

COVID-19

Rohingya Response

The 855,000 Rohingya Refugees who are currently residing in 34 overcrowded, makeshift camps in Cox's Bazar, Bangladesh are highly vulnerable to COVID-19. The overcrowded and unhygienic conditions increase the potential for the rapid spread of disease. Given the underlying poor health status of the population, and the limited access to health care and the use of communal hygiene facilities the potential mortality and morbidity risk associated with COVID-19 is likely to surpass global averages.

The purpose of this risk report is to support humanitarian responders to understand the primary and secondary risks that a COVID-19 outbreak could pose to the Rohingya Refugee population, based on the idea that this understanding can support mitigation and preparedness measures. This is not a specialised health report, it takes a holistic view of the plausible overall impact.

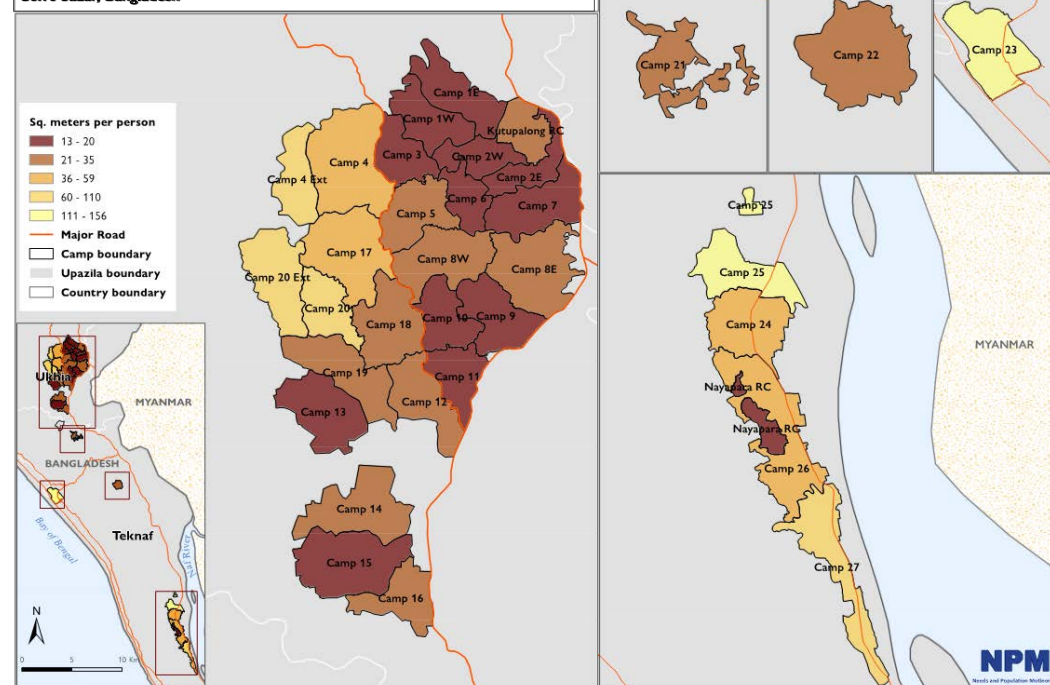
PROBABILITY



IMPACT



ROHINGYA REFUGEE CAMPS BY POPULATION DENSITY
Cox's bazar, Bangladesh



Key figures

- 40,000** average population density per square km
- 30,000** (13,420 female/16,606 males) individuals over 59 years (UNHCR 12/19)
- 10%** of household (85,470 HH) have at least one individual above the age of 5 with a disability or chronic illness (MSNA 10/19)
- 45%** of Rohingya households (83,656 HH) have either 'borderline' or 'poor' Food Consumption Scores (FCS) (MSNA 10/19)

Methodology

This risk report presents an analysis of publicly available secondary data that brings together current research on COVID-19 pandemic risk factors, and an examination of relevant risk factors present in the Rohingya refugee camps in Cox's Bazar, Bangladesh.

Limitations

This document relies mainly on publicly available sources and therefore should be used only to provide a contextual overview. In order to inform preparedness planning more detailed insights from sector leaders and other operational actors is required. As this is a rapidly developing, and unprecedented situation, the information in this report should be taken as an indication of the potential exposure to risk faced by the Rohingya population.

Rationale

As the world struggles to contain the outbreak of COVID-19, the world's largest refugee camp remains highly exposed to a potential outbreak.

On Wednesday the 11th of March 2020 the World Health Organisation declared the coronavirus, first detected in mainland China in late 2019, a "pandemic" signalling the magnitude of the emergency.

