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Early-stage innovation report

Community engagement self-monitoring (CE-SM) strategy for social innovations in health: pilot implementation in the Philippines

Pauline Marie Padilla Tiangco ,[1] Jana Deborah Mier-Alpano ,[1] Jose Rene Bagani Cruz ,[1] Jason Alacapa,[2,3] Joey Escauso,[4] Uche Amazigo,[5] Beatrice Halpaap,[6] Meredith Labarda,[7] Noel Juban[8]

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For numbered affiliations see end of article.

Correspondence to
Dr Meredith Labarda, Medicine, University of the Philippines Manila School of Health Sciences, Palo, Leyte, Philippines; mdlabarda@up.edu.ph

ML and NJ are joint senior authors.

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ABSTRACT

The Social Innovation in Health Initiative (SIHI) piloted a community engagement self-monitoring (CE-SM) strategy, where communities were actively engaged in monitoring the implementation and performance of their social innovations to ensure that their objectives were achieved. This strategy aims to empower communities to document processes, understand the factors involved and measure outcomes by developing a community-grounded self-monitoring tool and implementing their own approach.

Two community comanaged social innovations were selected. For one innovation, the communities implemented the CE-SM independent of external intervention. For the second, the communities were provided with minimal assistance by SIHI. These communities identified their monitoring indicators and selected local monitors to collect data to assess performance outcomes and document the entire process.

Communities chose indicators based on their perceived importance and practicality, while monitors were chosen based on their familiarity with the community. Community leaders' proactive leadership and community members' participation contributed significantly to its success. The important role of regular feedback sessions was also emphasised, not only as a means of monitoring progress but also for boosting their morale. The level of external support needed by a community was determined by the scope of the project and the community's grasp of the strategy.

CE-SM has been demonstrated to be a viable strategy when communities realise their capacity to monitor their own projects using an approach they deem fit. It has also enhanced their sense of ownership which could improve the chances of sustaining these initiatives and contribute to more accessible healthcare and services.

Summary box

What are the new findings?

⇒ The project demonstrated a novel and inclusive method to codesign and coimplement monitoring and evaluation strategies for social innovations in health.

⇒ Regular feedback sessions of the local monitors served not only as a means of monitoring their progress but also as a means of boosting morale. Weekly sessions served as a 'safe space,' where local monitors were free to voice their insights and opinions.

⇒ When social innovations are conceptualised, cocreated and used by a community, there is a sense of ownership and a better grasp of their principles, making the implementation and monitoring process more efficient and meaningful at the community level.

How might it impact healthcare in the future?

⇒ Self-monitoring and evaluation of communities for social innovations in health can help these communities access data needed to improve and refine these innovations to further improve health outcomes in the community.

⇒ Empowering communities to implement self-monitoring and evaluation strategies for health initiatives in their communities can enhance their sense of ownership of these initiatives, which could improve the chances of sustaining these initiatives and contribute to more accessible healthcare and services.

INTRODUCTION

Social innovations in health (SIH), defined as a community-engaged process that links social change and health improvement, drawing on the diverse strengths of local individuals and institutions,[1] are embedded in strengthened community engagement processes that promote people-centred health systems and equitable health services.[2] They have been shown to enhance public health sector delivery capacity, prioritise impact, agility and sustainability, and produce outcomes that extend beyond health.[3] These must therefore be scaled up, sustained and integrated into existing health systems.

Globally, community scorecards have been used as a participatory social accountability tool for planning, monitoring and evaluating services in health, education, water and sanitation.[4] In the Philippines, scorecards are used as a means to evaluate and monitor the performance of local government units in the implementation of reforms within the health system.[5] However, it largely uses a top-down approach with little involvement from the community. Hence, there is a need to explore community-grounded, community-managed and contextualised approaches to the monitoring and evaluation of health intervention performance and implementation. A similar strategy was adopted for the control of onchocerciasis in Africa, which was found to promote sustainability, community ownership and empowerment.[6]

In this regard, the Social Innovation in Health Initiative (SIHI) engaged selected communities in the Philippines to implement a community engagement self-monitoring (CE-SM) strategy with a focus on social innovations among urban and rural communities. This allows communities to be involved in the entire process of monitoring, where they can plan, design and implement how to monitor their projects as they deem fit. Enabling relationships among community stakeholders and partners to enhance existing practices in addressing health challenges specifically in monitoring and evaluation is deemed to be an effective approach to promote ownership and sustainability at the community level.[7 8]

OBJECTIVE

To describe the processes and dynamics of the communities in implementing a community-grounded and contextualised CE-SM strategy for SIH, which will help identify factors and describe strategies to best engage communities. It also seeks to explore factors influencing the level of external support a community needs to conduct the strategy.

