



MULTISECTORAL ACUTE WATERY DIARRHOEA (AWD)/CHOLERA PREPAREDNESS AND RESPONSE PLAN



Forcibly Displaced Myanmar Nationals (FDMN) and surrounding host population in Cox's Bazar Bangladesh

Living document as of 31 July 2022



EXECUTIVE SUMMARY

Diarrhoeal disease is a leading cause of child mortality and morbidity in the world and mostly results from contaminated food and water sources. Worldwide, 780 million individuals are inaccessible to improved drinking water while a staggering 2.5 billion lack improved sanitation. Diarrhoea due to infection is widespread throughout developing countries. In the FDMN population living in the camps in Cox's Bazar Bangladesh, diarrhoeal diseases contribute to the second-highest proportional morbidity, and similarly, the district Cox's Bazar has evolved into endemic zone for diarrhoeal diseases including cholera with continuous transmission reported for more than three years now.

As of 31 July 2022, a total of 936,733 Forced Displaced Myanmar Nationals (FDMNs) are residing in 33 camps in Cox's Bazar District, while 27,451 of the FDMN population have been relocated to Bhasan Char Island, a remote silt Island in the Bay of Bengal. The leave Cox's Bazar's Ukhiya and Teknaf Camps with FDMN population of 909,282. In addition, 541,021 host populations in Teknaf and Ukhiya Upazila (sub-district) are targeted in this response, as outlined in the United Nations Joint Response Plan (UNJRP) for the year 2022. In August 2017, Cox's Bazar district experienced a sudden influx of an estimated 700,000 FDMNs fleeing conflict in Rakhine state in Myanmar. This put extreme pressure on available resources and the Bangladesh government, UN Agencies, and international and national NGOs acted immediately with a large-scale humanitarian response. While camps were set up to cater to these new arrivals, the increased population density and overcrowding of the camps resulted in increased demands for critical supplies and other necessities like medicine, food, clean water, appropriate shelters special attention to women, children, the aged and disabled while many of the hurriedly built camps were vulnerable to monsoon flooding and cyclone storm surges. These gaps in essential services and specifically in hygiene and sanitation resulted to a rapid surge in diarrhoeal diseases including Acute Watery Diarrhoea (AWD), Cholera, and others. In September to December 2019, a cholera outbreak occurred in the camps.

To mitigate the impact of future AWD and cholera outbreaks and streamline multi-sector response, WHO in collaboration with Bangladesh government, UN agencies and other partners, initiated multisectoral acute watery diarrhoea/cholera preparedness and response plan were in October 2017 and this has been revised twice in 2019 and 2020 and currently undergoing its third revision beginning 01 January 2022 by the World Health Organization (WHO) and Ministry of Health and Family Welfare (MoHFW) that a co-chair Health Sector in collaboration with the WASH and Nutrition sectors, the Communicating with Communities Working Group (CwC WG) and relevant line departments.

The plan for 2022 has continued to be aligned to the Global Strategy on Cholera Control and Roadmap for 2030¹, Global Action Plan for Pneumonia and Diarrhoea (GAPPD)², National

¹ <https://www.gtfcc.org/about-gtfcc/roadmap-2030/>

² https://www.who.int/woman_child_accountability/news/gappd_2013/en/

Cholera Control Plan (NCCP) for Bangladesh (2019-2030)³, and recommendations drawn from Intra Action Review of AWD/cholera outbreak for 2021 that was undertaken in May 2022. Specifically, this revised plan documents the preparedness, prevention, and control actions agreed upon between the sectors and departments that are required to prevent transmission of or limit the impact of AWD and cholera outbreaks or curtail the number of AWD and possible cholera upsurges in both FDMN and the surrounding host population. The plan specifically addresses the identified gaps in Multisectoral coordination for cholera preparedness and response interventions by advocating for one preparedness and response plan by both Health and WASH Sectors to avoid duplication of efforts and disjointed response, seeks to strengthen and operationalize routine and ad-hoc Joint Assessments and Response Teams.

The second objective of this review is to address the inherent community behaviors that increase risk of cross-contamination during water collection and handling at household level through more intensified and targeted awareness creation that place FDMNs at the center of surveillance and response, increased availability of water treatment chemicals at household level and frequently monitored residual chlorine quantity. This is based on new findings by Water Quality Supply Surveillance Report for December 2021 that has documented increased contamination of water at household level (39%) compared to external water source (8%).

The review will also provide opportunity for delivery of costed preparedness and response plan with clear responsibilities by relevant partners, review of at-risk population and anticipated attack rate for cholera in 2022/2023 based on prevailing epidemiological situation to guide quantification of necessary supplies. The revised plan has further incorporated nutrition in case management to address the increased number of malnourished AWD and cholera cases and highlight food quality and safety which was previously not included in the plan.

The plan continues to enhance cholera surveillance as the overarching response pillar among other response pillars in availing timely evidence or data for immediate public health control measures (case management, WASH and use of Oral Cholera Vaccine (OCV), if justified) and provide continuous capacity for monitoring the epidemiological situation. It further establishes standard operating procedures for early detection of cases and laboratory confirmation of cholera outbreaks; implement proper case management, and infection control and prevention during an outbreak; enhances environmental control procedures in response to outbreaks; strengthen tailored public health Communication with Communities (CwC) activities through the Risk Communication & Community Engagement Technical Working Group, ensure that regular Hygiene Promotion (HP) activities are implemented.

Although this plan primarily focuses on an AWD/cholera outbreak, the same

³ National Cholera Control Plan (NCCP) for Bangladesh, 2019-2030, Communicable Disease Control, Directorate General of Health Services, Health Service Division, MOH&FW, Bangladesh

framework can be modified to prepare for and respond to other water-borne and fecal-oral transmitted diseases (Typhoid, Acute Jaundice Syndrome etc.) that could become epidemics or upsurges that would require multisectoral coordinated response.

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ACRONYMS AND ABBREVIATIONS

This document uses the same glossary and abbreviations as the earlier with a few new abbreviations.

AWD	Acute Watery Diarrhoea
BCC	Behavior Change Communication
C4D	Communication for Development
CDC	Communicable Disease Control
CFR	Case Fatality Rate
CRF	Case Report Form
CS	Civil Surgeon
DTC	Diarrhoea Treatment Center
EBS	Event Based Surveillance
EPI	Expanded program on Immunization
EWARS	Early Warning, Alert and Response System
FDMNs	Forcibly Displaced Myanmar Nationals
GoB	Government of Bangladesh
HS	Health Sector
HP	Hygiene Promotion
IBS	Indicator Based Surveillance
icddr,b	International Centre for Diarrhoeal Disease Research, Bangladesh
IEDCR	Institute of Epidemiology, Disease Control and Research
IPD	In-patient Department
JAT	Joint assessment team
JRP	Joint Response Plan
MOHFW	Ministry of Health and Family Welfare
NCCP	National Cholera Control Plan
OCV	Oral Cholera Vaccine

ORP	Oral Rehydration Point
ORS	Oral Rehydration Saline
ORT	Oral Rehydration Therapy
PHC	Primary Healthcare Center
RCCE	Risk Communication and Community Engagement
RDT	Rapid Diagnostic Test
RRT	Rapid Response Team
SAM	Severe Acute Malnutrition
SOP	Standard Operating Procedure
UHC	Upazila Health Complex
WASH	Water, Sanitation, and Hygiene
WHO	World Health Organization

GLOSSARY

Acute watery diarrhoea (AWD): Acute watery diarrhoea is an illness characterized by 3 or more loose or watery (non-bloody) stools within a 24-hour period

Cholera Alert: a cluster of AWD cases or death(s) reported through EBS (Health facilities, community, and other sources)

Cholera suspected case: In areas where a cholera outbreak has not been declared, a suspected case is any patient who has acute watery diarrhoea and severe dehydration or AWD suspected case confirmed positive by Rapid Diagnostic Test (RDT) or died from acute watery diarrhoea. In areas where a cholera outbreak is declared, a suspected case is any person presenting with or dying from acute watery diarrhea⁴

Rapid Diagnostic Test (RDT): Cholera rapid diagnostic test (RDT) represents a promising tool in the early detection of *V. cholerae* O1/O139 directly from the stool specimens even in remote areas where laboratory resources are poor. This technique requires no special laboratory skills for the detection of cholera cases. An AWD case potentially detected positive by RDT is considered a suspected cholera case and irrespective of the RDT detection, every such sample is further submitted for culture to isolate/confirm for cholera case and sensitivity test to guide appropriate case management.

Cholera confirmed Case: A suspected case with Cholera O1 or O139 confirmed by culture or PCR

Culture and Sensitivity: A culture is a test to find germs (such as bacteria or a fungus) that can cause an infection. A sensitivity test assist with assessment of effective medicine, such as an antibiotic that would effectively treat the illness or infection. An RDT-tested sample (irrespective of its detection status) undergoes culture and sensitivity tests. Any RDT detected case is considered a confirmed cholera case.

Cholera Outbreak: Is defined by the occurrence of at least one confirmed case of cholera by culture or PCR and evidence of local transmission. Outbreaks can even occur in areas with sustained year-round transmission meaning in an endemic area. These outbreaks are defined by an unexpected increase in the magnitude or timing of suspected cases over two consecutive weeks, with some cases being confirmed by the laboratory tests. Such increases should be Investigated and responded to appropriately, through additional outbreak response and control measures are required⁵

Cholera-endemic area: An area where confirmed cholera cases have been detected during the last 3 years with evidence of local transmission (cases are not imported from elsewhere).

An area can be defined as any sub-national administrative unit including state, district, or smaller localities.⁶

⁴ National Cholera Control Plan (NCCP) for Bangladesh, 2019-2030, Communicable Disease Control, Directorate General of Health Services, Health Service Division, MOH&FW, Bangladesh

⁵ EWARS case definition

⁶ National Cholera Control Plan (NCCP) for Bangladesh, 2019-2030, Communicable Disease Control, Directorate General of Health Services, Health Service Division, MOH&FW, Bangladesh

Any country that contains one or more sub-national administrative units that are endemic as defined above, is considered Cholera endemic country

Cholera can be epidemic or endemic and cholera outbreak/epidemic can occur in endemic settings and in settings where the transmission doesn't occur regularly

Cholera Control: A reduction in the incidence, prevalence, morbidity, or mortality of cholera cases to a locally acceptable level (according to NCCP), and no longer considered a public health problem, and continued intervention is required to maintain a controlled situation.

Cholera elimination: Any country that reports no confirmed cases with evidence of local transmission for at least three consecutive years and has a well-functioning epidemiological and laboratory surveillance system able to detect and confirm cases

Cholera hotspot: A geographically limited area (e.g., city, administrative level 2, or health district catchment area) where environmental, cultural, and/or socioeconomic conditions facilitate the transmission of the disease and where cholera persists or re-appears regularly. Hotspots play a central role in the spread of the disease to other areas.

Hygiene: Hygiene refers to the conditions and practices that help maintain health and prevent the spread of disease including handwashing, menstrual hygiene management, and food hygiene (JMP WASH)

Safely managed drinking water services: Improved water source located on premises, available when needed, and free from microbiological and priority chemical contamination.

Upazila (Sub-district): The Upazilas are the second-lowest tier of regional administration in Bangladesh

Diarrhoea Treatment Center: Dedicated health facility that serves the FDMNs in the camps as well as the host population living in the neighborhood housing; manages cases of severe diarrhoeal diseases including cholera and associated malnutrition and carries out diarrheal disease surveillance.

AWD Isolation Unit: Dedicated health facility that serves the FDMNs in the camps as well as the host population living in the neighborhood housing; manages cases of moderate to severe diarrhoeal disease and associated malnutrition and carries out diarrheal disease surveillance.

Sentinel surveillance site: Selected health facilities in Ukiah and Teknaf Upazilas, Cox's Bazar including in the camps to gather information regarding the cholera burden among the fragile population (FDMN) and host community.

1.0 INTRODUCTION

The scope of this Multisector Cholera Preparedness and Response Plan 2022 is to focus on cholera detection and management within Rohingya Refugees/FDMN camps and the surrounding host population in Cox's Bazar District. The document has now been realigned to the National Cholera Control Plan for Bangladesh 2019/2030 and Global Roadmap to 2030 aiming for at least 90% mortality reduction in 47 endemic countries. With the commitment of cholera-affected countries, technical partners, and donors as many as 20 countries could eliminate the disease transmission in this timeline. This goal can be achieved by strengthening preparedness, early case detection, and quick response to contain cholera outbreaks using Oral Cholera Vaccine (OCV) as well as by having an implementation plan for improving WASH services. OCV can also be used to control the endemic situation.

1.1 Acute Watery Diarrhoea

According to WHO report published in May 2017, Diarrhoeal disease is the second leading cause of death in children under five years old and is responsible for around 525 000 deaths among children globally every year. Diarrhoea can last several days and can leave the body without the water and salts that are necessary for survival. In the past, for most people, severe dehydration and fluid loss were the main causes of diarrhoeal deaths. Presently, other causes such as septic bacterial infections are likely to account for an increasing proportion of all diarrhoea-associated deaths. Children who are malnourished or have impaired immunity as well as people living with HIV are most at risk of life-threatening diarrhoea.

Diarrhoea⁷ is defined as the passage of three or more loose or liquid stools per day (or more frequent passage than is normal for the individual). Frequent passing of formed stools is not diarrhoea, nor is the passing of loose, "pasty" stools by breastfed babies.

Diarrhoea is usually a symptom of an infection in the intestinal tract, which can be caused by a variety of bacterial, viral, and parasitic organisms. Infection is spread through contaminated food or drinking water, or from person to person because of poor hygiene.

