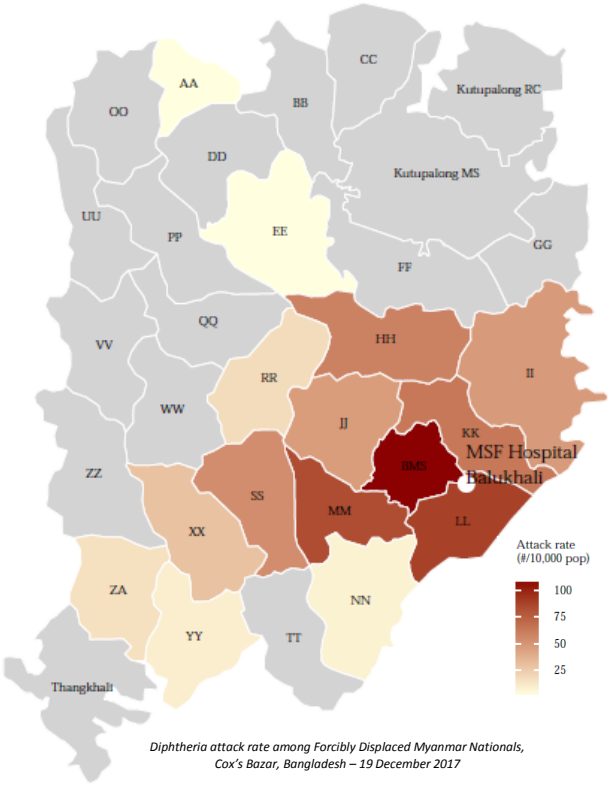
# Bangladesh Rohingya Crisis

## Health Sector Response to the Diphtheria Outbreak

### Situation Overview




*Diphtheria attack rate among Forcibly Displaced Myanmar Nationals, Cox's Bazar, Bangladesh – 19 December 2017*

Violence in Rakhine State, Myanmar, which began on 25 August 2017, has forced more than 646,000 Rohingya (Forcibly Displaced Myanmar Nationals) across the border into Cox's Bazar, Bangladesh, joining some 300,000 that fled in earlier waves of displacement. Pre-existing settlements and camps have expanded with the new influx, while new spontaneous settlements have also formed and are quickly growing. Significant numbers of new arrivals are also being absorbed into the local host community. A combination of overcrowded living conditions, poor hygiene and low immunization coverage has left the FDMN population at risk for a wide range of infectious diseases, including Cholera, Measles, Rubella, and Diphtheria.

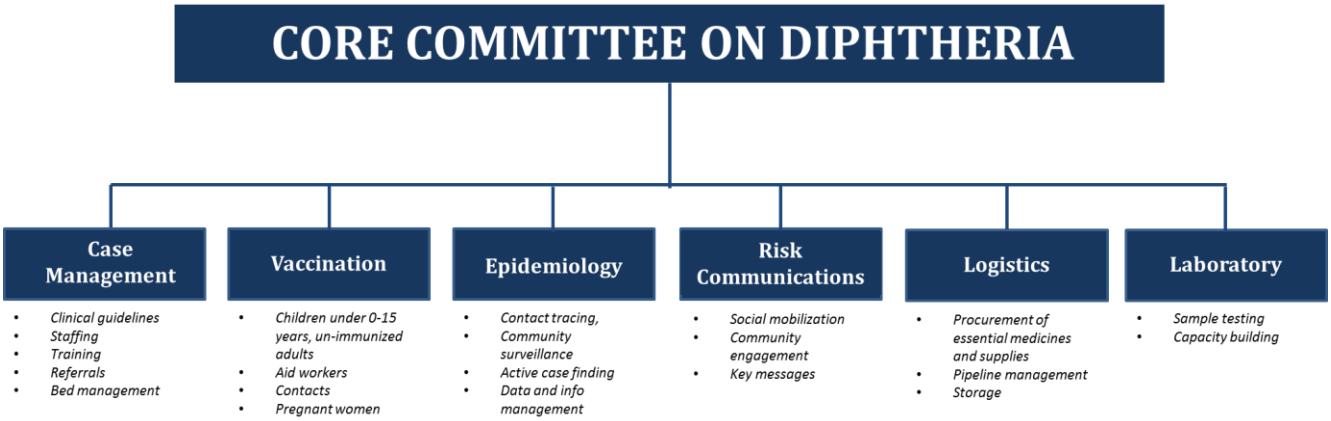
The first case of Diphtheria was reported on 08 November, 2017 by a Médecins Sans Frontières (MSF) clinic located within the Balukhali makeshift settlement within the mega camp, Kutupalong. A subsequent suspected case reported to an IFRC clinic with a three day history of fever, sore throat, difficulty swallowing, and a swollen neck.

