



YEMEN AND COVID-19: **WHAT NEEDS TO BE DONE**

By:

Dr. Sameh Al-Awlaqi

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COVER PHOTO: A healthcare worker wears protective gear in a ward being readied for any COVID19- patients at Zayed Hospital in Sana'a on March ,15 2020 // Photo Credit: Asem Alposi



The Sana'a Center for Strategic Studies is an independent think-tank that seeks to foster change through knowledge production with a focus on Yemen and the surrounding region. The Center's publications and programs, offered in both Arabic and English, cover political, social, economic and security related developments, aiming to impact policy locally, regionally, and internationally.



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A Yemeni patient, recently returned from Egypt, presented to the emergency room of a hospital in Aden this month with flu-like symptoms — a fever and a cough. After taking his history and a few other details, he was provisionally diagnosed with the novel coronavirus disease, COVID-19. All medical staff, as well as patients in the waiting area, immediately left the hospital in panic, leaving the patient perplexed and stigmatized.

Scientists are still learning the epidemiology of COVID-19; many data, contradictory in some cases, have confused the public since the emergence of this outbreak. The pandemic has spread to almost every country on Earth in a matter of months; John Hopkins University is reporting more than 440,000 confirmed cases as of March 25 – actual numbers are almost certainly orders of magnitudes larger – with close to 20,000 deaths attributed to the disease.⁽¹⁾ Disease incidence (new cases) are dynamic, and we can expect a growing number of confirmed cases as testing expands to cover more populations. At the time of writing, only one country in the Eastern Mediterranean Region (EMRO), which includes 22 countries and territories, remains officially free of confirmed cases: Yemen. Dr. Tedros Adhanom Ghebreyesus, director-general of the World Health Organization (WHO), warns that following China and Europe, a third wave of the pandemic is expected in countries with weaker health systems, humanitarian crises and conflict.⁽²⁾

Evidence suggests that the primary route for transmitting the viral infection is through contact with respiratory droplets of infected patients, which can persist between hours and days on various types of surfaces, while those infected are often asymptomatic. Instances of aerosol (air) transmission remain unconfirmed.⁽³⁾ Arguments on the seasonal behavior of the new coronavirus — i.e. that there is less transmission in hot, humid weather, based on the influenza virus outbreaks — are unresolved.⁽⁴⁾ The WHO states that from the evidence so far, the virus can spread in all areas in any climate.⁽⁵⁾ Yemen's diverse climate and limited seasons make it vulnerable to all possibilities. However, the northern regions of the country,

1) "Coronavirus COVID-19 Global Cases by the Center for Systems Science and Engineering," John Hopkins University, accessed March 25, <https://coronavirus.jhu.edu/map.html>

2) Kaamil Ahmed, "World's most vulnerable in 'third wave' for Covid-19 support, experts warn," The Guardian. March 20, 2020, <https://www.theguardian.com/global-development/2020/mar/20/worlds-most-vulnerable-in-third-wave-for-covid-19-support-warn-experts>

3) "Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-CoV-1," The New England Journal of Medicine, March 17, 2020, <https://www.nejm.org/doi/pdf/10.1056/NEJMc2004973?articleTools=true>

4) Marc Lipsitch, "Seasonality of SARS-CoV-2: Will COVID-19 go away on its own in warmer weather?" Center for Communicable Disease Dynamics, Harvard T.H. Chan School of Public Health, <https://ccdd.hsph.harvard.edu/will-covid-19-go-away-on-its-own-in-warmer-weather/>

5) "Coronavirus disease (COVID-19) advice for the public: Myth busters," World Health Organization, <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/myth-busters>

which are characterized by a high population density and cold, dry weather, in particular would be more susceptible to transmission in cold weather.

Yemen is entering its sixth year of conflict, which has resulted in the largest humanitarian crisis in the world and a fragile health system.⁽⁶⁾ The arrival of the coronavirus, a pandemic which has shocked the world's largest economies, will be catastrophic. The weak health system, poor water and sanitation infrastructure, and social norms that encourage close contact and social gatherings — such as qat chews — are among the factors that would make the spread of this virus explosive in Yemen.

During the war, Yemen has reported the highest number of suspected cholera cases in recent history, with more than 2.3 million suspected cases reported since 2017.⁽⁷⁾ Working in Yemen in 2019, I witnessed an overstretched health system struggling to cope with high demand for essential health services and suffering from a shortage of ICU beds and ventilators. External aid plays a vital role saving lives and protecting our health system from total collapse.