Interventions to prevent diarrhoea, include safe drinking water, use of improved sanitation and handwashing with soap can reduce disease risk. Diarrhoea should be treated with oral rehydration solution (ORS), a solution of clean water, sugar, and salt. In addition, a 10-14-day supplemental treatment course of dispersible 20 mg zinc tablets shortens diarrhoea duration and improves outcomes.

There are three clinical types of diarrhoea:

- Acute watery diarrhoea (AWD) – lasts several hours or days and includes cholera.
- Bloody diarrhoea – also called dysentery; and
- Persistent diarrhoea – lasts 14 days or longer.

AWD is among common diseases constantly reported among FDMNs and host community.

⁷ <https://www.who.int/news-room/fact-sheets/detail/diarrhoeal-disease>

One of the causes of AWD is Cholera, a diarrhoeal disease caused by infection of the intestine with the bacterium *Vibrio cholerae*, either type O1 or O139, though type O1 has been predominantly high in the FDMN camps in Cox's Bazar for over past years. Both children and adults can be infected. Cholera is usually transmitted through fecal contamination of water or food and remains an ever-present risk in many countries. New outbreaks can occur sporadically in any part of the world where water supply, sanitation, food safety, and hygiene are inadequate. The greatest risk occurs in overpopulated communities and refugee settings characterized by poor sanitation, unsafe drinking water, and increased person-to-person transmission. Because the incubation period is very short (2 hours to 5 days), the number of cases can rise extremely quickly.

The living conditions of FDMN communities in Cox's Bazar are characterized by poor sanitation, unsafe drinking water, and overcrowding, which makes it an ideal situation for contamination of food/ drinking water. The crowded living condition means more people are exposed to vomitus, excreta of a sick person, and contaminated water and food. However, the situation has been improving over the past three and half years. The WASH sector has been working relentlessly to improve the situation in the camps. Besides that, the RCEE TWG has been facilitating community engagement through CHW WG and C4D network in the camp at individual and block to sensitize them for desired behavioral changes. But still, there are a few areas that need to be addressed hence the risk of transmission continues to persist and the disease has the potential to cause an explosive epidemic with a high death toll if treatment is not initiated during the early phase of the disease transmission. If an outbreak does occur, those at greatest risk of death from AWD/cholera include the persons with lower immunity, such as malnourished children, pregnant women, HIV positive persons, unvaccinated persons/children moving from areas from the transmission, and the vulnerable persons moving to camps with ongoing transmission.

Inadequate access to health and WASH services, limited diagnostic capacities and poor WASH practices could become major barriers to controlling the infection and decreasing mortality since early detection and containment of cases in isolation facilities are essential to reduce transmission and good treatment outcomes/prognosis. Critical measures to reduce the risk of AWD outbreaks are ensuring the provision of clean water; proper sanitation; the at-risk population adopting good personal, and food hygiene. In particular, the risk of infection is reduced when people adopt healthy eating habits and hand-washing practices. This underscores the critical role of Water, Sanitation and Hygiene (WASH), Nutrition, and Communication for Communities (CwC) sectors in preventing AWD outbreaks and breaking the cyclic transmission of AWDs or cholera within FDMN Camps and adjoining host populations.

1.2 Cholera

Cholera is a major public health problem in many countries in Asia, Africa, and Latin America. According to WHO Global fact sheet for 30 March 2022, about 47 countries worldwide are

recognized as cholera endemic. Cholera is responsible for an estimated 1.3-4 million cases and 21,000 to 143,000 deaths per year worldwide. The good news is that most of those infected have no or mild symptoms and can be successfully treated with oral rehydration solutions. In October 2017, Global Taskforce on Cholera Control (GTFCC) partners launched a strategy for Cholera Control, dubbed 'Ending Cholera', Global Roadmap to 2030 with targets to reduce cholera deaths by 90% and to eliminate transmission in almost 20 countries by 2030. It was therefore commendable that by December 2018, the cholera cases had dropped by 60% in endemic countries.

Bangladesh is one of the endemic countries with the highest burdens of cholera due to serogroup 01 and in the middle of the country including Dhaka, there are two (bi-annual) seasonal peaks, yet the country has no established national cholera surveillance system.⁸ An estimated 109,052 cholera cases are reported annually while a population of 66,495,209 is at risk of Cholera with an annual incidence rate of 1.64/1,000. The cholera cases in high-risk populations and cholera-prone areas may exceed 2/1,000 population (ranges 2-5) suggesting an occurrence of 450,000 hospitalized cases and >1 million infections per year.⁹

Cholera is a threat to vulnerable populations caught in humanitarian emergencies. WHO has recommended that inactivated oral cholera vaccines (OCVs), in conjunction with the provision of appropriate rehydration therapy, clean water, and sanitation, be considered for use in humanitarian and emergency settings at high risk for cholera. Since 2013, inactivated vibrio whole-cell OCVs have been made available for deployment from a global OCV stockpile, funded by Gavi, the Vaccine Alliance. Almost 60 million doses of OCV have been shipped out globally and in 2018 alone, 18million doses were shipped to 11 countries. Emergency deployment of OCVs from the stockpile is coordinated by an International Coordinating Group (ICG) with WHO serving as the secretariat. There has been increasing demand for the OCV stockpile and between July 2013, and September 2017, close to 17 million OCV doses were shipped to 18 countries.¹⁰

1.3 Situation in Cox's Bazar

In the year 2021, a total of 147,376 AWD¹¹ cases were reported in Early Warning and Alert Response System (EWARS) from different health facilities, the highest since the greatest influx of Rohingya Refugees in August 2017. During the same period, 1284 patients with mild and severe dehydration were admitted to Diarrhoea Treatment Centers (DTC) and AWD isolation units at PHCs.

⁸ Parvin I, Shahid ASMSB, Das S, Shahrin L, Ackhter M.M, Alam T, et al. (2021) *Vibrio cholerae* O139 persists in Dhaka, Bangladesh since 1993. *PLoS Negl Trop Dis* 15(9): e0009721. <https://doi.org/10.1371/journal.pntd.0009721>

⁹ National Cholera Control Plan (NCCP) for Bangladesh, 2019-2030, Communicable Disease Control, Directorate General of Health Services, Health Service Division, MOH&FW, Bangladesh

¹⁰ Emergency deployment of Oral Cholera Vaccine for the Rohingya in Bangladesh, 2018.

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(18\)30993-0/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)30993-0/fulltext); doi.org/10.1016/S0140-6736(18)30993-0

¹¹ EWARS definition of AWD: Passage of 3 or more abnormally loose or fluid stools in the past 24 hours with or without dehydration

Table 1: Number of annual AWD and Cholera suspected and confirmed cases and OCV disease administered among FDMN populations from 2017 to 2021 in Cox's Bazar district

Year	Number of culture-confirmed cholera	RDT positive AWD	Admitted cases in the health facilities	Number of AWD cases reported through EWARS	Number of AWD cases reported through extended CBS	Number of the OCV dose administered
2017	-	-	-	565	-	899,959
2018	7	49	-	160,733	-	1,243,959
2019	184	258	986	140,181	-	691,168
2020	5	28	638	138,415	-	259,891
2021	137	357	1284	147,376	-	1,490,079

From the EWARS data in table 1 above, its notable that after December 2019, AWD cases depicted a declining trend in 2020 (138,415 cases reported of which 638 cases were admitted to health facilities) down from 140,181 reported cases of which 986 cases admitted in health facilities. This could possibly be attributed to the improved vaccine induced immunity among targeted population, the vulnerable cohorts of 1-<5years children through administration of two (2) rounds of OCV campaigns based on the available epidemiological evidence. It is also possible that this declined was partially triggered by COVID-19 pandemic that began in early 2020 hence shifting health seeking from health facilities due to fear of Covid-19. This had equally affected trends for all other diseases.

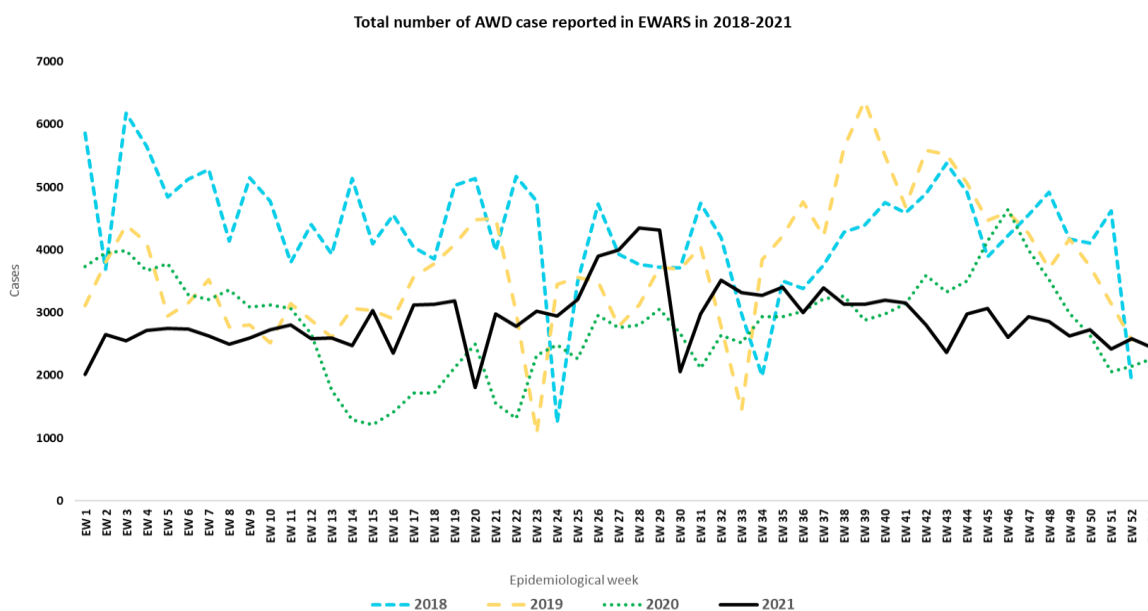


Figure 1: Total number of reported AWD cases in EWARS in 2018-2021, Cox's Bazar, Bangladesh

During the period between 01 January to 31 December 2021, 357 total AWD cases (210 RDT positive and 137 culture confirmed for Cholera) were reported. About 74% of the total Cholera suspected cases were reported among FDMN population while 61% were reported among FDMN Camps based in Ukiah Upazila. (See figure 2). During the 2021 outbreak which continued throughout the year, a multiagency response was deployed that rapidly scaled up integrated Health, WASH, and Community engagement and hygiene promotion interventions. This significantly contributed to the minimization of transmission by the end of 2021. However, it's the impactful roles of two rounds of OCV campaigns, closely integrated with RCCE and Joint Assessment and Response interventions for cholera outbreak investigation, that significantly contributed to the decline in AWD transmission halting the outbreak. As a result, the caseloads

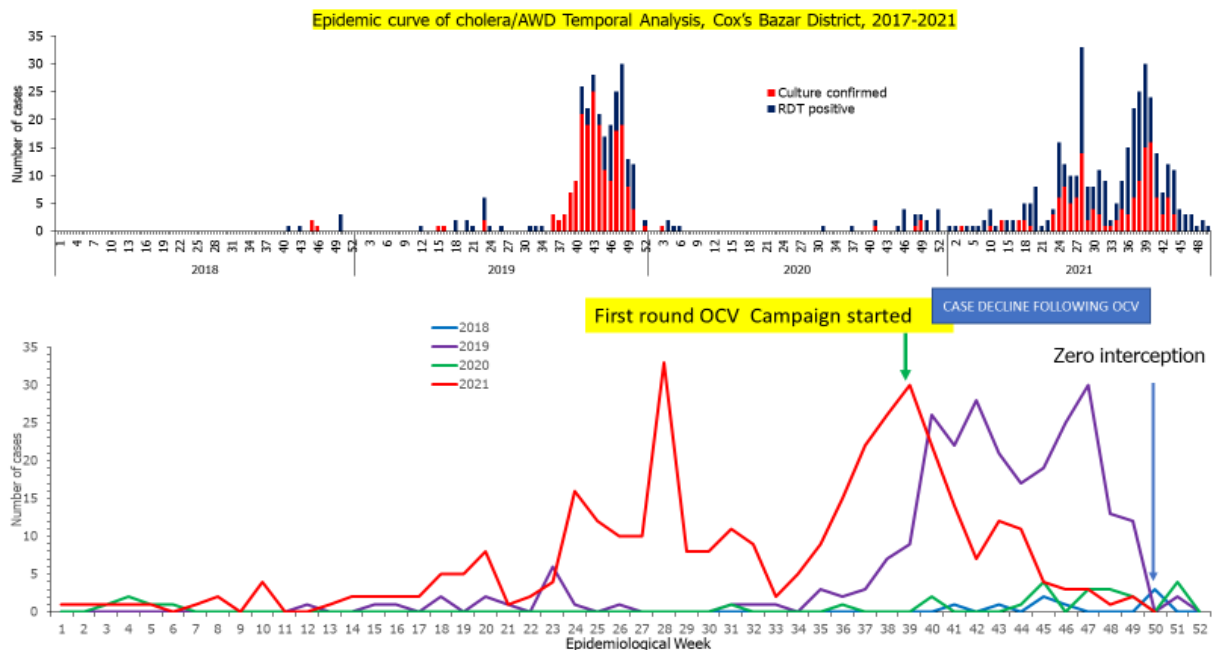


Figure 2: Trends of Cholera cases (suspected and confirmed) from 2017 to 2021 in EWARS, Cox's Bazar, Bangladesh

drastically dropped to zero by end of epi week 50, 2021.

