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

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Executive summary

This country case study examines primary health care (PHC) in the Maldives in the context of the COVID-19 pandemic between 2020 and May 2021.

The health system in the Maldives operates across three tiers: primary care is delivered via health centres that operate at island level; secondary care is delivered via atoll hospitals in atoll capitals, six of which are designated as regional hospitals; and tertiary care is provided mainly at the central level in the capital Male’. Despite important PHC strengths, health service delivery largely follows a disease-focused medical model, with an emphasis on minor ailments and preventive aspects. Improving multisectoral action and mechanisms for civil society engagement, including creating greater clarity around the role of community health workers (CHWs), is likely to strengthen PHC.

The COVID-19 pandemic through 2020 brought the whole of government together to establish coordination mechanisms for the pandemic response, facilitated by high-level political commitment. Technology was used extensively to bridge gaps in information systems and to support decision-making, coordination and information exchange. At the same time, voluntary support was provided by civil society organizations (CSOs), while the Maldives Red Crescent (MRC) engaged with vulnerable and foreign migrant populations, facilitated by the social service sector and supported by United Nations (UN) agencies.

However, as the pandemic progressed in 2020, cross-government partnerships were difficult to sustain, the multisector response lost momentum and public trust waned. Enabling civil society engagement via a common platform and mechanism for collaboration was a key challenge.

Moreover, there were challenges in sustaining service provision in healthcare facilities. With the outbreak clustered in the Male’ area, health facilities in the Atolls were able to resume essential services without significant delay while conducting case surveillance. Primary care resumed in Male’ with support from volunteer health professionals who provided home visits and online consultations.

A key achievement included alternative pathways created for emergency referrals, with patients requiring tertiary care diverted to hospitals in the Atolls. Lack of coordination within and between health facilities resulted in delayed care in some instances. However, overall, the experience increased confidence among residents of the Atolls who felt that they were receiving a similar level of health care as those in Male’.

The pandemic response throughout 2020 has highlighted existing challenges in the health system in the Maldives, as well as the need for sustained multisectoral action and community engagement. The pandemic also highlighted the importance of strengthening primary care services to support care continuity in public health emergencies.
Introduction

In 2018 the Astana Declaration codified three interrelated and synergistic components of PHC: 1) primary care; 2) multisectoral collaboration, and 3) community engagement (WHO & UNICEF, 2018a; 2018b). This case study uses the Astana framework to analyse PHC in the Maldives in the context of the COVID-19 pandemic from January 2020 to May 2021.

Data collection involved a desk review of literature and stakeholder engagement with Ministry of Health and other government officials, health workers in primary care and hospital facilities, and local government and civil society representatives. The review enabled information to be obtained on the three components of PHC and identified areas for further exploration through stakeholder consultations. Data from consultations was used to contextualize and triangulate information relevant to the three components of PHC.

National context

The Maldives is an archipelago of approximately 1900 low-lying islands in the Indian Ocean, of which about 200 islands are inhabited (MoEn, 2020). In December 2020, the country had a population of 557 427 (NBS, 2018a). Census data from 2014 show that 16% of the population were foreign residents and the country had experienced its first population dividend with fertility below replacement (May, 2016; NBS, 2018a). The 2014 census data also show that about 38% of the population resided in Male’, the capital of the Maldives, with the rest distributed across 20 administrative Atolls (NBS, 2018a).

A middle-income country, the Maldives’ GDP grew by an average of 4.6% per year between 2015 and 2019 with tourism as the main contributor to growth (NBS, 2020). The Maldives ranked 95 out of 189 countries in the 2020 human development index (HDI), with a value of 0.74 (UNDP, 2020). While income poverty has been calculated at 6.6% with wide disparity between Male’ and the Atolls (1.5% and 10.4% respectively), multidimensional poverty has been calculated at 28% (NBS, 2018b; NBS et al., 2020). Social vulnerabilities rose during the COVID-19 pandemic, with disruptions to education and increased reports of domestic violence (MoE, 2020; UNFPA, 2021). GDP declined by 30.5% in the fourth quarter of 2020, compared to the same period in 2019 (MMA, 2021), while income poverty increased by an estimated 5.1% (World Bank, 2021).

