



Assessment of Private Healthcare Providers Role in the COVID-19

Aden, Yemen

AUTHORS' NOTE

This assessment was conducted as part of the evidence and knowledge gathering to inform the initiation of the UNDP COVID-19 Emergency Health Response and Recovery Project with Funding from UNDP.

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Introduction

Yemen has been embroiled in a protracted internationalized civil war since early 2015. Yemen is considered not only the worst humanitarian crisis in the world but also one of disproportional and devastating development crisis; the health care system has been decimated by years of relentless war.¹ The ongoing conflict is affecting the functionality and provision of

¹ UNDP Yemen's Impact of War reports: Assessing the Impact of War on Development in Yemen (April 2019) and Assessing the Impact of War on Yemen in Achieving the Sustainable Development Goals (September 2019).

health service and public health programmes to the population. Only half of the public health facilities are functioning, and many that remain operational lack basic equipment like Personal Protective Equipment (PPE), diagnostic capacity, oxygen, and other essential supplies to treat the coronavirus. Many health workers are receiving no salaries or incentives.

As of 7 September 2020, the country reported 1,989 confirmed COVID-19 cases and has a 29 per cent death rate (573 deaths). United Nations estimated approximately 40,000 will die of COVID-19, while the virus could infect more than half the population if no mitigation measures are put in place. Many infected Yemenis have developed severe COVID-19 symptoms due to limited access to health services and underlying health conditions, and this trend is likely to continue. Although there has been increased information and risk communication efforts, a large proportion of Yemenis are still in denial and mistrust COVID-19 messages – partially due to fear of stigma and discrimination.

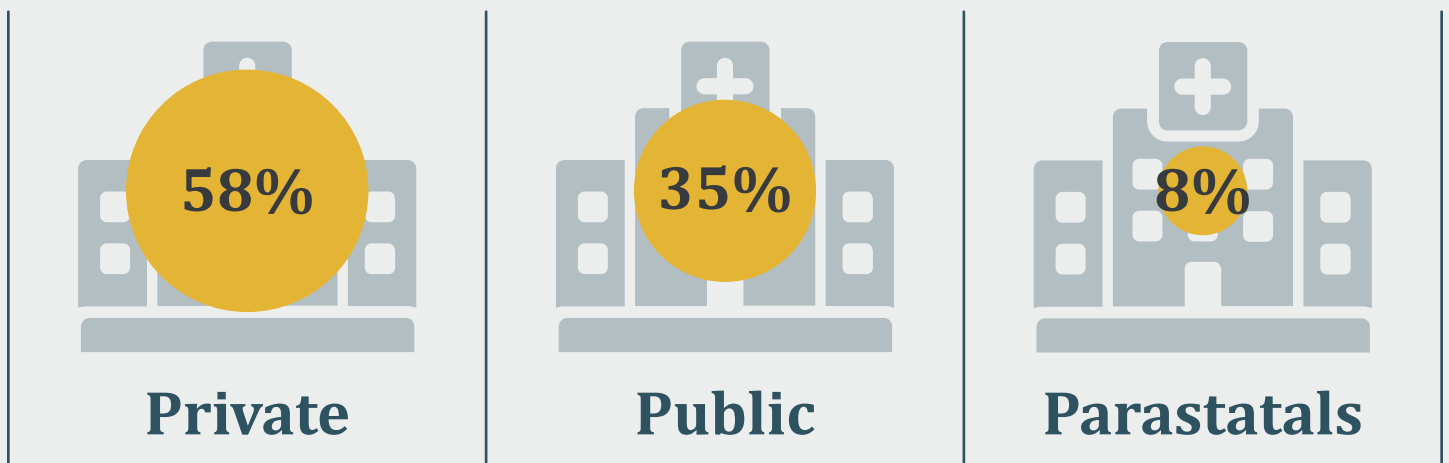
COVID-19 testing is available in the

public health system. In the southern governorates, the World Health Organization (WHO) supported four COVID-19 polymerase chain reaction (PCR) laboratories; however, testing coverage remains very low. Perhaps, the combination of fear, stigma, and inadequate testing make many patients reach health services at the late stage of the disease and their chance for survival are limited. The delayed access to testing and treatment is affecting the overall COVID-19 response in Yemen and may further impact community trust.

Since mid-June, there is a sudden decrease of COVID-19 patient admissions in Aden. In addition, there are some anecdotal reports of patients self-treating and seeking health service in the private health sector. The private sector has been rapidly growing since 1990, driven by the deterioration of the public health system. Currently, the private health sector provides about 70 per cent of health care in the country. Hence, the private health sector has a key role in the COVID-19 response. Furthermore, the private sector is a key partner for health service delivery and the integrated food security phase classification (IPC).

As the number of confirmed COVID-19 cases and hospital admissions reduced significantly, this paper aims to identify the informal COVID-19 treatment services in Aden city, the role of the private health sector in the COVID-19 response, and to understand the organization and safety of such services.