At the beginning of 2021, the Joint Response strategy by technical partners driven by the implementation of Multi-Sectoral AWD Response plan 2020, had put in place a more stable three-tier case management system through dedicated Cholera DTCs, AWD Isolation facilities to manage moderate and severe AWD and Cholera cases. Furthermore, case management partners established standby Severe Acute Respiratory Infection Isolation and Treatment Centers (SARI ITCs) and more trained and dedicated frontline healthcare workers to provide the required services, this contributed to a stable and effective case management structure for AWD and Cholera. Continuous community engagement through sensitization and awareness creation and available referral systems that linked community through CHWs to DTCs contributed to improved detection, stabilization of cases through ORS and referral to relevant health facilities. This significantly contributed to the zero-case fatality rate in the

entire outbreak period of 2021. Most of the 169 health facilities also doubled up as ORS posts to support and stabilize mild cholera cases who were then released to go home with proper treatment guidance in place. Mid-way in implementation of Multi-Sectoral AWD Response plan 2020, the ORS posts had to be phased out and replaced by trained and dedicated Community Health Workers who visit households on weekly basis to detect and report AWD alerts and provided ORS for the management of such cases.

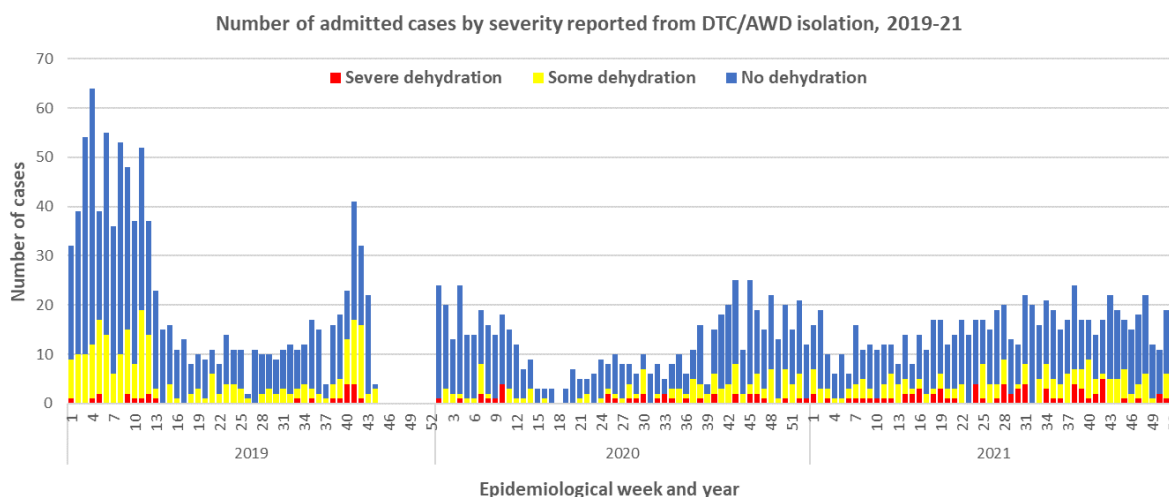


Figure 3: The trends of admitted cholera cases (RDT and culture confirmed) by severity from 2019 to 2021

A total of eight rounds of Oral Cholera Vaccine (OCV) campaigns were conducted in which the first six rounds were undertaken in October and November 2017, May, and December 2018, December 2019, and February 2020 respectively in which FDMN and most at-risk host community populations were vaccinated with Shanchol vaccine (Sanofi Pasteur)¹² and Euvichol (Eubiologics). The last two rounds of OCV campaign were conducted in October and November 2021 mainly among FDMNs while that for host population was deferred due to then ongoing COVID-19 vaccination campaign that had commenced in August 2021. However the host community OCV vaccination is still being planned and anticipated.

Table 2: Mass OCV campaigns held among FDMN and Host population in Cox’s Bazar from 2017 to 2021

Sl	Name of campaign	Period	Target Age group	Target population	Coverage
1	OCV Campaign (R1)	10-18 Oct 2017	>1 year	658,371	106%
2	OCV Campaign (R2)	04-09 Nov 2017	1 to <5 Years	182,317	109%
3	OCV Campaign (R1) (+Host community)	6-13 May 2018	>1 year	984,906	879,273
4	OCV Campaign (R2) (+Host community)	17 Nov – 13 Dec 2018	>1 year	328,556	110%
5	OCV Campaign, FDMN	7 – 14 Dec 2019 (R1) 15-20 Feb 2020 (R2)	1-<5 years	144,062	113%

¹² <http://www.who.int/cholera/vaccines/AddendumGuideVaccinationForShanchol050913.pdf>

6	OCV Campaign, Host (partly done)	7 – 31 Dec 2019 (R1) 22 Feb -12 Mar 2020 (R2)	>1 year	495,197	107% ~80,000
7	OCV Campaign, FDMN (R1)	10 – 25 October 2021	>1 year	869,095	87%
8	OCV Campaign, FDMN (R2)	01 – 22 November 2021	>1 year	869,095	85%

Note: The Two rounds of the 2021 OCV campaign excluded the host population

1.4 Purpose of this plan

The Multi-Sectoral Acute Watery Diarrhea Response plan was first initiated in October 2017 by the WHO-led Health Sector in collaboration with WASH, and Nutrition sectors, the Communicating with Communities Working Group (CwC WG), and relevant line departments. The aim was to guide the preparedness and response among FDMNs and surrounding host population in Ukiah and Teknaf Upazilas in Cox’s Bazar District. The plan has been revised twice in 2019 and 2020 and is currently undergoing a third revision in July 2022 to further align it with new evidence from surveillance and case management interventions, new revisions in Global Cholera Roadmap 2030, Global Action Plan for Pneumonia and Diarrhoea (GAPPD), National Cholera Control Plan (NCCP) for Bangladesh (2019/2030) and recommendations and lessons learned from Intra Action Review of AWD/cholera outbreak response in 2021 ,the workshop had been undertaken in May 2022.

The new Multi-Sectoral AWD/Cholera Preparedness and Response plan has made an investment case for AWD and Cholera preparedness and response through a costed budget plan and clear agency leadership of pillar thematic areas. It has also highlighted preparedness component of AW/Cholera response and has anchored its new strategies based on the most current epidemiological situation.

The primary objectives of this plan are outlined below

- To minimize AWD and Cholera case fatality rate to zero or below 1% through effective case management
- To ensure timely detection of AWD and Cholera cases through robust and sensitive surveillance systems for effective investigation and management
- To Improve community ownership of AWD and Cholera prevention, preparedness, and response through appropriate engagements, advocacy, and communication and placing them at the center of planning for AWD and cholera activities.

The purpose of this document is to ensure a proactive and coordinated approach to AWD upsurge or outbreak planning, preparedness, and response across sectors and stakeholders with the objective of reducing avoidable morbidity and mortality. Specifically, this plan articulates the prevention, preparedness, and control actions agreed upon between the sectors and departments that are required to prevent or limit the impact of AWD outbreaks among FDMN and the surrounding host population. It will further strive to overarch 4Cs of integration (Combined, Complementary, Convergent and Coherent) as critical components of prevention, preparedness, and response to AWD/cholera.

Furthermore, the plan is specifically expected to improve integrated multisectoral coordination for AWD/cholera prevention, preparedness, and response interventions to achieve a complete and better health outcome among FDMNs and host population affected by persistent and cyclic AWD and cholera outbreaks while attempting to manage their existing vulnerability and additional challenges faced by the refugees in the camps. Other expected outcomes are listed below.

- Enhanced cholera surveillance for immediate public health control measures (case management, WASH, and use of OCV, if justified) and monitor the situation.
- Established standard operating procedures for early detection of AWD cases and laboratory confirmation of cholera outbreaks.
- Established implementation mechanisms for proper case management, infection prevention and control during an outbreak.
- Enhanced environmental control procedures in response to outbreaks.
- Strengthened the Risk Communication and Community Engagement (RCCE) interventions in the field through the Communication with Communities (CwC) WG.
- Assurance that regular HP activities are implemented through the WASH sector.

Lastly, although this plan primarily focuses on AWD/ cholera upsurge/outbreak, the same framework can be modified to prepare for and respond to other water-borne and fecal-oral transmitted diseases with epidemic potential and that warrants immediate coordination among the sectors and Working Groups for coordinated response interventions

2.0 SCENARIO PLANNING: ESTIMATED CASELOAD AND NEEDS

2.1 Target population

According to the Joint Government of Bangladesh-UNHCR Population Factsheet as of 31 July 2022, the latest FDMN population is 909,282 including new and pre-existing influx. This number excludes the 27,451 that have been relocated to Bhasan Char. In addition, 541,021 host communities are targeted in this response, as outlined in the UN Joint Response Plan (UNJRP) 2022. These figures are shown in Table 3 below. For purposes of AWD response, a separate document would be referred to for the response on Bhasan Char Island.

Table 3: AWD/Cholera Preparedness and Response Plan activities and budget 2022-2023

Target population breakdown	Population
FDMN population*	909, 282
Host Population**	541, 021
Total Population	1,450,303

*Updated population estimate as of 31 July 2022

**UN Joint Response Plan (JRP 2022 population in need)

2.2 Estimated caseload

For scenario planning purposes, the following key assumptions were made based on the characteristics of past large AWD outbreaks in FDMN camp settings.

2.2.1 Key assumptions made on FDMNs population in 2022

Firstly, the proportion of the FDMN population that has been fully covered by two (2) rounds of the OCV campaign is 735,907 (81%) when using the latest FDMN statistics above. Alongside, improved water infrastructures highlighted in the 17th Water Quality Survey (WQS) report for December 2021. In this report 91% of samples from external water sources had no *E.coli* detected compared 62% of sampled in-dwelling water stored in the households pointing to improved water quality at source. Even though 38% of sampled water from in-dwelling containers had *E.coli*, it's commendable that some level of improvement in water handling has been achieved and sustained at the household level due to continuous hygiene promotion on AWD and COVID-19 pandemic prevention by the WASH sectors.

The gap in OCV campaign therefore leaves out 19% (173,375) of FDMN population who remain uncovered by OCV campaign when we rely on the above statistics. Applying the Global Taskforce for Cholera Control's scientific assumption that 60% of the 735,907 vaccinated population should have successfully attained vaccine acquired immunity and would remain so for the next two to three years from January 2022, then 40% of the vaccinated remain vulnerable to AWD/Cholera infection for a similar period, thus 294,263 persons. Total vulnerable FDMNs will comprise of total vulnerable persons among the vaccinated and those that remain unvaccinated, this totals to 467,638. In 2021, 265 cases out of 357 cholera suspects (RDT positive and culture confirmed cases) were reported among FDMNs by epidemiological week 52 2021, this resulted to 0.03% cumulative Attack Rate (AR) for 2021 among FDMNs.

Projected Cholera Attack Rate (AR) among FDMNs for 2022

- Applying 2021 AR of 0.03% to the 467,638 vulnerable FDMNs yields 140 cholera suspects
- Expected number of cholera cases in 2022 is further enhanced by 15% to adjust for possible missed cases in the community that may be opaque to the healthcare system, this brings the total annual Cholera suspected cases to 161
- Total severely dehydrated cases (26% of total cases as per 2021 Data) will be 42
- Total Moderately dehydrated cases (30% of total cases based on 2021 data) will be 48
- Projected cases with zero to mild dehydration will be (44% based on 2021 data) 71
- Projected cases in peak week (20% of total cases by WHO Standards) will be 32

2.2.2 Key Assumptions made for the Host population

No OCV campaign has been undertaken among host population during the 2020 and 2021 period, in addition to this mitigation gap, there is poor quality of WASH services in the host population, this includes long term water infrastructure that continues to persist coupled with

weak hygiene promotion services in place. It can therefore be safely assumed that the entire host population is at risk of AWD and Cholera Outbreak. Again, based on WHO 2021 Surveillance data, 92 cholera suspects were reported (61 RDT confirmed AWD cases/Cholera suspects and 31 culture-confirmed Cholera cases), the AR was therefore 0.02%

Table 4: The Projected Populations, Population at Risk and Attack Rate for 2022 and 2023 and cases for 2022

Population	Population (UNHCR, 31 Dec 2021)	Population at risk (2022-23)	Cases for 2022 (considering the AR, 2021)
FDMNs	909282	467,638	161
Host Population	541,021	541,021	106
Total	1,450,303	1,008,659	267

Projected Cholera Attack Rate (AR among host population in 2022)

- The AR by Cholera cases for 2022 will be assumed to be similar to 2021 which is 92 cumulative suspected cases
- Projected annual cases were further enhanced by 15% due to possibly missed cases in the community hence will be 106 cases
- Projected severely dehydrated cases (26% as per 2021 Data), 28 cases
- Projected moderate cases (30% as per 2021 data), 32 cases
- Projected cases with zero to mild cases (44% of total cases as per 2021 data) will be 47
- Projected number of cases in peak week (20% by WHO global standard) will be 21 cases

In addition, the average duration of the outbreak is projected to last 3 months, and the Case fatality rate (CFR) with appropriate treatment should sustained below 1%.

It's assumed that the above scenarios among FDMN and Host community will similarly apply in 2023.