There are currently 191 127 confirmed cases across some 140+ countries, and 7,807 people have lost their lives (WHO 18/03/20). This number is increasing exponentially every day, and due to the global shortage of testing kits and the variation of severity in symptoms caused by the virus, the number of cases and the extent to which the virus has spread is likely to be vastly underreported (WHO 19/03/20).

As of publication, there have been no confirmed cases of COVID-19 in the Rohingya camps. However, according to WHO there has been local transmission of the virus in Bangladesh (WHO, 17/03/20). Though official numbers in Bangladesh are low, as has been demonstrated in more affected countries, the virus can spread rapidly and mostly undetected in the initial stages. Cox's Bazar district, and the 34 refugee camps within it, are at high risk of exposure. In addition to being the site of a large scale emergency response, Cox's Bazar is the most popular domestic tourist destination in Bangladesh. This means there is significant domestic and international travel in and out of the area. Although recent travel restrictions and flight cancellations have significantly reduced the amount of domestic and international travel to Bangladesh.

The extreme population density of the refugee camps, poor hygiene, insufficient health facilities, and the inability to self-isolate means the risk of infection within the camps is high. The pre-existing prevalence of Acute Respiratory Infection (ARI) suggests that the environment is conducive to the spread of COVID-19, as other respiratory diseases transmit much like COVID-19 (WHO 01/20). According to Early Warning Alert and Response System (EWARS) there have been already been 174,128 reported cases of Acute Respiratory Infection (ARI) since January 2020 (WHO 03/20).

Predicted primary impact of COVID-19 for Rohingya refugees

Primary impacts of a COVID-19 outbreak are the direct and immediate consequences for human health, and health systems.

Based on what is known about the virus, and what is known about conditions of the Rohingya camp population, it could be expected that the primary impact of a COVID-19 outbreak on the 855,000 Rohingya refugees will be widespread transmission across the

camp and higher than average mortality and morbidity rates in comparison to other impacted populations as a result of:

- Overcrowded living conditions within camps and movement restrictions (to areas outside the camps) which prevent the refugees from social distancing or isolating themselves from others.
- Reliance on public, and often overcrowded, hygiene infrastructure including toilets, bathing facilities and water points.
- Limited access to soap, which is key to helping prevent the transmission of the virus.
- Health infrastructure that is already crowded and overburdened, and does not have the equipment, human resources or space which would be required to treat severe cases or a large-scale outbreak of COVID-19.
- Almost half of the refugee population are living below the poverty line with the humanitarian assistance currently provided and 45% have borderline or poor food consumption scores. This implies that general immunity status is predicted to be lower than the general population, making them more susceptible to COVID-19 (MSNA 10/19).
- The current camp-wide telecommunication blockage is inhibiting humanitarian actors from efficiently disseminating accurate messages about the current situation that are critical for COVID-19 prevention and preparedness, and countering harmful misinformation.

What is currently known about COVID-19?

- Coronavirus disease (COVID-19) is caused by SARS-CoV-2, a new strain of coronavirus first detected in humans in in 2019 (WHO 03/2020).
- Main symptoms: fever, cough, shortness of breath and breathing difficulties.
- Severe symptoms: pneumonia, severe acute respiratory syndrome, kidney failure and, in some cases, death (WHO 03/2020).
- Presumed to spread primarily via respiratory droplets and close contact.
- Estimated rate of transmission is $R_0 \approx 2 - 3$ (CDC, 03/20).
- Incubation period estimated at two to 14 days (ECDC, 03/20).
- Global mortality rate among diagnosed cases currently estimated between 2-3%.
- True mortality rate is uncertain, as total cases (including undiagnosed) is unknown (Elsevier 5/02/2020, WHO 02/2020).
- Currently estimated 20% of cases require hospitalization, 5% to require Intensive Care (ICU), and around 2.5% require specialized equipment (ventilators or ECMO (extra-corporeal oxygenation)) (Medium, 10/03/20).
- No specific treatment for this disease, only management of clinical symptoms. Supportive care (e.g. fluid management, oxygen therapy, etc.) can be highly effective for patients with symptoms (ECDC, 03/20).

Unpacking key risk factors

Living conditions

The Rohingya live in extremely densely populated settlements. Roughly 855,00 refugees are living in 34 congested camps. 444,000 host community members live in close proximity to the camps, with five camps intermixed with host community.

Preliminary research from the outbreak in Wuhan, China indicates that the average rate of transmission (R_0) is between 2.4 and 2.9 (Peng PWH et al, 28/02/20). Research also finds that R_0 is not a constant figure, rather it can be significantly modified based on conditions and human behaviour/interventions.

