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Frontline Health Project

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Operationalized Indicators: Integrating Community Health Worker and Client Views to Assess Community Health Systems

BACKGROUND

Community Health Workers (CHWs) are on the front lines of improving health outcomes and health equity in communities worldwide - providing health education, delivering basic health services, and supporting linkages to facilities across a range of health areas [1,2]. There is growing commitment to strengthening and scaling up CHW programs to achieve universal health coverage (UHC) in low and middle-income countries (LMICs). **With this effort comes the need to effectively measure CHW program performance** [3].

Systems to measure CHW program performance in a country should incorporate data from multiple sources, employ well-validated and theoretically grounded measures/indicators, and be practical to implement [4]. In addition, it is important to move towards a harmonized measurement system to assess community health (CH) system performance worldwide, while also recognizing that metrics and data sources chosen in any one country depend on CH system maturity, funding, systems readiness for data collection mechanisms, and contextual realities.

It is critical to integrate CHW and community members' perspectives within efforts to assess community health workforce performance. Hearing from CHWs and their

FRONTLINE HEALTH: HARMONIZING METRICS, ADVANCING EVIDENCE, ACCELERATING POLICY

In collaboration with USAID and UNICEF and with funding from the Bill & Melinda Gates Foundation, the Frontline Health project is a three-year joint research, policy, and advocacy endeavor of the Population Council and Last Mile Health. The project developed and operationalized a core set of measures for CHW performance in select countries from the Integrating Community Health partnership (ICH), and supports the national and global adoption of these metrics for routine monitoring [10].

clients can complement and enrich understanding gained from other data sources such as program/service monitoring data, coverage assessments, patient registers, CHW logs, and health management information systems (HMIS) [5-8]. In particular, capturing CHW/community perceptions can help identify specific under-performing areas of CHW programming, as well as track progress over time - it may also help distinguish between relevant sub-groups to promote equitable support to CHWs and CH systems.

While these data sources are often collected on a routine and relatively frequent basis since they involve collating data from records/databases, there is also growing interest in rapid, routine methods of surveying CHWs and/or clients/community members, such as via community scorecards [9]. In addition, while necessarily implemented less frequently, periodically implementing more comprehensive surveys with CHWs and clients/community members, and

Photo credit: Mali Health, courtesy of Photoshare.

FIGURE 1. COMMUNITY HEALTH SYSTEMS PERFORMANCE MEASUREMENT FRAMEWORK

meaningfully integrating their perspectives with other data sources, can provide more comprehensive information for how to strengthen and scale CHW programs.

We also highlight 20 of the 30 indicators (including at least one from each domain) that we believe would be well suited for routine/rapid data collection methodologies and/or integration within CH service provision assessments (SPAs), demographic health surveys (DHS) or other population-based surveys.

This measurement guide proposes 30 indicators (comprising 91 total questions, including several multi-item scales) that can be collected in surveys with CHWs (19 indicators) and community members (11 indicators).

The comprehensive set of 30 indicators aims to robustly capture seven critical domains of CHW performance:

- Supportive Systems
- CHW Development
- Support from Community Groups,
- CHW Competency
- CHW Wellbeing
- Community Access, and Community Centered Care

These domains come from the Population Council's CHW Performance Measurement Framework (Figure 1) [6] which was developed under the Frontline Health (FLH) project and seeks a balance between comprehensive and pragmatic measurement of CHW performance within primary health care (PHC) systems [10].

This framework is situated within several donor and international agency-coordinated efforts over the past decade to engage national and global stakeholders in developing frameworks and tools to promote functional, effective, quality, and accountable community health systems [5-8, 11-15].

For interested readers, Figure 2 on page 9 shows these select global guidelines and national strategies, their operationalization in planning and priority setting tools, tracked by progress, output, and outcome measures.

APPROACH TO SELECTING FINAL INDICATORS

The indicators were tested and validated in surveys with CHWs and/or community members in Bangladesh, Kenya, Haiti, Mali, and Uganda, which covered several health areas such as family planning, maternal and

child health, and general PHC services [15], and finalized through consultation with global and national stakeholders. The pool of indicators tested came from 46 total indicators created as part of the Community Health Systems Measurement Framework (Figure 1) [6]. A subset of indicators and scales that elicited CHW and client/community member perspectives, covering the seven domains noted above, were tested as part of FLH's operational research. These scales, which are described in a separate brief as well as several manuscripts, included the Multi-dimensional Motivation Scale (for CHWs), the Trust in CHWs Scale (for clients) and the Client Empowerment in Community Health Systems Scale (for clients) [16-19]. These scales are included as three of the 30 recommended indicators.