Table 5: Susceptible population, attack rate cases in current scenario in 2022

Population Categories	Susceptible Population in 2021 (A)	Susceptible Unvaccinated-19% of FDMN & 100% of Host population (B)	Susceptible among vaccinated -40% of FDMNs who received 2 doses of OCV ©	Total susceptible Population (A+B)	Attack Rate
FDMN	909282	173,375	294,263	467,638	161 (0.03%)
Host	541,021	541,021	0	541,021	106 (0.02%)
Total	1,450,303	714,396	294,263	1,008,659	267

This plan proposes a single scenario for preparedness and response based on prevailing epidemiological situation at the end of 2021. The assumes that the OCV campaign among

FDMN population remain impactful with 60% of the fully vaccinated population who had received the two doses protected for the next 2-3 years and unvaccinated naïve host population being 100% vulnerable to Cholera outbreak. It is further assumed that similar scenario for 2022 will be replicated in 2023. The attack rate cases for both host and FDMN populations have been enhanced scientifically by 15% to adjust for missed cases opaque to the healthcare system due to possible surveillance gaps. See table 6

Table 6: Caseload Estimates for Current Scenario for 2022

Epidemiological variables	Assuming 60% efficacy among vaccinated FDMNs, vulnerable host population based on the current (2021) Scenario
Estimated case-FDMN	161
Estimated case-host community	106
Estimated total case	267
Estimated cases in peak week (20%)	53
Estimated cases with severe dehydration peak week (26%)	69
Estimated cases with moderate dehydration peak week (30%)	80
Estimated cases with no dehydration peak week (44%)	118
Estimated fatalities	3

The estimated need for treatment facilities and stock in this plan are calculated based on this scenario caseload estimates during the peak week when the maximum number of resources will be required.

2.3 Estimated number of testing, treatment facilities and supplies

2.3.1 Sample collection (sentinel) and testing sites

Across the camps by 31 July 2022, the health sector through Epidemiology Technical Working Group, has established 27 sentinel/testing sites with capacity to perform RDT testing of cases that meet the standard case definition for AWD. Thereafter, samples regardless of RDT test outcomes, are sent to Dhaka at icddr, b reference laboratory for culture detection of Cholera and antibiotic sensitivity determination.

Table 7: List of Sentinel Sites with sample collection, Isolation & DTC Capacities among FDMN/Rohingya Camps on 31 Dec 2021

Health Facility	Sample Collect Site	HF with isolation capacity	DTC (Specialized)
MSF Camp 15 PHC	√	√	-
MSF Camp 16 (Goyalmara) IPD	√	-	-
MSF Kutupalong Main Clinic	√	√	-
MSF Balukhali IPD	√	√	-
MSF Camp 8W (IPD)	√	-	-
IOM Camp 2W PHC	√	√	-
IOM Camp 3 PHC	√	√	-
IOM Camp 13 PHC	√	√	-
IOM Camp 13 HP	√	-	-
IOM Camp 24 PHC	√	-	-
FH/MTI Camp 12 PHC	√	-	-
GK Camp 4 Ext UNHCR PHC	√	-	-
GK Camp 4 UNHCR PHC	√	-	-
RHU Kutupalong RC PHC	√	-	-
RHU Nayapara RC PHC	√	-	-
ICDDR B SARI ITC	√	√	-
UNICEF-icddrb Camp 24	√	√	√
RTMI Camp 19 PHC	√	√	-
MOH Ukhia UHC	√	√	-
MOH Teknaf UHC	√	√	-

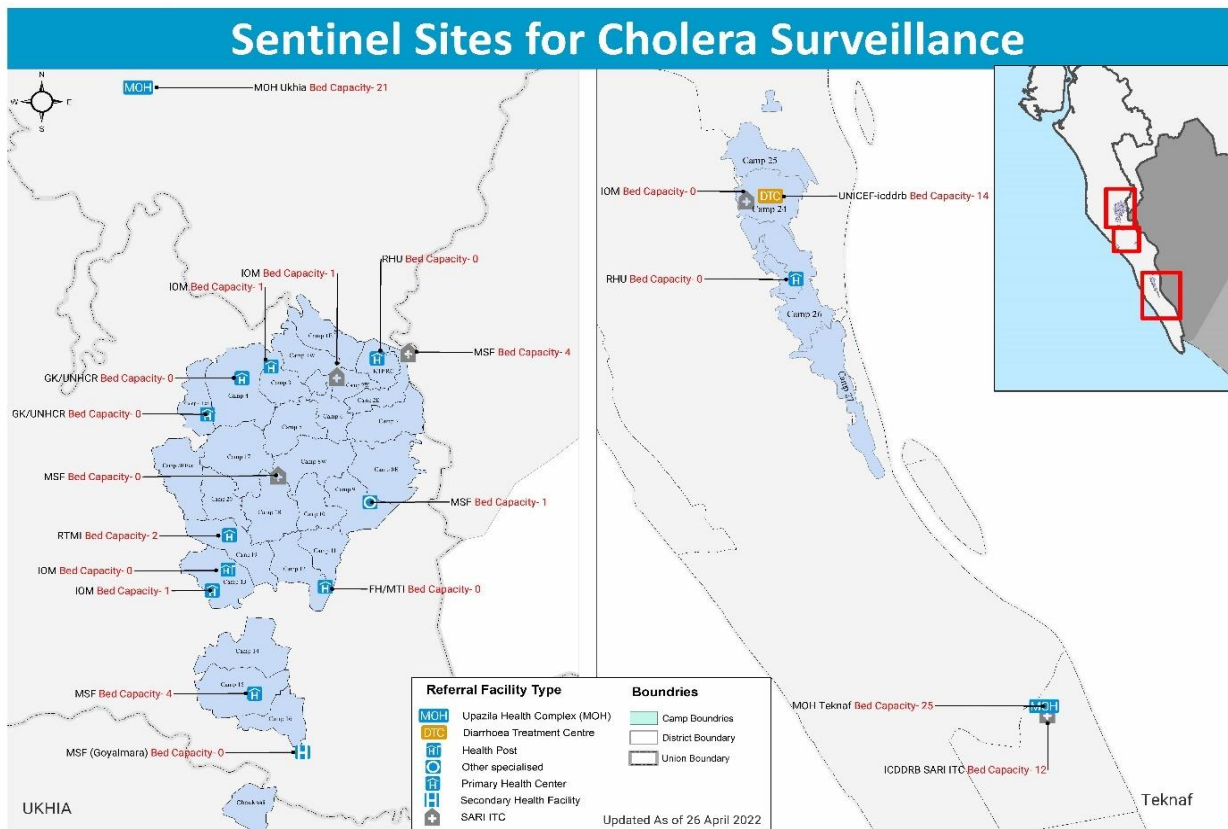


Figure 4: Map of AWD/Cholera Sentinel sites in FDMN/Rohingya Refugee Camps ON 31 Dec 2021

Case detection:

At this stage, laboratory investigations are carried out to confirm the causative agent and on periodic basis to determine the antibiotics Susceptibility profile.

Rapid diagnostic tests (RDTs):

RDTs are intended to screen suspect cases to determine if *Vibrio cholerae* O1 or O139 might be the causal agent. However, only culture can confirm the etiological diagnosis. Global Taskforce for Cholera Control (GTFCC) recommend at least five samples from patients randomly selected per week from the inpatients in ideal settings. However, in Bangladesh, none of the currently available RDTs is pre-qualified by the WHO. If there are no pre-qualified RDTs, this guide recommends collecting stool samples for microbiological diagnosis without prior RDT screening.

Culture of stool specimens:

Stool specimens are sent to a properly equipped microbiology laboratory for cholera detection. The Icdrr, b reference Lab is the recommended national reference laboratory for culture isolation of Cholera cases among FDMNs and Bangladesh

- Confirm Cholera
- Identify the strain (serogroup/biotype/serotype)
- Assess antibiotic sensitivity

2.3.2 Estimation of AWD and Cholera treatment facilities

All patients with AWD require rehydration. If patients are not promptly and adequately treated with ORS, then the loss of large amounts of fluid and electrolytes can lead to severe dehydration and death within hours of onset. In the event of an AWD/Cholera outbreak, the following health facilities would be needed:

Diarrhoea Treatment Center (DTC) and health facility with isolation capacities for the management of cases with some, and severe dehydration. Currently there are 20 health facilities, one (1) DTCs with 72 active beds and 400 standby beds to manage severe dehydrate cases among the FDMNs and surrounding host population.

Projected Bed Capacity for Cholera and AWD cases among FDMNs and Host population in the camps in 2022-23:

Assuming the FDMN population of 909,282 with Cholera Attack Rate (AR) of 0.03% and Host population of 541,021 with Cholera AR of 0.02% and that proportion of caseloads expected to be admitted during the week at the peak of the outbreak to be 20%.

This will result to 267 total annual cases and 53 cases during peak week requiring bed for both FDMN and Host population for at least two days of care. It is anticipated that similar scenario will apply in 2023.

In 2021, 1,284 AWD admissions were made of which 792 AWD cases were admitted in DTC while 492 in Isolation facilities with capacity to manage mild to moderate AWD cases. Making similar assumption for 2022, its anticipated that 792 AWD cases will require DTC admissions while 492 AWD Cases will require general health facility isolation. The highest daily DTC bed occupancy in peak week for AWD (20% of total AWD cases) will be 158 cases while highest daily bed occupancy for AWD/Health facility-based Isolation units (20% of total AWD cases in AWD Isolation facilities) during peak week will be 98 beds.

Based on the above assumption and historical data on admission, an estimated total of 1,284 beds will be required to meet the anticipated needs of AWD cases (792 Cholera DTC and 492 AWD health facility isolation) of which the highest number of single day bed occupancy will be 256 (158 Cholera DTC beds for severely dehydrated cases and 98 beds for Mild to moderately dehydrated cases in AWD isolation facilities) during the peak week. Currently the DTCs and Isolation facilities have 72 active and 400 standby beds within FDMN camps. The 72 active bed capacity can comfortably cater for projected cholera suspected cases (53 Beds) during peak week, however AWD cases that include the 53 Cholera cases, will require a total 256 beds during peak week hence 184 additional beds will need to be activated from the 400 standby beds to comfortably cater for all AWD cases for 2022 and similar situation is expected in 2023. Note: The Health Sector will therefore use the projected AWD cases to plan for the required case management needs for both AWD and suspected and confirmed cholera cases.

2.3.3 Tier Strategy in case management of AWDs and Cholera in FDMN camps

During the two years of the COVID-19 pandemic (2020-22), the Health Sector identified a selected number of well-equipped isolation facilities that were repurposed to serve as SARI ITCs to provide effective case management for ARIs and COVID-19 cases. Based on the prevailing situation in 2020, a three tires system of AWD case management was established for systematic and easy activation during different levels of AWD surges. However, the three-level tire system has since been replaced by a two-tiered system in 2021 incorporating one DTC and 19 health facilities with isolation capacity for AWD while Oral Rehydration Posts (ORPs) were phased out and replaced by 1,500 dedicated and incentivized CHWs who undertakes active weekly visitation of allocated households to monitor, detect and initiate initial cases management by stabilizing suspected AWD cases found at household level with ORS.

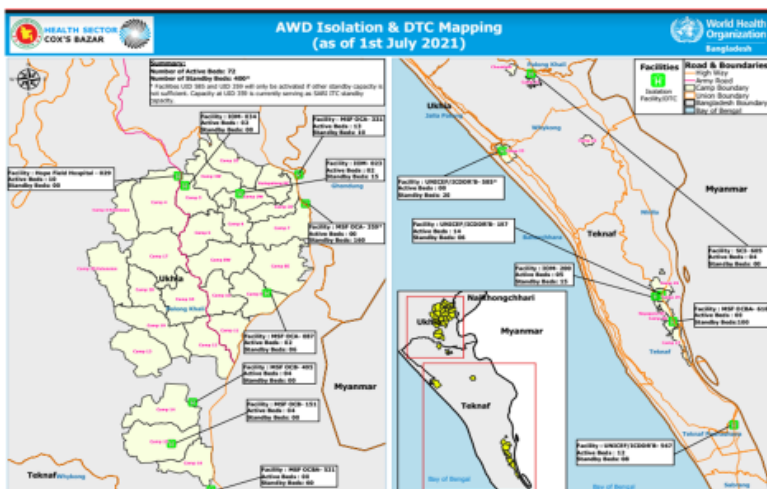
In the Host population, under the leadership of District Civil Surgeon and seven Upazila Health and Family Planning Officers, there are several facilities that include seven Upazila Health Complexes and Cox's Bazar District Referral Hospital, available to effectively support detection and case management of AWD and Cholera cases throughout the seasonal upsurges and recurrent outbreaks in both Teknaf and Ukhia.

The Tier strategy was designed in a way that in case the first tier of AWD and cholera admission capacity was overwhelmed by a huge caseload, the health sector and the District Civil Surgeon would be notified of increasing cases who will then consider and approve the activation of second-tier case management system in which an existing and freely available COVID-19 dedicated SARI ITCs would be repurposed for use to manage such surges. The same process would be undertaken in case the 2nd tier was overwhelmed, based on prevailing circumstances and priority needs, dedicated and occupied SARI ITCs would be repurposed to support AWD and or Cholera surges. The number of beds would be distributed proportionately across the camps to meet the needs of both Rohingya Refugees/FDMNs and surrounding host population during an upsurge or outbreak.

Outline of the AWD/Cholera Case Management Tier System

- **Tier one Level Response:** One (1) active DTC and 19 AWD isolation units are available with 72 Active bed capacity and 400 standby beds- that can be rapidly activated as primary case management facilities during a surge of cases.
- **Tier 2 Level Response Activation:** In case, tier one is overwhelmed by cases, then upon consultation with the health sector and District Civil Surgeon, part of the standby beds in operation SARI ITCs, at the time, will be repurposed to further support the management of the surge
- **Tier Three Level:** If Tier 1 and 2 are overstretched by cases, then further engagement with Health Sector and District Civil Surgeon is undertaken to approve and activate the repurposing of the remaining SARI ITCs beds.