A potentially useful comparison can be drawn between the Rohingya refugee camps and the Diamond Princess cruise ship¹. Research by Rocklov et al, published in the Journal of Travel Medicine found that initially, the **transmission rate on board the Diamond princess was four times higher than observed in Wuhan at the peak** of the outbreak with R_0 at nearly 15, and attributed this to the cramped conditions and sub-standard hygiene practices (Rocklov et al, 28/02/20). **Population density on board the cruise ship was estimated at 24,400 people per km²** (Rocklov et al, 28/02/20). **The average population density of the Rohingya camps is almost 40,000 people per km²** with the highest population density in some sections increasing to over 70,000 per km².² Although described as sub-standard by the medical researchers, it is safe assumption that the hygiene facilities and practices on a cruise ship, while perhaps not ideal, are much better than those of the world's largest refugee camp.

Table: population density comparison

Location	Wuhan	Diamond Princess Cruise ship	Rohingya Refugee camps (34 camps)
Population density per km ²	6,000	24,400	40,000

1 There are limitations in the strength of learning we can take from the environment of a cruise ship for the refugee camps; however, in the absence of information at this point of the crisis, and with the observations of health researcher such as Rocklov et al in regard to the impact of hygiene and congested living conditions, this was deemed to be worth highlighting.

After isolation measures were established on the Diamond Princess, the rate of transmission, or R_0 dropped to 1.78. It is estimated that without any isolation measures 79% of the total population of the ship would have been infected (Rocklov et al 28/02/20). The kind of isolation measures used to limit the spread of the virus on the Diamond Princess is simply not possible in the Rohingya camps. Due to the number of refugees and the limited land available to host them, shelters are small and very close together. The vast majority of households are sharing a one-room shelter, constructed of tarpaulin sheets and bamboo, with a minimum floor space of 17.5 m² (MSNA 10/19; Shelter Sector 12/19). The average number of people per shelter is 4.6 people, with 31% of households having more than six members (UNHCR 12/19). Shelters are not equipped with hygiene and sanitation facilities, meaning Refugees must leave their shelters, and often queue, to use toilets, showers, collect water or any food or non-food distributions of basic needs.

The social distancing which is essential for breaking the chains of transmission is impossible in the refugee camps. The Rohingya know this, and recent Focus group discussions (FGD) conducted in the camps by IOM Communicating with Communities (CwC) team, illustrates their concerns over the risks facing them.

"[to prevent contracting COVID-19 we must] avoid crowded areas. But we can't manage this because we are all living together in one room and need to go outside for many things." (IOM CwC 17/03/20).

The one thing that public health officials all over the world are stressing as a necessity in slowing the spread of COVID-19: create social distance, is the thing that is impossible for the Rohingya to do.

Information

Misinformation and rumours have the potential to greatly exacerbate the spread and impact of the virus as well as a level of panic that can result in other negative impacts. During the Ebola outbreak in west Africa the impact of misinformation and rumours had a devastating impact on the response which caused panic, increased transmission and resulted in the death of thousands of people (ACAPS 02/16).

Accurate and consistent public health messaging is critical in preventing and controlling outbreaks. Current conditions are not conducive to this, as confusion and misinformation circulating throughout the camps is commonplace. According to initial FGDs with Rohingya conducted by IOM CwC on 15 March, COVID-19 is being referred to by some

2 Camp density calculated using UNHCR population data from 12/19 and geospatial data from IOM's Needs and population monitoring (NPM) Unit.

refugees as “moronavirus” (dying-virus in Rohingya). It seems the general perception of Rohingya interviewed is that COVID-19 is deadlier and more dangerous than the virus’ actual fatality rate, and perception of Coronavirus and its impacts are being connected to deaths and illnesses caused by various other unrelated diseases (IOM CwC 17/03/20). There was also limited evidence of accurate knowledge on treatment or transmission.

“If anyone gets infected, the authority has to kill him/her. Because if he stays alive, his virus will transfer to another person’s body.”

“We have to take them to hospital and try to make them cure but if it is impossible then we have to kill them through injection.”

This type of misconception about COVID-19 is extremely dangerous in the context of the refugee camps. It not only jeopardizes the Rohingya’s ability to undertake accurate self-preparedness and coping mechanisms, but also has significant implications on mistrust and fear of health services, discussed more below. There are also potential implications for intra-communal violence, if the belief is that those with COVID-19 must be killed in order to prevent transmission. It is critical to urgently counter these rumours and misconceptions.

FGD findings suggest that the most common information sources were informal networks on WhatsApp and social media forums, as well as Mosques, Imams and religious officials. As in most communities worldwide, there is a real concern surrounding COVID-19 among the Rohingya, and a general desire to know more in order to protect themselves and their families.