To select the final set of recommended indicators, we followed an iterative process that included consultation among multi-country team members with deep knowledge of their community health systems contexts. Specifically, we:

- Reviewed all survey datasets from FLH studies in Bangladesh, Kenya, Haiti, Mali, and Uganda (Table 1) to extract potential indicators from relevant framework domains.
- Examined descriptive statistics for each indicator (frequencies/means and variances), and associations with other relevant variables when feasible.

Criteria for inclusion in final list of indicators included:

1. Demonstrated adequate variability in a majority of countries (e.g., >10% or <90% for a binary indicator) OR demonstrate variability between countries (e.g., >10% difference)
2. Salience within a specific CH system and globally based on multi-country team and global stakeholder perspectives
3. Together, indicators within a particular domain comprehensively capture CHW and community perspectives on that domain.

As described above, the three scales were also selected as indicators. While we recommend using the full scales whenever possible, we also recognize that limited funding may restrict the frequency and ease of information gathering in programmatic settings.

TABLE 1. SURVEY DATA USED TO FINALIZE INDICATORS

Country	Surveys with CHWs (n)	Surveys with clients/community members (n)
Bangladesh	66	1,384
Haiti	--	616
Kenya	211	306
Mali	141	--
Uganda	399	--

Therefore, given the importance of assessing these concepts in routine/rapid data collection methodologies and/or as part of the DHS and other routine surveys, we have also included a short scale or specific items that reflect each scale's subdomains. (For example, the item "Does the CHW always treat you with respect? (Yes/No)" can be seen as a brief representation of the "Respectful communication" subscale of the Trust in CHWs scale.)

Photo credit: Pooja Sripad.

TABLE 2. RECOMMENDED INDICATORS FOR ASSESSING COMMUNITY HEALTH SYSTEMS

Table 2 below describes indicators for assessing the performance of CHW programs. Indicators that may be well-suited for use in routine/short surveys to “take the temperature” of CHW program performance are marked with an icon (see Key).

PROGRAMMATIC PROCESSES		
Indicator	Question / Item wording	Response Options
Supportive Systems		
1. % of CHWs supervised in the last 3 months	“Have you met with your supervisor in the last 3 months?”	Yes/No
	How satisfied are you with:	
2. % of CHWs satisfied with support received from supervisor	“Support you receive from your supervisor for your work”	Very dissatisfied; dissatisfied; satisfied; very satisfied
3. % of CHWs satisfied with feedback received from their supervisor	“Feedback your supervisor provides on areas that you can improve on”	
4. % of CHWs satisfied with availability of drugs, supplies, equipment	“Availability of drugs, supplies and equipment for your work”	
Support from Community Groups		
	How satisfied are you with:	
5. % of CHWs satisfied with community members’ ability to contribute to improving health services	“Opportunities for community members to contribute their ideas to improve health services?”	Very dissatisfied; dissatisfied; satisfied; very satisfied
6. % of CHWs satisfied with support from leaders and stakeholders	“Support from community health leaders and stakeholders for CHWs’ work?”	
7. % of CHWs satisfied with decision-making processes	“Decision-making processes used by community health leaders and stakeholders?”

Availability of drugs, supplies, and equipment for your work

Examples of community groups: village health committees, facility management committees, and local governance structures, including non-health sector groups.

Key:

- Indicators for use with CHWs
- Indicators for use with community members/clients of CHWs
- Indicator recommended for routine/short surveys