Figure 1: Hospitals in Aden





Rationale

With the rapidly evolving COVID-19 outbreak and the high level of stigma and fear, the focus should remain on improving coordination of all sectors, well-structured community engagement, strengthening supply chain system, and access to quality and safe COVID-19 treatment and testing services. There is a general view that Yemen healthcare system should “build back better”; however, the policy makers and citizens must benefit from lessons learned and build upon resilient and sustainable

health systems. The public health sector role in the COVID-19 response is key to the success of containing the spread of the disease, as well as the continuum of care of the population.

If such a rapid assessment exercise is to be useful, it must ask deep, penetrating, and critical questions without finger-pointing or

engendering defensiveness. While it is obvious that aspects of the COVID-19 response could have been stronger at the onset of Yemen's outbreak, it should also be obvious that the focus must be on systemic challenges rather than the shortcomings of specific individuals or institutions.





Objective

The overall objective of the rapid assessment is taking stock of the role of the private healthcare sector in the COVID-19 response and to better understand the organization of the COVID-19 care and treatment services.

The finding of this rapid assessment is expected to inform the pillars of the national COVID-19 response including service delivery, community engagement, referral pathways, IPC, and waste management.



Methodology

The assessment used a two-pronged method of focus group discussions (FGD) and in-depth interviews. Both methods aim to supplement each other and were used to gather opinions, experiences, values, and to gain a deeper understanding of the subject. These methods aimed to obtain data from purposely selected groups of individuals and/or entities rather than from a statistically representative sample of a broader population.

In this rapid assessment, selected health facilities and health workers from various cadres were assessed based upon the patient volume, service levels, and roles. A team of doctors, nurses, laboratory technicians, and managers were engaged in the FGDs and in-depth interviews with an aim to identify weaknesses, strengths, and opportunities for the private healthcare sector in terms of coordination, health information systems, and COVID-19 related supply chain and healthcare waste management.

UNDP – with the support of WHO – conducted a rapid assessment in six randomly selected private healthcare

providers in Aden city and included FGDs and seven in-depth interviews with management. Additionally, five to nine healthcare workers in the six facilities participated in five focus group discussions lasting one to one-and-a-half hours. A standard questionnaire was used to collect the data of the FGDs and in-depth interviews.

The selected private health facilities were representative in terms of health facility size, serviced population, and type of services; all were functional in the last six months.

The rapid assessment was conducted between 19 July and 13 August 2020 in Aden City, Yemen.





Study Limitations

The methodology and design of the rapid assessment was done in consultation with governorate's health office, WHO and the United Nations Children Fund (UNICEF). The study questions were limited to areas not currently assessed by other partners such as risk communication, surveillance, and contact tracing to avoid duplications but also not to overburden the surveyed respondents.

The study was limited to assess the role of the private healthcare sector in the COVID-19 response, identify strengths, weaknesses, and opportunities of the private health sector in the COVID-19 response and continuum of care of the population. The study has not assessed client satisfaction or health seeking behavior of the population in relation to the COVID-19 outbreak. Health seeking behaviour assessment would provide more strategic information about client preference of health services, cost, access, quality, and

equity of the services. In addition, it would provide an answer as to why patients prefer to access private COVID-19 treatment services to the free-of-charge COVID-19 treatment service in the public health sector.

The study also was not able to transcribe all the information word-for-word from the participants since some of the interviewees were not able to speak English. This may have led to loss of some information and interviewer bias.



