Health Policy

Community-driven strategies for primary health care resilience in response to shocks in Latin America and the Caribbean: a scoping review and expert consultation

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Summary

Community engagement in Primary Health Care (PHC) enhances system resilience. This scoping review and expert consultation aimed to document the range of community-driven interventions and strategies implemented in Latin America and the Caribbean (LAC) in response to shocks and identify factors that enable or hinder their implementation. The research used a mixed-methods approach, including a scoping review of 70 studies from January 2019 to July 2024 and interviews with seven subject experts. The findings were then validated with six additional experts. The study identified 14 community-driven strategies, grouped into three main categories: community health worker participation, community engagement, and mobilization of civil society organizations. For each category, the researchers analyzed facilitators and challenges. This work provides a comprehensive compilation and analysis of community-driven interventions during emergencies in LAC. The findings offer valuable insights for improving emergency preparedness and response strategies in health systems.

Keywords: Primary health care; Community participation; Social participation; Health system resilience; Latin America; Caribbean region

Background

There is a growing trend in global public health towards community-led, asset-based strategies that empower individuals, build social capital, and promote resilience.[1,2] This shift highlights the need to move away from a purely biomedical approach towards more participatory, people-centered strategies.[1,2] Central to this view is the recognition of communities' roles in their own health and well-being.

Scholars define communities not simply by geographic location but also by shared interests and social interactions, and internal diversity.[3] Communities are characterized as dynamic, heterogeneous entities with unique social networks, bonds, and cultures.[3] More than just recipients of aid, communities are seen as key actors with their knowledge, skills, and resources that can shape health interventions.[1] This understanding views communities as active agents, rather than passive targets of interventions, that can promote resilience.[4]

Community engagement is described as the process of involving community members in the decisions and actions that affect their health.[3] It moves beyond basic risk communication to substantive participation in all aspects of health programming, including planning, implementation, and evaluation.[3] Loewenson and colleagues,[1] suggest that effective community engagement requires time, empathy, resources, measures that consider socio-cultural diversity, and use of community evidence.[1]

In the context of Primary Health Care (PHC), studies indicate that community engagement contributes to resilience by improving service delivery and strengthening relationships between communities and health systems.[5] These strategies enable the development of context-specific solutions tailored to local needs, improve resource allocation, and promote health equity by addressing the needs of marginalized

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populations.[4] This may be particularly relevant in emergency settings, where communities often act as first responders.[6]

During crises like the COVID-19 pandemic, studies have highlighted the role of community engagement in maintaining essential services and adapting to challenges.[5] However, current knowledge gaps remain, particularly in Latin America and the Caribbean (LAC), where health systems face multiple risks, including climate change, epidemics, natural disasters, and socioeconomic challenges. The World Bank/PAHO Lancet Commission on Primary Health Care and Resilience in Latin America and the Caribbean highlights that integrating community-driven strategies into PHC resilience can support countries' responses to public health emergencies.[7]

While studies have examined specific community-based interventions in various contexts, a comprehensive overview of community-driven strategies in LAC, particularly in emergency and PHC settings, appears to be lacking. This scoping review and expert consultation aims to address this gap by 1) documenting the range of community-driven interventions and strategies implemented in LAC during emergency settings, and 2) identifying key factors that enable or hinder the implementation of community engagement in PHC resilience in LAC.

This study seeks to contribute to the evidence base and inform future policy and practice in strengthening PHC resilience in the face of future health challenges in LAC.

Methods

This is a mixed-methods study that combined a scoping review and interviews with experts to explore community-driven strategies that can contribute to PHC resilience across LAC.

Scoping review

We conducted a scoping review using the Joanna Briggs Institute (JBI) Manual for Evidence Synthesis.[8] The review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analysis Protocols (PRISMA-ScR) extension for scoping reviews (Supplementary Table S1) but did not register a protocol.[9] The research question for this scoping review was: *what evidence exists on community-driven strategies or interventions that can contribute to PHC resilience in LAC, and what are the factors that enable or hinder their implementation?*

Search strategy

We searched PubMed, Embase (using Ovid), Lilacs, Econlit (using Ebsco), BMJ Global Health (using Web of Science), and Proquest Research Library (Public Health, Social Science Database, and Sociology Database) on July 22, 2024. We considered both MESH and free keyword terms related to "social participation", "primary health care", "resilience", "public health emergency", and "Latin America and the Caribbean". The search was conducted in English, with no restrictions on the language of publication (Full description of search strategy can be found in Supplementary Table S2).

Selection criteria

We followed the population, concept, and context mnemonic for eligibility criteria.[10] The initial criteria were refined in an iterative process in regular meetings with all the authors. Table 1 presents the final set of inclusion criteria. Articles in any language that were published between January 2019 and July 2024 were included.

All retrieved articles were imported to Covidence for duplicate removal and screening. We used a calibrated dual-review approach for screening.[11] Two independent reviewers screened titles and abstracts of a subset of articles until they achieved an agreement rate of 90% or higher. The remaining articles were then divided between reviewers for independent screening. In cases of uncertainty, they consulted with each other to reach a consensus. The same process was applied during the full-text review to determine article inclusion or exclusion.

Data extraction and critical appraisal

We extracted descriptive study data according to predefined extraction codes and collated the information in Microsoft Excel. Data extracted included authors' name (s), title, publication year, methodology, type of shock addressed, study's objective, setting, country of study, intervention or strategy's description, facilitators, and challenges. We conducted an inductive content analysis, allowing themes and categories to emerge from the data and ensuring a nuanced understanding of the literature.[11,12]

Two reviewers independently extracted data using a pilot-tested, standardized form in Microsoft Excel. The form (Supplementary Table S3) was iteratively refined during the extraction process to capture all relevant information.[11] Critical appraisal was conducted using appropriate JBI checklists for each study design.[8] Two reviewers independently assessed each study, with disagreements resolved through discussion or consultation with a third reviewer. Following data extraction and critical appraisal, we synthesized the findings narratively, identifying patterns and themes in the literature. This synthesis was guided by our research question and objectives.[11]

Expert consultation

Based on the strategies identified in the scoping review, we conducted interviews with seven key informants to learn about their perceptions of those strategies, barriers, and facilitators. Stakeholders were selected if they

	Inclusion	Exclusion
Population	Studies conducted in LAC countries	Studies conducted outside LAC countries
Concept	Studies reporting community-driven interventions or strategies related to resilience or public health emergency response	Studies that do not report community-driven interventions or strategies, or where the link to resilience or public health emergency response is not explicit
Context	PHC settings and public health emergencies	Studies not relevant to PHC or health emergencies
Time	Published between January 1, 2019 and July 22, 2024	Published outside the specified time range
Article type	Primary research, secondary research, reviews	Commentaries, editorials, opinions, gray literature, non-peer-reviewed articles
Language	All languages	None
Availability	Full text available	Full text not available

Table 1: **Inclusion and exclusion criteria based on the population, concept, and context mnemonic.**

were involved in implementing those approaches in LAC. Participants included representatives from civil society organizations (CSOs) and policymakers from six countries: Brazil, Ecuador, Guatemala (n = 2), Mexico, Nicaragua, and Peru. Interviews took place in November 2024. Five participants were female and two were male, despite invitations being distributed nearly equally by sex. Six members of the World Bank/PAHO Lancet Commission on Primary Health Care and Resilience in Latin America and the Caribbean were also contacted to confirm and supplement identified strategies.

Interviewees were invited to participate via email, and interviews were conducted virtually in Spanish, with each session lasting between 50 and 60 min. Using a pragmatic theoretical perspective,[13] the interview guide was developed based on the categories of interventions found in the scoping review. A semi-structured interview guide (Supplementary Guide S1) was used. All interviews were audio-recorded with participants' consent and transcribed verbatim for analysis.

We used NVivo software to analyze the interview data. Given the variety of strategies discussed, we employed a deductive coding approach, assigning codes based on the findings from the scoping review while remaining open to additional inductive classifications as needed. The analysis revealed 15 codes containing 142 references, organized into four categories, including core findings and the three categories identified in the scoping review (Supplementary Table S4). Thematic analysis of the interview data was then conducted and triangulated with the scoping review results.

Triangulation

The triangulation process involved systematically comparing findings from the scoping review and expert consultation. The themes were coded independently from each source and then indexed to facilitate thematic comparison. Common themes were identified, while discrepancies were documented for further analyses. Discrepancies between data sources were reconciled through iterative team discussions, prioritizing expert insights where literature gaps existed. Divergent perspectives that could not be fully reconciled were preserved as context-specific findings requiring further exploration.

Ethics

The protocol for the Lancet Commission studies, which included this article, was reviewed by the Ethics Review Committee at PAHO and determined to be exempt from full review (PAHOERC Ref. No: PAHOERC.0772.01). All interviewees signed a written statement of informed consent to participate.

Role of the funding source

This study was supported by the Pan American Health Organization (PAHO), which provided funding for the consultant (CZ) who contributed to the study. PAHO had no role in study design, data collection, analysis, interpretation, manuscript writing, or the decision to submit for publication.

