Bhutan: a primary health care case study in the context of the COVID-19 pandemic

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Executive summary

The aim of the case study is to examine the primary health care (PHC) system in Bhutan in the context of the COVID-19 pandemic between January 2020 and June 2021. As of 2 May 2021, Bhutan had recorded 1111 confirmed cases of COVID-19 (both imported and local) with only one death, performed 711,726 COVID-19 tests (1) and vaccinated more than 90% of its eligible population (480,498 people) (2).

The PHC system, which focuses on preventive and comprehensive approaches to health care services, supported efforts to prevent the widespread community transmission of COVID-19. These efforts were shaped by good governance, concerted political will and leadership and the efforts of a dedicated health workforce with a firm focus on the core principles of PHC. Bhutan’s governance approaches and structures, its planning framework and its functional health infrastructures and systems meant that an enabling environment was already in place that could be mobilized to contain the pandemic and facilitate COVID-19 vaccination.

The Royal Government of Bhutan (RGOB) adopted policy changes to address the disruptions caused by the pandemic and ensure the continuous and comprehensive provision of health care services. For example, the government frontloaded the procurement of medicines and medical equipment in anticipation of a global supply shortage. This enabled continuity of essential medical supplies. Further, teleconsultations and mobile clinics were adopted when national and local stay-at-home orders were in effect. Task-sharing and task-shifting were employed to address human resource constraints. The creation or adoption of information and communication technology platforms was accelerated to inform decision-making. Digital applications helped to strengthen the government’s response planning, contact-tracing and surveillance initiatives, as well as the uninterrupted provision of essential health services even during national movement restrictions.

These specific interventions were underpinned by the government’s application of both whole-of-society and whole-of-government approaches. Various government sectors worked together and alongside private sector organizations, nongovernmental organizations (NGOs), civil society organizations (CSOs), the armed forces, religious bodies and community volunteers (formal and informal). Collectively, these actors ensured the provision of essential health services and the delivery of medicines to patients. They arranged consultations with specialists and managed flu clinics, supported risk communication and advocacy initiatives, mobilized communities, supported surveillance, patrolled the border areas, supervised quarantine centres and enforced COVID-19 protocols.
Executive Summary

Key lessons from Bhutan include the need for people-centred service delivery models that integrate care for chronic conditions beyond COVID-19. The country’s experience also demonstrates the positive impact of harnessing multisectoral partnerships and using digital technology and community mobilization to reach the most vulnerable and unreached communities.
Introduction and national context

Bhutan, located in the eastern Himalayan region has an estimated population of 735,553 people spread across over 38,000 square kilometres (3). Sixty-two percent of the population live in remote rural villages without access to good road networks and almost 12% of the rural population are reported to live in poverty (3,4). Fuelled by the growth in hydroelectric power and tourism, Bhutan's gross domestic product (GDP) per capita reached US$ 3,411 in 2019, up from US$ 2,201 in 2010 (5). The country is on track to become a lower-middle-income country (LMIC) by 2023 (6).

At the time of writing, the RGOB was the only government in the world to be guided by a development philosophy and approaches based on the pursuit of gross national happiness (GNH). GNH is operationalized through four pillars (good governance, sustainable socio-economic development, cultural preservation and environmental conservation) and nine domains (psychological well-being, health, education, time use, cultural diversity and resilience, good governance, community vitality, ecological diversity, and living standards) (7).

Decentralization and community engagement lie at the heart of the government’s development planning efforts, rooted in Bhutan’s 20 districts (dzongkhags), 205 sub-districts (gewogs) and 47 electoral constituencies. Decentralized and bottom-up approaches have been the mainstay of the planning process with the Gewog Tshogdu (sub-district level developmental committee) and Dzongkhag Tshogdu (district committee) taking charge of planning all development activities in the communities. The functions of these committees are mandated by the Local Governments Act of Bhutan (2007) (8), which empowers people at the grassroots level to participate directly in the development and management of their own social, economic and environmental well-being. CSOs augment the efforts of the government by reaching out to those who might otherwise be unreached.