From the time of the first suspected case to 19 December 2017, 1841 suspect cases and 22 deaths have been reported. Geographically the outbreak has extended from the Kutupalong mega camp to other smaller refugee camps. At present, MSF are treating all patients with suspected Diphtheria.

Referral of patients and access to health care in the Kutupalong and larger southern camps is complex, with no road access for the majority of the camp, and in some cases 30-45 minute walks down narrow tracks to the nearest dirt road.

## Current Response

Recognizing the need to rapidly contain the spread of this highly infectious respiratory disease, health sector partners and the Ministry of Health and Family Welfare (MoHFW) have come together to establish an overarching coordination mechanism to scale and drive the overall response to the Diphtheria outbreak. Referred to as the Core Committee on Diphtheria, the coordination mechanism leverages and aligns the critical capacities of members within the response pillars outlined below.




## Planning Assumptions

Considering the possible magnitude of the outbreak, likelihood of spread across multiple camps, and limited data available to adequately model the progression of the outbreak, an estimate, or operational planning parameter, has been developed to help guide and rapidly scale the response. The operational planning parameter was developed to ensure health sector partners and the MoHFW have adequate capacity to respond to the outbreak.

**Operational Planning Parameters**

***250 cases per day, requiring 720 low- and high-acuity Diphtheria treatment beds***

Immediate planning is based on an estimate of establishing sufficient capacity to comfortably accommodate 250 cases per day. This planning figure allows for the geographic spread of cases and for a small contingency provision enabling the health sector to maintain the possibility of managing up to 350 new cases per day. Continued surveillance is critical to ensure flexibility to scale if the daily number of suspect cases approaches the planning threshold.

**Operational Planning Parameters**

- This is not an epidemiological model
- These planning parameters are a tool to facilitate immediate planning and scaling up
- These planning parameters are intended to allow for the flexibility required to respond to real world changes and so may change over time to reflect events
- Parameters factor in a response time of 3 months, covering 8 camps and an at-risk camp population of over 846,000, as well as surrounding host communities

Planning assumptions are also significant in that they take into account (1) an unknown number of cases that are background acute respiratory infections or other conditions, and not Diphtheria, (2) limited availability of a reliable diagnostic test, and (3) the unfamiliarity of health workers with the signs and symptoms of Diphtheria and concern for missing potential cases.

The planning parameters factor in assumptions concerning the percentage of patients requiring an inpatient bed, of which 20% are expected to require a high-level of care for an estimated period of five days and the remaining 80% a low-level of care for an estimated period of two days. The planning parameter is intended to enable the health system to absorb surges and fluctuations of daily presentations, which are anticipated within any outbreak. Adherence to a single case definition, clinical protocols, and training and skill of the clinical staff all contribute to decreasing the burden on health facilities. The on-the-ground reality in the FDMN camps also requires that "over-triage" be considered bed capacity assumptions.

## Health Sector Response Goal

### Reduce morbidity and mortality associated with the Diphtheria outbreak in Cox's Bazar

## Response Objectives and Activities

Health sector partners are supporting the Government of the People's Republic of Bangladesh and the MoHFW to implement a comprehensive strategy based on the following objectives:

1. Controlling the Outbreak
2. Caring for Those Affected
3. Coordination, Technical, and Operations Support

In addition to managing the overall health sector response to the Diphtheria outbreak, the interventions outlined in this plan align with and support long-term capacitation of the health sector to respond to the complex health needs of the FDMN population.

## OBJECTIVE 1 – Controlling the Outbreak

*Prevent further transmission of Diphtheria through rapid detection and isolation.*

**1. Surveillance, Active Case Finding, and Contact Tracing**

- Effective contact tracing of suspect cases and active case finding within their immediate community, as well as enhanced surveillance in common spaces and host communities;
- Establish and support rapid case investigation and strong referral pathways among health and non-health partners using agreed upon case definitions and guidance materials;
- Ensure all close contacts of those infected are provided with chemoprophylaxis, and subsequently vaccinated against Diphtheria.