Moreover, more than 7 million Yemenis are in need of treatment or services for malnutrition, according to UNICEF, including 2 million children under five and 1 million pregnant and lactating mothers who need urgent treatment for acute malnutrition.⁽⁸⁾ Acute malnutrition lowers immunity if left untreated, potentially worsening the impact of the coronavirus among these communities.⁽⁹⁾

Furthermore, the WHO recommends frequent handwashing using proper techniques to prevent the infection. In reality, many areas in Yemen lack clean water resources so achieving this will be very challenging. Yemenis' lack of access to safe water and basic sanitation already contributed to the rapid spread of cholera in the country.⁽¹⁰⁾ On top of this, about 55 percent of the budget required for water, hygiene and sanitation within Yemen's humanitarian response plan is yet to receive funding.⁽¹¹⁾

6) "2019 Humanitarian Response Plan," UN Office for the Coordination of Humanitarian Affairs, February 2019, https://yemen.un.org/sites/default/files/2019-08/2019_Yemen_HRP_V21.pdf

7) "50 suspected cholera cases every hour for five years in Yemen," Oxfam, March 23, 2020, <https://reliefweb.int/report/yemen/50-suspected-cholera-cases-every-hour-five-years-yemen>

8) "Yemen Country Office Humanitarian Situation Report," UNICEF, December 31, 2019, https://reliefweb.int/sites/reliefweb.int/files/resources/UNICEF%20Yemen%20Situation%20Report_Year%20End%202019.pdf

9) "Q&A: Malnutrition and emergencies," World Health Organization, January 20, 2020, <https://www.who.int/news-room/q-a-detail/q-a-malnutrition-and-emergencies>

10) Garry Walsh, "Water is a lifeline as Yemen's war enters fifth year," ReliefWeb, April 12, 2019, <https://reliefweb.int/report/yemen/water-lifeline-yemen-s-war-enters-fifth-year>

11) "Yemen Humanitarian Response Plan 2019 – Funding Status," UN Office for the Coordination of Humanitarian Affairs, December 31, 2019, https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/yhrp_funding_status_31122019.pdf

The fragmentation of Yemen is a huge challenge and will have a severe impact on preparedness, containment and mitigation measures.⁽¹²⁾ Pandemics demand a harmonized response, the rule of law and strict regulations. In Yemen, the response to the epidemic is likely to differ depending on who is in control of each area.

Returning to the patient who was left alone in the Aden emergency room after a provisional diagnosis with COVID-19, health authorities arrived and provided testing. The result of the screening test was negative.

What happened in the hospital was shocking. Fear and stigma drove the behavior of those in the hospital, but this was an unexpected reaction from healthcare workers. It is alarming that healthcare workers in Yemen still lack proper training and protection against COVID-19. Urgent measures must be taken including action on preparedness, training on identification of patients and case management, and equipping hospitals, both public and private, with testing sets, treatment protocols and protective tools. Measures to address social stigma are also paramount to alleviate the impact of the virus spread and to ensure the dignity of people affected, if coronavirus lands in Yemen (I hope it does not).⁽¹³⁾

Current Initiatives

In February, the Yemen Health Cluster, a coordination platform for humanitarian health activities led by the WHO, initiated COVID-19 preparedness and response activities in collaboration with the Yemeni Ministry of Health in Sana'a and Aden. Locations for isolating potential patients were identified and being prepared in hospitals, mostly near airports. Screening testing kits were sent to some central laboratories in Sana'a, Aden and Mukalla, and additional kits arrived in Aden on March 24, the WHO confirmed.⁽¹⁴⁾ The Ministry of Health and the WHO have calibrated PCR⁽¹⁵⁾ machines in all three cities to detect COVID-19 by testing

12) Sameh Al-Awlaqi, "Yemen's health system fragmentation during the conflict: The impact on the health and nutrition status of a vulnerable population," International Health Policies, March 18, 2019, <https://www.internationalhealthpolicies.org/blogs/yemens-health-system-fragmentation-during-the-conflict-the-impact-on-the-health-and-nutrition-status-of-a-vulnerable-population/>

13) "Social stigma associated with COVID-19," IFRC, UNICEF & WHO, February 24, 2020, https://www.epi-win.com/sites/epiwin/files/content/attachments/2020-02-24/COVID19%20Stigma%20Guide%2024022020_1.pdf

14) World Health Organization, "Information session for Covid-19," Facebook, March 24, 2020, <https://www.facebook.com/1403873126566958/videos/253816865637369>

15) PCR: Polymerase Chain Reaction, a diagnostic laboratory technique to confirm diagnoses with high accuracy..

throat or nasal samples collected from patients. A nationwide early warning system to collect case reports on communicable diseases was operational prior to the pandemic.⁽¹⁶⁾ Materials to educate people have been widely circulated across social media platforms. Moreover, the WHO and Ministry of Health also established telephone hotlines to report suspected COVID-19 cases. Many local Yemeni initiatives to educate the public are underway, such as a campaign led by Yemeni youth to spread awareness. Nevertheless, enormous work remains to ensure adequate preparedness and testing capacity.