AWD Isolation and DTC mapping



Upazila	Community	AWD Isolation	DTC Mapping
Ukhiya	FDMN		
	Host		
Teknaf	FDMN		
	Host		

S.No	Health Facility Name	UID
1	MSF Camp 15 PHC	HF_151
2	MSF Camp 16 (Goyalmara) IPD	HF_531
3	MSF Kutupalong Main Clinic	HF_331
4	MSF Balukhali IPD	HF_087
5	MSF Camp 8W (IPD)	HF_068
6	IOM Camp 2W PHC	HF_023
7	IOM Camp 3 PHC	HF_034
8	IOM Camp 13 PHC	HF_408
9	IOM Camp 13 HP	HF_136
10	IOM Camp 24 PHC	HF_200
11	FH/MTI Camp 12 PHC	HF_115
12	GK Camp 4 Ext UNHCR PHC	HF_208
13	GK Camp 4 UNHCR PHC	HF_043
14	RHU Kutupalong RC PHC	HF_339
15	RHU Nayapara RC PHC	HF_594
16	ICDDR B SARI ITC	HF_385
17	UNICEF-icddr Camp 24	HF_197
18	RTMI Camp 19 PHC	HF_187
19	MOH Ukhiya UHC	HF_311
20	MOH Teknaf UHC	HF_566

Figure 5: Map of Diarrheal treatment Center and AWD Isolation Unit bed capacity in health facilities in Cox's Bazar

2.3.4 Estimated treatment supply stockpile needs

Patients with no dehydration are treated with Oral Rehydration Solution (ORS) while severely dehydrated patients receive intravenous fluids therapy, preferable Ringer Lactate (alternatively Ringer Acetate or/Cholera Saline. Antibiotics can diminish the duration of diarrhea, reduce the volume of rehydration fluids needed and shorten the duration of V. cholerae excretion.¹³ However, the health care provider should follow national guidelines (see Appendix 3) to prescribe antibiotics to AWD/Cholera cases.

For children up to five years of age, supplementary administration of zinc has proven effective in reducing the duration of diarrhoea as well as reducing successive diarrhoea episodes.¹⁴ Patients suffering from severe acute malnutrition (SAM) and AWD need to be treated following a specific protocol (see appendix 3)

To estimate the required supplies in the event of an AWD outbreak, the following assumptions were used:

- All cases among children under five will require Zinc: 1 (20 mg) for 10 days.
- All cases will require ORS: Seven (7) sachets (1-liter formulation) per case with some or severe dehydration and 2-4 sachets (1-liter formulation) per case with no dehydration

¹³ WHO's cholera outbreak response website, <https://choleraoutbreak.org/book-page/section-7-case-management-treatment-facilities>

¹⁴ WHO's cholera outbreak response website, <https://choleraoutbreak.org/book-page/section-7-case-management-treatment-facilities>

(depending on age)

- All severe cases will require Ringers' Lactate as follows: 6 liters per adults, 4 liters per child 5-17 years, 2 liters per child <5 years
- All severe cases will require Normal Saline as follows: 1 liter per adult, 0.5 liter per child <5
- All severe cases will require Azithromycin (single dose) as follows: 16% require syrup (under five years of age), 36% require 250 mg (x2) tablet (children above 5 years old), 48% require 500 mg (x2) tablet (adult dose)

The above caseload scenario estimates 1,284 cases in the event of an AWD outbreak which will also cater for the 267 Cholera suspected cases. This plan calls for the prepositioning of medical treatment supplies as indicated in the table 8.

Table 8: Estimates vulnerable population, AWD and Cholera cases and projections of therapeutic and diagnostic supplies required for 2022

Projected AWD/Cholera cases, therapeutics, and diagnostics	Total	What is available with WHO	Gaps including stock by partners
ORS sachet (7 sachet per expected case) (147382 consultations/cases)	1,031,641	1000	1,030,641
Water purification chemicals (Aqua tab)	35,952	2800	33,152
RDT kit (enhanced by 15%) based on RDT tested AWD cases 7,016	8,068	2617	5451
1 RL of 120 bags for 20 severe cases (792 AWD Cases)	4,752	1280	3472
Erythromycin /Doxycycline capsules,100 mg (3cap/severe case) based on 792 AWD cases projected	2,376	300	2,076
Normal Saline solution (Liter per adult) quantified for all the severe cases (Projected at 792)	792	0	792
Cholera Kit(3 Modules-cater for 100 Cholera patients)	100	1	0

3.0 REPORTING, VERIFICATION, AND INVESTIGATION IN ROUTINE/NON-OUTBREAK SCENARIO

3.1 Reporting and alert notifications (non-outbreak setting)

Health facilities report aggregated numbers of AWD cases weekly through the Early Warning and Response System (EWARS) managed by the World Health Organization (WHO). In addition to regular reporting of health events through Indicator-Based Surveillance (IBS), EWARS also has an Event-Based Surveillance (EBS) component for immediate reporting of important issues related to AWD.

In non- outbreak scenarios, an EWARS alert is raised if any of the following conditions are met:

If the weekly AWD case counts reported through IBS in a health facility exceed the alert threshold (twice the average number of cases in the preceding three weeks)

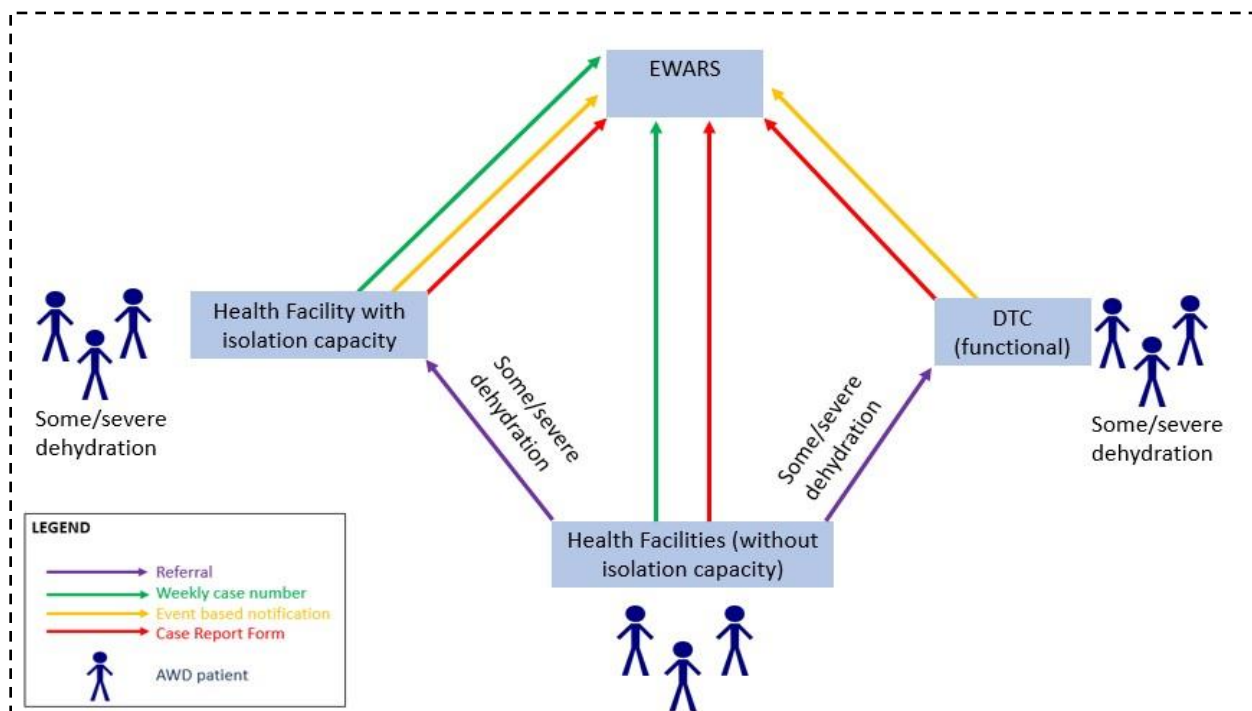


Figure 6: AWD notification and reporting pathways in Non-Outbreak setting

Any of the following events is reported (via EBS or other means):

- Any suspected cholera cases
- Cluster(s) of 2 or more AWD cases with severe dehydration within sub-blocks and/or adjacent sub-blocks, within one week

- The reported death of any AWD patient (reported by the facility and/or community).
- Cholera Rapid Diagnostic Test (RDT) positive case
- Community rumors of increased AWD cases within a week (picked up by community health workers/volunteers)

To avoid double reporting, health facilities should not fill a case report form (CRF) for patients who are immediately referred to another health facility. In 2022-23, WHO will continue to provide hands-on training on CRF and EBS reporting to clinicians, nurses and reporting officers in active DTCs and health facilities with isolation capacity. All reporting pathways in EWARS are illustrated in Figure 5 above.

3.2 Alert verification Standards Operating Procedures (SOPs) in Non-Outbreak settings

The WHO Epidemiology team verifies all alerts reported in EWARS within 48 hours. During non-outbreak settings, all IBS and EBS alerts require initial verification which is carried out by WHO including the following steps:

- Determine if case definitions for AWD/suspected cholera were used appropriately.
- Confirm that alert thresholds have truly been exceeded (for IBS alerts)
- Confirm that a case report form was completed for all cases meeting the case definition for suspected cholera
- Determine whether RDTs were performed or/and stool specimens were submitted for culture.
- Determine whether there is a potential cluster of cases with severe dehydration (notify via EBS if not already done).

3.3 Laboratory surveillance (non-outbreak settings)

Health facilities with isolation capacity and DTCs will perform RDTs for all suspected cholera cases and share results in EWARS through a notification in EBS and updating the case report form. WHO will provide RDT stocks to health facilities with isolation capacity/DTCs, on request.

This plan like the older version, recommends that all samples that have been subjected to RDT Test regardless of outcome be re-tested using classic laboratory procedures for confirmation of *Vibrio Cholera* (culture test).

For all patients admitted to DTCs supported by icddr, b there exist organization specific SOPs that guide the regular and routine collection, shipment and processing of stool samples sent to the designated reference lab for culturing located at icddr, b Dhaka. Stool samples of RDT-positive cases are normally shipped overnight (same day). This is same procedure for RDT negative admitted cases in which samples are collected and sent for culturing in batches though this is unlike RDT positive samples, is done once a week. If a case of *V. cholerae* is detected by the

laboratory, the lab will notify the Civil Surgeon and WHO. Meanwhile, the icddr, b will continue to undertake serotyping and drug susceptibility testing. RDTs will also be performed as part of the field investigation as defined in the next section.

3.4 Joint Field Assessment and Response (non-outbreak settings)

After verification, all confirmed alerts will trigger a field investigation composed of two components (Assessment and response) which will be undertaken by a Joint Assessment & Response Team (JART) consisting of WASH, Health, and laboratory experts and located in most of the 34 camps. The assessment will precede response to provide feedback/report that will inform immediate deployment of multi-Sector response interventions for timely interruption of transmission.

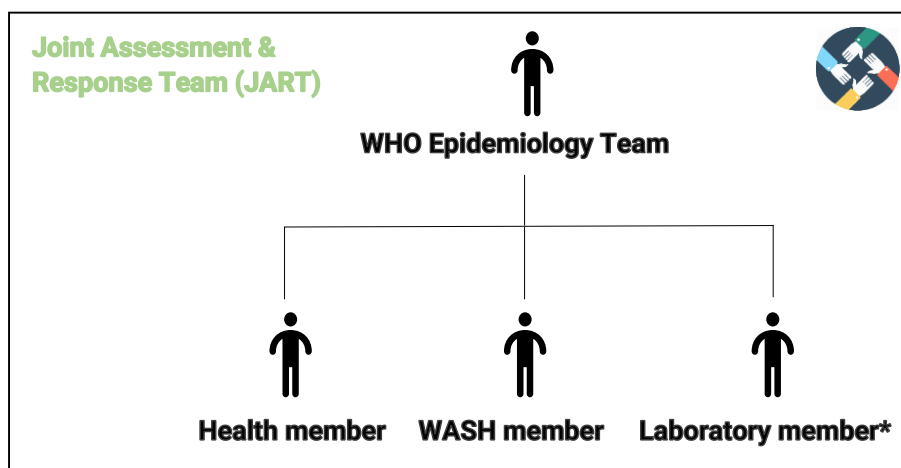


Figure 7: Structure and Membership composition of Joint Assessment and Response Teams (JARTs) who coordinate AWD and Cholera response in FDMN Camps

The JARTs will consist of personnel from Health and WASH sectors who completed the JART training as well as a member for the field laboratory situated at Cox’s Bazar Medical College to facilitate sample collection and transportation if required. The structure of the JART is provided below.

*The JART field team will require laboratory members only when there is a direct need for sample collection and transport/ laboratory coordination identified during the verification process.

The JART operational flowchart, presented below describes how the JART mechanism will be used for any confirmed diarrhoeal disease alert. Together with epidemiological investigations, an environmental assessment of Health & WASH conditions around the alert location and collection of water/environmental samples should be conducted followed by immediate health and WASH education sessions in the community.