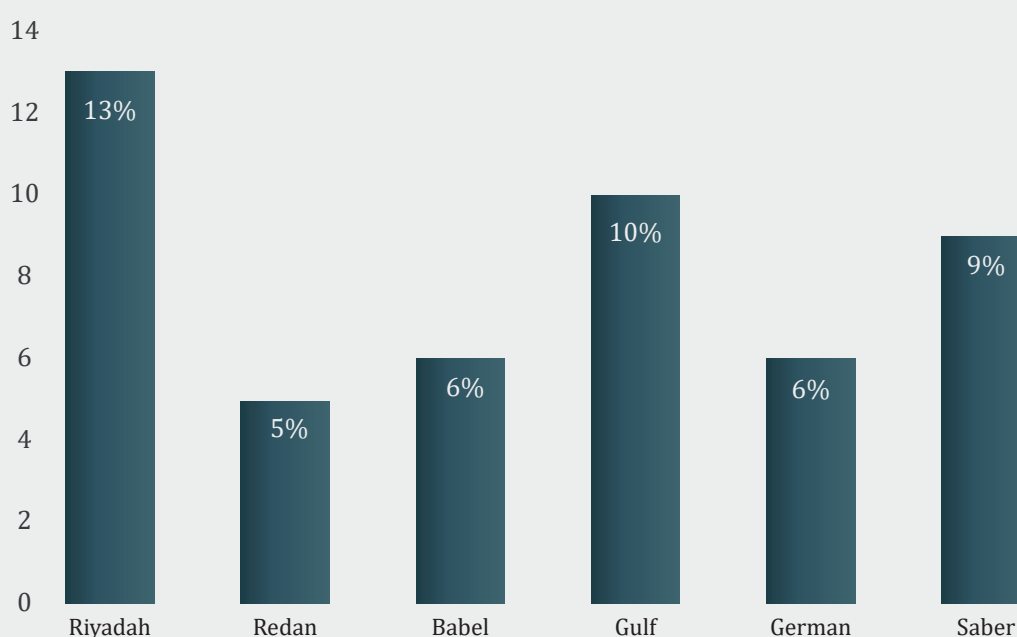


Results

The six participating private hospitals had a total of 506 general admission beds, 60 intensive care unit (ICU) beds with a total of 121 doctors, 291 nurses and 1,047 non-medical staff. Of which, 20 health workers out of 412 (4.8 per cent) were COVID-19 trained. On average, the six facilities attend to about 800 patients daily; 8 per cent of whom present with influenza like illnesses (ILI) (e.g. 64 ILI cases daily).

The six hospitals have a cumulative of 730 oxygen cylinders and one hospital provided oxygen centrally. The top five disease reported in the participating hospitals are ILIs, malaria, dengue fever, chikungunya, and trauma.

Figure 2: Estimated ILI Percentage



All participating facilities reported high numbers of ILIs at the peak of COVID-19 in April to May 2020. “We used to see between 70 to 80 patients a day,” said one doctor in one of the hospitals; however, all participants reported a decrease in the COVID-19 cases between July and August. All participants in the FGD agreed

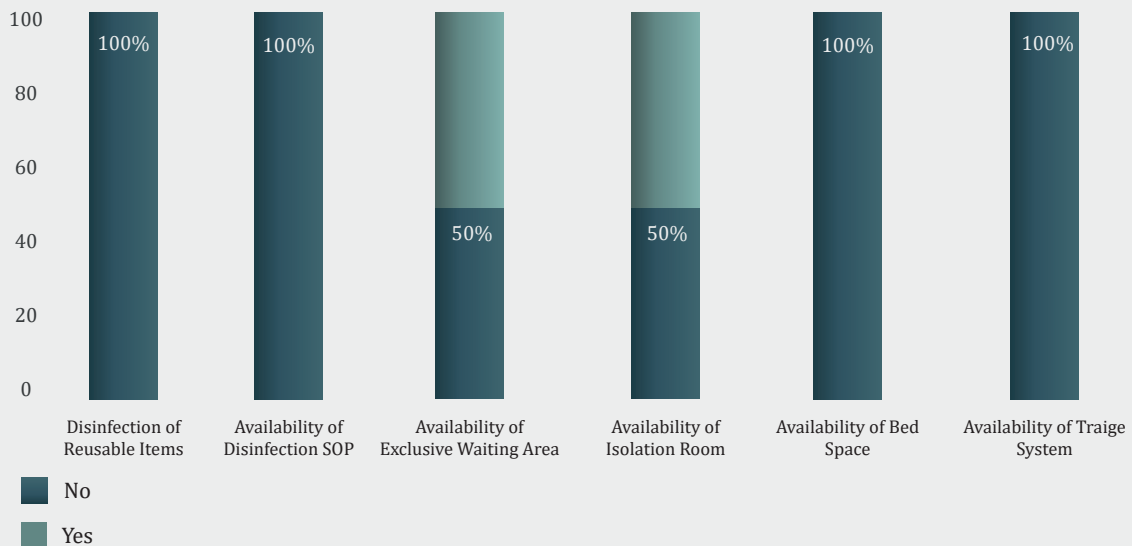
that they expect an upsurge after the Eid and wedding periods. “We expect an increase in the suspected cases after the upcoming Eid and wedding season,” said one of doctors.

The private healthcare providers believe most community members are not following the COVID-19 prevention protocols since the community members do not believe there is COVID-19 outbreak in Yemen.

All participating facilities do not have Standard Operating Procedures (SOPs) for disinfecting reusable items

and common patient and visitor areas of the hospital. Participants reported that they do not received any SOPs from the international partners or the Ministry of Health and that they have struggled on their our own, using the universal hospital precaution and reading about COVID-19 protocol from WHO and Center for Disease Control (CDC) websites.

Figure 3: Percentage of IPC Practices



The chart above shows that participating hospitals did not have a functional triage system at the time of the assessment. All the facilities reported creating a triage during the peak of COVID-19 in April to May 2020; however, because they now believe there is no COVID-19, they think there is no need for the triage.

They also reported challenges with triaging space with two of the facilities establishing tented areas but have been removed them due to stigma or low risk perception of no COVID-19. “We do not have triage said the head nurse at one facility. We have security, visitors, and patients moving in and out at all times so it is difficult for us to separate patients. We try to screen them at the Accident and Emergency Unit, but this is for very few of the patients. As of July, we even relaxed further because we think the threat of COVID-19 has gone down.”

Only half of the facilities have functional exclusive patients waiting areas and isolation rooms. This is partly due to the stigma from the community and the fear of losing clients if the hospital establishes exclusive COVID-19 waiting and isolation areas in the facility.