There are 3.8 health facilities, 4.6 doctors and 16.5 nurses for every 10,000 people (9) and indigenous Bhutanese traditional medicines and services are also integrated into the country’s overall health system. Despite the wide reach of primary care services at the local level, people often bypass these systems for higher-level hospitals (10). Two regional referral hospitals (one in eastern and one in central Bhutan) and a National Referral Hospital provide all tertiary care services. The Khesar Gyalpo University of Medical Sciences of Bhutan (KGUMSB) is the only medical university that trains health workers including: health assistants, nurses, technicians and medical specialists (MDs) and practitioners of traditional medicine.

The health care delivery system is based on the principles of PHC and is committed to achieving universal health coverage (UHC) by 2030, with the country achieving a UHC index ranking of 75% by 2018 (11). Most health indicators showed progress over recent years. The average life expectancy at birth was
Introduction and national context

70.2 years at birth in 2017 (71.7 years for women and 68.8 years for men) up from 66.3 years in 2005. Infant mortality almost halved between 2012 and 2017, falling from 30 deaths before the age of 1 year for every 1000 live births to 15.1 per 1000 live births, with even greater declines in the maternal mortality ratio, which fell from 204 per 100 000 live births in 2010 to 89 per 100 000 in 2017 (3).

All health care services are provided free of cost at the point of delivery and the Government is the major source of health financing. Out-of-pocket expenditure is minimal, at just 13% of current health expenditure (CHE) (12). The government’s share of CHE in the financial years 2018-19 and 2019-20 was 70% and 73% respectively. Contributions from external sources for the same financial years accounted for 7% and 5% of CHE, respectively, with insurance schemes accounting for only 0.2% in both years. The total CHE borne by the Government stood at about 3% of Bhutan’s GDP for both years. However, the share of CHE allocated to preventive care was reported to be only about 14% in comparison to the 54% of CHE for curative care services (13).

Methodology

The aim of the case study is to examine PHC in Bhutan in the context of the COVID-19 pandemic. The case study used secondary data based on a desk review of the literature (published and unpublished) and country reports. Documents were reviewed relating to COVID-19, health systems, government reports, national health account reports and the health ministry’s reports. The case study included government policies on COVID-19, situation reports published by the Government, peer-reviewed publications, grey literature and media reports related to COVID-19. These sources were identified through database and website searches, and included sources (e.g., policy reports) known to the project team. The Astana PHC framework was used to guide data extraction from documents and data analysis, including to review national performance across three PHC components: 1) primary care; 2) multisectoral collaboration; and 3) community engagement. This study was conducted from January to June 2021.
How primary care and essential public health functions are responding to COVID-19

This section examines Bhutan’s COVID-19 response management in relation to the primary care and essential public health functions through WHO’s health system building blocks. It does so in conjunction with the core components of PHC and the PHC levers from the Astana Declaration (14).

Governance and leadership for COVID-19 response

The 2013 Disaster Management Act of Bhutan established the National Disaster Management Authority (NDMA) as the highest policy decision-making body for preparedness and responding to national disasters, including pandemic diseases. The NDMA is chaired by the Prime Minister. In the health sector, the Health Emergency Management Committee (HEMC) is the highest decision-making body for public health emergencies (Figure 1) as per the Health Emergency and Disaster Contingency Plan (HEDCP) 2016. There are also District Disaster Management Committees at the district level (15).

The HEMC was activated as early as January 2020, when the first case of COVID-19 outside China was reported in Thailand, and it started to prepare COVID-19 contingency plans. The NDMA was activated as soon as the World Health Organization (WHO) declared COVID-19 as a public health emergency of international concern (PHEIC) on 30 January 2020. The Government established COVID-19 Task Forces at the national, regional and district levels (16). These were supported by a Technical Advisory Group composed of epidemiologists, clinicians, laboratory and public health experts from the Ministry of Health (MoH), the KGUMSB and the Ministry of Agriculture and Forests (MOAF) and the National Outbreak Investigation and Surveillance Team. In addition, the National Immunization Technical Advisory Group (NITAG) was already in place in the MoH and was used for providing technical guidance on the development, planning and implementation of a vaccination strategy.

Bhutan followed a whole-of-society and whole-of-government approach (17) and the Prime Minister oversaw efforts to translate this into concrete action (Figure 1). Ultimately, the governance structures, command systems and whole-of-society and government ethos contributed to Bhutan’s successful management of COVID-19.