Results

Scoping review results

The scoping review search retrieved 1900 studies. After removing duplicates, 1608 citations remained for screening. A total of 281 full-text articles were assessed for eligibility, with 70 studies ultimately included (Fig. 1). The literature comprised qualitative studies (n = 38), cross-sectional studies (n = 7), economic evaluations (n = 2), narratives (n = 13), quasi-experimental studies (n = 2), reviews (n = 4), and mixed methods studies (n = 4).

The shocks addressed included COVID-19 (n = 37), natural disasters (n = 9), demographic shocks (n = 6), epidemiological shocks (n = 5), political or social shocks (n = 2), and any type of disaster (n = 1). 13 articles did not specify a particular shock but were included for their relevance to PHC resilience. Finally, a total of 20 countries were represented in the studies, with Brazil having the highest representation (n = 35), followed by Mexico (n = 7). Supplementary Figure S1 shows detailed descriptive statistics of the articles included in the scoping review.

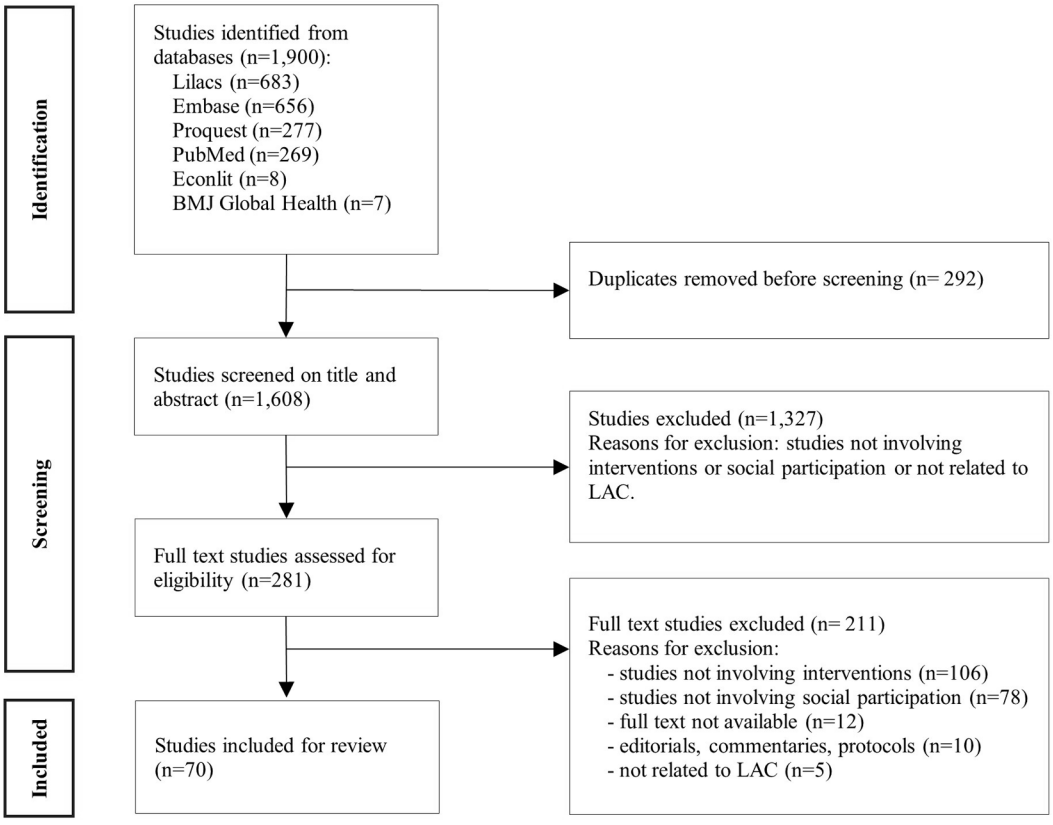

Fig. 1: **Flowchart for the study selection process in the scoping review.**

We used JBI criteria to rate study quality: ≥75% as high, 50–75% as medium, and <50% as low. Of the studies, 56 were classified as high quality, 14 as medium, and none as low. Table 2 provides a list of the 70 studies included in the scoping review, describing the strategy or intervention, and the challenges and facilitators of its implementation.

Three categories of community-driven strategies emerged from the analysis (Table 3): participation of community health workers (CHWs) (n = 35) with six interventions, active community engagement (n = 35) with four interventions, and mobilization of civil society organizations (CSO) (n = 23) with four interventions.

These categories were identified based on their lead actors and roles. CHWs include salaried or incentivized workers embedded in PHC structures conducting health actions. Active community engagement refers to grassroots participation by individuals and local leaders or committees, addressing neighborhood-level social determinants. CSO mobilization involves structured non-governmental entities—such as NGOs, labor unions, and faith-based groups—that operate independently of the health system and influence regional or national policy. Fig. 2 illustrates the distribution and intersections of these categories across the 70 articles included in the scoping review.

Participation of CHWs

The scoping review identified 35 studies and six interventions where CHWs had a key role in PHC resilience during public health emergencies (Table 3). 26 studies reported that CHWs integrated regular home visits and community outreach with emergency response efforts, ensuring continuous service delivery and population health surveillance. In nine studies, CHWs leveraged digital platforms and technological tools in both community and remote settings, improving communication, monitoring, and timely interventions. Task shifting was a strategy implemented in seven studies. In those cases, CHWs supported and reduced workloads in basic health units by organizing patient flows, conducting screenings, and handling administrative tasks.

In six studies, CHWs maintained essential community services in emergency settings by adapting healthcare delivery through innovative approaches like peri-domiciliary visits and adapted antenatal care protocols. In four studies, CHWs also expanded their service range, delivering a wider array of health services

Author	Emergency addressed	Setting/ country	Strategy/intervention	Challenges	Facilitators	Study design	Critical appraisal
Alamo-Hernandez et al., 2019[14]	Dengue and lead	Semi-urban, highly marginalized community in Mexico	The CASITA Project used a participatory action research process, involving planning, action, and reflection cycles. Community promoters conducted dengue prevention education sessions in schools, households, and public spaces; and contingency actions to produce natural repellents, nets, and mosquito traps. For the lead component, volunteer mothers were trained as environmental health community promotors, who facilitated community discussions on lead diagnostic results and potential solutions.	Not reported.	Culturally contextualized and environmentally friendly solutions.	Mixed methods: Qualitative and quasi experimental	High Quality
Almeida et al., 2022[15]	No shock is mentioned. Addresses urgent and emergency cases	Riverside territories in the Brazilian Amazon	CHWs provided urgent care services to the riverside population, conducted home visits, assisted women in labor, transported riverside dwellers to hospitals, and presented their production and the population's demands to the municipal hospital. Community members also facilitated transportation when there was unavailable.	Difficult access to health services, particularly transportation challenges.	CHWs' dual role as workers and community members informs strategies tailored to local realities.	Qualitative	High Quality
Alonso et al., 2023[16]	Covid-19	General population in Argentina	Neighborhood emergency committees were created as solidarity networks to create plans, coordinate with the health sector and municipal organizations, and provide social support. The latter included the distribution of medicines and assistance in the event of job loss, food crisis, and the suspension of public health services.	Not reported.	Collaboration of health workers with community organizations.	Qualitative	Medium Quality
Alonzo & Popescu 2021[17]	Covid-19	Low-income, high-risk communities in Guatemala	A social media-based mental health campaign targeted underserved communities through a participatory approach involving researchers, community-based mental health providers, and community members. They actively participated in designing and sharing the aims and content of the social media mental health campaign.	Not reported.	Participatory process. Identification of community partners.	Qualitative	High Quality
Anigstein et al., 2021[18]	Covid-19	General population in La Granja and Chiloé, Chile	Social movements are organized to protest, advocate for vulnerable groups, and implement health initiatives. The Health in Resistance Movement supported self-managed health actions together with the Emergency Committees and neighbors, including disinfection of houses and communal pots, preventive health education, and coordination with health personnel.	Social participation is excluded from local decision-making processes.	Not reported.	Qualitative	High Quality
Aranda et al., 2024[19]	Covid-19	Rural communities in Chiapas, Mexico	A COVID-19 contact tracing intervention engaged CHWs to collect data on contact rosters, screen them and follow up during a home visit, educate contacts, and provide socioeconomic support.	Limited telephone and internet connection, and technical problems. Insufficient training and supervision of CHWs. Challenges with community engagement and acceptance of the program.	Communication campaigns to increase community engagement. Digital tools and real-time digital data collection.	Cross sectional	High Quality
Blas et al., 2023[20]	No shock is mentioned. Addresses essential newborn care	Rural communities in the Peruvian Amazon	CHWs conduct tablet-enhanced educational home visits to pregnant women and mothers of newborns for Mamás del Río program to identify possible pregnancies, administer pregnancy tests, and enroll pregnant women to receive home visits with their consent.	Lack of payment or insufficient time for volunteering.	Adoption of a community-based approach.	Quasi experimental	High Quality
Budosan et al., 2020[21]	Earthquake	Earthquake–affected areas in Haiti	NGOs expanded access to community-based mental health services through case finding, outreach, and clinical care at community-based outpatient facilities.	Sustainability of the program. Local NGO partners prioritize their own needs. Lack of systematic data.	Not reported.	Qualitative	Medium Quality

(Table 2 continues on next page)