From observations, all the health facilities have one main entrance to the facility and a separate route for an emergency ambulance. However, all the entrances are manned by

security guards with no hand wash facilities, no temperature screening points, no separation between patients and visitors, and unlimited access to all the hospitals areas without hindrance.

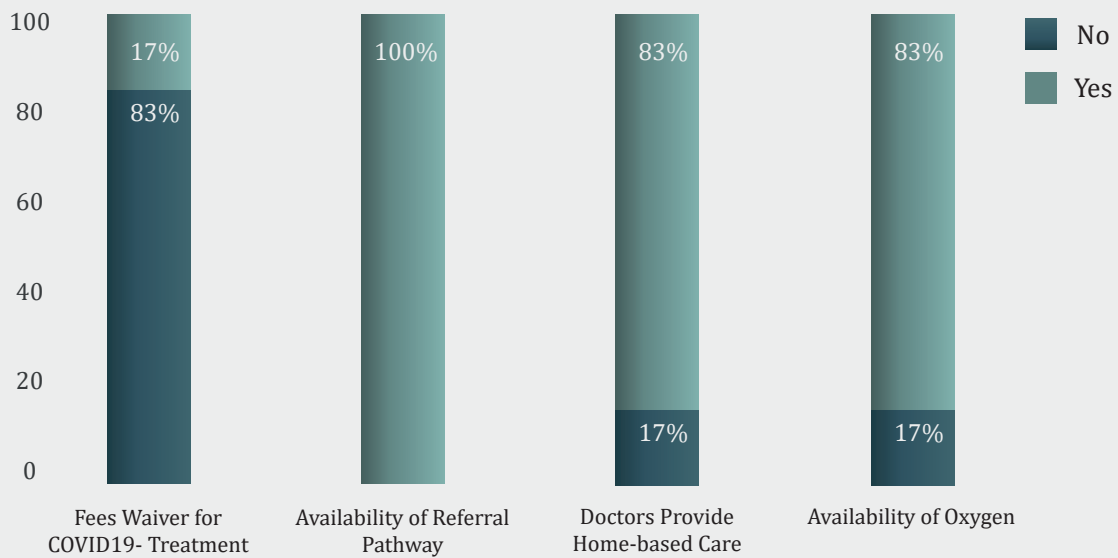
Although most of the facilities reported IPC practices such as hand washing points at all units, the assessment was not able to identify any of the facilities during the visit. “We have hand sanitizers and disinfect spaces used regularly by patients, but we do not have established protocols” said the laboratory technologist at one hospital.

Participants stated that they have contacts with many patients in a day making it difficult to observe IPC measures. “In this country, one patient is always visited in the hospitals by a minimum of five people, friends and relatives, making the hospital overcrowded with people” said a doctor.

Regarding medical waste management, all hospitals reported not having waste management facilities such as incinerators. “Here we only do waste segregations at the different points of service but when the waste is being taken out by the city authority, there is no segregation. Sometimes even

in the wards we do not segregate because we see that the final waste is just bundled together” reported a hospital administrator. “There is no incinerator for the facilities and transportation is done by the city authorities. We do not know where they finally dispose the waste.”

Figure 4: Percentage of Referral and Home-based Care



The chart above shows the percentage of referrals and home-base treatment for COVID-19 patients and all participants reported having a referral system to the COVID-19 isolation units. “We have telephone numbers of the isolation facilities and numbers for some of the doctors there,” participants reported. When the participants were asked what they do with patients

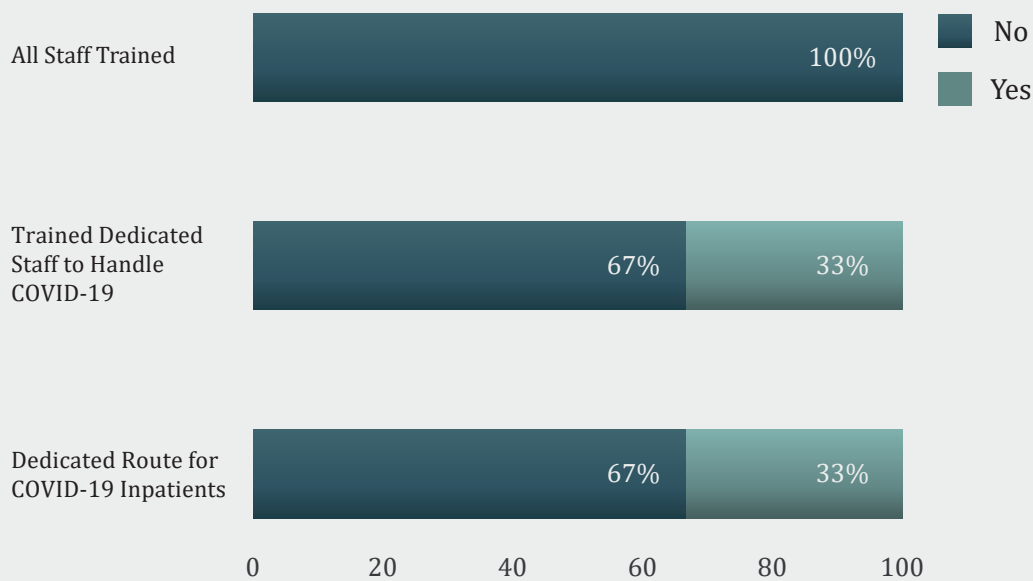
presenting with signs and symptoms related to COVID-19, they said “We refer all COVID-19 suspected cases to be treated in the COVID-19 isolation units”. “If we accept COVID-19 here in the facility, we shall close all other hospital services because we do not have the capacity to handle COVID-19 and other patients at the same time,” indicated one of the doctors.