In addition, **some worrying signs of stigma and concerning rumours surrounding the virus were identified**, which, left unaddressed could not only negatively impact social cohesion, both among the Rohingya community, and between refugees and host communities, but also increase transmission of the virus. If Rohingya feel they have to hide illness, either from their community members out of fear of stigma, or from health providers, out of fear of being killed, the ability of health care provided to identify and isolate cases will be severely compromised.

“Someone had a headache, and everyone wouldn’t let him near them. They were shouting at him to stay far away.”

“Even now when someone has a fever, they are afraid to tell anyone because of what might happen.” (IOM CwC 17/03/20)

Water and hygiene facilities

Good hygiene practices are a critical factor in preventing the spread of COVID-19. In particular, regular thorough handwashing with soap and water is continually stressed throughout health advisories globally. However, due to the lack of water and hygiene facilities in the camps, this is extremely difficult for Rohingya to maintain. Currently, 56% of households across the 34 camps do not have enough water to meet all their basic needs (including drinking, cooking, personal hygiene and other domestic purposes) without the addition of extra handwashing demands. Camps in Teknaf recording higher levels of water scarcity than the camps in general (MSNA 10/19). In addition, only 67% of household reported having access to soap, with access as low as 30% of households in camp 25 (MSNA 10/19).

All water and hygiene facilities provided in the camps are public, and these are often overcrowded, causing people to queue for long periods of time to access latrines and water points, conditions which increase the risk of COVID-19 transmission. Distance to these facilities is also a factor for many households, which further exacerbate their challenges. Rohingya recognize that their conditions make it impossible to follow prevention guidelines and protect their families from the virus.

“Though you teach us to maintain hygiene, but we can’t maintain properly, because we don’t have sufficient water.”

“The amount of soap provided to us is not enough for us. We are getting only once in a month. My family size is very big, but the amount is very poor.” (IOM CwC 17/03/20).

Health infrastructure

Health infrastructure in Cox’s Bazar district and within the camps does not currently have the capacity to respond to a large-scale outbreak of COVID-19.

Standard health facilities within 34 camps

- 154 basic health units,
- 41 health centres (open 24/7)
- 5 hospitals across the 34 camps

(ISCG 12/19).

According to the Joint Response Plan for 2020, health facilities are unable to meet current caseloads. In particular, there is inadequate capacity and resources for non-communicable disease management, laboratory diagnostics, mental health and psychosocial support services, including inpatient/psychiatric care, and specialized services (such as eye-care, geriatric care, oral healthcare and services for people with disabilities and palliative needs) (JRP 2020). Specialized medical equipment, needed to treat the most severe symptoms of COVID-19, are not commonly stocked in the health clinics in the camps or hospitals in Cox's Bazar (ACAPS sources in the field 03/20).

Disease surveillance and health information systems are equally limited. The health sector has a functioning Early Warning Alert and Response System (EWARS). However, the system does not have the ability to detect and track COVID-19. Currently, there is **only testing capacity in Dhaka with an estimated 2,000 testing kits nationwide to detect COVID-19** that were provided by WHO according to the Epidemiology, Disease Control and Research (IEDCR) (NEWAGE Bangladesh, 08/03/20). These kits are being used to detect and test suspected case that present in people with a travel history, which Rohingya refugees do not have, given their stateless status and movement restrictions. This makes surveillance and early detection in the camps, under current practices, impossible. The humanitarian sector in Bangladesh is currently advocating for additional resources to be located in Cox's Bazar however, due to the global shortage of kits and equipment this is proving very difficult.

Health access

There is a general lack confidence in health care services offered within the camps among Rohingya. The 2019 Joint Multi-Sector Needs Assessment (MSNA) found that despite widespread usage of health clinics across the camps³, 66% of individuals who reportedly sought medical assistance in the camps also incurred debt to pay for private health services outside the camps. An additional 15% engaged in other coping mechanisms such as sale of assistance to manage and pay for health-related issues (MSNA 10/2019). This suggests that though the value placed on health care is high and NGO clinics are commonly used, Rohingya are seeking additional or alternative health care that requires payment, as many perceive the health care provided in the camps inadequate (MSNA 10/19, UNHCR 11/19).

A qualitative analysis conducted by ACAPS and REACH studying refugee vulnerability found that dissatisfaction with health services centred around medical centres being closed when needed, receiving paracetamol for every illness (perceived not to be proper

healthcare), long wait times and some refugees feeling mistreated and disrespected by health workers. This has led to the perception that paid health services are better.

