At present, there are no medicines or vaccines proven to cure or prevent the SARS-CoV-2 virus; however, various countries have implemented strategies to control the pandemic by slowing down the transmission and reducing mortality associated with COVID-19. Following on from identifying cases through effective testing and contact tracing, case management strategies include providing necessary medical care (for example, management of symptoms, treatment of acute co-infections, and prevention of complications) and isolating suspected and confirmed COVID-19 cases. Eventually, COVID-19 case management will hopefully include the roll-out of therapeutics and vaccines that will provide longer-term treatment and prevention (1,2). Transmission control focuses on context-appropriate, population-level infection prevention measures to reduce or prevent community spread, such as physical distancing measures, and appropriate restrictions on population mobility (3). By implementing case management and transmission control measures in tandem, countries aim to decrease mortality and morbidity from COVID-19, disrupt the disease transmission chain, and control infectious disease outbreaks in the population (4).
Leveraging PHC for COVID-19 risk communication will be challenging no matter the context, however adopting this approach may offer several opportunities for health systems strengthening beyond the COVID-19 time period. These challenges and opportunities may include:

**CHALLENGES & OPPORTUNITIES**

**EMERGENCY PREPAREDNESS, RESPONSE, AND RECOVERY**

In the short term, risk communication can support effective surveillance and response efforts for COVID-19, for example by providing communication channels to track and report new or suspected cases. In addition, it can aid countries in developing plans and strategies for the safe reactivation of essential services, such as immunizations and family planning services. For example, risk communication could be involved in informing the public of “decreasing risk” as the pandemic progresses, with guidance that will help to inform them when it is safe to resume seeking essential services that were temporarily halted during the pandemic. (5) To support recovery efforts, it is important for countries to collect regular data and information on non-COVID priority diseases and conditions. This will enable countries to better determine health needs and priorities on the road to recovery. (30)

In the longer term, lessons learned from COVID-19 risk communication efforts can be integrated into the ongoing review of national plans and surveillance efforts, helping to strengthen a country’s capacity to effectively prepare and respond to future epidemics. (3,8) This process is enabled by a strong in-country capacity to stimulate and make use of new and existing evidence and incorporate these learnings into changes at scale.

**PUBLIC TRUST**

Ineffective communication during the COVID-19 pandemic could lead to worsened economic impacts and preventable morbidity and mortality that can carry over into long-term public distrust in the PHC system. (3) Communications that are inaccessible or delivered in a way that people distrust, and therefore disregard, can reduce overall trust and confidence in the system. To meet community needs and strengthen public trust in PHC as the first point of contact, risk communication must be tailored to the sociocultural context of communities, address misinformation and misconceptions, and provide timely, accurate, and easy-to-understand advice and information from trusted sources. (1,2,4,11)

On the other hand, regular, proactive communication that accounts for community needs, concerns, and preferences can help to strengthen public trust and reduce stigma in the immediate and long terms. It can also provide policymakers, planners, and health workers with the information they need to better tailor services to the communities they are designed to serve, reinforcing PHC as the first point of contact and laying the foundation for long term resilience. (2,21)

**EQUITABLE ACCESS**

Ensuring equitable access to disease education and risk communications for all communities may be a challenge, particularly for remote or marginalized groups. If communications are not designed with at-risk or other marginalized communities in mind, they can exclude the voices and experiences of communities and run the risk of communications not being received at all, exacerbating risk of spread among those who are already at elevated risk. Planners and implementers should tailor communication channels to users’ needs and use established community engagement and local priority setting mechanisms to involve local stakeholders to ensure that diverse voices are represented in planning, implementing, and monitoring risk communication activities and guarantee the flow of information across levels and sectors. (4,11) Iterative feedback from affected communities and data from the service delivery level will help to determine which communication platforms are available and accessible to a diverse audience, and which are exclusionary, helping to inform which channels to use for future outbreaks.
Globally, countries have adopted various strategies for responding to the COVID-19 pandemic. Because of its community-orientation, PHC is naturally set-up as the first point of contact for both COVID-19 and non-COVID concerns. Given that the majority of COVID-19 patients do not require critical care (5,6), PHC is often the main platform for case management; this may be especially true in countries where access to higher acuity care may be particularly limited (7). In addition, population-based transmission control interventions such as community quarantine, physical distancing, and movement restrictions are often implemented at the community level, making PHC a promising potential vehicle for supporting implementation(3). More specifically, PHC systems could be leveraged to help ensure that community needs, attitudes, concerns, and beliefs are identified and incorporated in case management and transmission control strategies. In addition, the PHC workforce and facilities are crucial for the triaging, referring, and isolation efforts necessary for controlling the spread of COVID-19 (8). Potential pathways for leveraging PHC for case management will depend on local context (9), but may include:

**HOW CAN PHC BE LEVERAGED?**

**POTENTIAL PATHWAYS:**

**CASE MANAGEMENT AND TRANSMISSION CONTROL**

COVID-19 response requires a rapid activation of coordination mechanisms to avoid an unmanageable surge of cases in the population. By adopting participatory leadership and a “Health in All Policies” approach, key stakeholders within the health, transport, travel, trade, finance, security and other sectors can be proactively involved in developing national and sub-national response and management plans that maximize coordination across different levels of care (10–12). Protocols on case management, isolation, and patient referral must be clear, widely disseminated, and ideally embedded in PHC policies—including those on financing, inputs, and service delivery—to ensure access to adequate management for all categories of COVID-19 cases (2).