More than 80 per cent of the facilities had functional oxygen cylinders, one had centrally provided oxygen to the ICU and one did not have oxygen supply. If well-coordinated, these oxygen supplies can provide surge capacities for COVID-19 response during peak infection periods.

The vast majority of respondents reported that they provide home-based care for suspected

COVID-19 cases. “This is common practice especially for all the specialists in town,” reported one doctor. In addition, the home-based care services are not free of charge. More than 80 per cent of the facilities had no systems for a fee waiver for suspected COVID-19 patients and all suspected cases are treated as ILI cases, which may be influenced by profit making since they are private facilities.

Figure 5: Percentage of Case Management Staff



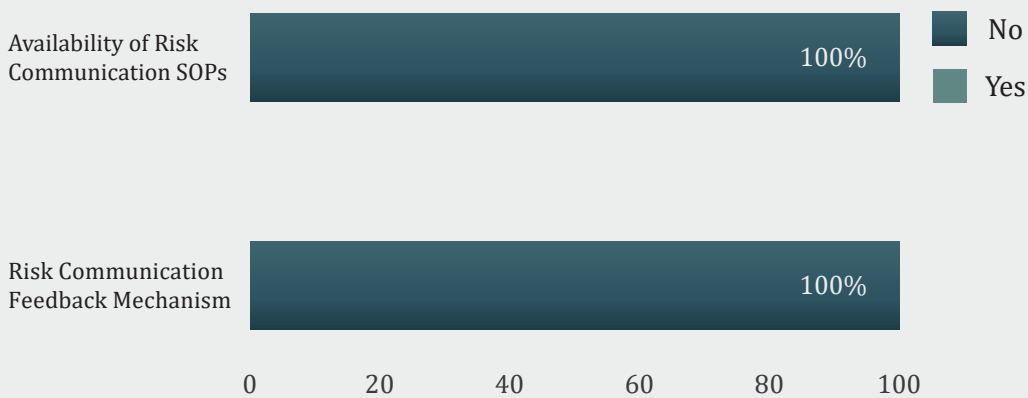
The chart above shows that not all health workers and non-medical staff in the private hospitals were trained on COVID-19 case management or prevention. Only one-third of the private health facilities had dedicated trained staff to handle COVID-19. “It is not possible to maintain staff for both COVID-19

and other diseases,” said a head nurse. When asked why they think the services cannot be integrated, participants responded that even patients will not come to the facility if COVID-19 patients were officially admitted in their facilities because of the current levels of the stigma.

It was indicated that many staff were infected during the COVID-19 peak and unfortunately some died. “We were all infected,” said a group of participants in one facility. Another facility reported closing for two weeks when one of their senior doctors got infected and was taken to the ICU. “We closed for two weeks as this was our most senior doctor

and the staff were scared when his condition became severe enough to require ICU treatment,” said the manager in the facility. Most of the participants reported that the Emergency Room (ER) staff were most at risk since they were the first point of contact with little or no training, no triage in place, and at times rationing the use of PPE.