METHODS

Key persons and their roles

The SIHI is a global network of individuals, organisations and institutions advocating for and advancing research in social innovation in health. The SIHI country hub in the Philippines (SIHI Philippines) conducted the project.

Innovators pertain to community-based organisations, represented by their heads, who have developed and implemented social innovation(s) to address identified priority health needs of Filipino communities.

Documenters are individuals that innovators have assigned to document how communities plan, collect, analyse and report data. They serve as observers and were not to intervene in the communities' processes. Essentially, they are the community's link to the SIHI team.

Local monitors refer to community-selected volunteers who are part of the community where the social innovation is being implemented. Their main task is to collect data throughout the self-monitoring process.

CE-SM implementers collectively refer to the innovators, local monitors, community members and community leaders who have been involved in the implementation of the strategy.

Overview of CE-SM strategy implementation

In the preparatory phase of CE-SM, SIHI conducted the selection of innovations and planning with the innovators, including the selection of specific communities to be engaged. This was followed by the identification of local monitors and the selection of monitoring indicators. The actual implementation of the monitoring process, documentation of community performance outcomes and reporting of feedback were then carried out by the communities(figure 1). These were conducted from September to December 2021.

Selecting social innovations

For the pilot implementation of the CE-SM strategy, the social innovations should be: (1) codesigned and (2) comanaged by the community or have a strong community participation component and (3) implemented within the time frame of the project. Innovations were chosen from those that were identified and recognised by SIHI Philippines for developing and implementing social innovation(s) based on the identified priority health needs of Filipino communities.[9]

Two social innovations were selected: (1) Kalinga Health of Innovations for Community Health,[10] and (2) Seal of Health Governance (SOHG) of the municipality of Del Carmen, Surigao del Norte,[11] as listed in table 1. A difference in the urban–rural setting of the innovations was also taken into consideration to explore differences in the strategy implementation (table 1). The CE-SM implementers for Kalinga Health were designated as the community-managed group, which did not receive any intervention from external partners. In contrast, the CE-SM implementers for SOHG were assigned as the SIHI comanaged group. They received minimal assistance from SIHI by being provided with an initial list of monitoring indicators but were able to modify this as they deem fit.

Figure 1 Steps in the implementation of the CE-SM strategy. CE-SM, community engagement self-monitoring .

In general, both innovators aimed to conduct monitoring to determine progress towards objectives and gain an understanding of the factors which serve to enable the innovation's sustainability. For SOHG, which is a leadership programme with a monitoring component itself, CE-SM was geared towards determining if the objectives are being achieved and if such an initiative can be sustained. The indicators have then been selected based on what the local government unit and the community considered important for sustainability, specifically the community's perception of and participation in the programme. Kalinga

Table 1 Profile of identified social innovations

	Community-managed group	SIHI comanaged group
Innovation	Kalinga Health[10]	Seal of Health Governance[11]
The Nature of Innovation	It is a 360° social enterprise facility that focuses on service delivery for tuberculosis care from detection to management. It implements a hub-and-spoke model, where it acts as the 'hub' and several private providers ('spokes') refer patients through a series of public–private mix strategies for tuberculosis care.	A health leadership and monitoring programme that encourages community leaders to be actively engaged in addressing their community's concerns through an open participatory competition.
Innovator	Innovations for community health is the first implementation-focused non-government organisation in the Philippines. It seeks to provide sustainable and scalable innovations in community health with an emphasis on private-sector delivery mechanisms.	The local government of Del Carmen oversees and manages the project, along with representatives from the Department of Education and local civil society organisations.
Geographical area	Marikina City—a highly urbanised city located in the Philippines' National Capital Region	Del Carmen, Surigao del Norte—a fifth-class coastal municipality in one of the major islands in the Philippines
Communities	Comprosed of 16 barangays/villages. Two barangays, which have a combined population of 45 310 as of 2020, participated in the project.	Composed of 20 barangays with a total population of 20 127 as of 2020. All 20 barangays participated in the project.
Community members' roles in the innovation	K! leaders, who are volunteer leaders and members of the community, conducted house-to-house visits to ensure that patients of Kalinga Health were compliant with their medications and their follow-up consultations. During these home visits, they also provided health education sessions related to tuberculosis and other lifestyle diseases such as hypertension.	Development of scorecards, participation in health leadership and management training, provision of out-of-the-box solutions to their context-specific challenges
Selected local monitors	K! Leaders, a group of volunteers trained by ICH in health promotion and patient engagement	Members of the barangay council, barangay nutrition scholars, barangay health workers

ICH, Innovation for Community Health; SIHI, Social Innovation in Health Initiative.