Author	Emergency addressed	Setting/ country	Strategy/intervention	Challenges	Facilitators	Study design	Critical appraisal
(Continued from previous page)							
Cabieses et al., 2022[22]	Constitutional process	General population in Chile	Citizen and CSO participation in the constitutional reform included the submission of health-related proposals for constitutional norms through the Popular Initiative for Norms platform.	Selection criteria for proposals left no relevance to the number of public votes.	The national process promoted widespread civil participation.	Qualitative	Medium Quality
Caperon et al., 2021[23]	NCDs during COVID-19	General population in El Salvador	Local health committees and clubs monitored health issues and non-communicable diseases and mobilized communities. NGOs trained community leaders, established health committees, sent health educators to communities, and provided health information. Due to COVID-19, communities implemented virtual communication strategies via social networks.	Limited access to mobile phones in vulnerable populations. Women's participation is limited by patriarchal structures. High crime rates.	Trusted leaders, health teams, and peer support networks. Religious leaders influenced social mobilization. Radio, virtual tools such as WhatsApp, and community spaces allowed social mobilization activities.	Qualitative	High Quality
Cavaca et al., 2023[24]	Covid-19	Peripheral DF territories in Brazil	CSOs developed initiatives to combat COVID-19 through various communication channels, including digital social networks, public spaces, advocacy campaigns, TV, word of mouth, and network connections and partnerships.	Lack of digital literacy in the peripheral areas.	Use of online and off-line tools, digital tools, attentive listening, and solidarity.	Qualitative	High Quality
Cela et al., 2022[25]	Hurricane	Rural communities in Haiti	A Haiti-based research institution identified a skin outbreak and collaborated with local authorities and stakeholders to implement treatment interventions. Treated patients shared knowledge and medications with other affected community members.	Not reported.	Local participation and governance fostered accountability and trust between officials and constituents. Consistent communication.	Mixed methods: qualitative and cross sectional	High Quality
Chan et al., 2022[26]	Immunization programs for migrants and HPV	General population in Bolivia and Guyana	In Guyana, emergency response planning ensured immunization equity for high-risk border communities and migrant populations, leveraging intersectoral collaboration and community partnerships. In Sucre, Bolivia, local health committees, school boards, and other civil society allies participated in community-based HPV immunization promotion initiatives.	Guyana: Difficult access and outreach in border communities. Linguistic barriers. Bolivia: Growing misinformation about vaccine safety and effectiveness.	Intersectoral collaboration and civil society engagement.	Qualitative	High Quality
Correa-Salazar et al., 2023[27]	Migration	Venezuelan migrant and refugee women and girls in Colombia	Peer leadership and women-based networks promote protective health factors through shared resources, childcare support, protection from authority abuse and GBV, and access to HIV care. Civil society actors and NGOs act at the community level through outreach, community engagement, peer leadership, and social institutions like churches or community dining places.	Persecution of NGOs. Exposure to violence, health risks, and abuse.	Community leaders represented their communities in various activities. Collaboration of leaders with institutional actors. Local knowledge of community leaders.	Qualitative	High Quality
Dintrans et al., 2023[28]	Covid-19	General population in Brazil, Chile, Colombia, Costa Rica, Cuba, El Salvador, Honduras, Paraguay, Peru	Innovative strategies included virtual communication methods, remote services, online education and support groups, collaboration with various actors, delivery of contraceptive methods, and syphilis, HIV, and TB testing. The use of technology has been key to addressing COVID- 19 such as radio programs, telephone calls, SMS, chat groups, online platforms, and electronic material.	Ensure that innovative responses are sustainable and scalable	Collaboration among various actors and at different levels to create context-adapted solutions. Use of information and communication technologies (ICTs).	Narrative	High Quality

(Table 2 continues on next page)

Author	Emergency addressed	Setting/ country	Strategy/intervention	Challenges	Facilitators	Study design	Critical appraisal
(Continued from previous page)							
Douine et al., 2023[29]	No shock is mentioned. Addresses Malaria	Workers in illegal mines in Suriname	CHWs screened individuals for malaria and with the integration of the Malakit strategy, they distributed self-diagnosis and self-treatment kits for malaria and trained gold miners in their use.	Continuation of funds is not guaranteed. Insufficient salary. Repeated training leads to a loss of interest for CHWs. High turnover of CHWs.	Access to international funds. Regular supervision. Cooperation between health institutions, academia, and communities.	Narrative	High Quality
Duan et al., 2021[30]	No shock is mentioned. Addresses diabetes	Rural communities in Mexico	In a community-based diabetes management program, CHWs bridged clinics and patients by offering education, psychosocial support, and medication adherence assistance. Communities nominated CHWs to participate in the program, compensating them with consumable items.	Not reported.	Not reported.	Economic Evaluation	High Quality
Duffy et al., 2020[31]	No shock is mentioned. Addresses diabetes	Rural Guatemala	CHWs, recruited from the rural health promoter program, used a clinical decision support (CDS) application for diabetes control under the supervision of program physicians.	The application was not easy to use for all CHWs.	Use of CDS technology.	Quasi experimental	High Quality
Farias & Melo 2023[32]	Covid-19	Vulnerable areas in Brazil	Local strategies included creating popular health agents in partnership with universities and social movements, community monitoring and information sharing about COVID-19, identifying families most in need, and distributing supplies. CHWs carried out their visits on a per-domiciliary basis, limiting themselves to access to the front and sides of the houses. They received tablets with the objective of accompanying families, providing health guidance at a distance and communications on the marking and operation of their services.	No instances of social control were identified, such as local health councils or popular assemblies.	Not reported.	Qualitative	High Quality
Farias et al., 2023[33]	Covid-19	General population in Northeastern Brazil	Contingency plans indicated CHWs had to conduct health promotion, education, and prevention activities, active search, monitoring, and peri domiciliary visits in communities. As part of the reorganization of work processes at the health unit, CHWs had to reorganize schedules, assist with patient flow, and provide administrative services.	The role of the CHWs was minimized or omitted in the plans.	Not reported.	Narrative	High Quality
Fernandes & Spagnuolo 2021[34]	No shock is mentioned. Addresses social participation	General population in Brazil	Health councilors acknowledged their important role in public policy creation, representing the population, helping other bodies, and overseeing the public budget.	The participation process for health councilors was deficient, occurring in a fast and unplanned manner.	Educational workshops and concept maps were effective pedagogical tools for municipal health councilors.	Qualitative	High Quality
Fernandes et al., 2022[35]	Covid-19	Vulnerable populations in Brazil	Popular Health Education practices included addressing social needs, such as delivering food baskets, masks, and spiritual services. Collaborations among stakeholders created crisis offices for donations and engaging residents, trained popular health agents, and supported CHWs.	Not reported.	ICT and social media assisted outreach while respecting social distancing protocols.	Qualitative	High Quality
Fernandez et al., 2021[36]	Covid-19	General population in Brazil	The work reorganization of CHWs included work overload, increased administrative demands within the health unit, focus on Covid-19 guidelines, suspension of group meetings, peri domiciliary visits, and the adoption of telemedicine and remote communication tools such as WhatsApp and telephone.	Telemedicine does not replace face-to-face contact. Digital exclusion barriers. Rejection and fear among families towards CHWs. Bureaucratic internal processes. Precarious working conditions: intensified workload, lack of personal protection equipment (PPE) and insufficient support	Not reported.	Qualitative	High Quality

(Table 2 continues on next page)

Author	Emergency addressed	Setting/ country	Strategy/intervention	Challenges	Facilitators	Study design	Critical appraisal
(Continued from previous page)							
Franca et al., 2023[37]	Covid-19	General population in northeastern Brazil	CHWs supported intramural activities at the health unit by identifying and monitoring cases, providing health education, managing supplies and equipment, and tele registration. Deviations from their attributions included acting as porters or cleaning staff. CHWs continued their community-based activities, including active case searches, health promotion and prevention, peri-domiciliary visits, and case monitoring. They maintained communication with community leaders and worked to identify social vulnerabilities.	Regulations cover incipient recommendations, providing multiple operational interpretations. ICTs and social networks: insufficient equipment, poor internet quality, and lack of training. Digital exclusion barriers. Deviations from their attributions limited their ability for their community work and health education.	ICTs to extend access to users.	Qualitative	Medium Quality
Giovanella et al., 2021[38]	Covid-19	General population in Brazil	CHW maintenance was essential in surveillance, support for vulnerable groups, continuity of family monitoring and guidance through peri-domicile visits, and remote communication. Communities and CSOs supported vulnerable groups by collaborating with health services, mapping and supporting users at risk for COVID-19, developing communication and health education actions, distributing donations, and providing accommodations.	Not reported.	Interactions between social movements and health services, mediated by CHWs, facilitated mapping and support for high-risk users.	Narrative	High Quality
Giovanella et al., 2021[39]	Covid-19	General population in Bolivia, Brazil, Chile, Colombia, Cuba, Uruguay, Venezuela	CSOs supported vulnerable populations by disseminating information, providing food and financial assistance, and facilitating access to social security. CHWs were active in communities conducting peri-domiciliary visits, disseminating information, and monitoring cases through WhatsApp. Communities disseminated information and organized solidarity initiatives such as community kitchens, protests, and care for the elderly population.	Not reported.	Promoting participatory and intersectoral responses within territories and communities.	Narrative	High Quality
Gofen et al., 2021[40]	Covid-19	General population in Brazil	CHWs influenced policy design at both state and local levels. They created WhatsApp groups to support families, held weekly online public meetings to mobilize public opinion, formed coalitions in defense of public health, and gained media visibility.	Limited face-to-face interactions and lack of PPE. CHWs were either not given directives or received conflicting instructions regarding their work.	Intensive use of technologies and social media. Create and leverage coalitions and existing networks. Support of various stakeholders.	Qualitative	High Quality
Gordon et al., 2020[41]	Hurricane	General population in Puerto Rico	A non-governmental Disaster Medical Response Team provided primary care via community-based pop-up clinics and home visits, with community leaders identifying homebound residents and performing a needs assessment to select areas for medical relief.	Not reported.	Not reported.	Qualitative	Medium Quality
Gutierrez et al., 2023[42]	Covid-19	Favelas in Rio de Janeiro, Brazil	PHC teams and communities registered vulnerable individuals for social benefits, distributed medicines and food, supported transportation, developed communication materials, monitored cases via WhatsApp, and generated data in collaboration with a research institution. Organized groups conducted social activism and supported the most vulnerable, organizing the collection and distribution of basic food baskets and supplies.	Not reported.	Family clinics collaborated with community-organized groups.	Qualitative	Medium Quality