Joint Assessment & Response Team (JART) Operational Flowchart

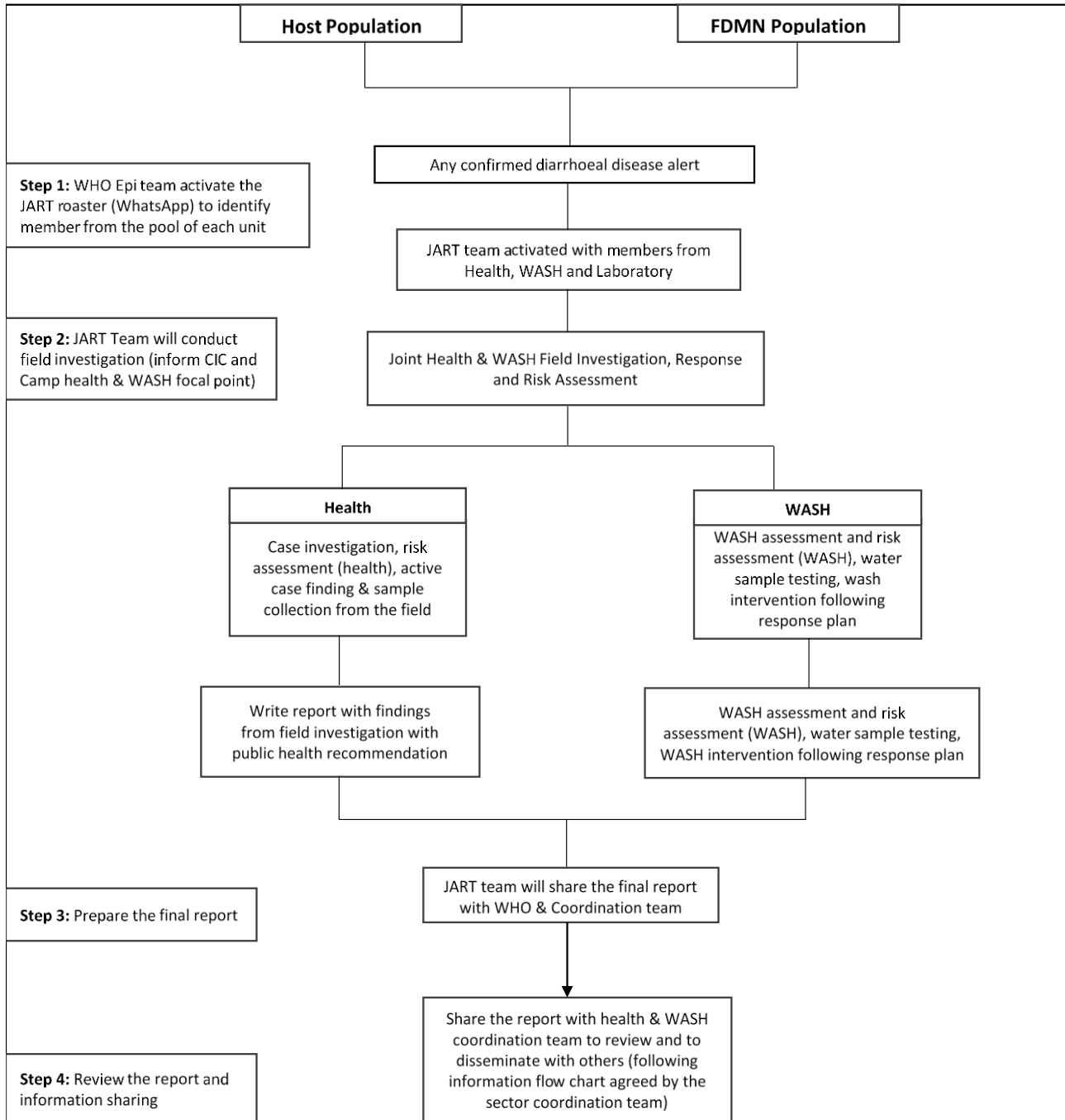


Figure 8: JART operational flowchart and SOP to guide its activation, investigations, assessments and reporting of confirmed diarrhoeal disease/AWD Alert

JART team that is established in each camp, will also be responsible for following up on each alert within two weeks of field investigation and will monitor the implementation of recommended response activities.

4.0 REPORTING, VERIFICATION, AND INVESTIGATION IN OUTBREAK SCENARIO

4.1 Reporting and alert notifications (outbreak setting)

Outbreak can even occur in areas with sustained year-round transmission meaning in an endemic area. This outbreak is defined by *an unexpected increase in the magnitude or timing of suspected cases over two consecutive weeks, with some cases being confirmed by the laboratory tests*. The Ministry of Health & Family Welfare (MoHFW) has the sole authority to declare a cholera outbreak in the entire Bangladesh territory. Though the following two conditions should be met for AWD cases to be considered a confirmed cholera outbreak ideally:

1. One case of Laboratory confirmation of *Vibrio cholerae* O1 or O139 through stool culture
2. Evidence of local transmission
 - As confirmed by clusters of cases
 - Breaches in water, sanitation, and hygiene infrastructure permitting large-scale exposure to food or water contaminated with organisms

Local transmission is present when evidence suggests that the AWD infection was most likely acquired in the local area. In Cox's Bazar host or FDMN's communities, any confirmed case with no travel history will be considered as locally acquired.

During a declared outbreak, the reporting case definition will be revised to match the above-mentioned WHO standard definition. For any patient who meets this definition, DTCs/health will undertake the following

1. Report all cases as part of the EWARS routine weekly report form (health facilities with or without isolation capacities).
2. Report all cases through line listing (DTCs and health facilities with or without isolation capacity); (Appendix 5)

NB: The case report form will not be used during a confirmed outbreak.

Notification pathways of AWD (suspected cholera) during an outbreak are illustrated in the Figure below.

4.2 Alert verification (outbreak settings)

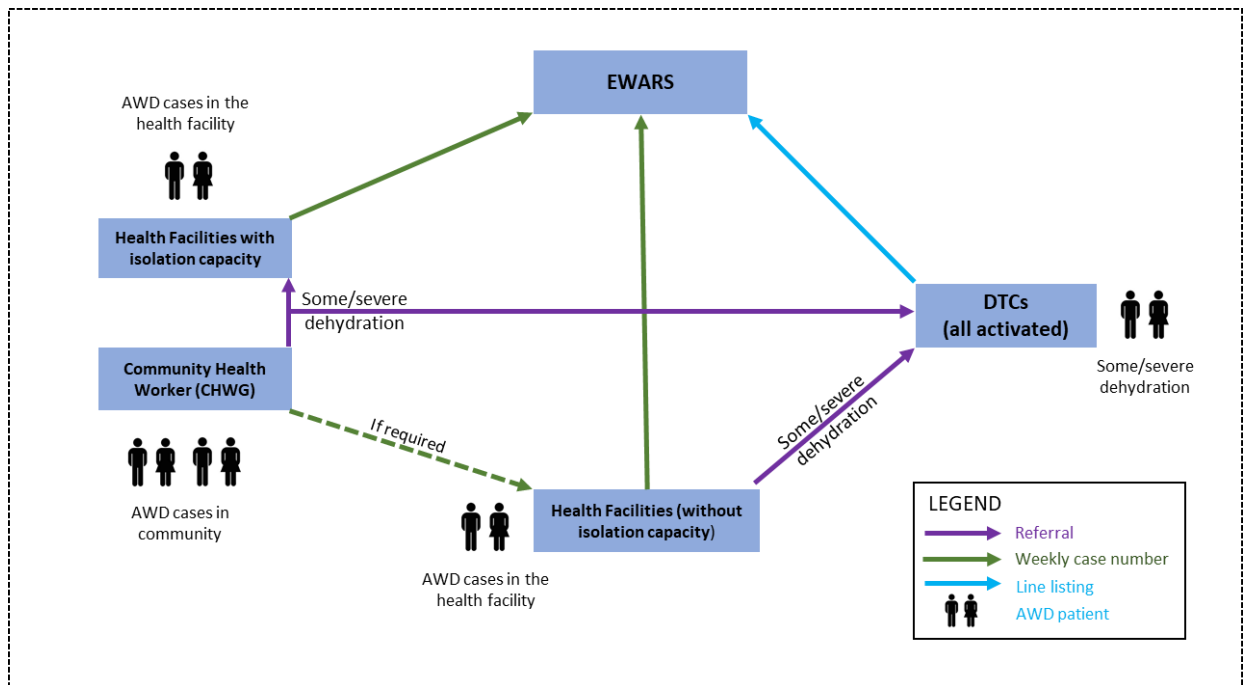


Figure 9: AWD/Cholera Reporting Pathways during Outbreak Settings

(For the information flowchart please see Appendix: 8)

4.3 Laboratory Surveillance (outbreak settings)

Once an outbreak is confirmed, a clinical diagnosis using WHO standard case definition is sufficient. After that laboratory testing is required for antimicrobial sensitivity testing and for confirming the end of an outbreak. Sporadic testing can be done at regular intervals subject to resource availability.

4.4 Field investigation (outbreak settings)

The Ministry of Health and Family Welfare (MoHFW) has district-level Rapid Response Team (RRT) trained by IEDCR for all outbreak investigation. In the event of a confirmed cholera outbreak, these RRTs in collaboration with IEDCR will conduct the required field investigations.

The JART mechanism will equally be triggered by alert as per reporting and alert verification section above in the host community to support with response upon request by MoHFW.

5.0 ALERT, ACTION AND EPIDEMIC DECLARATION THRESHOLDS FOR AWD/CHOLERA WITH FDMNS AND HOST POPULATION

The health and WASH preparedness and response actions will vary according to the severity of the situation which will be monitored by the WHO epidemiology team. Three scenarios are anticipated as follows:

Scenario 1: Situation remains unchanged (Alert Threshold)

AWD rates in camps and host populations remain as they are (routine activities over the year) considering the endemic criteria/definition.

Scenario 2: Situation escalates moderately (Action Threshold)

- At least one culture-confirmed case in the last 30 days in a camp or 2 or more RDT positive cases in the same sub-block in 15 days period
- A verified AWD alert either by cholera RDT or culture-positive case is reported without evidence of an increase of AWD in the area – Localized response (determined by JART)
- A 15% increase in AWD cases reported through EWARS compared with the previous 3 weeks (this needs to be verified by WHO) – Localized response (determined by JART)
- Cholera confirmed by either RDT or culture and verified increase in AWD cases in EWARS and EBS reports (verified by WHO Epi team/JART) – Response to be targeted to the affected area (determined by JART)

Scenario 3: Outbreak confirmed and declared by MoHFW (Epidemic Threshold)

Step 1:

WHO Epidemiology team established either of the two below outbreak threshold situations

- Occurrence of at least one confirmed case of Cholera with evidence of local transmission
- In an area of sustained year-round transmission, unexpected increase by magnitude and timing of suspected cases over two (2) consecutive weeks of which some are laboratory confirmed

Step 2: The MOHFW declares an outbreak once either of the two scenarios have been verified

Note: Severely malnourished children are given empirical antibiotic treatment upon admission to malnutrition treatment programs. Since antibiotic treatment might interfere with laboratory findings for cholera, stool samples should be taken from children prior to antibiotic treatment.

The Health, WASH & nutrition, and community mobilization preparedness and response activities for these three scenarios are presented in the following pages.

5.1 SCENARIO 1: SITUATION REMAINS UNCHANGED (ALERT THRESHOLD)

Scenario 1 (Prevention phase)	Health	WASH	Community Mobilization
<p>AWD rates in camps and host population remain as they are (routine activities over the year)</p>	<p>Stockpile AWD supplies as needed</p> <p>Train health service providers at DTCs, isolation facilities, and CHWG networks (CHWs and their supervisors)</p> <p>Incorporating inpatient nutritional therapy, IYCF and outpatient supplementary feeding services on management of AWDs with associated malnutrition.</p> <p>Establish breastfeeding corners.</p> <p>Map facilities with isolation capacity for managing severely dehydrated AWD cases.</p> <p>Refer all severe dehydration cases to mapped/identified isolation facilities (adults/children).</p> <p>Treat all cases at the health clinics according to the existing protocol</p> <p>Treat SAM children with diarrhoea should be referred to mapped/identified isolation facilities for further management preferably with malnutrition programs</p> <p>Analyze results from WASH assessment and diarrhoea cases to identify hot spots</p> <p>Report AWD cases as per the routine pathways</p> <p>Disseminate standards for case definition, reporting</p>	<p>WASH actors continue interventions to improve water supply and sanitation conditions according to the WASH strategy.</p> <p>Specific activities here include: Regular monitoring of quality of drinking water sources particularly Free Residual Chlorine levels at waterpoints and HH (Take corrective action if necessary)</p> <p>Regular operation & monitoring of sanitation facilities Monitor compliance with procedures used by NGOs for desludging and ensure safe disposal.</p> <p>Reporting suspected severe diarrhoea or rumored cholera cases to WHO Epi/JART for verification and scenario determination</p> <p>Continue preparedness actions including Household Water Treatment (HHWT). Design and dissemination of hygiene practices through behavioral change approach</p> <p>Monitor and adapt water availability according to context (season, risk...)</p>	<p>In close consultation with the health, wash & nutrition sector; CwC actors & CHWs, Hygiene promotion volunteers continue intervention to improve key Infant and Young Child Feeding (IYCF) and hygiene practices, including specifically: Community-based awareness campaigns organized with at-risk communities.</p> <p>Ensure that AWD outbreak rumors or misconceptions are addressed and reported to Health Sector.</p> <p>Continue preparedness actions. Disseminating information on infection control and prevention, contact tracing, burial procedures, information products, etc.</p> <p>Ensure HH and institutions (e.g., schools) have adequate and enough hygiene material (soap, toilet cleaning equipment)</p>

Scenario 1 (Prevention phase)	Health	WASH	Community Mobilization
	<p>tools (EWARS), thresholds, case investigation, case management protocol.</p> <p>WASH FIT program for health facilities should be implemented.</p>		