COMMUNITY HEALTH SYSTEM PERFORMANCE OUTPUTS

Indicator	Question / Item wording	Response Options
CHW Wellbeing
8. % of CHWs motivated in their work	"Overall, I am motivated to work here."	Strongly disagree (1); disagree (2); agree (3); strongly agree (4). Generate mean scores by taking the mean of non-missing items for a final range of 1.0 to 4.0.
9. % of CHWs at risk of attrition	"I frequently think of quitting this job."
10. % of CHWs well-supervised*	"I am supervised well."
11. % of CHWs who feel valued and capacitated in work*	"I feel valued and capacitated in my work."
12. % of CHWs respected and supported by peers*	"I am respected and supported by my peers at work."
13. % of CHWs who feel well-compensated for work*	"I am compensated well in relation to my workload."	Response options for set of satisfaction items: Very dissatisfied, dissatisfied, satisfied, very satisfied (The score for each domain is then weighted by how important each is to the respondent)
14. Average score on <i>Multi-dimensional Motivation (MM) Scale</i> (22 items) See: Reference 16 - 17	22 items covering four domains: Quality of supervision (example item: "Support your direct supervisor gives you in your work") Feeling valued and capacitated in your work (example items: "Respect received from community for doing this work"; "Availability of drugs, supplies, and equipment for your work") Peer respect and support (example item: "Cooperation among CHWs") Compensation and workload (example item: "Amount of total financial incentives you receive")

Photo credit: Zanmi Lasante.

The mean score was 14.5 in Bangladesh (on a scale of -24 to +24), with peer respect and support the highest-scoring sub-domain.

The mean score was 5.0 in Mali, with quality of supervision the highest-scoring sub-domain.

Compensation was the lowest-scoring sub-domain in both countries.

* Representative of the four domains of the full *Multidimensional Motivation Scale*

Key:

Indicators for use with CHWs

Indicators for use with community members/clients of CHWs

Indicator recommended for routine/short surveys

CHW development		
Indicator	Question / item wording	Response Options
15. % of CHWs who received follow-up training	“After initial training, did you receive any practical training/support and follow up during your normal work as a CHW?”	Yes/No
16. % of CHWs receiving financial and/or non-financial compensation	“What type of compensation do you receive?”	None; Financial; Non-financial; Both
17. % of CHWs satisfied with timeliness of compensation	“How satisfied are you with the timeliness in which you receive compensation?”	Very dissatisfied; dissatisfied; satisfied; very satisfied
18. Average number of household visits performed by CHWs in last month.	“How many total household visits did you make in last month?”	Average number of household visits reported in the last month
19. % of CHWs with adequate knowledge and practices (per health area)	Dependent on health area covered by CHWs. Often measured with index specific to health area (e.g. family planning; antenatal/postnatal care; malaria)	Context dependent
Community Access		
20. % of community members visited by CHW in last 3 months	“Have you been visited by a CHW in the last 3 months?”	Yes/No
21. % of clients who received referral to health facility from CHW in last 6 months	“Did you receive a referral to a health facility from the CHW in the last 3 months?”	
Community-Centered Care		
22. Average duration of last CHW visit	“How much time did the CHW spend with you at the most recent visit?”	Country dependent; example response categories: less than 30 minutes, 30 minutes to 1 hour, 1 hour and above

In Bangladesh, CHWs answered 64% of the family planning knowledge questions correctly; this equated to an average knowledge index score of 20.6 items correct out of 32.

% of CHWs satisfied with timeliness of compensation

Key:

Indicators for use with CHWs

Indicators for use with community members/clients of CHWs

Indicator recommended for routine/short surveys

Subdomain of Community-centered care: Experience of care		
Indicator	Question / item wording	Response Options
	Please let me know how much you agree or disagree with the following statement:	
23. % of clients satisfied with CHW services	"I was satisfied with the services I received from the CHW(s) in the last six months."	Strongly disagree; disagree; agree; strongly agree
24. % of clients who would recommend CHWs to a friend	"I would recommend a friend to the CHW(s) I have seen in the last six months."	
Subdomain of Community-centered care: Empowerment		
25. Average score on Influence of CHWs on Empowerment Scale (5 items) See: Reference 18	1. "I can better make decisions about my health and my children's health because of my interactions with CHWs." 2. "I can better share health information with others because of my interactions with CHWs." 3. "I can better get the care I need from my clinic because of my interactions with CHWs." 4. "I can better improve my clinic and/or the health system because of my interactions with CHWs." 5. "I can better contribute to my community because of my interactions with CHWs."	Strongly disagree (1); disagree (2); agree (3); strongly agree (4). Generate mean scores by taking the mean of non-missing items for a final range of 1.0 to 4.0.
26. Average score on Client Empowerment in Community Health Systems Scale (CE-CHS) (16 items) See: Reference 18	Sixteen items covering three domains: Personal agency around health (example item: "I feel in control of my health") Agency in sharing health information with others (example item: "I feel confident sharing health information with my family/friends") Engagement in community health systems (example item: "I can participate in making decisions that improve health in my community")	