**2. Emergency Vaccination**

- Implement a vaccination campaign to protect at least 380,000 children ages 6 weeks to 15 years, including members of host communities, against Diphtheria;
- Ensure at least 532,000 under- and un-immunized adults (over 15 years of age) and close contacts, including members of host communities, and pregnant women are fully vaccinated against Diphtheria;
- Ensure all 20,000 aid providers are fully vaccinated against Diphtheria.

**3. Laboratory Capacity in Dhaka and Cox's Bazar**

- Ensure adequate laboratory capacity in Dhaka and Cox's Bazar, including availability of quality laboratory reagents and quality control strains;
- Ensure effective and efficient systems are in place for the transportation of lab samples, as required

**4. Risk Communications, Social Mobilization, and Community Engagement**

- Develop in coordination with partners and the MoHFW, an Emergency Risk Communications (ERC) Framework to enable clear and consistent communication with the target population for the duration of the outbreak response;
- Leverage the reach of key stakeholders to establish community mobilization teams;
- Broadcast clear and culturally informed messaging to support positive health seeking behaviors;
- Ensure all health facilities are provided with and oriented to the standard guidelines on case management and public health response.

## OBJECTIVE 2 – Caring for Those Affected

*All patients should have access to high-quality medical care to improve survival and prevent further spread of the outbreak.*

**1. Clinical Guidance and Training**

- Availability of a single, agreed upon case definition and treatment flow guidelines;
- Provision of training to all health providers on the agreed case definition and treatment guidelines.

**2. Case Management**

- Establish triage, case identification, and isolation precautions in 215 health facilities;
- Establish referral pathways and safe and timely transport to dedicated Diphtheria treatment centers;

- Maintain a Case Fatality Rate (CFR) at or below 10%;
- Monitor case identification through lab testing in at least 11 health facilities dedicated to the treatment and isolation of Diphtheria.

**3. Medical Response and Treatment**

- Provision of 720 Diphtheria treatment beds to enable the treatment of low – and high-acuity patients;
- Ensure adequate and appropriate staffing is in place, including the timely deployment of expert medical teams as required.

## OBJECTIVE 3 – Coordination, Technical, and Operations Support

*Critical infrastructure, procedures, and support mechanisms to enable and coordinate all aspects of the Diphtheria response.*

**1. Leadership and Partner Coordination**

- Establish a Core Committee on Diphtheria and technical sub-groups to help drive the overall health sector response to the Diphtheria outbreak;
- Ensure the aforementioned coordination mechanisms established for the Diphtheria outbreak response are comprehensive enough to serve as a foundation for future outbreak responses among the FDMN population in Cox's Bazar.

**2. Staff Safety and Security**

- Establish standard guidelines and operating procedures to enable staff to work 24 hours a day in camp settings.

**3. Logistics and Operations Support**

- Map existing stock of essential medicines and supplies among partners and the MoHFW;
- Produce a regular gap analysis of required stock;
- Establish a clear pipeline among partners and the MoHFW to ensure the availability of essential medicines and supplies;

**4. Monitoring, Reporting and Evaluation**

- Ensure all partners and government agencies involved in the response are provided with accurate and update to date information regarding the progress of the response, health service availability, healthcare utilization and outcomes to help direct, prioritize, and re-prioritize partner needs and activities.

## Diphtheria Response Monitoring Framework

| OBJECTIVE 1: CONTROLLING THE OUTBREAK | | |
|---|---|---|
| **Services** | **Indicator** | **Target** |
| *Surveillance, Active Case Finding, and Contact Tracing* | | |
| Effective contact tracing, active case finding, and community surveillance | % of contacts traced for all suspect cases | >90% |
| Ensure all close contacts of those infected are followed-up and provided with chemoprophylaxis, and subsequently vaccinated against Diphtheria | Number and % of contacts completing the full course of recommended prophylaxis | > 90% |
| *Emergency Vaccination* | | |
| Implement a vaccination campaign to protect children, ages 6 weeks to 15 years, including members of host communities, against Diphtheria | Target population for children under the age of 15 fully vaccinated against Diphtheria | 95% coverage rate |
| Ensure both un and under-immunized adults, members of host communities, close contacts, and pregnant women are fully vaccinated against Diphtheria | Target population for adults over the age of 15 fully vaccinated against Diphtheria | 95% coverage rate |
| Ensure aid providers are fully vaccinated against Diphtheria | All identified aid providers fully vaccinated against Diphtheria | 100% |
| *Laboratory Capacity in Dhaka and Cox's Bazar* | | |
| Ensure effective and efficient systems are in place for the transportation of lab samples, as required | Standard Operating Procedures in place | 100% |
| *Risk Communications, Social Mobilization, and Community Engagement* | | |
| Develop and broadcast an Emergency Risk Communications (ERC) Framework for the duration of the outbreak response | Emergency Response Framework in place and updated weekly for the duration of the response | 100% |
| Ensure all health facilities are provided with and oriented to standard messaging on the public health response | Agreed upon messaging on the public health response distributed to and used by all health facilities | 100% |