The country has made significant improvements in communicable disease control, as well as maternal and child mortality. However, the country now battles a double burden of disease, with 80% being noncommunicable diseases (NCDs) (WHO, 2018). While the Ministry of Health (MoH) is mandated with health policy and the provision of health services, the Health Protection Agency (HPA) is responsible for public health protection and disease control, including pandemics. The Maldives Food and Drug Authority regulates the quality and safety of food, medicine and medical products.
The health system is organized across three tiers (Fig. 1). Each inhabited island has a health centre that is staffed at least by a doctor, a nurse and a CHW, who together provide essential health services including skilled birth attendance. Atoll-level hospitals located in the Atoll capital provide secondary care, including comprehensive obstetric and paediatric care. Hospitals and health centres have a public health unit (PHU) that provides preventive and promotive services to the community. Six hospitals in the Atolls are designated as regional hospitals, providing a wider range of secondary care. Two of the regional hospitals also provide some tertiary care (MoH, 2021a). Referrals rely on the central hospital – Indira Gandhi Memorial Hospital (IGMH) – in Male’ to a large degree and these referrals do not strictly follow the tier system. Public health facilities do not use an integrated patient information system, instead relying on information from patients. All health supplies including medicines and consumables are imported into the country.

**Figure 1. Health system entities in the Maldives, 2020**

<table>
<thead>
<tr>
<th>Tier 3: Tertiary</th>
<th>Government health services</th>
<th>Business and civil society services</th>
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<tbody>
<tr>
<td>National referral hospital – IGMH</td>
<td>Private hospitals Male’ (3)</td>
<td>State (STO) and private pharmacies and health suppliers</td>
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<tr>
<td>Regional hospitals (2)</td>
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<td>Thalassaemia Centre (1)</td>
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<th>Tier 2: Secondary</th>
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<tr>
<td>Hulhumale Hospital</td>
<td>Private hospital</td>
<td>STO and private pharmacies and health suppliers</td>
</tr>
<tr>
<td>Regional hospitals (4)</td>
<td>Atolls (1)</td>
<td></td>
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<tr>
<td>Atoll hospitals (13)</td>
<td>Private clinics (198)</td>
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<tr>
<th>Tier 1: Primary</th>
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<tr>
<td>Health centres</td>
<td>Health-focussed CSOs; youth and women’s groups</td>
<td>STO pharmacies</td>
</tr>
<tr>
<td>Islands (162)</td>
<td></td>
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<tr>
<td>Male’ (1)</td>
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Source: The author’s compilation based on stakeholder consultations.
The policy to place medical doctors within tier one pivoted the PHC model and created some uncertainty regarding the role of CHWs who represent the cornerstone of PHC. CHWs are trained for two years to provide services relating to public health, preventive interventions and curative care, including maternal and reproductive health care and the prescribing of a specified list of medicines (LSTM, 2020). Furthermore, as policy-makers and health managers understand PHC differently, the organization of services at health facilities has gradually transitioned towards disease-focused care rather than PHC-led services (LSTM, 2020). The Maldives’ health policy and approach has also resulted in a marked increase in foreign workers, who in 2020 constituted 30% of the health workforce and the majority in all cadres except public health (MoH, 2020).

According to the national health accounts for 2015–2017, 9% of GDP was spent on health (MoH, 2019). The government-funded national healthcare financing scheme, Aasandha, covers comprehensive curative care, emergency transfers and referrals to enlisted private hospitals. This scheme decreased out-of-pocket household expenditure from 45% of total health expenditure in 2011 to 20% in 2016 (MoH, 2019). Despite the relative high spending on health, however, recent studies have shown that 43% of the population do not have confidence in the health sector and 63% are not satisfied with health services (MoH, 2019; HRCM et al., 2020; Riyaz et al., 2020).

While a number of multisectoral mechanisms are set up at national level, examples of Health in All Policies (HiAP) have only been observed in the education sector. The HPA works with CSOs supported by UN agencies and other partners to reach specific target groups. However, since mechanisms for transformative partnerships are not well established, the results of such efforts by the HPA are short-term with limited sustainability.