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Author	Emergency addressed	Setting/ country	Strategy/intervention	Challenges	Facilitators	Study design	Critical appraisal
(Continued from previous page)							
Hartmann et al., 2020[43]	Civil unrest	General population in Nicaragua	NGOs prioritized community outreach and deployed health promoters to communities for health checks and home visits while implementing tailored programs. They enhanced communication and refocused on administrative, fundraising, and safety concerns.	Reduced mobility within and between communities, diminished financial resources, and safety concerns for staff and volunteers.	Not reported.	Qualitative	High Quality
Hernandez et al., 2020[44]	Covid-19	Indigenous communities in Guatemala	Saving Mothers Guatemala piloted an antenatal care protocol tailored to low-literacy CHWs during the COVID-19 pandemic. Traditional birth attendants skilled in antenatal care delivery were trained in the protocol and applied it in a low-resource setting in Guatemala.	Pregnant women felt unsafe with healthcare providers inside their homes. Misinformation about COVID-19 transmission.	Pre-existing collaboration between municipal health authorities and NGOs, alongside community acceptance of home visits.	Narrative	High Quality
Holanda et al., 2022[45]	No shock is mentioned. Addresses influenza vaccination	General population in Brazil	The presence of CHWs in the studied municipalities was positively associated with achieving influenza vaccination targets.	Not reported.	Not reported.	Cross sectional	High Quality
Juarez-Ramirez et al., 2022[46]	Covid-19	General population in Mexico	The population participated in PHC disseminating and translating information and volunteering as screening assistants. Health promoters in urban and rural areas elaborated and disseminated information, tested suspected cases and followed up, conducted home visits and created mobile brigades, used social networks to establish communications, and reported to the epidemiology area.	Families withheld information about their health status from personnel due to fear of discrimination and attacks by other community members.	Use of telehealth to extend care coverage in rural areas. Social intermediaries provide local knowledge and expand the provision of services. Collaboration with authorities.	Qualitative	High Quality
Keim et al., 2021[47]	Hurricane	Communities at high risk from hurricanes in Puerto Rico	Rapidly community-developed hurricane protection plans involved community workshops for risk communication, plan writing, and exercises. Participants included community members, health authorities, NGOs, and faith-based organizations.	Use of bilingual co-facilitators instead of translators. Doubts about whether plans would be approved and adopted by the government. Key agencies and organizations were missing from the conversation.	Rapid, collaborative planning process. Shared spaces to "speak the same language" about disasters. Creating new and strengthening existing partnerships within the community.	Mixed methods: qualitative and cross sectional	High Quality
Logroño 2019[48]	No shock is mentioned. Addresses social participation	Periphery of La Plata, Argentina	Social movements trained health promoters who facilitated health insurance enrollment, linked communities with healthcare systems, and provided SRH information. Promoters also accompanied pregnant women and advocated for their communities.	Not reported.	Not reported.	Qualitative	Medium Quality
Losco et al., 2019[49]	Migration	Bolivian migrants in Brazil	Bolivian health agents in São Paulo fostered connections between basic health units and the Bolivian community. Their work included workshops, home visits, campaigns, and health communication, often serving as language interpreters.	Mistrust toward health teams due to fear of inspections negatively affecting migrants' stay in the country.	Bolivian health agents belong to the same community of users and established and strengthened trust relationships.	Qualitative	High Quality
Lotta et al., 2021[50]	Covid-19	General population in Brazil	CHWs developed new procedures and adapted their tasks, such as monitoring families and communities via WhatsApp and telephone calls. They also assumed additional administrative responsibilities within health clinics.	Inequalities between health professionals: CHWs received less support, less training, and fewer resources. CHWs were unable to realize their usual tasks. Team hierarchies worsened. Work in unsafe conditions.	Not reported.	Cross sectional	High Quality

(Table 2 continues on next page)

Author	Emergency addressed	Setting/ country	Strategy/intervention	Challenges	Facilitators	Study design	Critical appraisal
(Continued from previous page)							
Lotta & Nunes 2022[51]	Covid-19	General population in Brazil	Municipalities and clinics mobilized CHWs for household visits, vaccination campaigns, establishing sanitary cordons, and information dissemination. CHWs used telemedicine technologies, organizing WhatsApp groups for regular patient contact. State unions and federations advocated for CHWs' rights, strengthening resistance efforts.	Lack of clear regulations regarding CHW roles. Inadequate PPE and training, low salaries, and the absence of recognition for CHWs as a professional category.	Use of social media.	Qualitative	High Quality
Maciel et al., 2020[52]	Covid-19	General population in Brazil	CHWs supported health teams in communities by conducting home visits, data collection, surveillance, and health education. They also assisted in health units by organizing patient flow, vaccination schedules, and health education. Telehealth was utilized through channels like WhatsApp, email, and phone for virtual visits and community outreach.	Lack of support and manuals for CHWs to implement ICT systems. Digital exclusion across social groups. Need to strengthen CHWs' competence in communicating the epidemiological situation.	Use of ICTs.	Review	Medium Quality
Maia et al., 2020[53]	Refugees	Congolese refugees and asylum seekers in Rio de Janeiro, Brazil	CHWs are the mediators of the relationship between refugees and basic health units, who actively seek out users. The basic health unit management collaborated with the local pastor to map and register refugees.	Not reported.	Not reported.	Qualitative	Medium Quality
Malinverni et al., 2023[54]	Covid-19	General population in Peruibe, Brazil	CHWs maintained some routine activities, such as the registration of new residents. Changes in routine included providing guidance to reduce contamination, telemonitoring COVID-19 cases, and observing signs of other diseases. They used active listening during calls and peri-domiciliary visits.	Not reported.	Attentive listening, participant observation, and bonding. CHWs' knowledge of the territory and their ability to connect with the community.	Qualitative	Medium Quality
Manfrini et al., 2023[55]	Hydrological disasters (floods)	Flood-affected communities in Southern Brazil	CHWs informed communities about the functioning of health services, registered affected families to inform the City Hall and organize social assistance needs, and distributed donations for recovery. Community volunteers supported cleanup efforts in health units and properties.	Lack of clarity by health teams regarding the existence of a response plan in municipalities. Health teams felt unprepared to respond to disasters.	Civil Defense warnings and dissemination of information through open and institutional media. Solidarity acts in the flood context. Team cooperation and effective management.	Qualitative	High Quality
Mello et al., 2021[56]	Covid-19	General population in Brazil	Popular health agents trained by CSOs tested and monitored cases in communities, provided supplies and health information, guided access to basic emergency income, monitored socioeconomic conditions, articulated social support networks, and organized food banks. CHW from the SUS, in addition to the previous activities, supported intramural work in health units through the Fast-Track COVID-19 and organized reception flows, educational activities, active search, and helped in the organization of influenza vaccination.	Lack of institutional support, education, and ongoing training for CHWs.	Not reported.	Qualitative	High Quality
Meneses et al., 2023[57]	Covid-19	General population in Brazil	Popular Health Surveillance strategies involved solidarity networks, collaborations among residents, organizations, and public or private sectors, as well as community monitoring and data generation, and recognition of practices and dialog with popular knowledge.	Health services struggle to value democratic processes.	Collective networks of solidarity and popular self-organization drove surveillance actions.	Review	Medium Quality

(Table 2 continues on next page)