"We are not happy with the hospital because they are busy with their phones and talking together, so we have to wait for a long time and after that they give us only paracetamol, no matter what the disease." (ACAPS 12/19)

"We go to hospitals for treatment but generally always we get the same medicine like paracetamol. But I know that the medicines or treatment of Corona are really different. So have the medicines already reached to all the hospitals or not? Will they refer to other places to the severe patients or will they give just medicines?" (IOM CwC 17/03/20)

The pre-existing distrust is a concern, should a surge in caseload occur. In the majority of COVID-19 cases rest and paracetamol will be the appropriate treatment; however, this is likely to be taken by the Rohingya as insufficient and an example of the humanitarian community not taking their healthcare needs seriously. Their perception of this treatment may push them to increasingly take debt and engage in negative coping strategies to seek alternative healthcare which may not even be appropriate to their medical needs. One negative coping strategy already being adopted are sale of food assistance in order to pay for health care (MSNA 10/19). As food assistance is based on daily caloric needs, this coping strategy has adverse impacts on food security, which could, in turn, increase vulnerability to a more severe form of COVID-19.

This distrust may also discourage Rohingya from seeking treatment and testing at all, which could make it challenging for responders to track the spread of the disease.

"We don't prefer to go to the hospital. Because, we don't get medicine even if we keep follow up for four to five days. They always say – you are okay you don't need medicine." (IOM CwC 03/20)

In addition, **the hilly terrain, long distances and steep uneven pathways act as a major physical barrier for individuals with mobility challenges, such as those with a physical disability, chronic illness, and the elderly.** Accessing health clinics is extremely challenging for these individuals and is often only possible with the support of their family or friends (ADH, CDD, ASB 2017, Humanity & Inclusion 01/2019, MSNA 10/19) Considering that these individuals have been identified as more likely to develop the more severe symptoms of COVID-19 the additional challenges accessing health care put them at even greater risk.

³ According to the JMSNA, 97% of individuals who required treatment sought assistance, and 4 out of 5 of those reportedly visiting NGO run health clinics (JMSNA 10/19).

Poverty, food security & nutrition

On the 16th of March, in a live press conference, the WHO expressed their grave concerns for the potential impact that this virus could have on malnourished populations, as they are likely to be more susceptible to more severe symptoms of COVID-19 (WHO 16/03/20). For the past two and a half years, 855,000 refugees have been surviving on food assistance aimed at providing them with the minimum daily required kilocalories. Despite this, a range of assessments highlight significant deficiencies in the food and nutrition status of Rohingya. Currently, WFP's Refugee Influx Emergency Vulnerability Assessment (REVA) estimates that 88% of Rohingya are considered vulnerable according to a combination of poor food security indicators (such as poor food consumption or dietary diversity) and the adoption of negative coping strategies (JRP 03/20, WFP 05/19).

Some 45% households were calculated to have either "borderline" (41%) or "poor" (4%) food consumption scores (MSNA 10/19). The Fill the Nutrient Gap Analysis revealed that almost no Rohingya households can afford a nutritious diet (JRP 03/20). The MSNA found that, 69% of households incurred new debts in the 30 days prior to data collection, and of those households just over half reported incurring the debt to fulfil immediate food needs (MSNA 10/19). Therefore, any break in supply chain or operational ability to distribute essential food assistance will further threaten their survival.

The lack of purchasing power among Rohingya households impacts their ability to buy essential items that will help prevent the transmission of the virus such as soap, and masks. Rohingya are already noticing increases in the prices of these items, according to a recent news article (Anadolu Agency 13/03/2020).

Vulnerable groups

A known variable in COVID-19 morbidity and mortality is a compromised or low immune status or pre-existing chronic illness such as hypertension, diabetes, cardiovascular disease, chronic respiratory disease and cancer (ECDC, 03/20). These individuals are much more likely to develop the more severe symptoms of COVID-19 infection which include death (Elsevier 5/02/2020, WHO 02/2020).

Though the exact prevalence of non-communicable diseases (NCDs) is unknown among the refugee population, according to the MSNA conducted in October 2019, 10% of refugee households contain at least one individual reported as requiring assistance to complete daily activities, a proxy indicator for disability and chronic illness (MSNA 10/19, Médecins Sans Frontières 05/02/2019).

According to WHO common NCDs reported other than physical injuries are Chronic Obstructive Pulmonary Disease (COPD), chronic liver disease with underlying hepatitis C infection, arthritis, respiratory illness, heart disease and diabetes (WHO 11/17, WHO 5/2018). However, health workers fear that burden of infectious diseases may be masking the needs of those with NCDs, leaving them undiagnosed, and the full extent of NCDs (including those which may magnify the health impacts of a COVID-19 infection) is vastly underestimated (WHO 5/2018).