5.2 SCENARIO 2: SITUATION ESCALATES MODERATELY (ACTION THRESHOLD)

Scenario 2	Health	WASH	Community Mobilization
<p>At least one culture-confirmed case in the last 30 days in a camp, or at least 2 or more RDT positive cases in the same sub-block in 15 days period</p>	<p>Activities as outlined in JART protocols/Multisectoral AWD plan (Scenario 1 and 2) to continue.</p> <p>At the response level (all camps): Map available health stocks, mobilize, and distribute stockpiles.</p> <p>Map availability of beds, plan for scale-up as needed, and define the threshold.</p> <p>Provide training for health staff on evidence-based management of AWD.</p> <p>Ensure consistent flow of information to WASH, including geolocations, for targeting household interventions.</p> <p>Advise health facilities to refer suspected AWD (cholera) cases to isolation facilities for testing in their corresponding catchment</p> <p>At camp level for camps with one cholera case in the last 30 days: Increase health promotion messaging through CHWs.</p> <p>Ensure distribution of ORS through CHWs</p> <p>Undertake active case search by CHWs</p>	<p>Implementation of JART protocol & Multisectoral AWD plan Scenario 1 and 2,) to continue.</p> <p>(All camps): Report suspected AWD or rumored cases to WHO Epi/JART to verify the rumour/alerts and determine the scenarios.</p> <p>Support WASH in health facilities receiving cholera/AWD patients if needed/allowed.</p> <p>In camps with one cholera case in the last 30 days (undertake the following) Monitor Free Residual Chlorine levels of all sources/storage and selected HH to ensure compliance with 0.8-1 mg FRC/l at the tap and 0.2-0.5 mg FRC/l at the household level.</p> <p>Target additional untreated water sources with water quality testing.</p> <p>Distribute aquatabs and/or soap to reinforce household chlorination and hygiene behavior</p> <p>Undertake container distribution at HH level where water storage is determined as a</p>	<p>Activities as outlined in JAR protocols/Multisectoral AWD/Cholera preparedness and response plan 2022-23 (Scenario 1 and 2) to continue.</p> <p>Disseminate AWD preventive and response messages through various communication channels (mass media, interpersonal communication, at schools, etc.) through CHW WG and Risk Communication WG.</p> <p>Organize awareness and discussion sessions with all communities:</p> <p>Promote handwashing with soap; exclusive usage of chlorinated water for drinking; and cessation of open defecation.</p> <p>Promote proper hygiene measures in gatherings.</p> <p>Gather feedback on community concerns and obstacles to healthy hygiene practices.</p> <p>Provide guidance on medical assistance if there is diarrhoea in the household.</p> <p>Sensitize and train</p>

Scenario 2	Health	WASH	Community Mobilization
	<p>Provide information to CICs, Site Management as required</p> <p><u>Food safety and compliance</u> Ensure routine and ad-hoc inspection of food quality in all eating places and selected households Ensure monthly sampling of food from all public eating places and selected houses</p> <p>Ensure all food handlers have appropriate medical certificates as required and monitor them for annual routine re-assessment and renewal of food handling certificates</p>	<p>contributing factor.</p> <p>Repair latrines and handwashing at latrines in these camps on a priority basis.</p> <p>Spray chlorinated solution daily in public latrines, bathing cubicles, and other public places (markets, schools, gathering sites). Provide and maintain hand-washing stations (ensuring soap is always available) in schools, CFS, markets/other public spaces, food shops, and other relevant locations.</p> <p>Build emergency latrines and handwashing facilities if coverage is not enough including in public places in HC</p> <p>Intensify solid waste management, collection, and disposal to agreed safe locations, with attention to markets and other public spaces that may lead, including deblocking of drains in coordination and under leadership of SMSD. Where required, shock chlorination of contaminated TW</p>	<p>religious and community leaders, schoolteachers, community health workers, and public-places stakeholders on how to keep people safe at gatherings (safe food and personal hygiene practices, with special emphasis on safe handling of dead bodies).</p> <p><u>Food safety compliance</u> Train food providers on environmental health and food safety done in consultation with the WASH sector and disseminated by CwC and CHWG.</p> <p>Ensure that AWD outbreak rumor or misconception is addressed and reported to the Health sector.</p> <p>Based on feedback from joint assessment or field investigation the WASH and health actors will target affected households by: Distributing cholera kits including body, laundry soap, and disinfectant for at least one month.</p> <p>Target households surrounding contaminated households with hygiene and cholera specific prevention messages. adapting and reinforcing cholera preventive and response messages through various communication channels, influencers, religious leaders (mass media, interpersonal communication, through schools, etc.)</p>

Scenario 2	Health	WASH	Community Mobilization
			Addressing rumour and misconceptions related to an AWD outbreak and reporting them to the health focal point

Scenario 2	Health	WASH	Community Mobilization
<p>Triggered by the following- A verified AWD alert either by Cholera RDT or culture positive case is reported without evidence of an increase of AWD in the area – Localized response</p> <p>A 15% increase in AWD cases reported through EWARS compared with the previous 3 weeks (this needs to be verified by WHO) –</p> <p>Localized response Cholera confirmed by either RDT or culture and a verified increase in AWD cases in EWARS and EBS reports (verified by WHO Epi team/JART) – Response to be targeted to affected area</p>	<p>Continue Scenario 1 activities</p> <p>Collect samples from suspected AWD cases via JART team after receiving alerts from health facilities and test the samples with Rapid Diagnostic Tests and refer RDT positive samples for culture</p> <p>Implement referral guidelines/system for FDMN settlement and host communities.</p> <p>Resource mapping of health facilities, medical supplies, human resources, etc.</p> <p>Notification: Continue activities as in Scenario 1. Expect more alerts to be generated and verified due to higher number of cases.</p> <p>Mobilize and distribute stockpile to target locations (Logistics)</p> <p>Mobilize trained health service providers as needed. Ensure that activities are implemented by consensus in Epi & Case management WG.</p> <p>Ensure that the WASH sector is informed of prevalence of AWD cases for household disinfection.</p> <p>Advise health facilities to refer suspected AWD (cholera) cases to isolation facilities for testing in Sentinel facilities including DTC and Isolation facilities.</p>	<p>Continue Scenario 1 activities</p> <p>Based on health surveillance data, conduct targeted water quality and water safety assessments in high-risk areas and at all sources.</p> <p>Conduct bucket chlorination as water treatment methodology at source level.</p> <p>If source chlorination is not feasible, reinforce HH treatment accompanied by targeted awareness activities.</p> <p>Monitor Free Residual Chlorine levels of water sources and ensure compliance with 0.8-1 mg FRC/l at tap and 0.2-0.5 mg FRC/l at household level.</p> <p>Make targeted sanitation repairs and improvements (including hand-washing facilities at all latrines)</p> <p>Provide and maintain hand-washing stations (ensuring soap is always available) in schools, CFS, markets/other public spaces, food shops and other relevant locations.</p> <p>Monitor and update CiC on opened food/drink shops and hawkers in collaboration with CCM.</p>	<p>Continue Scenario 1 activities</p> <p>Disseminate AWD preventive and response messages through various communication channels (mass media, interpersonal communication, at schools, etc.) through CHW WG and Risk Communication WG</p> <p>Organize awareness and discussion sessions with all communities: Promote hand washing with soap; exclusive usage of chlorinated water for drinking; and cessation of open defecation</p> <p>Promote proper hygiene measures in gatherings. Gather feedback on community concerns and obstacles to healthy hygiene practices</p> <p>Provide guidance on medical assistance if there is diarrhoea in the household.</p> <p>Sensitize and train religious and community leaders, schoolteachers, community health workers and public-places stakeholders on how to keep people safe at gatherings (safe food and personal hygiene practices, with special emphasis on safe handling of dead bodies)</p>

Scenario 2	Health	WASH	Community Mobilization
	<p>Epi team to inform Health sector and Civil Surgeon if if case loaded exhaust current capacity to activate additional stand beds based on tier system.</p> <p>Verify rumored cases.</p> <p>Verify and improve WASH in health facilities receiving cholera/AWD patients in required</p>	<p>Build emergency latrines and handwashing facilities if coverage is not enough, including in public places. Spray chlorinated solution daily in public latrines and other public places (markets, schools, gathering sites). Report suspected AWD or rumored case to WHO Epi/JAT to verify the rumour/alerts and determine the scenarios. Intensify solid waste management, collection, and disposal to agreed safe locations, with attention to markets and other public spaces including deblocking of drains.</p> <p>In the host community JAT will consult with UH&FPA and UNO to activate additional WASH capacity (DPHE) for water quality testing based on available resources and capacity. Area focal agency (AFA) for WASH supporting camp focal agency (CFA) for WASH based on available resources and capacity. Support WASH in health facilities receiving cholera/AWD patients if needed/allowed.</p>	<p>Train food providers on environmental health and food safety done in consultation with wash sector and disseminated by CwC and CHWG</p> <p>AWD outbreak rumour or misconception is addressed and reported to Health sector. Based on feedback from joint assessment or field investigation the WASH and health actors will target affected households by distributing cholera kits including body, laundry soap and disinfectant for at least one month</p> <p>Target households surrounding contaminated household with hygiene and cholera specific prevention messages</p> <p>Adapting and reinforcing cholera preventive and response messages through various communication channels, influencers, religious leaders (mass media, interpersonal communication, through schools, etc.)</p> <p>Addressing rumors and misconceptions related to an AWD outbreak and reporting them to the health focal point</p>

5.3 RESPONSE SCENARIO 3: OUTBREAK IS CONFIRMED (EPIDEMIC THRESHOLD)

Scenario 3	Health	WASH	Community Mobilization
Two or more culture-confirmed case in the last 30 days in a camp, or more than 2 RDT positive cases in	<p>Scale-up activities in Scenario 2</p> <p>Scale-up DTCs and Isolation facilities and CHWs support for detection and</p>	<p>Scale-up activities in Scenario 2</p> <p>Reinforce the infection control practice including disinfection, ensuring safe</p>	<p>Scale-up activities in Scenario 2</p> <p>Coordinated response through national or local committees</p>

Scenario 3	Health	WASH	Community Mobilization
<p>the same sub-block</p> <p>Step 1</p> <p>Occurrence of at least one confirmed case of Cholera with evidence of local transmission</p> <p>In an area of sustained year-round transmission, unexpected increase by magnitude and timing of suspected cases over two (2) consecutive weeks of which some are laboratory confirmed</p> <p>Step 2: The MOHFW declares an outbreak once either of the two scenarios have been verified</p>	<p>management of cases as per tier system of management as needed</p> <p>Scale up prevention and containment activities.</p> <p>Active case finding at Sentinel, health facilities and community engagement</p> <p>Analyze data daily, produce weekly epidemiological trends and disseminate regularly including analysis by demographic characteristics, estimate of attack rate/incidence rate, case fatality rate (if >5%, review case treatment guidelines and availability of medical supplies)</p> <p>Identify common risk factors for confirmed and suspected cases, such as common geographic location, latrines, or event information</p> <p>Notification: Use of outbreak case definition, outbreak reporting pathways (via line list) and descriptive analysis</p> <p>Confirm with laboratory every month that the bacteria have not developed resistance to recommended antibiotics</p> <p>Monitor supply of Ringer's Lactate and Cholera Saline, ORS, Zinc, and antibiotics</p>	<p>water supply and hygiene promotion in the community and in the health facilities</p> <p>Coordinate with Govt. response activity.</p> <p>Conduct bucket chlorination as water treatment methodology at source level</p> <p>Spray chlorinated solution daily in public latrines, bathing cubicles, and other public places (markets, schools, gathering sites). Provide and maintain hand-washing stations (ensuring soap is always available) in schools, CFS, markets/other public spaces, food shops, and other relevant locations</p> <p>Support WASH in health facilities receiving cholera/AWD patients if needed/allowed.</p>	<p>Enhance surveillance at health facilities and at community levels.</p>

6.0 MANAGEMENT OF AWD AND CHOLERA CASES & DEATHS

6.1 Case management of AWD and Cholera cases

Proper management of cholera cases will minimize the spread of the disease during an outbreak. Such efforts include coordinating with all stakeholders (health care providers, clinics, laboratories, community members, and community and religious leaders).

General principle of cholera case management

- In general, the case fatality rate among appropriately treated cholera cases is 1% or below. However, it may increase to 30 – 50% if treatment is delayed. Therefore, immediate intervention is necessary. Experience in different parts of the world shows systematic steps are essential to managing cholera cases
- Rehydration should be the main goal of treatment
- 80% to 90% of cholera cases can be rehydrated with Oral Rehydration Therapy (ORT) alone.
- Severe cases require rapid rehydration through intravenous fluids
 - Antibiotics can help severely dehydrated cases by reducing the volume, and duration of diarrhoea, and by reducing bacterial shedding
- During an epidemic, treatment facilities will be designated and or set up as treatment centres closest to the affected population. Further decentralization will be explored to improve access to treatment
 - In hospitals and PHCs, isolation wards will be set up
- Case management protocols will be made available to all treatment centers and healthcare providers will be trained on their implementation
- Primary and local health workers will be trained and equipped to assess the severity of dehydration levels, start oral rehydration protocols, and organize quick referrals of severe cases
- Treatment will be offered to all suspected cases (patients suffering from severe dehydration in isolation wards) in accordance with the treatment plan
- Maintenance of good hygiene and sanitation will be emphasized by cleaning patients' bedding and clothes using 0.5% chlorine solution or through boiling, and by safely disposing vomit and stool
- Allocation of separate lavatories/toilets for AWD patients in hospital/treatment centers at the point of construction and during the outbreak will be emphasized.
- Efforts will be made to educate patients' families about the disease and preventive measures that should be taken within the household/home
- Health workers, patients and caregivers will be asked to comply with personal hygiene procedures (washing hands with soap and water, cleaning, and disinfection of food, etc.) and provision to support implementation of above will be made available.