A national risk assessment of the pandemic conducted in early 2020 identified the Maldives as “high risk” (Usman et al., 2021). The first case of COVID-19 was detected on 7 March 2020. By the end of that year, the Maldives had experienced two waves: 13 721 cases and 48 deaths were reported across these waves, largely clustered in the greater Male’ area (GMA) with sporadic outbreaks in the Atolls and resorts (HPA, 2020). The new year saw a third wave that spread across the archipelago, with reported cases reaching 63 686 and 158 deaths by 31 May 2021 (HPA, 2021).
Centralized pandemic planning

Pandemic planning was centralized and functioned through the Health Emergency Operations Centre (HEOC) that was established in the Maldives at the end of January 2020. The HEOC was tasked with planning, operating and coordinating the pandemic response across the country, with guidance from the Health Emergency Coordination Committee (HECC), which is the intersectoral and multi-agency coordination structure for national health emergencies (MoH, 2018). The HEOC was escalated to the National Emergency Operation Centre (NEOC) in March 2020, before being scaled down again at the end of June 2020.

The initial focus of pandemic planning in 2020 was on creating awareness among the population of COVID-19, stockpiling personal protective equipment (PPE) and emergency supplies, training health care workers and establishing an effective surveillance system for case detection using the country’s existing notifiable disease reporting mechanisms – all while maintaining basic and emergency health services. This required building on existing primary care resources, timely coordination between teams at health centres at island level and effective communication with the islands to enable the real-time flow of information necessary for response planning.

Given the disconnect between PHUs and clinical services, coordination was a constant challenge. For instance, flu clinics for early detection of COVID-19 cases were run by doctors while CHWs attached to the PHU were responsible for reporting and taking samples for testing. Consultations and sample collections did not happen at the clinics, therefore follow-up visits were needed by CHWs to take samples. Furthermore, as the outbreak was geographically clustered in the GMA, there was little motivation among the health workforce at the primary care level in the Atolls to conduct surveillance and awareness-raising activities. Active monitoring by the national communicable disease control division at the HPA and in the Atoll health service coordination cluster at the HEOC supported surveillance across the Atolls.

Gaps and disconnect within the health information system were identified by key informants as a major challenge in response planning and continuity of essential services. Early decisions were made based on limited information and assumptions. Public health information systems (e.g., immunization and antenatal and family planning records) continued to be paper-based, and individuals could not be traced using the limited information maintained digitally.

There are no links between existing databases that contain information on the population and their health conditions. For example, disease surveillance databases, hospital information systems and the Aasandha system are not integrated, nor are they linked with the national identity registration system or household registries. The restrictions on movement introduced in April 2020 led
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to delays in reaching out to vulnerable populations such as bedridden patients, infants and pregnant women.

The early months of the pandemic highlighted the need for a common platform to hold the information needed by relevant stakeholders. As the pandemic progressed, a common information platform was established for pandemic operations, customized to the needs of the country. As with many technological innovations, this platform came with its own glitches and required continuous monitoring and maintenance. Nevertheless, the improved information flow enabled evidence-based decision-making: for instance, in contrast to the nationwide movement restriction policies enforced at the beginning of the pandemic, a policy was adopted in the second wave to enable differentiated restrictions on movement, based on epidemiological analysis of information from this common platform.

Building on existing primary care resources for essential health services and referral management

Ensuring continuity of essential health services during the COVID-19 pandemic response was a major challenge. Even though it was expected that essential health services would be provided by the PHC team, the organization of health service delivery at health facilities meant that services were often disconnected and fragmented.

Since the initial outbreak was largely concentrated in the GMA, essential health services continued on other islands except during a few weeks of the initial movement restrictions in April 2020. In the GMA, disruptions were felt during the movement restriction periods in both essential health services and referrals from the Atolls, with health service delivery for most of the year limited to emergency medical care and efforts to contain the COVID-19 virus.

As a result of the movement restrictions in Male’ and risk communication on COVID-19, the health-seeking behaviour of the population changed. People sought professional medical care primarily for essential health conditions and emergencies only, and online consultations were often preferred over face-to-face visits to health facilities. Indeed, online consultations enabled the island communities to seek specialist medical help at the central level without having to travel to the GMA – unlike prior to the movement restrictions. Online processes were also established to cover the cost of such consultations and to enable patients to purchase prescribed medicines through Aasandha. Similarly, Aasandha enabled the continuity of treatment for cancer patients through online consultations with specialists working at hospitals beyond the Maldives.