What Should Be Done?

Time is a great asset. With no confirmed infections in Yemen so far, there is more time for better preparedness and preventative measures against COVID-19. Considering and learning from the experiences of affected countries will significantly reduce the impact of the pandemic in Yemen. In tandem with WHO's eight pillars⁽¹⁷⁾ of public health preparedness and response to address COVID-19, the following measures should be taken:

Strengthen the Health System

Ongoing interventions to strengthen Yemen's health system should be maintained. It is worrying that these interventions may receive less funding as the COVID-19 virus is looming. Based on my experience managing a WHO-funded minimum health service package project in Yemen, which provides support to eight priority areas,⁽¹⁸⁾ I found this kind of intervention innovative and impactful with broad coverage.⁽¹⁹⁾

16) "Yemen: eDEWS Health Facilities Presence," Weekly Epidemiological Bulletin, World Health Organization, November 25-December 1, 2019, http://yemenhc.org/wp-content/uploads/2019/12/Epidemiological-Bulletin_Week_48-2019-.pdf

17) "COVID-19 Partners Platform – Next Steps," World Health Organization, <https://covid-19-response.org/next-steps>

18) The Minimum Service Package (MSP) in Yemen provides support in the following areas: general services and trauma care, reproductive/maternal and newborn health, child care, mental health and psychosocial support, nutrition, non-communicable diseases, communicable diseases and environmental health in health facilities.

19) "The Minimum Service Package – a lifeline for the vulnerable in remote areas," World Health Organization, February 19, 2019, <http://www.emro.who.int/yem/yemen-news/the-minimum-service-package-a-lifeline-for-the-vulnerable-in-remote-areas.html>

Donor countries and aid organizations should continue investing in these kinds of interventions. If funding shifts toward “health security” at this moment — as is expected — without maintaining essential health services, we may then witness a total collapse of Yemen’s health system.⁽²⁰⁾ The impact of neglecting essential health services could have a more calamitous impact than the COVID-19 virus itself.

Protect Health Workers

Nationwide prevention, infection-control and treatment protocols must be updated in light of COVID-19 and strictly followed at all levels of health services, with a focus on emergency departments and outpatient clinics.⁽²¹⁾ Specific reporting and referral systems for COVID-19, within the existing disease surveillance system, must be activated immediately. The Ministry of Health should ensure a sufficient supply of personal protective equipment: This is paramount in the fight against COVID-19, and it is a challenge even in developed countries. Therefore, finding alternative approaches to produce protective equipment, such as engaging the private sector and local producers, could help. International shipments, given the limited number of operational ports and global shortages, could be challenging but should be considered as well.

Reconfigure Malnutrition Programs

A new approach to dealing with malnutrition must be taken. Currently, malnourished children visit clinics on a weekly or fortnightly basis with their caregivers to collect their therapeutic food and take measurements. Limiting the number of visits, i.e. to once per month, or sending a community worker at the village level to follow up on cases if needed, could be alternatives. Evidence suggests that mothers can also monitor the progress of their children’s treatment by measuring mid-upper arm circumference, and can be educated to identify danger signs that necessitate seeking health care.⁽²²⁾

20) Gorik Ooms, Trygve Ottersen Albrecht Jahn & Irene Akua Agyepong, “Addressing the fragmentation of global health: the Lancet Commission on synergies between universal health coverage, health security, and health promotion,” *The Lancet*, Vol 392 Issue 10153, p.1098-1099, September 29, 2018, [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(18\)32072-5/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)32072-5/fulltext)

21) “Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19),” World Health Organization, February 2020, <https://www.who.int/docs/default-source/coronaviruse/who-china-joint-mission-on-covid-19-final-report.pdf>