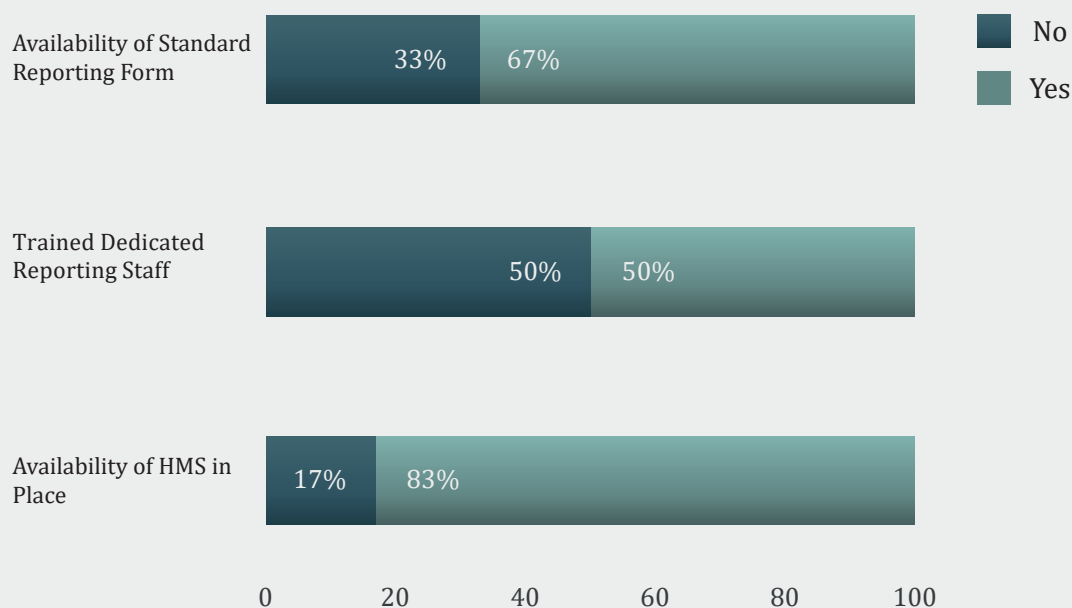
Figure 6: Risk Communication Percentage



The graph above shows that not all facilities have risk communication protocols and messages displayed for the patients while in the facility. Two hospitals reported providing “some risk communications” to patients especially during consultations. “We provide some form of awareness to our patients during consultations,”

indicated one of the doctors. “But the feedback we get from most of our patients is negative; they do not believe there is COVID-19 in Yemen.”

Figure 7: Percentage of Health Information System

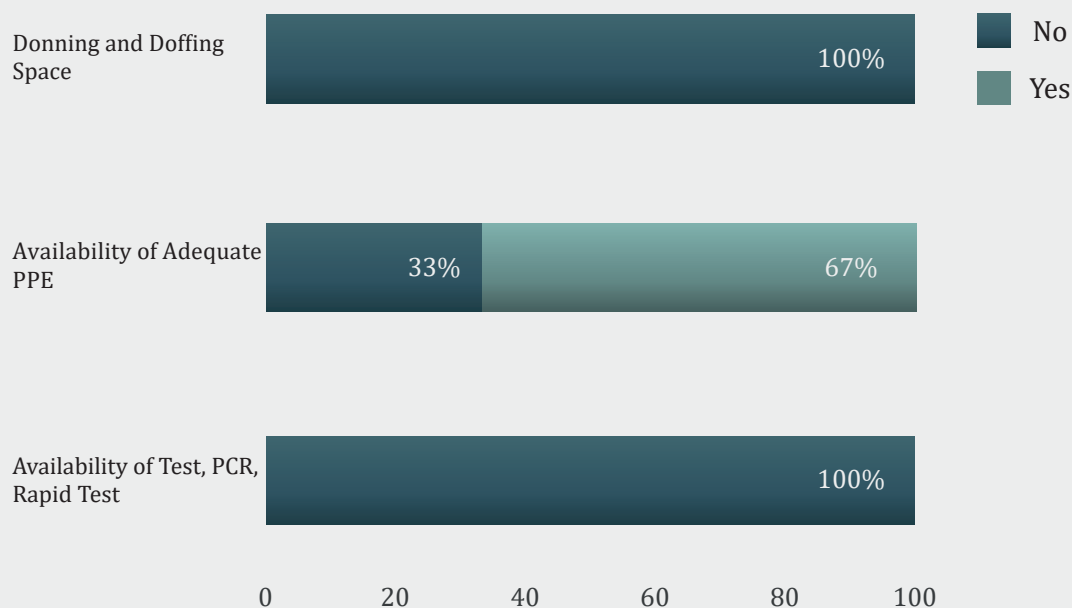


The graph above shows that more than 80 per cent of the hospitals reported having health information management systems either in hard or soft copies, or both formats; however, the forms and information were inconsistent across the facilities. Only one facility was able to show the reporting template they use for daily reporting to MOH. “We have three data assistants who compile our data and share with MOH. Our electronic systems are the best in Aden. You can adopt it for reporting,” said one manager. Participants stated that MOH has reporting templates that they randomly use for collecting the data. When asked what kind of report they share with MOH, they indicated that they “...share laboratory reports and morbidity data – especially on endemic diseases like malaria, cholera, Dengue fever

and others”. One hospital manager indicated that “The data is collected by the MOH team from the facility, the MOH team fills in the reporting template and takes it back.”

Most participants reported only having attended a few coordination meetings with MOH at the start of COVID-19 response preparation in March 2020. “There are no meetings with other stakeholders. There were only two to three meetings with MOH during the outbreak of COVID-19,” participants reported.

Figure 8: Percentage of Capacity and PPE Availability



All the facilities did not have dedicated donning and doffing areas; however, hospitals have changing rooms for staff. In addition, only two-thirds of the private health facilities reported that they have sufficient PPE at the time of the assessment. “PPE are expensive and sometimes we must economize – hence putting the lives of the medical workers at risk,” said a doctor. The head nurse in one facility said, “When the medical workers have enough PPE, they have work confidence. But there was a shortage of N95 masks in April at the peak.” An ICU nurse said, “We have to strengthen case segregation for mild, moderate, and severe cases before the next surge.”

having capacity to provide antibody tests for immunoglobulin G (IgG) and immunoglobulin M (IgM) for COVID-19. However, upon further inspection, the team found the facility preferred an Eliza machine which is not recommended for COVID-19 testing at the present time.