CSOs and volunteers were active in supporting and responding to non-COVID-19 health issues, while the health workforce in public sector was reserved for pandemic response efforts. Maternal and child health services such as antenatal check-ups and immunizations were disrupted briefly in 2020, but these resumed after a few weeks, which enabled the country to maintain
national indicators. Childhood vaccine coverage in 2020 appeared to be consistent with 2019 levels, for instance.

The medical community not affiliated with government services volunteered to work at the HEOC and contribute to the pandemic response efforts. These health professionals made home visits to attend to elderly and bedridden patients, for example, and were supported with PPE and orientation on the national operational protocols. Despite these additional efforts, however, the population faced complications and worsening of chronic conditions as a result of delayed care and due to the disruption to routine surgeries, diagnostic services and inpatient treatment. The factors that contributed to delays and disruptions will need to be studied and addressed to improve future preparedness.

Although emergency referrals from the Atolls to central level were allowed in 2020, the outbreak of COVID-19 in the GMA and the associated restrictions on movement caused reluctance among the public and Atoll health facilities to seek care from IGMH. Consequently, alternative facilities were found for emergency referrals and patients were diverted to the regional hospitals. Aasandha facilitated these referrals through changes in their operational procedures; however, this increased expenditure on inter-Atoll transport for critical patients by more than 25% compared to 2019 (personal communication, Aasandha, 29 April 2021). Moreover, operational delays in the coordination of referrals for high-risk, non-COVID-19 maternal cases resulted in foetal adverse events during the movement restrictions (Moosa et al., 2021).

The HEOC had clear, standardized referral protocols for COVID-19 cases. The coordination of these cases largely functioned appropriately with timely referrals and transport of a few high-risk cases that were detected on the islands. The Maldives’ experience during the pandemic in 2020 therefore demonstrates the value of integrated services with a coordinated referral mechanism to provide continued care.

A community-based health workforce

In 2020, the health workforce was a key limiting factor in responding to the pandemic. The existing skills mix was not well suited to providing PHC-led services, and the absence of an integrated approach to service delivery added a further challenge.

Multiskilled workers such as CHWs – who can take samples, conduct preliminary check-ups, start treatment and monitor patients until secondary care is available – are the ideal. However, there are relatively few trained CHWs and this proved a great challenge in the delivery of health services. Indeed, the number of CHWs in the public health system has remained static at about 500 workers (with 54% females) over the last three years, while other cadres have grown (MoH, 2020). In 2015, the Maldives recorded 23 doctors and 14 CHWs per 10 000 population, and in 2019 the number of doctors had increased to 44 per
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10,000 population but, the number of CHWs had declined to 4.5 (LHTM, 2020; WHO, 2020).

In addition, PHC teams’ skills are not well suited to addressing the chronic disease burden, which has contributed to gaps in the provision of psychological support, and physical and occupational therapy. Gaps were particularly evident during the pandemic in 2020. A high reliance on foreign doctors and nurses with limited understanding of the local context and who are stationed for short periods of time also affected the delivery of PHC-led health services. However, in the first wave of COVID-19, these foreign health workers proved extremely useful in attending to the large number of foreigners infected with the virus, as they were able to overcome language barriers.

Skills and capacity gaps were filled through task-shifting and by training the available workforce with appropriate knowledge and skills to contribute to the pandemic response. For example, initially, only those with a degree in medical laboratory sciences were licensed to conduct polymerase chain reaction (PCR) testing. This issue was solved by adapting the licensing guidelines so that the regulator, the Allied Health Council, permitted biotechnologists to conduct PCR tests. Furthermore, during the early months of the pandemic, PCR testing was available only at the national referral laboratory; however, concerted efforts were made by the government to increase testing capacity both in the GMA and the Atolls. Multi-stakeholder partnerships were leveraged to support PCR testing at the Maldives Police Service’s forensic laboratory as well as at the ADK Hospital in Malé to cater to the increased demand.

Testing began in five Atolls, with point-of-care testing available in three other Atolls supported by WHO. This increased laboratory surveillance capacity and helped early containment of the virus in the Atolls. Improvements were also made to sampling systems and the transportation of samples from the islands. School health workers and medical, nursing and health sciences students were trained in sampling techniques, which meant they could contribute to the rapid response and contact tracing efforts. There is potential for this testing capacity to be integrated as a function of the health system.