Financing COVID-19 response and preparedness

Upon confirmation of the first COVID-19 case in Bhutan, WHO released US$ 175 000 under the South-East Asia Regional Health Emergency Fund (SEARH EF) mechanism (18) within 24 hours to facilitate the implementation of the Government’s preparedness and response plan. In 2020-21, the Government budgeted Nu. 2621 million (approximately US$ 35.85 million) for COVID-19 related activities (inclusive of expenditures on essential food, fuel, roads and temporary
How primary care and essential public health functions are responding to COVID-19

shelter) and spent Nu. 4644.25 million (over US$ 63 million) in cumulative expenditure until June 2021 (19).

A COVID-19 response fund account was created by the Ministry of Finance with a local bank for receiving contributions from the public (20). A total of Nu. 122.8 billion (around US$ 1.7 billion) was raised through contributions as of 13 May 2021 (19).

Health service delivery during the pandemic

The MoH developed and implemented emergency contingency measures to ensure the uninterrupted delivery of essential health care services, including mental health services, during the COVID-19 pandemic (21). It began with the establishment of a working committee in May 2020 (22) and a package comprising maternal and child health delivery services, immunization services, medicine refill and chronic disease care. Dedicated mental health teams were constituted at central and subnational levels. The contingency plan was developed at the national level with different strategies in place to respond to the varying stages and characteristics of the outbreak of pandemics.

The strategies included provision of emergency services; provision of mobile clinics and medicine refills; continuation of emergency surgeries (the postponement of elective surgeries); and cessation of any aerosol- generating procedures linked to dental and ear, nose and throat (ENT) services (among others) (23). However, dental and ENT services were provided for extended hours, beyond the routine hospital hours, to clear patient backlog upon lifting movement restrictions.

In line with the national COVID-19 preparedness and response plan, contingency plans were developed at the district, sub-district and facility levels consistent with the national plan. Teleconsultations were introduced by the national referral hospital to enable patients to consult doctors during the second set of national movement restrictions in December 2020, and the home delivery of medicines was arranged (24). Transport services for those requiring emergency medical care were also organized (16) and high-risk patients were provided with domiciliary services (21).

As of May 2021, a total of 55 flu clinics were set up separately in all twenty districts and municipalities to enhance surveillance and provide COVID-19 testing services. To prevent the spread of COVID-19 from an infected individual to others visiting hospitals and to help prevent within-hospital spread, the flu clinics and COVID-19 treatment wards were located away from the buildings providing routine hospital services (25). These flu clinics were also used to screen for tuberculosis (TB) (26) and a total of 84 confirmed cases of drug-susceptible TB (DS-TB) and eight cases of multidrug-resistant tuberculosis (MDR-TB) were detected (as of 14 June 2021). From January to June 2021, 869 presumptive cases of TB were tested (27).
In addition, four regional COVID-19 treatment centres were established to optimize the utilization of Bhutan’s relatively limited number of specialist doctors by pooling doctors to meet medical surge capacity. This clustering of case management also helped rationalize the use of PPE and medicines. During larger community outbreaks, hotels were identified for the isolation of asymptomatic and mild COVID-positive confirmed cases. The country’s facility for COVID-19 testing using reverse transcriptase-polymerase chain reaction (RT-PCR) was also expanded from one at the Royal Centre for Disease Control (RCDC) in the capital city of Thimphu to five strategically located regional centres. These centres conducted tests for both rural and urban centres in their region and were effective in handling sample surges during community outbreaks.
All health care centres implemented stringent COVID-19 safety protocols. For example, the same cohort of doctors and other health care workers attending flu clinics, outpatient departments and in-patient departments. In addition, mandatory COVID-19 testing of health workers (every two weeks) and of patients and attendants before admission to in-patient wards was introduced to prevent the hospitals from being compromised (28).

Within a span of two weeks in April 2021, 94% of the eligible population (18 years and older) received their first COVID-19 vaccine dose of the Oxford-AstraZeneca COVISHIELD vaccine manufactured in India (29). This involved teams of doctors, nurses, and health assistants delivering vaccines to village, community and urban centres, and included vaccination of older and disabled individuals on their doorstep (29). Approximately one week after the end of the first dose vaccination campaign, and against a backdrop of rapidly rising case numbers in neighboring countries, there was a community outbreak on the southern borders though no confirmed deaths were reported. Completing the roll-out of the second dose vaccination in July 2021 (following either homologous [Oxford-AstraZeneca vaccine] or heterologous [primed Oxford-AstraZeneca and second dose booster with Moderna COVID-19 vaccine] vaccination regimen) in adults (18 years and over) and Pfizer vaccine in adolescents 12-17 years old likely contributed to the containment of prolonged outbreaks in southern border areas.