Such high-level decision-making should also be accompanied by social accountability measures at the primary health care level to ensure transparency and accountability of government actions, equitable access to adequate COVID-19 management, and protection of privacy and human rights in the context of strategies such as isolation or community quarantine that may restrict certain liberties (13,14). With the rapidly changing nature of the pandemic, active innovation and learning, regular community engagement, and dynamic local priority setting on case management and transmission control strategies must be adopted to assure measures are relevant, effective and responsive to the needs of the population (1).

To ensure the safety of patients and providers, COVID-19 case management and transmission control should be grounded in existing quality management infrastructures (QMI) (15). Existing QMI must be adapted to include globally accepted criteria for community quarantine and isolation, locally-adapted clinical guidelines for managing COVID-19 symptoms, and the operationalization of triaging algorithms for advanced management of acute COVID-19 cases. Additionally, metrics for monitoring and evaluation of the implemented strategies should be established to inform ongoing and future prevention and response activities (e.g. decision to relax quarantine measures) (16–19). To ensure the safety of patients and providers, COVID-19 case management and transmission control should be grounded in existing quality management infrastructures (QMI) (15). Existing QMI must be adapted to include globally accepted criteria for community quarantine and isolation, locally-adapted clinical guidelines for managing COVID-19 symptoms, and the operationalization of triaging algorithms for advanced management of acute COVID-19 cases. Additionally, metrics for monitoring and evaluation of the implemented strategies should be established to inform ongoing and future prevention and response activities (e.g. decision to relax quarantine measures) (16–19).
How can PHC be leveraged?

**Surveillance, data management and information systems**

Case management goes hand in hand with disease surveillance and data management. By leveraging existing PHC surveillance systems, public health authorities can limit the spread of disease, manage the ongoing risk of COVID-19, and determine the next course of action for case management (e.g. increase health facility investment, identify potential disease hotspots, relax quarantine measures) (34). PHC information systems can be utilized to facilitate transfer of patients that cannot be managed at the primary care level to respective COVID-19 referral centers, and strengthen coordination of health care across different health teams (35). In settings where strict physical distancing measures are in place, continuity in management can be challenging - especially for patients with complex conditions. Strong PHC information systems provide a foundation to support COVID-19 and non-COVID diagnosis, management, and monitoring through interventions like telehealth (36). Lastly, utilizing PHC information systems can also promote opportunities for participatory research that will bring in localized insights to the complex problems coming from this pandemic (37).

**Population health management**

Population health management strategies are essential both for ensuring the appropriateness of strategies for the local context, as well as ensuring buy-in and compliance. The suitability of the different COVID-19 case management and transmission control strategies may vary depending on local contexts, capacities, and resources. For instance, population-level physical distancing measures may be difficult to enforce in overcrowded slums and rural areas unless added social support measures are integrated to community implementation (20). Additionally, case management strategies may need to be adapted for patients or communities based on pre-existing local or individual burden of disease (21). *Local priority setting* mechanisms in place to support PHC organization and service delivery can be leveraged to identify specific health priorities, epidemiological profiles, relevant resources and services, and socio-economic factors that will inform the development of suitable COVID-19 case management and transmission control strategies, both locally and nationally. Triage systems will also help reduce the risk of exposing patients to COVID-19, and prioritize PHC resources for addressing urgent health needs in the community (18).

To further streamline resources, it is important to identify specific populations that would be most at risk for COVID-19 morbidity and mortality (22). Medical care and referral processes for pre-identified populations in the community at high risk can be tailored to address their specific needs using existing PHC strategies like empanelment. Panel data can also help support more targeted decisions and population-level strategies on stratifying risk for exposure and transmission at the level of the community (18,23).

**Facility infrastructure**

During the pandemic, many PHC facilities are being repurposed as COVID-19 triage and management centers (32). Implementing case management in these facilities will require reconfiguring facility operations, such as adopting new safety protocols, developing procurement and distribution plans for PPEs and medical equipment, prioritizing services to be provided during the pandemic, building capacity for providing basic emergency care for seriously ill patients, and setting-up triaging and referral logistics (19,33). Before being repurposed, it is essential that health facilities first be evaluated on their *capacity to provide adequate response and referral*. More about necessary changes in facility organization and management are discussed in the module on Safety & Facility Operations.