Similar capacity constraints were observed among the mental health workforce who became overwhelmed in the face of increased reports of mental health issues and domestic violence during the lockdown and periodic restrictions on movement in the GMA. With trained workers already in short supply, a mental health helpline was established that was supported by relevant CSOs and volunteers. Additional volunteers from the MRC were also trained and posted within the HEOC to provide psychological first aid and basic counselling to those in isolation or quarantine. The volunteers were trained to detect signs of critical cases and to refer patients to psychiatrists when medical help was required.

A lack of trust in the public health system reportedly led to some island communities believing that specialized services are best sought at the central level. The pandemic forced island communities to seek almost all medical services from regional and Atoll hospitals, however, which enabled doctors on
the islands to perform procedures that they would normally refer elsewhere. Some of these surgeries were on par with services delivered in the GMA, thereby increasing acceptance and confidence among island communities. More complex services such as advanced cardiac care, orthopaedic surgeries or advanced diagnostic imaging services are still not available in the Atolls – and thus gaps and inequities in health service coverage are observed.

Technological innovations

Technology enabled innovations in the pandemic response and the delivery of essential health services throughout 2020. Examples include smartphone apps for online consultations, the coverage of health care costs by Aasandha, and the transfer and management of sampling data, test results and vaccination records. Furthermore, HEOC operations were fully digitized within a few months, thus integrating case and contact information, and PCR sampling and results information. The HEOC’s digital system was also used to trigger the movement of cases, to flag up vulnerable people in quarantine and isolation, to issue de-isolation documentation, to alert international arrivals requiring quarantine, and even to authorize domestic travel between islands. By using technology and social media platforms to provide up-to-date information, update service providers, conduct trainings and empower primary care cadres, the Maldives was able to provide PHC services more efficiently in 2020.

Instructions and guidance were also issued to community groups primarily through online platforms. The majority of the islands had a suitable facility either in the council office or in the school or health facility from where online training could be delivered. Furthermore, the HEOC was constantly educating health professionals across the country on case detection and communicating changes in protocols and operations via online sessions. Experience showed that one-off trainings were not effective, and that information and skills needed to be reinforced at short intervals for effective implementation. Along the same lines, continued engagement with island communities created a favourable environment for the COVID-19 vaccination programme, with vaccine refusals reported at only low levels. For smaller islands, community groups played an important role in disseminating information on the COVID-19 vaccine.

How multisectoral policy and action are responding to COVID-19

A whole-of-government approach was mobilized during the early phase of the COVID-19 pandemic. Pandemic response planning started with the activation of the HEOC and the HECC, as stipulated in the Health Emergency Operations Plan (HEOP) (MoH, 2018). Although initial efforts to prevent and control the disease fell under the remit of the MoH, support was later called in from all sectors of the government. Because the country was classified in the national risk assessment of the pandemic as “at high risk” (Usman et al., 2021), the NEOC
was activated upon detection of the first suspected case to further support the preparedness functions and to coordinate operations across the country. Multi-agency coordination was also initiated with participation from the MRC, state-owned enterprises, the tourism industry and the private sector. Commitment was given at the highest level of the government, with the President leading the High-Level National Task Force. Figure 2 illustrates the emergency operations structure mobilized in 2020.

Figure 2. COVID-19 emergency operations structure during the 2020 pandemic response

Note: The NEOC, NERF, Lockdown Management Committee and Social Council Subcommittee were in place for the period March–June 2020 only.
Source: The authors adaptation form HEOP (MoH, 2018).
In addition to involvement with the NEOC, different sectors were also engaged in various other committees. For example, the Lockdown Management Committee coordinated the continuity of essential services and provision of basic commodities, monitored the welfare of workers – including foreign migrants – and provided economic relief. This committee also coordinated the import of essential supplies and the repatriation of locals stranded in other countries and vice versa. The Social Council Subcommittee facilitated shelter and relief, providing safe homes for victims of discrimination, violence and abuse and assistance to people stranded due to restrictions on movement. These multisectoral committees that worked alongside the NEOC enabled the MoH to focus on interventions to contain the pandemic. Different sectors also worked together to mobilize the resources, skills and expertise needed to discuss and find solutions to challenges faced in the pandemic response efforts. Balancing pandemic control with economic and social hardship was difficult, however. Deciding on acceptable risk levels based on technical recommendations, the capacity of the health system and the socioeconomic impacts on the population often required direction from the highest level of the government.