Client Empowerment in Community Health Systems Scale (CE-CHS): Average scores

Key:

□ Indicators for use with CHWs

■ Indicators for use with community members/clients of CHWs

⚙️ Indicator recommended for routine/short surveys

Subdomain of Community-Centered Care: Empowerment

Indicator	Question / item wording	Response Options
	Please let me know how much you agree or disagree with the following statement:	
27. Average score on <i>Civic Engagement Scale</i> (7 items) See: Reference 18	1. "I like to work on solving a problem in my community rather than waiting for someone else to address it." 2. "I understand what's going on in my community." 3. "I understand the important social issues that affect my community." 4. "I understand the important government/policy issues that affect my community." 5. "I understand the important environmental issues that affect my community." 6. "I can participate in making decisions for my community." 7. "There are plenty of ways I can participate in making decisions for my community."	Strongly disagree (1); disagree (2); agree (3); strongly agree (4). Generate mean scores by taking the mean of non-missing items for a final range of 1.0 to 4.0

Subdomain of Community-Centered Care: Trust

28. % perceiving CHW demonstrates healthcare competence*	"Does the CHW always seem capable of providing the best care possible?"	Yes/No
29. % perceiving CHW demonstrates respectful communication*	"Does the CHW always treat you with respect?"	
30. Average score on <i>Trust in CHWs Scale</i> (10 items) See: Reference 19	10 items covering two domains: <i>Healthcare competence</i> (example item: "How often have you felt the CHW knew as much as s/he should about a health topic?") <i>Respectful communication</i> (example item: "How often has the CHW been an excellent listener?")	Never (1); Some of the time (2); Most of the time (3); All of the time (4). Generate mean scores by taking the mean of non-missing items for a final range of 1.0 to 4.0

Trust in CHWs Scale: Average scores

Key:

Indicators for use with CHWs

Indicators for use with community members/clients of CHWs

Indicator recommended for routine/short surveys

* Representative of the two domains of the full *Trust in CHWs Scale*

FIGURE 2. SELECT MEASUREMENT AND PLANNING TOOLS IN COMMUNITY HEALTH

IMPLEMENTING INDICATORS

We hope these indicators prove useful to policy makers, program managers, and implementers in meaningfully integrating CHW and community perspectives when assessing CH system performance and tracking **improvements over time**. The intention is to complement the portfolio of existing global measurement tools that inform country community health monitoring and evaluation frameworks, further supporting localized decision-making in community health.

We offer the following recommendations for integrating and applying the indicators, while also recognizing that such recommendations may be revised based on experiences across countries in the coming years.

Consider taking advantage of both the brief and full sets of indicators. The **brief set of 20 indicators** (13 at CHW level and 7 at community member/client level) offer a simpler/less expensive option to integrate select items into more rapid/routine collection and monitoring effort at national and program levels. We encourage collecting information on the longer set of 30 indicators (19 at CHW level, 11 at community member/client level) every 2-3 years to give a more complete picture of a country's CH systems' performance progress, quality, and accountability.

Map out potential modes and timing of data collection – both integrating indicators into existing activities, as well as initiating new processes/special studies. An example is included in Table 3. If no such opportunities exist, consider advocating for adding them to the national monitoring and evaluation strategy.

Ensure data are collected through a “neutral third party”, to avoid bias related to the interviewer and ensure honest participant response. For example, CHWs should be interviewed by someone who is not part of the formal CHW supervision or compensation structure, and community members/clients by someone who is not part of the local CH system.

TABLE 3. ILLUSTRATIVE EXAMPLES OF MODES AND TIMING OF DATA COLLECTION

CHWs		Clients/ community members
Brief set of indicators	SPAs, every 6-12 months	Community scorecards, every 6-12 months Integration into DHS
Full set of indicators	Special studies, every 2-3 years	Special studies, every 2-3 years

Consider collecting qualitative data with CHWs and community members/clients, to complement quantitative data from indicators. This may be especially helpful in interpreting data from indicators used for the first time. Longer-term, qualitative data collection could help explain trends in indicators observed over time.

Share your experiences implementing the indicators. Lessons learned can be periodically reviewed by global stakeholders for continuous quality improvement.

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