Health services and COVID-19 vaccines were delivered to even the most remote villages (30). The Government continued to provide noncommunicable disease (NCD) services to all people even during movement restrictions through its Service with Care and Compassion initiative (31). The MoH also mapped all people older than 60 at village level and a strategy to evacuate them to a safer place in case of community outbreaks was developed. Furthermore, a multi-vitamin supplement and hand-washing soap were provided to all people 60 years and above across the country as a special protection service gifted by His Majesty the King. A separate national toll-free number for COVID-19 (2121) and a hotline for older persons care and medical refill (6060) were also established (32).

Access to essential medicines and equipment during the pandemic

Bhutan has centralized medical procurement, with the MoH responsible for the supply of medicines, medical equipment and non-consumables (33). During the pandemic and at the time of writing in May 2021, the government front-loaded the procurement of essential drugs, vaccines and other medical supplies; provided special approval to procure essential supplies based on the bids of the previous year; and helped suppliers to expedite delivery. CSOs initiated the local production of disposable face shields, cloth masks and reusable coveralls, while the Drug Regulatory Authority of Bhutan provided special permissions for the use and procurement of medicines and vaccines (34). This approach proved to be effective in ensuring the uninterrupted supply of medicines and other health essentials.
Health workforce for pandemic response

Task-shifting and sharing were employed during movement restrictions, mass testing and the vaccination rollout. Existing community health workers, for example, were trained for sample collection and new swab collectors were trained and recruited to enhance surveillance surge capacity. After the second national set of movement restrictions (December-January 2020), rapid testing was conducted by PHC workers. Students from various colleges under the KGUSMB helped to collect samples during mass community testing. CSOs played key roles in bridging the gap between patients and health facilities by ensuring access to dialysis services and chemotherapy and radiation therapies by coordinating and arranging mobile services, delivering medicines and supporting the home management of patients, as well as online consultations.

Doctors undergoing postgraduate training outside the country (13.3% of the total registered in the country) were recalled (36). In addition, recent medical graduates were recruited in advance of the routine time for recruitment and final year nursing students were deployed to help several services. A total of 77 doctors and 255 nurses were trained in the management of intensive care units focusing on intubation and ventilatory support (37). The MoH undertook the mapping of human resources in the health sector by cluster to meet any surge for human resources during localized outbreaks. They were trained for deployment to COVID-19 wards, flu clinics and quarantine facilities. In terms of protection from occupational hazards, infection-control guidance for health care professionals was developed and all cadres of health professionals (including cleaners) were trained on basic infection control, the use of personal protective equipment, decontamination and disinfection.

The health information system

New digital application systems and mobile apps were developed during the pandemic to aid contact tracing and effective coordination across COVID-19 outbreak management and response teams. These systems included the COVID-19 Integrated Influenza Surveillance system, the Health Facility System, the Druk Trace app, the Quarantine Management System, the Stay Home app, the Check Post Management System, the National COVID-19 dashboard and Bhutan’s vaccination system (38). These applications helped to strengthen the government’s COVID-19 response planning, monitoring and surveillance activities and the provision of essential health services. In addition, social media and apps – such as WeChat and WhatsApp – were used for medical consultation and the transfer of prescriptions for medical refill.
Multisectoral governance and policies

Bhutan’s recognition of the importance of multisectoral collaboration is evident in the country’s National Health Promotion Strategic Plan, Multisectoral National Action Plan for the Prevention and Control of NCDs, Suicide Prevention Action Plan, National Action Plan on AMR and Bhutan’s One Health Strategic Plan. The HEMC has members from all relevant departments under the MoH, the armed forces, the finance, home and agriculture ministries, the Bhutan Red Cross Society, the medical university and the national referral hospital and the De-suung office (15, 39). Bhutanese who undergo the De-suung Integrated Training Programme, built on the values of community service, integrity and civic responsibility, are known as De-Suups (para-military volunteers) (40).