Improving the health of the population requires addressing determinants of health outside the health sector, yet coordination with different stakeholders was a challenge even before the pandemic. The pandemic has highlighted the fact that health can only be assured by working together and emphasizing a HiAP approach. New partnerships were forged: examples include the development of housing standards for foreign migrant workers, social support provided by local councils, and health and safety provisions for employees in the tourism sector.

In certain cases, limited liaison mechanisms made it difficult for some stakeholders to work together in the initial response to COVID-19. This resulted in vulnerable groups such as persons with disabilities (PWDs) and persons with substance-use disorders being neglected. Roles were not clearly defined and therefore partners such as CSOs working to support PWDs did not know where they fit into the multisector response and what procedures were in place to facilitate collaboration.

While the multisectoral action described above enabled the Maldives to attend to immediate needs such as the provision of essential health services, shelter and food, and facilitate social protection, drug rehabilitation services and travel when necessary, no contingency plan exists to sustain multisector coordination. Operations were scaled down at the end of the first wave to just the HEOC, and as the pandemic continued, different sectors started to prioritize conflicting goals that hindered or even obstructed pandemic control measures. Lack of coordination and collaboration compromised service provision and led to duplication of some services, as observed in the establishment of testing laboratories and COVID-19 vaccination centres.
At the time of writing, the MoH planned to roll out a PHC-focused health plan in which attention would be given to preventive health and health promotion rather than curative care (MoH, 2021b). There is an opportunity to ensure that this plan fosters an HIAP approach and that it defines clear roles for collaborating stakeholders to maximize available resources across institutions with links to a programme budget at a national level.

**How communities are responding to COVID-19**

The pandemic throughout 2020 highlighted the importance of decentralization and the need to engage with the community in providing essential health services and public health interventions. At the time of writing, health services were planned and delivered using a top-down model, with few opportunities for client or community participation in governance processes.

The top-down model limits the role of health facility managers at local level, as well as engagement with stakeholders such as Island Councils or community groups in mobilizing local resources for emergency operations. Community participation is also critical to create awareness about COVID-19, as well as to encourage acceptance of preventive measures and the vaccination programme, while continuing to provide other essential health services.

Community volunteerism was limited in the health care response in the GMA, with just a handful of doctors and nurses providing home visits. Volunteers were more forthcoming in the relief operations during the lockdown, however, although initial attempts to engage businesses and construction companies achieved little.

Media companies and CSOs (specializing in health and other social issues) in the GMA volunteered during the movement restriction periods. Media coverage of activities to contain cases and risk communication raised awareness among the population and increased public acceptance of the restrictive measures imposed by the government. The MRC mobilized a large number of volunteers and community resources to support relief efforts and to raise awareness among the marginalized community of foreign migrants. Different youth groups also volunteered – bringing specific skills in maintenance, electrical repairs and graphic design, as well as supporting in the coordination and organization of response efforts – thereby easing the cost of operations. Many CSOs, supported by UN agencies and development partners, also helped with wider relief operations, providing support to PWDs, drug addicts and the elderly. Islands mobilized their community youth groups, CSOs, women’s development groups, school communities, and local utility providers and businesses to provide essential services and social support.

The Island Councils also played a critical role in preventing COVID-19 from reaching their communities. While the managers of health facilities at island and Atoll level implemented public health instructions from the HEOC, the
councillors showed initiative by operationalizing the travel restrictions and precautionary quarantine measures. At times, the Island Councillors acted with autonomy, imposing stricter measures than those prescribed for the particular island by the HPA.

As the pandemic progressed and islands stayed free of COVID-19, however, motivation levels among health care workers, councillors and island communities reportedly declined. As a result, they were ill-prepared for the early detection of cases in the Atolls, which led to outbreaks on several islands. Fortunately, the islands’ earlier preparations proved extremely useful, so that when necessary, the island community leaders re-convened their taskforces and found alternative ways to provide essential services with minimal disruption, while containing the outbreak, and there is a need to strengthen online platforms to share and report key data.