In close collaboration with the logistics teams and applicable sectors, periodic assessment of estimated need for essential medicines and emergency supplies to manage cases will be

undertaken as guided by the prevailing epidemiological situation. This will help determine the status of reserves to prevent shortages by allowing for the rapid replacement of depleted stocks

6.2 Management of AWD and Cholera Death

All persons who die of an infectious disease deserve a dignified funeral/ burial/ cremation according to the local rituals and social norms. However, it is very important to also observe standard precautions to minimize the chances of disease spread. There are two possible scenarios related to dead body management.

Death occurs in a health facility or DTCs

For all deaths occurring in DTCs or health facilities, the facilities are responsible for ensuring the dead bodies are disinfected according to the standard protocols. Once the body has been safely disinfected, the health facility will follow the usual practice for the dignified burial of the body.

Death occurs in the community

For all deaths occurring in the community, the proposal is to coordinate with site management and capacitate available 'burial teams' to safely manage dead bodies. These overarching committees will include site management volunteers within the camps, known as Safety Unit Volunteers, as well as camp health focal points and or members from the nearest health facility. According to WHO, the following cholera management measures should be implemented to reduce the possibility of disease transmission:

- Don appropriate PPE as per risk assessment
- Disinfect the body (cadaver) with 0.5% bleach solution
- Reduce physical contact by family members
- Wash hands with soap and water after touching a corpse
- Disinfect the equipment and bedding
- Doff PPE and dispose of as per protocols

The proposal is to work with already established burial teams in each camp and train these on protocols and identify areas for storing the necessary supplies (chlorine sprayers, PE etc.) In addition, there is need to educate all stakeholders (Imams, Majhis, funeral organizers, mourners, social workers, religious and community leaders, etc.) about proper hygiene and sanitation to minimize the disease from spreading; and sensitize the community to avoid unnecessary visits to mortuaries and designate an area to keep dead bodies once a cholera outbreak starts.

6.3 Case Management and Infection prevention and control (IPC) TWG roles in supporting case management and IPC at DTC/Isolation facilities and case household levels.

- IPC & Case Management TWG will ensure proper use of available beds to fit the needs of cholera patients or advise on the need for separate cholera beds (hole) for cholera patients

- Ensure availability of harmonized cholera detection and treatment protocols for use in health facilities and during the training
- Ensure harmonized use of National Cholera Control Program protocol with AWD treatment protocol from icddr, b and MSF Cholera guidelines
- Ensure that Standard case definitions were widely available and utilized by Frontline Health Workers (HCWs) in collaboration with epidemiological TWG
- Training of HCWs undertaken continuously to enhance their capacity for case management and IPC practices towards AWD/Cholera cases in Isolation and DTC facilities
- Conduct needs assessments, coordinate and ensure that medical supplies (ORS sachets, 1 Ringer lactate of 120 bags each for 20 patients, Antibiotics, Normal Saline, Nutritional Supplements and Zinc) have been pipelined and made available as appropriately required
- Coordinate and ensure that medical supplies and non-food items prepositioned in the different facilities and WHO prepositioned containers in the camps
- Ensure that all patients were provided with appropriate treatment from admission to discharge point
- Ensure that AWD/Cholera patients referred to Health Facilities have the required Cholera patient bedding facilities without straining the healthcare system pointing to an assurance of adequate bedding capacity at DTCs
- Coordinate with relevant sectors and partners to ensure availability of Hand Washing facilities at the entry and exit of isolation and DTC facilities
- Disseminate AWD Referral pathway from community to AWD Isolation facilities and DTC levels.
- Ensure adequate case management staff at the HFs
- IPC guidelines, tools provided to healthcare workers for effective use in AWD Sentinel Sites, Isolation health facilities and Cholera DTC
- Conduct AWD/Cholera IPC and Case Management training for all Healthcare Workers in HFs in camp
- The dead body management guidelines are available for use
- Ensure that Individual case patient details information is collected through EWARS
- Continuous monitoring the implementation of and adherence to IPC practices in all health facilities using a checklist
- Triage and screening for AWD and Cholera implemented in all HFs
- Early discharge of patients after fully recovered (observed 1/2 days)

6.4 Treatment of Malnourished Children

The notable overcrowding and overpopulated FDMN camps coupled with a high birth rate (approximately over 30,000 new births per year, inadequate access to basic essential health care services and portion of food has resulted in high global acute malnutrition (GAM) that currently stand at 8.7% among pre-school children at the Rohingya Refugee/FDMN Camps by

December 2021. The preparedness and response plan has now incorporated Outpatient Therapeutic Feeding Program into case management of AWD-Cholera cases coordinated by UNICEF. The clinical and nursing staff in all institutional or home-based case management facilities and CHW network supporting the management of malnourished AWD cases, will be provided with a training and nutritional supplement to manage such cases. Detailed guidance on case management of malnourished AWD/Suspected Cholera cases is in the annexure section of this plan.

7.0 FOOD SAFETY AND COMPLIANCE

The changing dynamics of diarrhoea disease outbreaks with specific concern to cholera outbreak calls for a comprehensive approach to minimizing all possible sources of contamination that facilitate the transmission of diarrhoeal disease including Cholera. In the previous Multi-Sector Response Plan 2020, considerable efforts and focus had been made on Health and WASH interventions without incorporation of food as a possible source of cross-contamination. Given the new evidence that points to cross-contamination of water at household level, there is growing concern that household hygiene behaviors and practices in water handling could be the central driver in the persistent AWD and cholera transmission within the camps and surrounding host population. This underscores the need to expand surveillance to include food safety as similar behaviors and practices could easily lead to cross-contamination of food at household levels and, markets other eating places. It's for this reason that the newly revised plan has now incorporated core food safety and hygiene compliance mechanisms that include routine and ad-hoc inspection of eating places, markets, sampling of food including analysis and enforcement of necessary compliance to food safety regulations, and sampled household visits to inspect and assess the quality of food. Through resource mobilization, there is need for dedicated human resource such as recruitment of dedicated public health and food safety and compliance officer(s) to coordinate, monitor and ensure compliance to safety and hygienic standards and practices in handling food at household and other public eating places within the FDMN camps and surrounding host population. Health Sector will coordinate this with UNHCR, IOM and UNICEF to ensure functional food safety, hygiene, and quality control is in place.

8.0 WASH AWD PREPAREDNESS AND RESPONSE

The WASH Sector is one of the critical drivers in AWD/cholera prevention, preparedness, and response within FDMNs and surrounding host population in Cox's Bazar district. The WASH Sector partners have the overall mandate of ensuring access to adequate potable water supply and sanitation within the camp. This has been achieved through collaboration with Health Sector and government's Department of Public Health Engineering (DPHE) which enabled systematic roll out of elaborate and impactful long term WASH infrastructures, waste management and hygiene promotion activities. Other key responsibilities of WASH Sector have included procurement, and distribution of water treatment chemicals (Aquatabs), regular treatment of water at source i.e., in tapstands (that provide chlorinated water) and sampling of water for biochemical water quality assessment in targeted hotspots and across the camps.

The WASH sector has an elaborate Inter-Sectoral in collaboration with line ministries developed WASH Sector AWD Preparedness and response plan in 2017¹³ which has been reviewed three times with final revision done in 2020 which has also incorporated COVID-19 response interventions. This preparedness plans) which derives its strategies from the Multi-Sector AWD response plan 2020, has been effectively utilized by WASH sector partners to guide in the WASH response components to AWD and Cholera surveillance, upsurges and possible outbreaks in 2019 and 2021.

In addition to this, Health and WASH sector have continued to coordinate the joint Rapid Assessments and Response Teams (JARTs) in all the 33 camps with clear SOP that has been jointly designed by the two sectors hence a harmonized response intervention.

During the Intra-Action Review for AWD response in 2021 held on 24th May 2022, there has been notable gaps in multi-sectoral coordination and inadequate sharing of WASH surveillance information to guide timely joint AWD response between WASH and Health sectors that may have contributed to sub-optimal response to AWD and Cholera upsurge of 2021. In the new Multi-Sectoral AWD/Cholera Preparedness and Response Plan 2022/23, this has now been addressed through more frequent and consistent monthly intra-sectoral AWD/Cholera preparedness and response review meetings, inter-sectoral AWD/Cholera preparedness and response coordination meetings held every two months , more information sharing between WASH, Health Sector and CHWGs and strengthening JATs by ensuring simplified rapid assessment closely tailored with response interventions under the new name Joint Assessment and Response Teams(JARTs).

WASH Sector in collaboration with Health Sector, undertake periodical water quality assessments with latest being the 17th Water quality Supply Surveillance which has offered new evidence on increased cross-contamination of water in-dwelling setting compared to outside water sources hence the new Plan for 2022/23 has outlined in preparedness and response scenario section ,key WASH activities that include consistent supply of adequate water treatment chemicals, consistent

monitoring of residual chlorine levels and promotion of safe water handling practices at household level. For more information. For more information kindly access, the [WASH Sector Website](#)

9.0 ACTIVITY SUMMARIES, BUDGET, AND LEAD AGENCIES

The AWD-Cholera Preparedness and Response plan 2022 has a new feature that now includes the costing of the entire plan if acute phases of the outbreak last for three months or adopts the known bimodal seasonality in transmission with two peaks for each of the two years (2022-2023). The summarized workplan below is organized by preparedness and response pillars with the aim of guiding resource mobilization and enhancing partnership accountability through lead partners. The detailed work plan is annexed for your further review. This workplan could be revised based on prevailing circumstances and the availability of resources.

Table 9: AWD/Cholera Preparedness and Response Plan Activities and Budget for 2022-2023

Emergency Preparedness and Response Pillars	Amount in USD (\$)	Amount in BDT 1 USD= BDT	Lead Agencies
Pillar 1: Coordination and Leadership	97,200	8,262,000	WHO & UNICEF
Pillar 2: Epidemiological-Surveillance, Diagnostics and Reporting	775,100	65,883,500	WHO
Pillar 3: Case Management, Infection Prevention and Control (IPC)	477,880	40,619,800	WHO and case management partners
Pillar 4: Community Awareness Creation and RCCE	216,040	18,363,400	UNICEF, UNHCR and CHWG TWG/Partners
Pillar 5: OCV Campaign	101,200	8,602,000	WHO
Pillar 6: Nutrition	336,850	28,632,250	UNICEF
Pillar 7: Food Safety and Compliance (WHO food lab)	67,440	5,732,400	WHO, UNHCR, IOM, WFP & UNICEF
Pillar 8: WASH & Environmental Health	883,520	75,099,200	UNICEF and WASH Partners
Total	2,955,230	251,194,550	

10.0 REFERENCES

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4. Emergency deployment of Oral Cholera Vaccine for the Rohingya in Bangladesh, 2018, [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(18\)30993-0/fulltext;doi.org/10.1016/S0140-6736\(18\)30993-0](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)30993-0/fulltext;doi.org/10.1016/S0140-6736(18)30993-0)
5. <http://www.who.int/cholera/vaccines/AddendumGuideVaccinationForShancho050913.pdf>
6. EWARS definition of AWD: Passage of 3 or more abnormally loose or fluid stools in the past 24 hours with or without dehydration.
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10. Joint Government of Bangladesh - UNHCR Population factsheet as of 31 December 2021
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13. [201006_wash_sector_awd_response_plan_final\(1\).pdf](#)

11.0 APPENDIX

APPENDIX 1: MAP OF REFERENCE FACILITIES TO REFER SUSPECTED AWD CASES



AWD Capacity.pdf

APPENDIX 2: NATIONAL CHOLERA CONTROL PLAN FOR BANGLADESH (2019-2030)



NCCP Final
2019.pdf

APPENDIX 3: MANAGEMENT OF DIARRHOEAL DISEASES AND ASSOCIATED MALNUTRITION



Management of
Diarrhoeal Diseases

APPENDIX 4: PROTOCOL FOR THE MANAGEMENT OF SEVERE ACUTE MALNUTRITION National Guidelines for the Facility – Based Management of Children with Severe Acute Malnutrition in Bangladesh.



Natnl Guidlns -
Children w Severe A

APPENDIX 5: CASE REPORT FORM FOR REPORTING SUSPECTED CHOLERA CASES IN EWARS



AWD Case Report
Form.docx

APPENDIX 6: LINE LIST TEMPLATE FOR AWD REPORTING DURING A CHOLERA OUTBREAK



Appendix 5_LineList
ORP DTC.xlsx

APPENDIX 7: CASE INVESTIGATION FORM FOR AWD FIELD INVESTIGATIONS



Case Investigation
Form_AWD.docx

APPENDIX 8: INFORMATION FLOW CHART BETWEEN HEALTH & WASH



Health & Wash
Coordination for FD

APPENDIX 9: CONTACT DETAILS OF HEALTH CAMP FOCAL POINTS



Health Sector Camp
HFP list.xlsx

APPENDIX 10: CONTACT DETAILS OF WASH CAMP FOCAL POINTS/ERT TEAMS



WASH Camp
Focal.xlsx

APPENDIX 11: JART CONCEPT NOTE/GUIDELINE DOCUMENT



JAT Operational
Guideline_V2.pdf

APPENDIX 12: ERT CONCEPT NOTE/GUIDELINE DOCUMENT



ERT concept
note.pdf