All the participating hospitals were not providing COVID-19 testing, however, one facility reported



Challenges

There is perception among private healthcare providers that there is lack of unified clear strategy on how to fight COVID-19 in Aden, but also in Yemen as a whole. The participants also stated that there is weak coordination and guidance on the COVID-19 response. There is growing myths and misconception of the COVID-19 fueled by fear of stigma and discrimination. One doctor called this as a “COVID-19 phobia” at the community level.

Participants also expressed concern over lack common understanding

of the threat of COVID-19 among health personnel. Some specialists have publicly denied the existence of COVID-19 and this makes extremely difficult to raise awareness among the population. At the community level, there are some herbal medicine “Paya and Robid” which people believe to be effective against COVID-19; these herbs come from eastern part of Taiz governorate.

A woman wearing a black niqab is looking through a doorway. The background is slightly blurred, showing a hallway with wooden doors and a light fixture. The word "Opportunity" is overlaid in large white text across the middle of the image.

Opportunity

All the facilities see themselves as first point of contact with the suspected COVID-19 patients and can be key pathway for referrals, sample collection, and health education. They have good numbers of doctors and nurses and a few specialists who – when trained and equipped with knowledge – can be a strong surge capacity in time of health emergencies.

The private healthcare providers are eager to collaborate with MOH and health partners by having regular meetings, sharing information, and

data. The strength of the private health sector is that they provide services to large portions of the population and can benefit from integrating risk communication messages into their service delivery.

A man in a blue suit and glasses is pointing towards the right in a conference room. The room has a white ceiling with recessed lights and a wooden door in the background. The word "Discussion" is overlaid in large white text.

Discussion

According to Yemen's National Preparedness and Response Plan for COVID-19, all suspected cases that meet the WHO COVID-19 case definition, all contacts of confirmed cases, and patients identified as suffering from respiratory diseases should be tested in a timely manner for COVID-19. The participating private hospitals reported approximately 64 (8 per cent) of the daily consultations presented with ILI. The term ILI is broad and not easily distinguished from other respiratory infections including COVID-19. However, it

can be an entry point for COVID-19 detection and case management.

Currently, the data of the COVID-19 suspects in the private health sector is not well captured and require improvement in reporting and registration. The patients with influenza like illnesses should have further examination and their samples collected and tested for COVID-19.

Improving the reporting and registration of the COVID-19 suspects through screening, sample collection, and transportation will improve the case detection – containing the spread of COVID-19 and treatment outcome. To ensure this, the private healthcare providers must be trained and equipped to conduct safe sample collection and transportations to the laboratory. More importantly, the forecast and quantifications of the COVID-19 test supplies and equipment should be reviewed to ensure sufficient supplies of test kits.

The rapid assessment formed part of the national strategy to conduct a risk assessment of IPC capacity at all levels of the healthcare system – including availability of triage and appropriately ventilated isolation rooms. Based upon this assessment, all the facilities assessed did not have a functional triage and well-ventilated isolation rooms. With no functional triage in the facilities, any suspected case will be attended to like any other case, hence exposing both the health workers, other patients, co-patients and visitors to the facilities.

Protecting the healthcare system is the cornerstone for health service delivery for COVID-19 patients and other ill-health conditions. Healthcare workers who participated

in the survey have expressed concerns about their wellbeing and safety of their family members. It is critical to ensure safety and wellbeing of the frontline workers in the national COVID-19 response. In July 2020, makeshift tents for screening and triage were supplied to the health facilities in Aden. At the time of the survey, these tents were not installed in the assessed private health facilities.

Establishing dedicated and equipped teams and ambulances to transport suspected and confirmed cases and referral mechanisms for severe cases with other underlying conditions (comorbidities) is the recommended standard both by the national strategy and WHO guidelines. The assessment found that all the assessed facilities had inadequate referral pathways where suspected patients are referred using public or private transport to seek medical services at the COVID-19 isolation facilities. This practice not only compromise the basic IPC compliance and principles recommended for health facilities, but also provides opportunities for a likely spread of the infections to others. It is also difficult to confirm whether the referred patients reached the facilities given the fear of stigma and discrimination.

The national strategy also provides for ensuring the availability of water, sanitation and hygiene (WASH) and IPC supplies needed to implement the recommended IPC protocols (e.g., hand hygiene resources, personal protective equipment, environmental cleaning, and healthcare waste management) at all health facilities. As per the national strategy and WHO guidelines, it is recommended to provide WASH services in healthcare facilities that are critical for quality care and prevention of hospital acquired diseases such as nosocomial infections, particularly through human to human transmission.

The assessment identified some critical gaps in IPC and disinfection

protocols that can increase risk of hospital infection both of staff and patients. There is a need to strengthen the capacity of the healthcare workers in IPC and provision of the PPEs.

Healthcare waste management cases in Istanbul in 2008 found that the estimated quantity of medical waste from the hospitals (private and public) is about 22 tons a day and the average generation rate is 0.63 kilograms per bed a day. According to COVID-19 waste management study in Wuhan, 2020



revealed that the City of Wuhan in China generated nearly 247 tones of medical waste per day at the peak of the pandemic – nearly six times more than before the pandemic. The current rapid surge in the healthcare waste due to the COVID-19 pandemic is further exacerbating the problem and there is an immediate threat to the environment.