Transparent communication of harmonized messages delivered via different platforms and languages enabled the government to gain the trust of the community. Consequently, the population was engaged with COVID-19 operations and service delivery in the country in the initial months of the pandemic. Media engagement, and therefore trust in the pandemic response operations, faltered over time, however. For instance, during the second wave, COVID-19 operations were not escalated to the NEOC and press briefings were held bi-weekly compared to the daily briefings in the first wave. The media started to question the commitment of the government and the transparency of activities and COVID-19 statistics. Challenges continued to surface following the second wave due to weak multisectoral coordination and lack of timely messaging from the government to the media, CSOs and the population. Public trust declined, threatening pandemic control measures.
Conclusion and lessons learned

PHC components that existed in the public health system prior to the pandemic were well utilized in 2020, particularly in the Atolls. This includes the utilization of doctors and nurses at island level to work in an integrated manner for disease surveillance, rapid response and medical care, which in turn enabled CHWs to focus on essential health services such as immunization, maternal health and home-based care. However, in the capital city of Male’, PHC components were much weaker, and teams had to be trained to deliver PHC, drawing on volunteers from private hospitals, professional associations and academia.

A key learning from the pandemic is that CHWs play a critical role in supporting healthcare continuity and local community engagement, and case study findings highlight a need to strengthen this workforce. The CHW workforce has declined in recent years due to the way that the health policy has been implemented, the lack of a common understanding of PHC and ambiguity around the role of CHWs in delivering PHC-led services. Skills gaps were also observed in terms of the provision of psychological first aid and continuing therapy for PWDs and the elderly.

The health system acted quickly to reorganize referrals in collaboration with Aasandha. This enabled subnational emergency referrals to regional hospitals, although the lack of preparedness for diversions from standard protocols to alternate emergency referral procedures resulted in delays in some instances, with adverse health outcomes and increased expenditure.

From a policy perspective, while strategic plans emphasize PHC, there is a disconnect between investments being made in the health system and the requirements for delivering PHC-led services. There is an opportunity to reallocate resources to strengthen PHC, including through investing in attracting and retaining CHWs and improving clarity around their roles (LSTM, 2020). The health system could benefit from being reoriented to integrate PHC components at health facilities across the tiers and to identify clear roles for CHWs within health service delivery. Increasing the number of CHWs with an appropriate skills mix is likely to increase health system resilience, alongside a holistic rather than siloed approach to health planning to secure sustainable investments for PHC-led services.

The pandemic has also presented the Maldives with an opportunity to build partnerships for health – although many of these partnerships have not been sustained. Multisectoral collaboration was evident from the first case of COVID-19 involving strong commitment from the highest level of the government (Moosa et al., 2020a; Usman et al., 2021). Some gaps remained, however, particularly in regard to social protection services and PWDs (Moosa et al., 2020b). Multisectoral collaboration weakened as the pandemic progressed, with some sectors pursuing conflicting goals. Other partnerships that emerged in 2020 need to be nurtured through a participatory governance approach and by defining clear, beneficial roles for all partners.
Integral to the multisector response were effective information systems. The health information system is not kept up to date and requires inputs to identify target population groups such as pregnant women for timely health interventions. Technology was widely used as part of the pandemic response in 2020 for communication, reaching out to patients, teleconsultation and for pandemic operations. There were both positive experiences and challenges that need to be integrated in future health planning. For example, the use of up-to-date monitoring of population health needs could be integrated into the normative public health system in the COVID-19 recovery phase.

While attempts were made to engage the community in the pandemic response in 2020, a top-down approach resulted in some vulnerable groups being left behind (Usman & Moosa, 2020). The MRC proved essential in engaging volunteers and in mobilizing community resources, supplemented by support from social services, CSOs and resident UN agencies. The health system lacked the mechanisms to tap into and maximize volunteer resources including CSOs effectively, however, which needs to be addressed as part of health systems readiness for future health emergencies.

Overall, the PHC components were instrumental in scaling up the pandemic response. The country has realized the importance of participatory governance mechanisms, forging new partnerships, using technology and innovative approaches to monitor epidemiological trends and reach vulnerable groups, and digitizing the response operations. There is an opportunity for recovery efforts to build on these experiences and lessons learned in order to address weaknesses in the health system. PHC-led health services could also be strengthened with an appropriate skills mix among the health workforce and decentralization of resources critical for health system resilience.
References


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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.