Author	Emergency addressed	Setting/ country	Strategy/intervention	Challenges	Facilitators	Study design	Critical appraisal
(Continued from previous page)							
Milnor et al., 2020[58]	No shock is mentioned. Addresses HIV	HIV in Rio de Janeiro, Brazil	An HIV-related community advisory board partnered with a research team to conduct community outreach and health education activities, collaborated with local CSOs, hosted roundtable talks, and participated in local conferences.	Not reported.	Collaboration with local civil society groups. Work directly with the research team. Understandings of community stakeholders, informal community leaders, and other influencers.	Qualitative	High Quality
Mulderij-Jansen et al., 2022[59]	Dengue	General population in Cuba, Colombia, and Puerto Rico	Health education campaigns and programs focused on community mobilization included vector control, house inspections, training a local task force, organizing community working groups, and enhancing collaboration between the government and the community.	Lack of community involvement and insufficient understanding of the impact of Aedes control measures. Financial constraints, limited vehicles, fuel, and personnel hinder sustainability.	Political will to provide adequate and uninterrupted supplies. Proper public management and intersectoral coordination. Actively involving household members to ensure program sustainability.	Review	High Quality
Nunes 2021[60]	Covid-19	Favelas in Brazil	Women in favelas addressed social needs by providing resources such as food, hygiene products, and wheelchairs, facilitated health communication, coordinated young volunteers, and collaborated with health and social assistance units.	Not reported.	Women and community activists established partnerships with health and social assistance units inside the favelas and beyond. Management of volunteers in a chain of solidarity.	Qualitative	High Quality
Olivar et al., 2022[61]	Covid-19	Indigenous communities in Brazil	The 'Rio Negro, We Care' campaign supported Indigenous communities by distributing basic supplies and food, disseminating pandemic-related information through informational audio recordings in Indigenous languages, and partnering with humanitarian partners.	Not reported.	Not reported.	Narrative	High Quality
Oliveira et al., 2022[62]	Covid-19	Communities in situations of vulnerability in Brazil	Communities undertook various actions, including coordinating with other communities to disseminate information, form committees, and distribute food. They also supported income generation and engaged in solidarity initiatives such as childcare, donation distribution, social mobilization, community kitchens, food collection and distribution, and socio-economic mapping of families. The establishment of "Street Presidents" and popular health agents played a central role in health promotion strategies.	Lack of mobilizing collaborative action among government sectors. No official records of actions addressing COVID-19 that consider the unique characteristics of different territories.	Collaborative networks and collective responses. Trust and solidarity among the residents.	Qualitative	High Quality
Oyarzo 2023[63]	Migration	Bolivian migrants in Argentine Patagonia	CHWs conduct health visits to migrants, in which they perform PAP testing, health promotion, and monitoring; conduct "healthy child", vaccinations, and pregnancy follow-up; monitor women using contraceptive methods; and facilitate referrals.	Difficulties related to communication between health workers and patients. Alternative conceptions of healthcare are not acknowledged by health personnel.	Not reported.	Qualitative	Medium Quality
Pancheshnikov et al., 2023[64]	Covid-19	Underserved community in Tijuana, Mexico	The NGO Prevencasa innovated during COVID-19, receiving a U.S. grant to expand a Social Medicine Curriculum for social service trainees, enabling them to host more local health interns.	Not reported.	Existing organizational capacities.	Narrative	High Quality

(Table 2 continues on next page)

Author	Emergency addressed	Setting/ country	Strategy/intervention	Challenges	Facilitators	Study design	Critical appraisal
(Continued from previous page)							
Parker et al., 2019[65]	Dengue	Underserved community in Honduras	Community leaders and stakeholders were trained on mosquito biology and control to conduct home visits and share educational material to the community. They collected data to assess baseline knowledge and the effectiveness of the intervention.	Not reported.	Not reported.	Cross sectional	High Quality
Posada et al., 2024[66]	Covid-19	General population in Cochabamba, Bolivia	The ECO Project incorporated community engagement to facilitate timely COVID-19 diagnosis and treatment. This collaborative approach co-created, implemented, and evaluated an information and education campaign.	Not reported.	Early engagement of community leaders. Collaborative, active listening, and responsive implementation of community engagement. Well-designed monitoring and evaluation of community engagement.	Mixed methods: qualitative and cross sectional	High Quality
Ramírez et al., 2022[67]	No shock is mentioned. Addresses social participation	Low-income communities in Risaralda, Colombia	A community-based participatory research program engaged academics, community leaders and residents, and health authorities to design and implement an educational strategy for social participation and community capacity building. Recruitment efforts included announcements at the Catholic churches, word-of-mouth, flyers, and social networks. The educational strategy was evaluated through focus groups with community leaders.	Clientelism and politicized participation. Little community knowledge about participation mechanisms and the health system. Barriers to participation include low educational attainment and little sense of community.	Participatory strategy tailored to the environment and culture built trust. Leading role played by institutional representatives and community leaders. Existing trust in the University and transparency of the researchers' intentions.	Qualitative	High Quality
Raviola et al., 2020[68]	Earthquake	General population in Haiti	CHWs played a key role in the national mental health system, being responsible for case identification and referral, screening, delivering interventions, health education, home visits, accompanying patients to and from the health facility, and follow-up.	Intermittent access to the internet and technology. Political and social instability. Threats to staff safety and travel restrictions.	Not reported.	Narrative	High Quality
Reinders et al., 2020[69]	Covid-19	Indigenous communities in the Peruvian Amazon	Villager groups and community members enforced COVID-19 compliance, introduced criteria to distribute government food packages, and organized committees to claim and distribute cash transfers. Indigenous federations and CHWs disseminated pandemic-related information, with local rules enabling CHWs to continue routine activities in two-thirds of communities as part of the Mamas del Rio program.	Not reported.	Using phone calls to rapidly communicate with most communities. Pre-existing supervision and monitoring systems for remote data gathering.	Qualitative	High Quality
Rodriguez-Cuevas et al., 2021[70]	No shock is mentioned. Addresses mental health	Rural communities in Mexico	CHWs received training in the WHO low-intensity psychological intervention Problem Management Plus to deliver sessions to people with mental health conditions. Adaptations to the program due to COVID-19 included using PPE, keeping distance, meeting in a ventilated area outside the house, and remote supervision.	High patient dropout rates due to the clinic's remoteness, address changes for job opportunities abroad, and referrals. Challenges with telesupervision were confidentiality, communication, and infrastructure.	Flexibility in session structures. Adaptations due to COVID-19 helped ensure the safety of CMHWs while continuing to provide care. Inclusion of community members as reference points for understanding and addressing local needs.	Narrative	High Quality
Rodríguez-Madera et al., 2021[71]	Hurricane	General population in Puerto Rico	The Health and Acupuncture for the People Project was a community-based initiative that provided free acupuncture services in public spaces after hurricane Maria.	Not reported.	Collaborative efforts between health professionals and community members. Volunteer work.	Qualitative	High Quality

(Table 2 continues on next page)

Author	Emergency addressed	Setting/ country	Strategy/intervention	Challenges	Facilitators	Study design	Critical appraisal
(Continued from previous page)							
Rosa-Cómitre et al., 2023[72]	Covid-19	General population in Sao Paulo, Brazil	CHWs of some PHC facilities maintained home visits and supported the most vulnerable, while others suspended routine activities. The local health policy council was identified as a driver of change and oversight of health management, and a vital tool for guaranteeing the quality of care provided.	Changes in unit workflows caused a distortion of CHWs' roles. Weakened social participation due to difficulties in holding face-to-face meetings and using ICTs.	Not reported.	Qualitative	High Quality
Samsamshariat et al., 2023[73]	Covid-19	Indigenous communities in the Peruvian Amazon	CHWs provided care to COVID-19 patients, led vaccine adoption efforts, and helped organize the logistics of vaccine delivery with health posts and the community chiefs.	Unreliable and dangerous transportation along the Amazon River. Limited internet access.	Leadership of CHWs.	Qualitative	High Quality
Santos et al., 2022[74]	No shock is mentioned. Addresses HIV	Men who have sex with men in Five Brazilian cities	Health promotion and information-sharing activities about HIV among MSM occurred through online platforms, dating apps, and face-to-face interactions.	Not reported.	Use of online platforms and dating apps.	Qualitative	Medium Quality
Santos et al., 2023[75]	Covid-19	General population in Brazil	CSOs created collective movements advocating for government accountability during the pandemic. They developed documents, virtual public acts, street manifestations, campaigns, and webinars.	Not reported.	Collaboration to create new forms of political articulation. Use of information and virtual communication mechanisms.	Narrative	High Quality
Souto Nobrega et al., 2022[76]	Covid-19	General population in Brazil	CHWs developed collective activities and conducted home visits, disseminated information, monitored cases, provided telehealth guidance, and helped identify vulnerable populations.	Not reported.	Not reported.	Cross sectional	High Quality
Souza et al., 2020[77]	Covid-19	General population in Rio de Janeiro, Brazil	Community leaders contributed to a knowledge-sharing platform by identifying COVID-19 informational needs, evaluating the content, language, and presentation of materials prepared by local project partners, and distributing these materials to their WhatsApp community groups.	Not reported.	Not reported.	Narrative	High Quality
Sripad et al., 2021[78]	Disasters in general	General population in Haiti	During crises, CHWs maintained door-to-door visits as possible, used phone-based and digital communication, inspired communities to "lend a hand, and mitigated travel risks by working with local information-sharing networks to refer patients.	Insufficient monthly stipend. Insecurity, violence, mobility restrictions, and constrained supply chains. Limited structural support.	CHWs' generalized scope of work, longstanding trust with communities, responsiveness, self-regulation, and adaptability.	Qualitative	High Quality
Toledo et al., 2024[79]	No shock is mentioned. Addresses HIV	General population in Brazil	NGOs provided HIV counseling and testing through strategies such as mobile units, peer education, and innovative community engagement in collaboration with various stakeholders.	Difficulties in coordination with health authorities, funding sustainability, and the impact of external factors such as COVID-19.	AIDS NGOs leadership. Social participation and government collegiate bodies enhance transparency. Cooperation between the three government levels and civil society.	Review	Medium Quality
Tschampl et al., 2020[80]	Dengue	General population in Guerrero, Mexico and Managua, Nicaragua	Camino Verde engaged CHWs, known as brigadistas, to support community mobilization as organizers and educators on dengue. Their efforts included household and school visits, organizing educational activities, and raising awareness about dengue transmission.	Social tensions due to drug-related security concerns created challenges for community engagement and access to participating households.	Not reported.	Economic Evaluation	High Quality