Health, on the other hand, was focused on increasing case detection and treatment compliance, as reflected by their indicators. It is important to note that ultimately, it was the local monitors who had the final say on what indicators to use and how to go about the strategy, in consultation with barangay leaders.

Planning sessions with innovators

The SIHI team conducted an orientation session, with the support of an expert in community engagement in global health, to facilitate an understanding of CE-SM, its value for social innovations and partners, and its specific implementation steps. SIHI's definition of social innovation, the principles and dynamics of CE-SM, the importance of community engagement and the use of CE-SM results were discussed. It was an interactive session with the innovators, SIHI team and members of various SIHI country hubs.

Implementation of the CE-SM strategy by the communities

Kalinga Health first engaged K! Leaders, who helped distribute letters to all barangays to introduce the project, along with an invitation for a virtual meeting with barangay officials. Two barangays agreed to be part of the project. A series of sessions were subsequently conducted by Kalinga Health to orient chosen monitors on collecting, interpreting and reporting data. A special session was facilitated on collecting data from the online dashboard that Kalinga Health developed. During the 4-week implementation period, data were collected from the online dashboard once weekly.

For the monitoring of SOHG, an orientation led by the local government head was conducted in each barangay to reintroduce the innovation, introduce the CE-SM strategy, and discuss implementation with members of the barangay council, who are in charge of planning and implementing government programmes and passing resolutions and ordinances in the community. They participated in consultative sessions to select monitoring indicators and local monitors through votation. The chosen local monitors were assigned to conduct house-to-house visits and interview household representatives based on the assigned catchment areas using a questionnaire that they themselves devised. Paper-based monitoring was used. After collecting data, accomplished questionnaires were checked, consolidated and finalised by members of the council.

Feedback loops

The documenter for Kalinga Health held two virtual sessions with local monitors, where weekly data were reported, and difficulties were discussed. After the 4-week implementation, local monitors presented their findings during a feedback session. The documenter for SOHG had separate face-to-face meetings with the local monitors of all barangays to discuss difficulties encountered in collecting and analysing data.

The SIHI team conducted weekly meetings with the documenters to discuss the progress of the communities, the difficulties they encountered and recommendations to improve their approach. These meetings were crucial to identify barriers early and formulate timely solutions. To synthesise insights from the project, a joint assessment meeting was conducted at the end of the implementation period.

RESULTS

Choosing local monitors

For Kalinga Health, K! Leaders were chosen as local monitors primarily because of their familiarity with the community and innovators. For SOHG, selected local monitors were mostly barangay health workers and barangay nutrition scholars because of their familiarity with the community and their perceived ability to execute required tasks. Barangay secretaries and treasurers were selected to spearhead data consolidation, while barangay captains and councillors acted as team leaders.

Choosing monitoring indicators

Monitoring indicators for both innovations were chosen based on what local monitors perceived as important, feasible and practical (see online supplemental appendix 1). For Kalinga Health, the two barangays came up with similar indicators, which include identifying the number of patients who have been: (1) diagnosed with tuberculosis, (2) lost to follow-up and (3) completed treatment in Kalinga Health. For SOHG, the majority of barangays opted to maintain the indicators provided by SIHI with two to three indicators per innovation objective, prioritised based on significance to their community and availability of data, as listed in table 2. The majority chose indicators that assessed the relevant involvement of stakeholders in the development, implementation and monitoring of the programme, the type and coverage of community-based initiatives, and the community's perception of and response to the initiatives. These were translated into Filipino and the local language of the community.

Dynamics of the monitoring process

Local leaders considered representation, active participation and cocreation as important factors in achieving the project's goals. Moreover, the engagement and commitment of the community to the project were observed to be largely dependent on their perception and trust in its principles and objectives.

The frequency and timing of monitoring were dependent on the availability of the workforce and their timeline. Local monitors for Kalinga Health collected data weekly while those from SOHG monitored once for the entire duration of the project. The former

Table 2 An excerpt of the monitoring indicators identified for SOHG

Objectives	Indicators
Promoting a cocreative and participatory approach	▶ Proportion of households with at least one active member (attends meetings, participates in planning and implementation) ▶ Proportion of barangay meetings held
Developing leadership capacity among village leaders and community members	▶ Proportion of training sessions conducted among community leaders/local monitors ▶ Proportion of barangay leaders oriented about SOHG
Encouraging community participation to innovate and create local solutions	▶ Proportion of community members that participate in the planning and implementation of community programmes ▶ Percentage of proposals that have been developed by community leaders and members
Acceptability	▶ How do community members perceive SOHG as a programme? ▶ Do they perceive it as an effective means of monitoring?
Community mobilisation	▶ Has the process of developing a community action plan been participatory? ▶ Are the changing needs of the audience being captured?
General considerations	▶ Are the project goals stated and well-defined? ▶ Are relevant stakeholders involved in the development and implementation of the programme?