As required under the Disaster Management Act of Bhutan 2013, the NDMA already had the Incident Command System (ICS) in place (15), but lacked experience in dealing with any large-scale emergencies. The ICS for COVID-19 was restructured by establishing a National COVID-19 Task Force (NC19TF). COVID-19 task forces were also set up at the regional and district levels with specific terms of reference (Table 1). These task forces not only dealt with the health aspects of the pandemic but also ensured economic and social dimensions were well-taken care of under the COVID-19 safety protocol.
Table 1. Terms of reference for different COVID-19 task forces

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<th>National COVID-19 task force</th>
<th>Regional COVID-19 task force</th>
<th>District COVID-19 task forces</th>
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<tr>
<td>I. Be the apex body for decision-making on all policy matters related to COVID-19.</td>
<td>I. Provide supervision, monitoring and support to regional and district C19TFs implementing preparedness and response activities related to COVID-19.</td>
<td>I. Develop, review and update local COVID-19 Contingency plan.</td>
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<td>II. Provide direction and oversight for multisectoral preparedness and response activities at national and regional levels.</td>
<td>II. Coordinate and oversee the implementation of preparedness and response for COVID-19 at the regional level.</td>
<td>II. Implement all preparedness and response measures related to COVID-19.</td>
</tr>
<tr>
<td>III. Assess and review the COVID-19 national preparedness and response plan of the ministries, agencies and regional C19TF for community transmission.</td>
<td>III. Maintain an up-to-date, comprehensive resource inventory of the country.</td>
<td>III. Enforce community quarantine and locality movement restrictions on the directives of NC19TF.</td>
</tr>
<tr>
<td>IV. Submit periodic reports on security, economy and preparedness and response for COVID-19 to His Majesty’s Secretariat.</td>
<td>IV. Ensure all regional and local ministries and agencies have all plans ready and fully prepared to manage potential local and community transmission of COVID-19.</td>
<td>IV. Ensure continuity of essential goods, medical supplies and services during the lockdown.</td>
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<tr>
<td>V. Declare different stages of the COVID-19 pandemic in Bhutan.</td>
<td>V. Ensure smooth and seamless enforcement of lockdowns.</td>
<td>V. Provide relief services (kidu) to the most vulnerable sections in consultation with His Majesty’s Secretariat.</td>
</tr>
<tr>
<td>VI. Approve and notify the enforcement of community quarantine and movement restrictions.</td>
<td>VI. Enhance and monitor border security.</td>
<td>VI. Report and update the situation to regional C19TF and NC19TF.</td>
</tr>
<tr>
<td>VII. Declare the containment of COVID-19 outbreaks.</td>
<td>VII. Collect and maintain all data and statistics related to COVID-19 preparedness and response activities at the national level.</td>
<td>VII. Communicate risk and preventive measures to the public.</td>
</tr>
<tr>
<td>VIII. Deactivate all Incident Command Systems and conduct debriefing in consultation with HEMC.</td>
<td>VIII. Ensure the availability of essential supplies at all times.</td>
<td>VIII. Maintain inventory of resources including human resources.</td>
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<tr>
<td>IX. Provide decisions on the necessity/requirement of international support.</td>
<td>IX. Facilitate the import and export of essential supplies.</td>
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<tr>
<td>X. Approve resources (technical and financial) required for the COVID-19 management.</td>
<td>X. Provide policy directives, support and guidance to the local COVID-19 Task Force on preparedness and response operations.</td>
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<td></td>
<td>XI. Assess, synthesize and appraise NC19TF on COVID-19 information.</td>
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<td></td>
<td>XII. Appraise the NC19TF on a day-to-day basis of new developments and the status of implementation of preparedness and response activities related to COVID-19.</td>
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<td>XIII. Review and recommend the requirement of resources for COVID-19 management.</td>
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Leveraging multisectoral collaboration to mitigate impacts of the pandemic

Bhutan’s existing multisectoral coordination was leveraged to respond to COVID-19. For example, the Comprehensive School Health Program has been in place since 1998; each school has a health coordinator who liaises with local health professionals and is responsible for coordinating the deworming of students and for providing vitamins and iron supplements, as well as ensuring sanitation and hygiene. The MoH was able to build on this approach to coordinate and implement COVID-19 safety protocols in schools. Each School Health Coordinator was designated and trained as a COVID-19 Safety Focal Officer and was trained to monitor and report any suspected cases of COVID-19 to local health authorities (maintain surveillance), as well as ensuring that hand-washing stations with soap are available and that all individuals are using face masks and maintaining physical distancing. They also supported monthly risk-based COVID-19 testing of students as part of the enhanced surveillance programme. Their role during movement restrictions was more limited: they shared information and advocacy materials, mainly through social media platforms.