| OBJECTIVE 2: CARING FOR THOSE AFFECTED | | |
|---|---|---|
| **Services** | **Indicator** | **Target** |
| *Clinical Guidance and Training* | | |
| Availability of a single, agreed upon case definition and treatment flow guidelines to all health providers | Clinical guidance in place | 100% |
| Provision of training to all health providers on the agreed case definition and treatment guidelines | Training sessions provided every two weeks over the duration of the response | At least 6 training sessions |
| *Case Management* | | |

| | | |
|---|---|---|
| Establish triage, case identification, and isolation precautions in all health facilities | % of all health care staff trained on the agreed clinical guidelines | 100% |
| Reduce the number of deaths of associated with the Diphtheria outbreak | Case Fatality Rate | < 10% |
| Monitor case identification through lab testing in at least 11 treatment centers dedicated to the treatment of Diphtheria | Proportion of samples taken every day for a period of two weeks | > 1/3 of daily cases |
| | Proportion of samples taken every day for a period of 10 weeks | > 1/10 of new cases reported |
| *Medical Response and Treatment* | | |
| Availability of low- and high – acuity Diphtheria treatment beds, including the required facilities, staffing, and supplies. | Number of patient beds available for use | 720 |

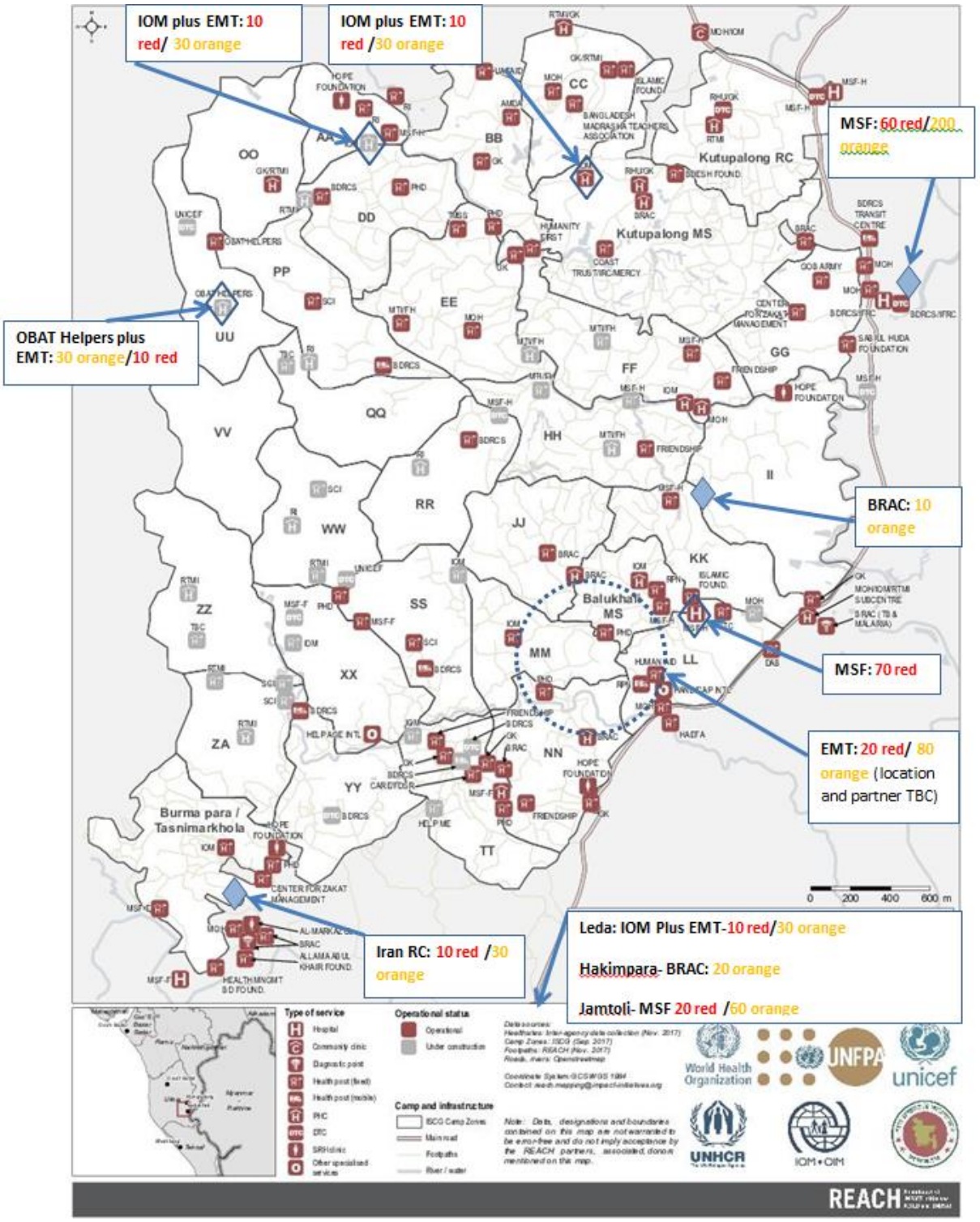