SOHG, Seal of Health Governance.

noted ease in monitoring because of their access to an online dashboard, which the local monitors were trained to use. The latter opted to do monitoring only once because of the large number of households to cover within a limited time frame. It was also difficult to monitor more frequently because of other simultaneous community projects and commitments.

Challenges encountered

An initial challenge for the CE-SM implementation for Kalinga Health was establishing rapport with community members which necessitated the extension of the preimplementation period. The unfamiliarity of the barangay councils with Kalinga Health and restrictions set by the COVID-19 pandemic also contributed to this.

During data collection, the limited time to complete interviews and difficulty collecting relevant data due to the unavailability of household heads and initial confusion of respondents were identified as challenges by both SOHG and Kalinga Health.

During data processing, the lack of familiarity with technology such as softwares for encoding and poor internet connection posed difficulties for both communities. To remedy this, help was sought from teachers and the Sangguniang Kabataan (Youth Council) for the questionnaires and from rural health unit nurses and the Disaster Risk Reduction and Management team for the coordination of visits. Explaining and expounding on concepts provided understanding and valuable insights to the respondents. One remark of note was a respondent who said, 'Sa tagal namin dito, ngayon lang kami natanong tungkol sa ganito' (In the many years of living here, this is the first time someone asked for our thoughts about a project).

DISCUSSION

Throughout the project, the political will of barangay leaders contributed significantly to its success. This is consistent with Arnstein's take on engagement and how the relationship between power, community and government affects the decision-making power of the community.[12] The importance of following the community's timeline was also emphasised. A pre-existing relationship between community members and the project team members facilitated active participation and better working relationships. Good relationships were an enabling factor for better engagement, observed in both communities. Moreover, the important role of regular feedback sessions was emphasised, not only as a means of monitoring progress but also to boost their morale and sense of ownership. Weekly sessions served as a 'safe space' where local monitors were free to voice their insights and opinions. This facilitated a continuous people-centred approach in the implementation and improvement of initiatives and cocreation of more community innovations. The sense of ownership also leads to more efficient and meaningful implementation and monitoring which enables project sustainability, even when external funding and support decreases or ends. The focus of monitoring was dependent on the nature of the social innovations and was geared towards determining progress towards goals and exploring elements crucial for sustainability. This was determined through a synergistic approach with the social innovators. Throughout the process, strategies and factors to best engage communities were identified, including building rapport, tapping community leaders, explaining the purpose and importance of the project to the community members, and holding regular feedback sessions.

The study explored whether differences exist between communities receiving different levels of support from external sources for their implementation of the CE-SM strategy. For the monitoring of SOHG, SIHI provided support in the initial stage by providing a list of indicators. This was found to have a minimal effect on the process and outcomes. The community had difficulty providing information required by the monitoring indicators due to the unavailability and inaccessibility of data sources and

lack of knowledge of the formulas needed to process data. On the other hand, the communities of Kalinga Health, which did not receive any form of support from SIHI, had no difficulty formulating indicators but had challenges moving forward, as they initially experienced difficulty in using the online dashboard. These demonstrate that the level of external support must be tailored to the baseline knowledge and skills of local monitors. Prior experience with the strategy and the availability of data sources are also some of the factors influencing the level of support needed. These might also indicate a mismatch between the perception of decision-makers of available community resources (financial and/or technical) and actual available resources. Levelling this could be important to future community self-monitoring programmes. Capacity-building activities focusing on creating questionnaires, building and understanding databases, and analysing data may also be beneficial.

CONCLUSION

The project discusses the community engagement and self-monitoring strategy, where communities are in charge of all phases of the strategy implementation. This is unique in that these efforts are community led, allowing them to change certain aspects of these processes as they deem fit. Other communities may benefit from it by contextualising the processes based on the specific problem being tackled and the actual circumstances of the community. Self-monitoring and evaluation of communities for social innovations in health can help these communities access data needed to improve and refine these innovations to further improve health outcomes in the community.