Other multisectoral collaborations were also used to support COVID-19 pandemic response management. Each agency with 20 or more individuals at the workplace was asked to identify a COVID-19 safety officer, and the MoH trained individuals on COVID-19 safety measures for workplaces and created monitoring systems. This allowed agencies to share the responsibility for COVID-19 prevention and management.

The One Health approach was used to manage COVID-19 by engaging veterinary epidemiologists in the national Technical Advisory Group (TAG), as well as laboratory experts from veterinary and food safety sectors to support COVID-19 testing and the mobilization of RT-PCR machines from animal health and food laboratories to the Royal Centre for Disease Control. Furthermore, professionals from the Bhutan Agriculture and Food Regulatory Authority (BAFRA) were deployed to carry out disinfection and decontamination of quarantine facilities and vehicles.

The MoH worked closely with the De-Suung office on various aspects of the pandemic response. De-Suups were involved in patrolling the southern borders to prevent the spread of COVID-19 through Bhutan’s porous border with India.

They also ensured compliance with movement restrictions, delivery of essential food supplies, managing quarantine centres and assisting medical staff in managing queues during sample collection when mass testing was conducted (41). Similarly, the armed forces took a lead role in enforcing COVID-19 safety protocols, patrolling border areas, managing traffic, quarantine facility management and supporting health care workers during mass testing (42).
Organizations like the Bhutan Red Cross Society (BRCS) and other autonomous not-for-profit organizations transported patients and attendants to and from hospitals and managed the handling of dead bodies for organizing funerals during the period of movement restrictions.

The economic impact of the pandemic was mitigated through monetary interventions. The loss of livelihoods as a result of the pandemic, for example, was addressed by the His Majesty The King’s Relief Fund (income support and loan interest payment and deferment of payment of EMI). More than 37 000 people and their children were granted this monthly income support in the two years before May 2021 and interest waivers benefitted close to 140 000 loan accounts (43, 44).

**Engaging and communicating with communities effectively and leveraging community resources**

**Local government and community systems**

Decentralization has been pursued since the 1980s and has been further strengthened by the principles enshrined in the country’s Constitution and the Local Government Act 2009 (45). The focus of the current five-year plan is to empower local governments by providing greater financial, planning and administrative responsibility and authority (46). In the urban areas, the city (Thromdes) serves as the local government.

The approach to planning is participatory, with communities helping to identify local problems and community vitality positioned as one of the nine domains of Bhutan's GHN. As shown in the 2010 GNH survey, community vitality (measured by donation [time and money], safety, community relationship and family) was ranked as one of the three most important domains, together with good health and ecology (47), indicating the importance of community participation in developmental activities that aim to promote happiness and spiritual well-being. Further, at the rural level, community vitality is seen as the most important contributor to the country’s GNH. Legislative frameworks and structures are in place to leverage community participation in decision-making processes at the grassroots level.

**Community volunteers and social accountability**

A strong sense of national solidarity was exhibited (48), with different sections of the community volunteering in various ways. Some provided in-kind contributions (agricultural products) during the national movement restrictions (first imposed on 11 August 2020, followed by a few subsequent restrictions during community outbreaks). Others donated hand sanitizers and masks and volunteered to assist medical staff (49, 50).
At the national level, parliamentarians donated one month’s salary and the teachers’ association and citizen initiatives raised funds for the pandemic response (51). At the district level, people offered their own houses to be used for quarantine and shelter for health workers. Volunteers (from De-Suung, from the association for dairy and agriculture producers and many other private individuals) were involved in quarantine and logistics management, surveillance, security, transportation, guarding the houses where COVID-19 positive people were staying, the delivery of essential items, escorting people and travellers who found themselves stranded, and the COVID-19 related management of dead bodies. Local leaders, religious figures and the monastic body were key players at the local level whose influence was used to enforce COVID-19 protocols, disseminate public health information, maintain essential supplies, and encourage and coordinate vaccination campaigns.