| **OBJECTIVE 3: COORDINATION, TECHNICAL AND OPERATIONS SUPPORT** | | |
|---|---|---|
| **Services** | **Indicator** | **Target** |
| *Leadership and Partner Coordination* | | |
| Establish a Core Committee on Diphtheria and technical sub-groups to help drive the overall health sector response to the Diphtheria outbreak | Weekly Core Committee meetings, with tracking of sub-group deliverables against agreed TORs | 12 meetings |
| *Staff Safety and Security* | | |
| Establish standard guidelines and operating procedures to enable staff to work in the field 24 hours a day | Safety and Security guidelines and procedures in place | 100% |
| *Logistics and Operations Support* | | |
| Map existing stock of essential medicines and supplies among partners and the MoHFW | Health facilities have adequate stock of essential medicines and supplies | 90% |
| Establish a clear pipeline among partners and the MoFHW to ensure the availability of essential medicines and supplies | Pipeline established and updated weekly | 100% |
| *Monitoring, Reporting and Evaluation* | | |
| Provide epidemiological updates to ensure that all partners responding to the outbreak are updated on the latest information regarding the health status of the population (i.e., epidemiology) and threats | Epidemiological update published | Daily |
| Produce comprehensive situation reports and periodic reporting of response indicators | Situation report published | Weekly |