The results of the pilot implementation of the CE-SM strategy demonstrated that it is a viable approach when tailored to the capacity of the community, the nature of the project being implemented and its practicality and feasibility for the community. It further affirmed the pivotal role community engagement plays in motivating and empowering communities to actively participate in social innovations. Letting community members monitor their projects—from identifying monitoring indicators to collecting and analysing data, and finally using these to improve implementation and create more solutions to enhance health and quality of life—highlights the importance of developing a sense of ownership and partnership in ensuring the sustainability of an initiative, whether with the government or private sector.

Our study is exploratory in nature, hence the conclusions drawn from this study may not be applicable to other settings. The findings can be strengthened by exploring the strategy on a larger scale, with a longer timeline and in other sociocultural settings.

Author affiliations
[1]University of the Philippines Manila, Manila, Philippines
[2]Johns Hopkins University, Baltimore, Maryland, USA
[3]Innovations for Community Health, Inc, Marikina, Philippines
[4]Surigao del Norte State University, Surigao City, Philippines
[5]Pan-African Community Initiative on Education and Health, Enugu, Nigeria
[6]UNICEF/UNDP/World Bank/WHO Special Programme for Research and Training in Infectious Diseases (TDR), Geneva, Switzerland
[7]Medicine, University of the Philippines Manila School of Health Sciences, Palo, Philippines
[8]Clinical Epidemiology, University of the Philippines Manila, Manila, Philippines

Twitter Jana Deborah Mier-Alpano @janadeborahmd

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Contributors UA, ML, NJ and BH conceptualised and designed the project. PMPT, JDM-A and JRBC designed and finalised the protocol. JE conducted the focus group discussions. PMPT, JDM-A, ML, JRBC, UA, JA and BH facilitated the qualitative analysis. All authors reviewed, edited and approved the final version of the manuscript. Deceased: NJ since deceased.

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ORCID iDs
Pauline Marie Padilla Tiangco http://orcid.org/0000-0002-6198-9399
Jana Deborah Mier-Alpano http://orcid.org/0000-0003-4119-8300
Jose Rene Bagani Cruz http://orcid.org/0000-0001-7539-0144

REFERENCES

1 Halpaap BM, Tucker JD, Mathanga D, *et al*. Social innovation in global health: sparking location action. *Lancet Glob Health* 2020;8:e633–4.

2 Dako-Gyeke P, Amazigo UV, Halpaap B, *et al*. Social innovation for health: engaging communities to address infectious diseases. *Infect Dis Poverty* 2020;9:98.
3 Social Innovation in Health Initiative. What is social innovation in health? 2021. Available: https://socialinnovationinhealth.org/about/what-is-social-innovation/ [Accessed 29 Oct 2022].
4 Amazigo U, Okeibunor J, Matovu V, *et al*. Performance of predictors: evaluating sustainability in community-directed treatment projects of the African programme for onchocerciasis control. *Soc Sci Med* 2007;64:2070–82.
5 Bureau of Local Health Systems Development - Department of Health. LGU health Scorecards, 2019. Available: https://doh.gov.ph/sites/default/files/publications/LGU-Health-Scorecard.pdf [Accessed 10 Oct 2022].
6 Amazigo UV, Obono M, Dadzie KY, *et al*. Monitoring community-directed treatment programmes for sustainability: lessons from the African programme for onchocerciasis control (APOC). *Ann Trop Med Parasitol* 2002;96 Suppl 1:S75–92.
7 World Health Organization. WHO community engagement framework for quality, people-centred and resilient health services. Geneva World Health Organization; 2017. https://apps.who.int/iris/bitstream/ handle/10665/259280/WHO-HIS-SDS-2017.15-eng.pdf [Accessed 01 Jul 2022].
8 World Health Organization. Community engagement: a health promotion guide for universal health coverage in the hands of the people. Available: https://apps.who.int/iris/handle/10665/334379 [Accessed 05 Aug 2022].
9 Cruz JRB, Mier-Alpaño JD, Mier AR, *et al*. Institutionalisation of social innovation in health research: the Philippine Gelia Castillo Award. *BMJ Innov* 2022;8:149–54.
10 Innovations for Community Health, Inc. Kalinga health. Available: https://innovationsch.org/kalinga-health/ [Accessed 01 Jul 2022].
11 Juban N, Salisi J, Mier A, *et al*. Seal of health governance, Philippines, 2021. Available: https://socialinnovationinhealth.org/case-studies/seal-of-health-governance/ [Accessed 01 Jul 2022].
12 Arnstein S. A ladder of citizen participation. *J Am Plann Assoc* 2007;35:216–24.