC impacts.

Discussion

Our examination of MHQoC strategy suggests that the phases and steps of HCD generally provide a systematic framework for understanding community accountability activities. Given its potential utility, applying the HCD framework to accountability programs more consciously could assist in launching, adopting, and institutionalizing it among stakeholders. In particular, HCD can help to build an understanding of MHQoC challenges both quickly and deeply; spark innovative ideas and encourage rapid, participatory testing of those ideas; and encourage grantees to develop acceptable and feasible accountability approaches that hold promise for sustainability and scale-up.

Furthermore, organizations designing and implementing community accountability programs might find specific tools and processes commonly used in HCD helpful to their programs. For example, to inspire conversation and creative thinking, organizations could conduct relatively brief, in-depth investigations into maternal health challenges through HCD tools and mechanisms, such as interviews, focus groups, and activities and games such as card sorting, collage-building, and diagramming resource flows. In addition, HCD approaches to gathering stakeholders to brainstorm and sketch out the roll out of potential community accountability mechanisms, provide feedback on the feasibility or acceptability of potential mechanisms, and role play proposed accountability processes could help to spark innovation and uncover unforeseen barriers to implementing a program.¹

Although the HCD framework provides guidance and specific tools that organizations can use to implement community accountability programs, there could be specific instances in which the HCD framework alone is insufficient for developing, testing, and implementing a program. For example, organizations could find that taking an in-depth, ethnographic approach to assessing women's maternal health needs is sometimes preferable to more targeted investigations into MHQoC challenges because it inspires work in other, related areas, or helps to shed light on MHQoC issues best addressed through programs other than those that focus on community accountability, such as advocacy or provider training programs.

Thus, as an overall construct HCD provides a promising framework for implementing and examining community accountability; however, the specific steps within the framework used or adopted might depend on the existing evidence base in the community, the resources, and time available. In fact, combining the HCD and other approaches might be useful—for example, rapid prototyping to identify promising solutions and then rigorous comprehensive evaluation to optimize implementation and understand effects on outcomes.

Conclusion

Bringing an HCD lens to community accountability is consistent with a broader push to encourage design thinking in global health and with grantees' commitment to bring democratic, participatory approaches to developing and implementing maternal health programs (Bazzano 2017). Although there are some specific challenges to applying this lens to community accountability work, assessing MHQoC strategy activities demonstrated that, in general, the HCD approach can be a valuable framework to apply to designing and implementing accountability programs. More assessment will be required to fully understand the connection between implementing specific HCD phases and steps and the extent to which doing so results in increased success of community accountability to achieve outcomes.

References

- Bazzano, A.N., J. Martin, E. Hicks, M. Faughnan, and L. Murphy. "Human-Centred Design in Global Health: A Scoping review of Applications and Contexts." *PLoS ONE*, vol. 12, no. 11, 2017, p. e0186744. Available at <https://doi.org/10.1371/journal.pone.0186744>.
- Brouwere, V.D., G. Lewis, V. Filippi, T. Delvaux, J. Beyeza-Kashesya, Y. Gebrehiwot, C. Bique, and D. Taylor. "Maternal Death Reviews." *The Lancet*, vol. 381, no. 9879, May 18, 2013, pp. 1718–1719.
- IDEO.org. *Field Guide to Human-Centered Design*. 1st edition. San Francisco, CA: IDEO.org, 2015.
- Lynch, U., S. McGrellis, M. Dutschke, M. Anderson, P. Arnsberger, and G. Macdonald. "What Is the Evidence that the Establishment or Use of Community Accountability Mechanism and Processes Improve Inclusive Service Delivery by Governments, Donors and NGOs to Communities?" London, Social Science Research Unit, Institute of Education, University of London, 2013. Available at <http://eppi.ioe.ac.uk/cms/Portals/0/PDF%20reviews%20and%20summaries/Community%20accountability%202013%20Lynch%20report.pdf?ver=2013-10-08-145129-450>. Accessed March 8, 2019.
- Sociedad Mexicana Pro Derechos de la Mujer. "Accountability in Maternal and Reproductive Health: Experiences from Civil Society from India, Mexico, and Nigeria." Report submitted to the MacArthur Foundation. Mexico City, Mexico: Sociedad Mexicana Pro Derechos de la Mujer, 2012. Available at https://www.macfound.org/media/files/Accountability_in_Maternal_and_Reproductive_Health-Final_Report.pdf. Accessed March 8, 2019.
- Waiswa, P., H.D. Kalter, R. Jakob, R.E. Black, and for the Social Autopsy Working Group. "Increased Use of Social Autopsy Is Needed to Improve Maternal, Neonatal and Child Health Programmes in Low-Income Countries." *Bulletin of the World Health Organization*, vol. 90, 2012, pp. 403–403A. doi: 10.2471/BLT.12.105718.
- World Health Organization. "Beyond the Numbers: Reviewing Maternal Deaths and Complications to Make Pregnancy Safer." Geneva, Switzerland: World Health Organization, 2004. Available at <https://apps.who.int/iris/bitstream/handle/10665/42984/9241591838.pdf?sequence=1>. Accessed March 8, 2019.

Endnotes

¹ HCD resources such as IDEO's Field Guide to Human-Centered Design, a resource commonly used for designing global health programs, can provide more specific examples of tools and activities that implementers can apply in developing and testing community accountability programs.