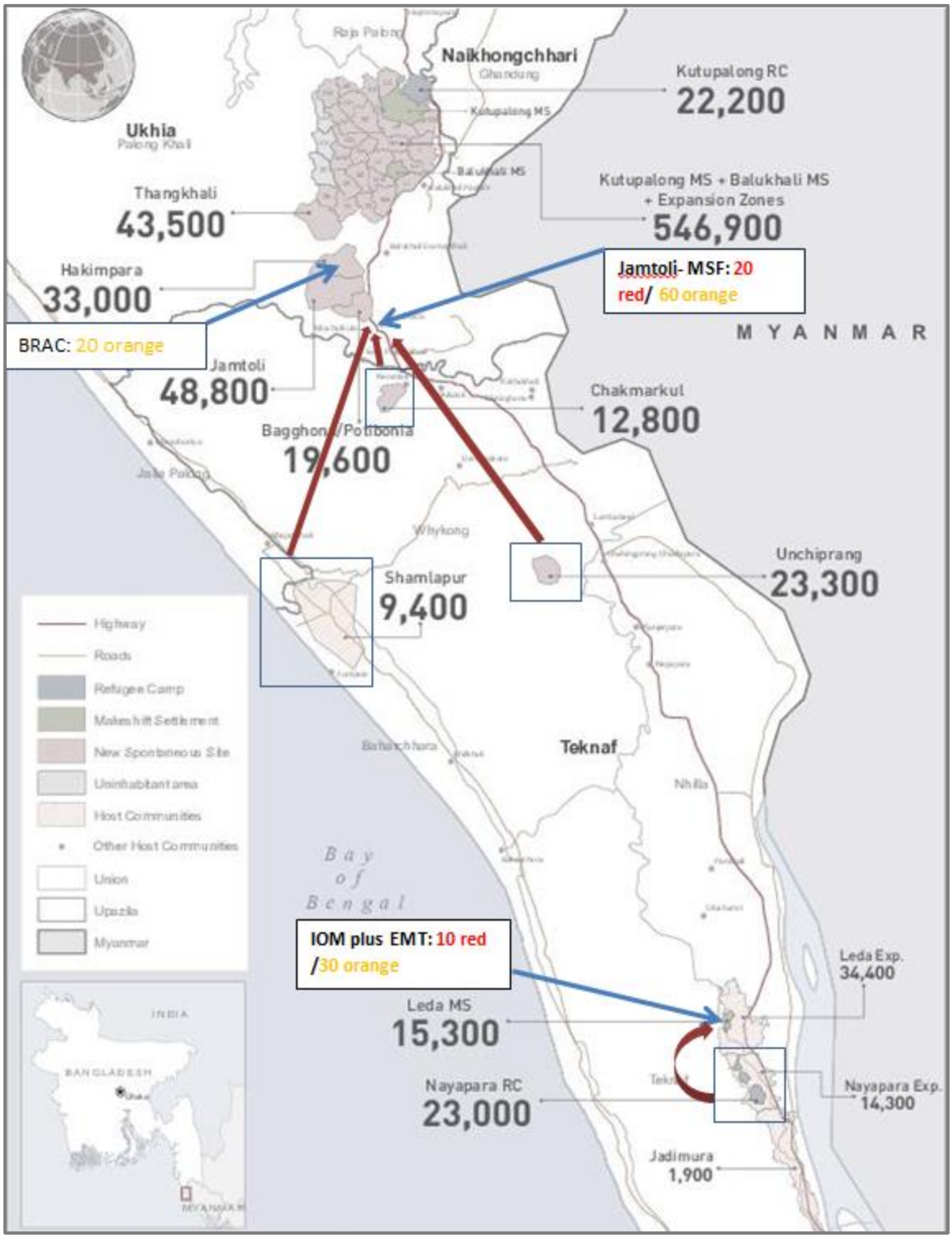
## Health Sector Diphtheria Response Plan Budget

| 3 Month Health Sector Response Plan Budget | | |
|---|---|---|
| **Objective** | **Activities** | **Budget** |
| **Controlling the Outbreak** | • Surveillance, Active Case Finding, and Contact Tracing<br>• Emergency Vaccination<br>• Laboratory Capacity in Dhaka and Cox's Bazar<br>• Risk Communications, Social Mobilization, and Community Engagement | **$1,958,000** |
| **Caring for those Affected** | • Clinical Guidance and Training<br>• Case Management<br>• Medical Response and Treatment | **$2,542,000** |
| **Coordination, Technical, and Operations Support** | • Leadership and Coordination<br>• Staff Safety and Security<br>• Logistics and Operations Support<br>• Monitoring, Reporting, and Evaluation | **$1,562,00** |
| | **Total** | **$6,092,000** |

## Annex 1: Proposed Diphtheria Treatment Facilities

*(Note: Both maps were originally produced by ISCG and REACH. Any additions were included by WHO for the purposes of this planning document.)*




Naikhongchhari
Kutupalong RC
22,200
Ukhia
Thangkhali
43,500
Kutupalong MS + Balukhali MS
+ Expansion Zones
546,900
Hakimpara
33,000
Jamtoli- MSF: 20
red/ 60 orange
BRAC: 20 orange
M Y A N M A R
Jamtoli
48,800
Chakmarkul
12,800
Bagghona/Potibonia
19,600
Unchiprang
23,300
Shamlapur
9,400
Teknaf
Highway
Roads
Refugee Camp
Makeshift Settlement
New Spontaneous Site
Uninhabitant area
Host Communities
Other Host Communities
Union
Upazila
Myanmar
Bay
of
Bengal
IOM plus EMT: 10 red
/30 orange
Leda Exp.
34,400
Leda MS
15,300
Nayapara RC
23,000
Nayapara Exp.
14,300
Jadimura
1,900