For the government’s part, enough essential items were stocked to last for at least six months at strategic locations to prevent shortages and public panic. Access to essential supplies was ensured, even to remote communities, overseen by the district governor and locally elected leaders. The government delivered essential commodities during the movement restrictions (52) and made special arrangements to facilitate the sale of perishable products. It also trained 1350 Village Health Workers (VHWs) in case recognition, surveillance and reporting health advocacy measures (35, 53). The government kept the public informed through regular press briefings: 67 televised press briefings had been conducted as of April 2021 (54).

These briefings shared the status of COVID-19, as well as current challenges and plans and queries from the press were answered. These mechanisms supported social accountability during the pandemic with the public being informed on all the developments and provided with avenues for further information whenever necessary.
Conclusion and lessons learned

Despite being a resource-poor country, Bhutan devised a robust response to COVID-19 based on its existing PHC system. Community health workers were trained for sample collection and new swab collectors were trained and recruited to enhance surveillance surge capacity. Community health workers engaged in disease surveillance, health advocacy, rapid response and contract tracing were supplemented by doctors and nurses from clinical services. In addition, the presence of VHWs who focussed on preventive health care services facilitated the delivery of essential services such as immunization, maternal and child health and palliative care for patients at home (53).

Bhutan’s people-centered health care services, shaped by its Service with Care and Compassion initiative, addressed the needs of patients by integrating care for chronic conditions and ensuring early detection and treatment by taking services to where people live. This new model re-oriented service delivery by integrating PHC across the different levels of the health system and identifying clear roles for CHWs within that system. This is a way forward for the integration of health services and the provision of a continuum of care from promotive and preventive, to curative and rehabilitative services.

With GNH as its guiding development philosophy, Bhutan has promoted community engagement at the core of all its development processes. However, in responding to the pandemic, the country could not utilize community participation to its fullest due to lack of well-functioning governance structures. As such, building on existing community networks could help to strengthen governance and coordination in future health care emergencies. Existing mechanisms for cross-sectoral and multilevel engagement do not appear to be strong enough. Even while engaging with the community directly or through CSOs and NGOs, there was a lack of coordination that often resulted in the duplication of efforts.

A thorough assessment of the existing multisectoral approaches and community groups and networks involved in Bhutan’s pandemic response may be a useful next step. Such an assessment could map multisectoral approaches, community groups and networks and study the enablers and barriers for their engagement to streamline multisectoral and community engagement in health emergencies.

The efforts of De-Suung, CSOs and the BRCS proved crucial for the pandemic responses. However, one gap in the response was the lack of health system mechanisms to formalize and mainstream the engagement and use of the volunteer resources effectively (including those provided by health-related NGOs). This indicates an opportunity to strengthen health system readiness for future health emergencies.
New digital application systems and mobile apps were developed during the pandemic, demonstrating the potential for the integration of multiple databases to monitor the health needs of the population. Health information systems need to be regularly updated and include inputs to identify target population groups, such as infants and pregnant women who require timely health interventions.

Immediately after the confirmation of the first COVID-19 case, the WHO Country Office for Bhutan released funds through SEARHEF, as there was no in-country mechanism in place to fast-track access to funds during emergencies. This facilitated the implementation of Bhutan’s preparedness and response plans while also demonstrating the need to establish an emergency fund that can be readily accessed by MoH for future crises.

Bhutan’s COVID-19 prevention and containment during the study period and its rollout of a massive vaccination drive, have utilized the extensive network of PHC delivery systems that are available across the country. Learning lessons from this pandemic, the PHC system could be further strengthened and remodeled to ensure PHC resilience and robustness to effectively respond to any future pandemic or other health emergency.
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This case study was developed by the Alliance for Health Policy and Systems Research, an international partnership hosted by the World Health Organization, in collaboration with the WHO Regional Office for South-East Asia (SEARO) and WHO country offices. In 2015, the Alliance commissioned the Primary Health Care Systems (PRIMASYS) case studies in twenty low- and middle-income countries (LMICs) across WHO regions. This case study builds on and expands these previous studies in the context of the COVID-19 pandemic, applying the Astana PHC framework considering integrated health services, multisectoral policy and action and people and communities. This case study aims to advance the science and lay a groundwork for improved policy efforts to advance primary health care in LMICs.