(Table 2 continues on next page)

Author	Emergency addressed	Setting/ country	Strategy/intervention	Challenges	Facilitators	Study design	Critical appraisal
(Continued from previous page)							
Vieira-Meyer et al., 2021[81]	Covid-19	General population in Brazil	CHWs conducted home visits, health promotion activities, and activities under the School Health Program	Not reported.	Not reported.	Cross sectional	High Quality
Vieira-Meyer et al., 2023[82]	Covid-19	General population in Northeastern Brazil	CHWs conducted a reduced frequency of home visits, school health promotion activities, and other on-site community services during the pandemic. The frequency of administrative activities remained unchanged.	Inadequate working conditions, including insufficient PPE supplies, lack of training in new protocols, and low overall biosafety levels.	Not reported.	Cross sectional	High Quality
Welton et al., 2020[83]	Hurricane	General population in Puerto Rico	Maternal and child health research programs implemented preparedness plans for hurricanes. Teams ensured staff safety and then restarted operations by contacting participants, assessing their needs, and helping to address them. They collaborated with other actors to collect and distribute supplies, and to deliver mobile clinics to local community health centers, schools, community organizations, and libraries.	Reaching most participants was difficult because wireless services were frequently offline.	Longstanding trust with the team facilitated participant commitment to clinic visits. Staff commitment.	Narrative	High Quality

CDS, clinical decision support; CHWs, community health workers; CSOs, civil society organizations; DF, Distrito Federal (Federal District) Brazil; GBV, gender-based violence; HIV, human immunodeficiency virus; HPV, human papillomavirus; ICTs, information and communication technologies; NGOs; non-governmental organizations; PHC; primary health care; PPE, personal protection equipment; SMS, short message service; TB, tuberculosis.

Table 2: **Articles included in the scoping review.**

directly in communities, including mental health support and pregnancy-related care. Finally, three studies highlighted CHWs' coordination with PHC teams and intersectoral collaboration with various stakeholders, including local information networks and politicians.

The articles identified several facilitating factors. Eight studies emphasized the role of information and communications technologies (ICTs), social media, and digital tools in facilitating daily operations. ICTs also expanded CHWs' capacity for remote monitoring, telehealth services, and real-time data collection, particularly during the COVID-19 pandemic.[19,31,37,40,46,51,52,69] Five studies highlighted CHWs' adaptability, leadership, and ability to engage with community members, health services, and other stakeholders.[38,54,70,73,78] Additionally, five studies noted their strong community ties and deep knowledge of local territories, built on trust and shared experiences.[15,46,49,54,78] Four studies mentioned the importance of collaboration with authorities, health institutions, academia, communities, NGOs, coalitions, and other networks in supporting CHWs activities.[29,40,44,46]

Several challenges were identified. 13 studies mentioned precarious working conditions limited CHWs' work. These included insufficient pay, inadequate personal protection equipment (PPE), transport difficulties, limited training and supervision, lack of professional recognition, low safety levels, and poor institutional support.[15,19,20,29,36,40,50,51,56,68,73,78,82] Ten studies reported challenges in community engagement. These included fear among families regarding home visits during the pandemic, reluctance to share health information, and communication barriers due to reduced face-to-face interactions, misinformation, limited CHWs' skills in communicating epidemiological information.[19,36,40,44,46,49,52,63,70,80]

Additionally, eight studies highlighted technological barriers, including insufficient equipment, poor internet connectivity, digital exclusion, and lack of training in using ICTs for monitoring or remote assistance, particularly in rural areas and in conditions of social distancing during COVID-19.[19,31,36,37,52,68,70,73] Six studies reported the absence of clear guidelines on CHW's roles, such as plans, regulations, and protocols, or noted conflicting instructions regarding their work.[33,37,40,50,55,72] Finally, two studies reported that the reassignment of CHWs to intramural health activities and administrative tasks at health units reduced their capacity for conducting activities in the field.[36,37]

Community engagement

The scoping review found 35 studies and four types of strategies that discussed the role of individual community members, local leaders, committees, and grassroots organizations during emergency preparedness and response in PHC. 19 studies highlighted community engagement in health promotion, prevention, and monitoring activities to support the health response during emergencies. Actions reported included serving as health promoters or agents, participating in health councils, engaging in peer social networks, facilitating health communication, and monitoring cases. 15 studies described communities' role in addressing social needs to mitigate the consequences of shocks. Activities included distributing food, medicines, hygiene supplies, and donations, as well as organizing popular kitchens, childcare, and

N°	Strategies/interventions	Actions	# Studies	References
Category 1: Participation of community health workers				
1	CHWs integrate regular home visits and community outreach with emergency response efforts to ensure continuous service delivery and population health surveillance to address the needs of target populations	Health promotion and education, dissemination of health information, active search, case monitoring and surveillance, referrals to appropriate healthcare facilities, coordination of vaccination campaigns, implementation of school health programs	26	15,19,29,32,36–39,45,46,49,51–56,63,69,72,73,76,78,80–82
2	CHWs leverage digital platforms and tools in community and remote settings to improve communication, monitoring, and timely interventions for target populations	Online visits and remote monitoring through digital communication channels such as WhatsApp, email, and phone. Use of tablets and clinical applications as job aids.	9	20,31,33,36,39,40,50–52
3	CHWs assume task-shifting roles to support and reduce the workload in basic health units during emergencies	Organization of patient flows, screening and triage, health education, data entry, monitoring, and surveillance within health units, as well as administrative tasks	7	33,36,37,46,50,52,56
4	CHWs adapt healthcare delivery in emergency settings to maintain essential community services	Peri-domiciliary visits, implement adapted antenatal care protocols for low-literacy CHWs	6	32,37–39,44,54
5	CHWs deliver an expanded range of health services offered in communities to enhance the response to their health needs	Administer pregnancy tests, enroll pregnant women to receive home visits, organize sessions for people with mental health conditions	4	20,30,68,70
6	CHWs collaborate with various actors to improve community health service delivery and foster multi-sectoral collaboration in emergency settings	Collaboration with local information-sharing networks, academia, health units, community leaders, coalitions, media actors, the judicial system, and politicians	3	40,73,78
Category 2: Community engagement				
7	Community members, leaders, and community-based organizations actively participate in health promotion, prevention, and monitoring activities to support the health response during emergencies	Serve as health promoters, participate in health councils, engage in peer social networks, facilitate health communication, utilize dating apps for information sharing, and monitor cases	19	18,23,25,27,32,35,39,42,46,48,56–58,60,62,69,71,74,79
8	Community members, leaders, and community-based organizations engage to address the social needs of their communities to mitigate the consequences of shocks	Distribute food, medicines, hygiene supplies, and donations, facilitate housing support and cash transfers, organize popular kitchens, childcare, and transportation assistance	15	15,16,18,27,32,35,38,39,42,55–57,60,62,69
9	Community members and leaders engage in participatory processes to develop tailored, culturally appropriate health plans, materials, and interventions	Co-creation, implementation, and evaluation of health interventions, such as health education courses, health prevention and information campaigns, and protection plans	10	14,20,41,42,47,59,65–67,77
10	Community leaders and community-based organizations collaborate with other communities and sectors to enhance the reach of interventions	Community-wide coordination with other communities, health workers, churches, academia, social services, civil society organizations	7	16,26,35,38,58,62,72
Category 3: Mobilization of civil society organizations				
11	CSOs collaborate with other actors to support the response to public health emergencies	Collaboration with other CSOs, health personnel, government, philanthropy, academia, communities, and social movements	14	18,21,25,26,28,32,35,38,39,48,53,74,79,83
12	CSOs actively participate in health promotion, prevention, and monitoring activities to support the health response in emergency settings	Provide health services in fixed locations and mobile units, deliver health education and information, train community leaders, create health committees, conduct online support groups	10	18,23,24,27,28,43,61,64,79,83
13	CSOs engage to address the social needs of target communities to mitigate the consequences of shocks	Mobilization to obtain and distribute donations, food, and monetary aid, disinfect houses, organize community kitchens, organize temporary shelters	5	18,35,38,39,83
14	CSOs conduct advocacy efforts to influence decision-making and to enhance transparency and accountability during emergencies	Submission of health-related proposals for constitutional norms, movements reactive to the Government's role through campaigns, protests, and public acts	4	18,22,51,75

Table 3: **Community-driven interventions identified in the scoping review.**

transportation assistance. Ten studies reported community involvement in participatory processes for developing tailored, culturally appropriate plans, materials, and interventions. This included the co-creation, co-implementation, and co-evaluation of health interventions, such as health education courses, health prevention and information campaigns, and elaboration of plans. Lastly, seven studies showed that grassroots organizations collaborate with other communities, actors, and sectors to enhance the reach of interventions. For instance, community-wide coordination with other communities, health workers, churches, academia, social services, and CSOs.