The assessed health facilities did not have in-house healthcare waste management systems and relied on city authorities for the healthcare waste management. The healthcare waste management policy is in place; however, the assessed health facilities did not have waste segregation or treatment practices in place. Unsafe disposal of healthcare waste not only pollutes the environment but is also conducive to the spread of infectious diseases such as HIV, hepatitis, cholera, typhoid, and respiratory complications which are mainly caused by the reusing of the disposal medical equipment or scavenging the medical waste.

The national COVID-19 response strategy prioritizes health facilities and/or hospitals, households, schools, mosques, and locations/settings that traditionally involve mass gatherings or that are trusted community institutions for messages and actions for COVID-19

prevention and control. The six health facilities assessed conduct over 800 daily consultations cumulatively, but there is not a risk communication SOP and/or messages displayed for the ease of use by their patients and visitors. There is a missed opportunity in these private health facilities to provide risk communication given the high numbers of patients seen and the trust they have in these facilities. During the survey we could not get a clear information about why the private health facilities did not have risk communication and perhaps it is important to further assess and conduct stigma index assessment among healthcare providers.

One of the objective of the COVID-19 national response plan is to ensure that health personnel are well-trained and familiar with COVID-19 case definition and management. It is also necessary for them to be able to deliver appropriate care to patients according to COVID-19 protocols, particularly patients at higher risk (e.g. older adults and people with underlying medical conditions). The assessment showed that only 5 per cent (20 out of 412) of the health personnel in these six facilities were trained.

With limited COVID-19 training for health workers in the private health sector, most of them reported being infected from their workplaces. These findings go against the principle of saving health workers and health systems during the COVID-19 pandemic. It also diminishes the care and treatment protocols especially for patients who presents in the facilities with other conditions. It is important to ensure regular updating and dissemination information and protocols on the management of severe acute respiratory infections and COVID-19-specific protocols based upon international standards and WHO clinical guidance is implemented.

Most of the facilities (83 per cent) admitted providing home-based care for both suspected COVID-19 cases with mild and moderate signs and symptoms with no comorbidity. Whereas the national strategy envisioned home based care as alternative for managing asymptomatic cases and patients with mild diseases and no risk factors with strict adherence to IPC measures and precautions regarding when to seek care. The strict adherence is difficult to practice due to limited training and availability of adequate home space for isolation making it more likely for cross

infections at household levels.

The strategy also recommends that – in case of cases managed at home – ensuring the availability of guidance for the self-care of patients with mild COVID-19 symptoms, including guidance on when referral to health care facilities is needed. None of the assessed facilities admitted having access to and or knowledge of these guidelines.

Both the international health response plan (IHR) and the national response plan provide for coordination as a pillar in the COVID-19 response. However, all the facilities assessed felt that the coordination mechanism is weak especially when it comes to the involvement of the private healthcare providers who provides most of the services to the communities. They all reported attending between one to three meetings since the beginning of the COVID-19 response period. If the national plan is to be achieved, the private healthcare providers need to be better coordinated and involved in all levels of the COVID-19 response.

It is also worth acknowledging the UNICEF, WHO and other partners ongoing efforts to improve IPC.



Recommendations

The participants were given the opportunity to ask questions and provide final thoughts and recommendations, which are reflected in the following points:

1. There is a need to bring all the private practitioners especially specialist on board to support the COVID-19 response.
2. Accurate COVID-19 related information for healthcare providers must be provided to mitigate the impact of the myths

and misconceptions. It is important to establish a digital COVID-19 resource center for Yemen.

3. It is necessary to reinforce the use of case definition for those patients who prefer to be treated at home. This enable the health authority to follow up contact tracing and surveillance.

4. To safeguard healthcare services and health workforce, there is an urgent need to reinforce IPC patient screening and triage in all healthcare facilities in Aden.

5. To regain community trust and improve COVID-19 treatment demand, community engagement and risk communication interventions should be scaled-up, integrated to the service delivery, and tailored to the local context.

6. To increase access to COVID-19 testing, private healthcare providers should be equipped with knowledge, prevention tools, and sample collection kits.





Conclusion

Yemen is facing the worst humanitarian crisis in history. With COVID-19 outbreak, weak healthcare systems, and misinformation, many Yemenis are at risk of contracting the disease. Much has been done in COVID-19 preparedness and emergency response; however, there is growing community mistrust and inadequate information about the disease. Health authorities and partners should step up information campaign, improve referral system, increase case detection reinforce IPC in all healthcare facilities. The

private health sector, as one of key service providers, can play a critical role in the COVID-19 response in increasing awareness, supporting referral pathways, reporting and registration, and providing protection to the health personnel.

The success of the containment of COVID-19 in Yemen would depend on the all society and all sectors involvement in the COVID-19 response as well as multisectoral coordination and stronger global solidarity.



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