22) “Mother-MUAC – Teaching mothers to screen for malnutrition: Guidelines for Training of Trainers,” Alima, <https://www.alima-ngo.org/uploads/b5cb311474e9a36f414a69bd64d39596.pdf>; Nikki Blackwell, Mark Myatt, Thierry Allafort-Duverger, Amour Balogoun, Alma Ibrahim & Andre Briend, “Mothers Understand And Can do it (MUAC): A comparison of mothers and community health workers determining mid-upper arm circumference in 103 children aged from 6 months to 5 years,” *Archives of Public Health*, June 1, 2015, <https://archpublichealth.biomedcentral.com/articles/10.1186/s13690-015-0074-z>

Address Mental Health as Part of the Health Cluster Response

Lockdown, isolation and social distancing measures will have a significant impact on Yemenis' mental health, with most still suffering from the psychological impact of the protracted conflict.⁽²³⁾ Mental health must be addressed within the Health Cluster response. It should be tackled in tandem with the current minimum health service package, and the COVID-19 prevention and response plan.

Provide Sufficient Water, Sanitation and Hygiene (WASH) Funding

Donor agencies should fund the deficit in the 2019 humanitarian response plan for the WASH sector. In the 2020 plan, which is yet to be published, more investment in WASH infrastructure and hygiene promotion in health facilities and households will ameliorate the future spread of infectious diseases (including cholera).

Restrict Unnecessary International Travel

This is already largely in place, as most of Yemen's sea and land ports have been closed since 2015. Flights in and out of Yemen were suspended on March 14 and restrictions have been placed on land borders.⁽²⁴⁾

Enforce Community Measures

The main challenge here is to ensure community compliance with any preventative or containment measures proposed. However, health education and promotion, using culturally sensitive messages on appropriate platforms, can help to overcome this challenge. Messages should be framed to educate people about the nature of the disease, hand hygiene and respiratory etiquette. Other actions such as treatment of water resources and containers; avoidance of mass gatherings, such as maqial (qat gatherings), overcrowded markets and weddings; and suspension of public prayers are among many other examples.

23) Sameh Al-Awlaqi, "Mental health in conflict: The case of Yemen," International Health Policies, November 22, 2019, <https://www.internationalhealthpolicies.org/featured-article/mental-health-in-conflict-the-case-of-yemen/>

24) Ben Parker, "Yemen coronavirus lockdown to hamper relief effort," The New Humanitarian, March 17, 2020, <https://www.thenewhumanitarian.org/news/2020/03/17/yemen-coronavirus-flights-lockdown;> "Weakened by war and hunger, Yemen braces for coronavirus," Reuters, March 18, 2020, <https://www.reuters.com/article/us-health-coronavirus-yemen/weakened-by-war-and-hunger-yemen-braces-for-coronavirus-idUSKBN2152Y9>

Shield the Most Vulnerable

The applicability of this approach, which is suggested for low-income settings to protect the most vulnerable in humanitarian settings at camps, household and community settings, should be evaluated as it could be beneficial in the case of Yemen.⁽²⁵⁾ The United Kingdom is currently following shielding measures to protect the most vulnerable population; there is much to learn from this experience as it evolves. The Yemeni government and UN OCHA should identify those most at risk in the context of COVID-19. Identifying, measuring and locating COVID-19 high-risk groups is the first step to ensure adequate shielding where applicable.

The Way Forward

The situation of Yemen is dire: Every sector is fragile. Everyone has the responsibility to stop transmission and prevent virus spread. Yemen's healthcare system, represented by the Ministry of Health regardless of whose authority its offices function under, should lead the response in close coordination with all other sectors, UN agencies, international donors, civil society actors and communities. It is critical to prioritize interventions to protect our health workers (based on lessons learned from Italy and China), older people, impoverished families, malnourished children and mothers, and disabled people. Most importantly, projects and activities to sustain essential services in health should not be interrupted. COVID-19 is a public health emergency; let us be better prepared.

25) Maysoon Dahab, Kevin van Zandvoort, Stefan Flasche, Abdihamid Warsame, Paul B. Spiegel, Ronald J Waldman & Francesco Checchi, "COVID-19 control in low-income settings and displaced populations: what can realistically be done?" London School of Hygiene & Tropical Medicine, March 20, 2020, <https://www.lshtm.ac.uk/newsevents/news/2020/covid-19-control-low-income-settings-and-displaced-populations-what-can>

***Dr. Sameh Al-Awlaqi** is a public health specialist from Yemen. Currently, he is a resident researcher in health systems and COVID19- response at the Institute of Tropical Medicine in Antwerp, Belgium.*

Fekri Dureab (PhD, Heidelberg University, Germany) and Kristof Decoster (Institute of Tropical Medicine, Antwerp) contributed to this article.



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