Several factors facilitated community engagement strategies. 14 studies highlighted collaboration with

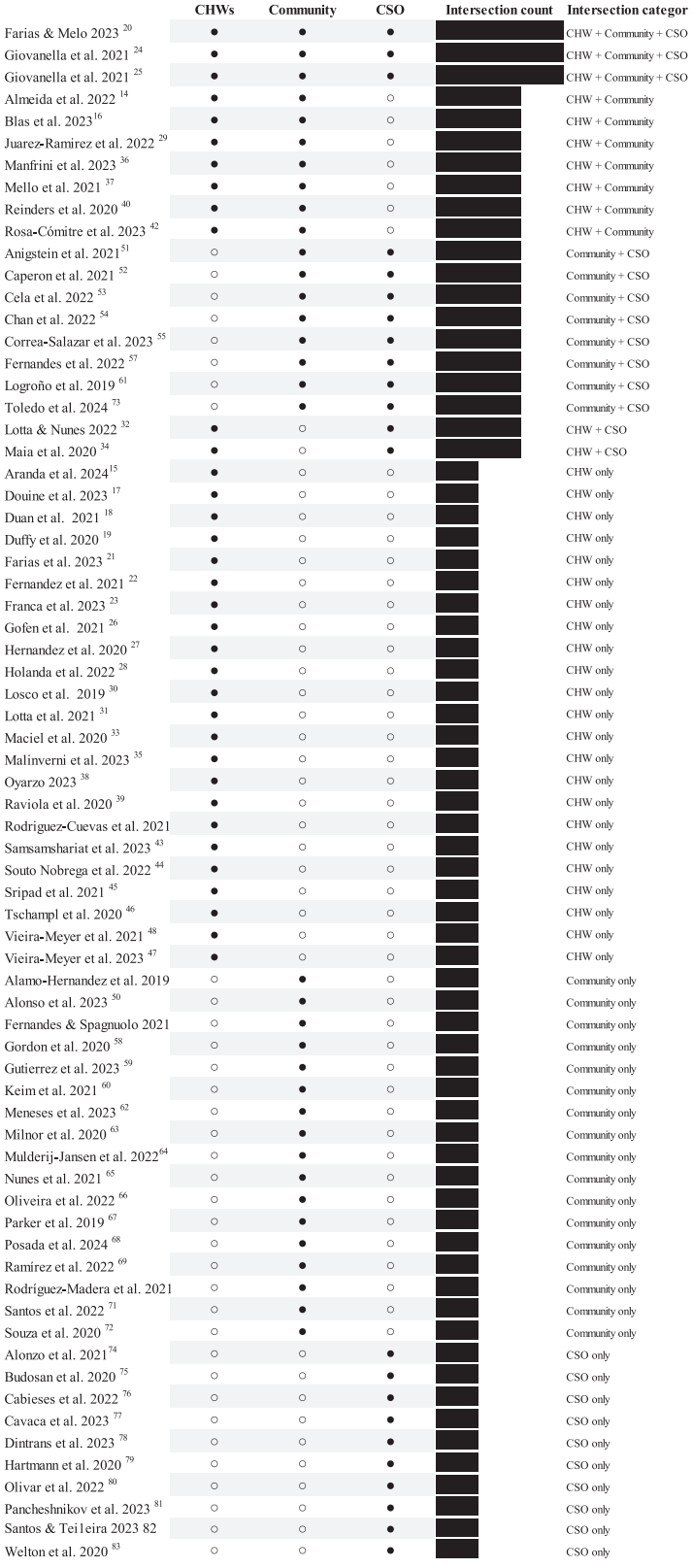

Fig. 2: **Distribution and intersections of study categories across scoping review articles.** The bars represent frequencies of articles within each intersection. CHWs, participation of community health workers; Community, community engagement; CSO, civil society organization mobilization.

various actors, such as health services, authorities, social assistance units, academia, and other stakeholders, as a key factor enabling effective community participation during crises.[16,25–27,38,39,42,46,55,58–60,67,71] 11 studies emphasized the role of community leadership, communication, trust, local knowledge, and solidarity among community members in driving collective responses during emergencies.[23,27,46,55,57,60,62,66,67,71,79] Additionally, 11 studies noted that participatory, community-based, and culturally contextualized approaches foster collaboration, build trust, and strengthen partnerships.[14,20,25,34,39,47,58,59,66,67,69] Four studies also reported the use of ICTs to enhance outreach activities and increase social mobilization.[23,35,69,74]

The studies identified barriers that hinder community engagement. Five studies identified insufficient community leadership, the absence of key organizations in decision-making processes, limited knowledge of participation mechanisms, and difficulties in holding face-to-face meetings.[18,47,59,67,72] Five studies reported cultural and linguistic barriers that restricted involvement and hindered the implementation of strategies.[23,26,46,47,62] Three studies identified the absence of social control mechanisms, such as local health councils or popular assemblies, and limited value to democratic processes in health services.[32,34,57] Security and financial concerns, including drug-related threats, were cited in three studies.[23,27,59] Lastly, two studies pointed to technological barriers, including limited access to mobile phones among vulnerable populations and challenges in utilizing ICTs effectively.[23,72]

Mobilization of civil society organizations

The scoping review identified 23 studies and four types of strategies describing the role of CSOs in the preparedness for and response to public health emergencies. 14 studies highlighted collaborative efforts with communities, health services, government authorities, and other CSOs to support emergency response. 10 studies reported CSOs participation in health promotion, prevention, and monitoring activities, which included providing health services in fixed locations and mobile units, delivering health education and information, training community leaders, creating health committees, and conducting online support groups. Five studies described CSO mobilization to address the social needs of target communities to mitigate the consequences of shocks. Actions included obtaining and distributing donations, food, and monetary aid, disinfecting houses, and organizing community kitchens and temporary shelters. Additionally, four studies showed that CSOs conduct advocacy efforts to influence decision-making and enhance transparency and accountability during emergencies. This included the submission of proposals for constitutional norms and mobilization through campaigns, protests, and public acts.

Several facilitating factors were associated with CSO mobilization. Seven studies highlighted that collaboration between CSOs and other stakeholders, such as community partners, social movements, health services, local authorities, and religious leaders, fostered community engagement and social mobilization.[17,26–28,38,39,75] Six studies emphasized the importance of consistent communication and the use of ICTs and social media to facilitate contact and engagement.[24,25,28,35,51,75] Four studies noted that CSOs' long-standing trust within communities, their organizational capacities, and a foundation of solidarity motivated community participation and enhanced program implementation.[24,64,79,83] Additionally, four studies identified participatory approaches as a key enabler for promoting social participation and accountability.[17,22,25,39]

Several challenges were identified, particularly in resource-limited and crisis-affected settings. Four studies pointed out that limited digital literacy, the absence of systematic program data, and restricted access to mobile phones among vulnerable populations hinder efforts to reach participants and implement programs effectively.[21,24,26,83] Four studies raised concerns about the long-term sustainability of programs, citing factors like insufficient political commitment at municipal and district levels, the withdrawal of international agencies, financial constraints, and some local partners prioritizing their organizational needs over broader goals.[21,28,43,79] Finally, two studies mentioned that safety concerns for staff, volunteers, and participants further complicate crisis response efforts.[27,43]

Expert consultation results

Table 4 summarizes the interview findings, organized by the three categories from the scoping review. Interviewees reasserted that communities are essential in preparing and responding to public health emergencies. They emphasized that communities are not merely supplementary, but central to a range of activities, including preparedness and planning. Interviewees also noted that communities are often the first to identify local issues that may be overlooked at the national level and play a crucial role in highlighting both longstanding and emerging needs, particularly among marginalized communities.

Interviewees identified several enabling conditions for community strategies. They stressed the need for health system policies and mechanisms that facilitate ongoing engagement, emergency planning, and feedback exchange with communities. They also highlighted the role of communities and local organizations in risk prevention messaging and disseminating accurate, context-specific information to strengthen response to emergencies.