Implementation of community transmission control measures for COVID-19 is complex and requires close partnerships and cooperation between state actors and the population (24). *Community engagement* mechanisms are crucial to sensitize the public on their active role in response, and ensure population buy-in and compliance to proposed case management and transmission control strategies (18). This entails regular communication and consultation with local health system users to determine the current strategies for reducing community COVID-19 transmission, and involving the community in the planning and implementation for future case management interventions (e.g. community vaccination and treatments) (1,25).
**HOW CAN PHC BE LEVERAGED?**

**WORKFORCE**

A competent, motivated, and equitably distributed workforce is important for successful case management and transmission control. With the ramping-up of national and local COVID-19 efforts, the existing PHC workforce can be redeployed to meet urgent human resource gaps during the pandemic. The introduction of new COVID-19 response activities (e.g. triaging, isolation monitoring) may entail shifting the roles of health workers through task-shifting, re-assignment, and changes to workforce rostering (e.g. staggering shifts, integration of quarantine schedules) (26,27). In some cases, the existing health workforce may need to be augmented by the hiring of new cadres of workers to support COVID-19 efforts. To maximize the capacity for case management and transmission control, both the existing and new health workforce must be trained on proper clinical management, infection control guidelines, as well as equipped with the necessary supplies and PPE to safely carry out these new tasks. Balancing the cadre of available health workers may also help in preventing an overload in health care surge capacity brought about by increasing absenteeism, changing health human resource needs, and shortage of crucial resources. For instance, health care workers whose routine patient loads have been reduced by the pandemic may be trained and tasked to implement case identification and basic medical management for COVID-19. Having a registry of skilled health care workers may be a way to streamline efforts to augment the capacity for clinical activities associated to COVID-19. (28).

Infection prevention and control (IPC) measures should be strengthened to prevent unwanted infections in the workforce. Health care workers must be trained on clinical management for COVID-19, as well as equipped with the necessary supplies and PPE to safely deliver care (19). With the changes in the dynamic of health service delivery during the pandemic (i.e. physical distancing, full donning of PPE, and isolation recommendations), building and/or maintaining and capitalizing on an environment of patient-provider respect and trust--ideally fostered by the role of the PHC workforce as the first point of contact for continuous care over the life course - will also be essential.

**FINANCING AND PROCUREMENT**

Effective case management for COVID-19 will entail harnessing public health financing resources for setting-up community treatment and triage centers, procurement of personnel protective equipment (PPE), hiring of additional staff for response, and continuous community engagement (19). Local health procurement and disbursement processes may need to be accelerated to address immediate appropriation and payment needs. Understanding local-level relevant regulatory systems and public financial management (PFM) mechanisms such as procurement schemes, capacity to reallocate funds, and necessary approval processes at the local level can allow for more rapid identification of budgetary flexibility opportunities and reallocation of resources (29).

This shift in spending priorities may lead to PHC resources being redirected to COVID-19 efforts. In this context, it will be critical to secure continuous funding for PHC services by exploring alternate financing mechanisms (for example social health insurance or health equity funds), and ensuring transparency in financial management (30). In addition, measures should be put into place to address a potential increase in out-of-pocket spending for medical care and financial opportunity costs from isolation measures that will not be covered through current public schemes to ensure continued financial access for all (31).
RELEVANT RESOURCES

PHCPI RESOURCES

- Primary Sources
  - COVID-19 in Malawi: Innovating New Approaches in Resource-Limited Settings
  - New routine in primary care: Experiences from an Austrian PHC center during the COVID-19 crisis
  - Early Focus on PHC Improves COVID-19 Response in San Luis, Argentina
  - Improvement Strategies Modules

GLOBAL LEARNING PLATFORMS

- JLN COVID Response Platform (coming soon)
- OpenWHO
- UNICEF COVID-19 Information Center
- PHCPI Community of Practice - online forum for resilient PHC

GLOBAL TOOLS & RESOURCES

- WHO, 2020 - Operational considerations for case management of COVID-19 in health facility and community
- WHO, 2020 - Clinical management of COVID-19
- WHO, 2020 - Considerations in adjusting public health and social measures in the context of COVID-19
- WHO, 2020 Addressing Human Rights as Key to the COVID-19 Response
- WHO, 2018 Primary Health Care and Health Emergencies
- Path, 2020 - Resources to support COVID-19 response in LMICs

PHCPI is a partnership dedicated to transforming the global state of primary health care, beginning with better measurement. While the content on this website represents the position of the partnership as a whole, it does not necessarily reflect the official policy or position of any partner organization.
REFERENCES

41. Carg S, Basu S, Rustagi R, Borle A. Primary healthcare facility preparedness for outpatient service provision during the COVID-19 pandemic in India. JMIR Public Health Surveill. 2020 May 26;