Interviewees shared several lessons on community empowerment in emergency management. They underscored the necessity of integrating community perspectives into problem identification and planning and incorporating community-proposed solutions into programs to build trust and relevance. In addition, interviewees advocated strengthening community capacities through education about rights and encouraging active participation in planning and decision-making

Category	Key findings	Challenges	Innovative approaches	Quotes	Files	References
Diverse roles of CHWs	- Critical in linking communities to health services - Leaders in health promotion and emergency response - Vital role of midwives and ancestral providers during emergencies	- Professional discrimination - Perceived lack of skills by some sectors - Not a homogeneous group, with different functions and levels of inclusion between countries	- Adaptation to regional variations within countries	"They should have more relevance, more recognition for their leadership capacity because they do much more than just care for the sick. They are leaders in things related to health promotion actions" "It is necessary to highlight the role of the midwives and [ancestral] therapists in these emergencies, both in Covid and climate emergencies"	3	6
Community engagement strategies	- Involvement through dialog spaces, local health councils, and participatory budgeting - Grassroots organizing and resource pooling - Integration of ancestral knowledge systems	- Limited trust in institutions - Insufficient resources for remote areas - Coordination challenges with new actors during emergencies	- Sharing health information in native languages - Establishing communal food preparation centers - Creating direct collaboration channels with local organizations	"There are many cases [of dengue] there and they have developed community coping plans based on fumigation of homes, and all these strategies that are used by health services, but led and carried out by the communities"	6	29
Mobilization of CSOs	- Pivotal in health promotion and monitoring - Instrumental in building community capacity - Collaborative operations with various stakeholders	- Balancing organizational agendas with public priorities - Sustainability of resources	- Digital literacy training - Collaborative community diagnoses and risk mapping - Creative use of technology in resource-limited settings	"We took testimonies from different organizations and with it we made a campaign so that people saw people like them who had come to get vaccinated, and the messages were also made in [indigenous language] and [indigenous language]"	5	44

Table 4: **Community-driven strategies during public health emergencies in the interview of stakeholders.**

processes. Ensuring access to clear information was also highlighted as vital for empowering communities to engage meaningfully in emergency management. Finally, participants called for local organizations to be formally integrated into public policies as vital partners in building resilient health systems.

Result for triangulation

The triangulation of the scoping review and interview results enabled the identification of common themes. Both sources generally agreed that communities and CSOs are essential actors in emergency preparedness and response. The scoping review highlighted interventions where CHWs played a key role during emergencies, while interviewees emphasized variability in governance structures of their roles across health systems in LAC. This suggests that CHW analysis requires a more localized approach rather than a broad regional one. Additionally, interviewees identified midwives and ancestral health providers as key actors, which were not prominently identified in the scoping review.

For community engagement, both the scoping review and interviews emphasized the critical role of community members and community-based organizations in preventing and responding to public health emergencies. Participants in the interviews provided examples of strategies that had already been identified in the scoping review, covering all four types of interventions. The interviews placed greater emphasis on the importance of incorporating local insights into preparedness and response efforts. Most of the facilitators and challenges discussed in the interviews were also captured in the scoping review, highlighting the consistency of these findings across both sources.

In the category of CSO mobilization, both the scoping review and interviews provided examples for each of the four interventions. The interviews emphasized the importance of supporting smaller CSOs and recognizing the role of philanthropy, which were less prominent in the scoping review findings. Most of the facilitators and challenges identified were similar across both sources in this category.

Discussion

This scoping review and expert consultation provided insights into community-driven interventions during public health emergencies in LAC, addressing a gap in the literature. The analysis of 70 studies across 20 LAC countries identified 14 key interventions in three categories: CHW participation, community engagement, and CSO mobilization. Expert interviews largely corroborated these findings, with regional variations noted in CHW governance and participation.

The review found that factors associated with successful community-driven interventions included strong community ties, local knowledge, established networks, and trust. The use of ICTs, combined with traditional communication methods, was reported as important for information dissemination. Studies also highlighted intersectoral collaboration and partnerships with diverse stakeholders as contributing to social mobilization.

Challenges identified in the studies included technological barriers, digital literacy issues, limited cultural adaptations, gaps in intersectoral collaboration, funding sustainability, restricted participation spaces, and safety concerns. These obstacles suggest potential areas for improvement in coordination, policy development, and investment in both technological and human capital within health systems.

These facilitators and challenges reflect core dimensions of health system resilience such as responsiveness and adaptability, recovery and learning.[84] For instance, strong community ties in Caribbean communities enhanced robustness by sustaining PHC during hurricanes through trusted CHWs.[85,86] Intersectoral collaboration improved responsiveness, as seen when Haitian CSOs used existing supply chains to deliver antiretrovirals post-earthquake.[86] Conversely, technological barriers in rural Guatemala hindered adaptability during floods, while unstable funding weakened robustness by disrupting workforce investments and program.[86]

The findings align with global literature on this topic. Multiple studies emphasize the potential benefits of community participation in emergency management.[87–89] Reported benefits include improved development, implementation, and evaluation of health service during emergencies,[89] trust-building and transparent communication,[88,89] and the identification of relevant information and issues.[90]

Evidence suggests that community engagement may be important for controlling disease outbreaks and mitigating disasters.[89,91] The COVID-19 pandemic has further highlighted the potential need for community engagement to build equity, trust, and sustained action in health promotion preparedness strategies.[87–89] Literature also indicates that effective management of public health emergencies may require open and transparent public communication.[87,91] This alignment with broader research suggests the potential applicability of community-driven approaches in public health emergency management.

This study has several limitations. First, it primarily focuses on recent events, particularly COVID-19, and has a concentration of references from Brazil. This potentially limits the generalizability of the findings across different public health emergencies and LAC countries. However, the mechanisms through which the identified strategies contribute to PHC resilience are transferable to other crises.

For instance, CHWs in flood-prone regions maintained essential maternal health services during extreme weather events by adapting protocols for peri-

domiciliary visits, mirroring strategies observed in COVID-19 responses.[92] Similarly, in conflict-affected, CHWs task shifting and pre-established supply chains were leveraged to deliver antiretroviral therapy during periods of active insecurity.[93] In Haiti, CHWs distributed "runaway bags" containing three months of medications to HIV patients during civil unrest. In Nepal, CHWs employed mobile phones to coordinate disaster relief after earthquakes when traditional infrastructure failed.[92]

Brazil's prominence in the literature reflects its large population, universal health system, and long-standing PHC investment. In contrast, smaller countries often face barriers to documenting resilience strategies, creating a regional evidence gap. Additionally, while the inclusion of seven experts and six validators is consistent with scoping review expert consultation norms,[94] the small sample may not reflect LAC's socio-political and health system diversity. As a result, context-specific challenges, such as indigenous health governance models or disaster-prone Caribbean Island states, may be underrepresented. Future research should prioritize these underrepresented settings to enhance generalizability.

Furthermore, findings are presented aggregated and not by setting. As such, the results should be seen as examples that may apply to specific contexts and not as a full picture of the bottom-up actions in the region. Although this review followed PRISMA-ScR guidelines, the protocol was not registered due to the expedited timeline of the project. Future reviews should consider protocol registration to improve transparency and reproducibility.

Finally, while this review focused on acute shocks, future studies could explore community-driven strategies under routine circumstances to identify baseline resilience mechanisms. Studies could also explore the long-term impacts of these approaches and PHC responses to prolonged epidemiological shocks (e.g., HIV/AIDS, dengue) to better understand evolving resilience capacity over time.

The findings suggest that integrating community-driven approaches into emergency preparedness and response can enhance PHC resilience in LAC. Policymakers and health practitioners can leverage community assets to integrate community-driven responses in partnership with governments. Specific actions include supporting and strengthening CHWs' capacities in PHC delivery and emergency response through targeted training programs while addressing systemic enablers such as fair compensation, adequate resources, and institutional support. Involving and empowering CHWs, midwives, ancestral providers, and community members to engage in health promotion during emergencies fosters trust and ensures culturally tailored communication strategies that address barriers such as misinformation or limited leadership capacity.

Local governance structures and partnerships with CSOs and other stakeholders could be strengthened. Community networks can be leveraged to extend the reach of interventions, ensuring broader access to essential services and information during crises. Promoting intersectoral collaboration by fostering partnerships between PHC, community-based organizations, CSOs, academia, and local authorities can pool resources and expertise effectively during emergencies. National policies could consider institutionalizing social participation and community engagement as components of emergency preparedness and response. This can promote communities actively involved in planning, decision-making, and implementing emergency responses. Finally, developing governance models that balance decentralized decision-making with centralized oversight can promote adaptability in PHC across diverse LAC contexts.

Conclusion

This study documents community-driven interventions in public health emergencies and PHC settings in LAC countries. The analysis identified 14 key interventions across three domains: CHWs participation, community engagement, and CSOs mobilization. The study also documented factors that may influence the implementation of these interventions. Potential facilitators included strong community ties, local knowledge, and the use of information and communication technologies. Challenges identified encompassed technological barriers, limited digital literacy, funding sustainability issues, and safety concerns. This study provides a basis for understanding the range of approaches that can contribute to PHC resilience. Future research could explore the long-term impacts of these interventions, their institutionalization within health systems, and their adaptations to different contexts.

Contributors

NH, WF, and MC conceptualized the study. EB secured funding and provided oversight. NH coordinated all review activities. NH and CZ collaborated on study searching, data extraction, and quality appraisal. NH wrote the original draft with support from CZ. EB, MC, CV, WF, and JH reviewed and edited the manuscript. All authors had full access to all the data in the study and had final responsibility for the decision to submit for publication. The final version of the manuscript was approved by all authors.

Declaration of interests

The authors declare no conflicts of interest.

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Appendix A. Supplementary data

Supplementary data related to this article can be found at https://doi.org/10.1016/j.lana.2025.101236.

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