



# Cholera Case Investigation – Ad Dali', Yemen

**Key Findings Presentation**

May 2024



# Contents

- 01** Introduction
- 02** Demographics
- 03** Main Findings

A light gray world map is centered on the page, overlaid with a faint, light gray geometric pattern of interconnected triangles. The map shows the outlines of continents and countries. The text '01' is positioned above the word 'Introduction'.

01

# Introduction

# Cholera Situation in Yemen



## Current Cholera Outbreak\*

- From October - December 2023, Yemen experienced a **cholera outbreak**, with nearly **1018** cases of AWD recorded.\*
- The outbreak has started among **migrant communities** in Ataq district of Shabwah governorate.\*
- The total number of cases recorded between 1 January and 29 April 2024 across all 22 governorates is now estimated to be around 30,000.\*\*
- At Ad Dali' governorate level, the number of reported cases from the beginning of 2024 until May 17, 2024, was **1,427**. \*\*\*

\* [Yemen Humanitarian Update: Issue 11, December 2023 \[EN/AR\] | OCHA \(unocha.org\)](#)

\*\* [Yemen - Situation Update: Cholera | Digital Situation Reports \(unocha.org\)](#)

\*\*\* [Epidemiological Situation of diseases in free areas in Yemen](#)



## WASH Response

- As part of the response to the cholera outbreak, REACH, in collaboration with the Yemen WASH Cluster, **updated the CIF tool** with a specific focus on cholera. This tool is designed to collect data that helps understand **potential sources**, **risk factors**, and **vulnerabilities** associated with a cholera outbreak.
- Following the recent outbreak, the Yemen WASH Cluster has requested partners to use the CIF tool to **conduct interviews with patients**, especially in the affected areas. The tool is available to all YWC partners for use, and below you can find examples of both the paper and Kobo versions.



## Cholera Investigation Form (CIF)

CIF\_08\_FEB\_2024

### Metadata

\*P1. Were you tested for cholera through a laboratory test of your stool?

(If response is "results were negative," end the interview)

- ☒ Yes, results were positive  
☐ Yes, results were negative  
☐ Yes, results have not yet been received  
☐ No  
☐ Don't know  
☐ Refuse to answer

### Positive & The results have not yet been received.

#### Patient information

#### Risk factors

#### Health

\*X1. Was this interview done using a mobile telephone or a paper-form?

This question is to be answered by the enumerator

- ☐ Mobile phone  
☐ Paper form

### Cholera Case Investigation Form - Yemen

#### GENERAL

G1. Date of the interview			
G2. Enumerator First Name	G2.1 Enumerator Last Name		
G3. Enumerator Agency			
G3.1 If other, please specify:			
G4. Governorate	G5. District	G6. Sub-district	
G7. Location name			
G8. Type of location (select one)	<input type="checkbox"/> 1. Urban <input type="checkbox"/> 2. Peri-Urban <input type="checkbox"/> 3. Rural <input type="checkbox"/> 4. IDP Hosting Site		
G9. Status of the respondent (select one)	<input type="checkbox"/> 1. Host community <input type="checkbox"/> 3. Migrants <input type="checkbox"/> 5. Returnees <input type="checkbox"/> 2. IDPs <input type="checkbox"/> 4. Refugees <input type="checkbox"/> 6. Don't know		
G10. Name of health facility			
G10.A What is the GPS coordinates of your current location (N.E. Altitude)?	N:	E:	Elevation:
G11. Phone number of health facility (Enter integer)	+967 xx xxx xxxxx		
G11.A Name of Chief Medical Officer			
G12. Hello, my name is [SAY YOUR NAME] and I am working for [SAY NAME OF ORGANIZATION THAT YOU WORK FOR], and we are conducting interviews to inform the cholera response for Yemen. This interview will take around 15 minutes. Information that you provide will not be identifiable and will be anonymous. Participation in this interview is voluntary and you can choose not to answer any or all of the questions. You are free to stop this interview at any time. Are you willing to be interviewed?			
<input type="checkbox"/> 1. Yes <input type="checkbox"/> 2. No			

#### PATIENT INFORMATION

P1. Were you tested for cholera through a laboratory test of your stool? (If response is "results were negative," end the interview) (select one)	<input type="checkbox"/> 1. Yes, results were positive <input type="checkbox"/> 2. Yes, results were negative <input type="checkbox"/> 3. Yes, results have not yet been received	<input type="checkbox"/> 4. No <input type="checkbox"/> 5. Don't know <input type="checkbox"/> 6. Refuse to answer
---	---	--

# Methodology Overview



## CIF tool – the basics

- In-person patient-level surveys with an adult member (18 years or older) who is waiting for the results or tested positive for cholera.
- The CIF includes a section to collect data on each household member who might be sick, as well as details on **potential exposure** to cholera within the household and community.
- The CIF examines the patients' recent travels to identify **potential routes of cholera transmission**.
- Patient **Access to WASH services and behaviors** were assessed to monitor associated risk factors.
- Data collection with the patient **ideally** within **two weeks of health facility discharge** of the patient



## DATA COLLECTION

- With the support of the Health Cluster, Data collection was carried out in **Health facilities** that provide contact information for positive and potential cholera patients.
- Following coordination with the Yemen WASH Cluster, **WASH partners volunteer to collect CIF data** to inquire about positive and potential cases.



## POPULATION OF INTEREST

- **All households (HH) members**, people from host communities, displaced populations, refugees, and migrants who are suspected of having cholera and have visited a medical centre due to illness.
- Ideally, and if there are enough resources available, the **form should be used for all people** who seek treatment for Acute Watery Diarrhea (AWD) at the health center / Diarrhea Treatment Center (DTC) when a cholera outbreak is suspected in the area.

A light gray world map is centered on the page, overlaid with a faint, light gray geometric pattern of interconnected triangles. The map shows the outlines of continents and countries. The number '02' is positioned in the upper center, over the European continent.

02

# Demographics

# Cholera Cases Demographics



- The following key findings were derived from 22 patient-level interviews conducted through the CIF tool in April 2024, collected by CARE International and Medair.
- All the patients have tested positive for cholera.
- Locations of the 22 cases are in 14 rural, 6 in urban, and 2 in peri-urban areas in **Qa'atabah, Al Azariq, and Ad Dali'** districts in Ad Dali' governorate.

Male cases:  
**9 cases**

Female cases:  
**13 cases**

- All positive cases reported having between 3-22 HH members living in their households .
- 11 cases reported being **unaware** of other confirmed/suspected cases in the same neighborhood.
- 3 positive cases stated that a one-year-old child in the household, either male or female, **displayed symptoms of cholera**.
- All 22 positive cases reported that they did not travel to different locations while experiencing symptoms.

A light gray world map is centered in the background. Overlaid on the map is a complex, light gray geometric pattern of interconnected lines forming various sized triangles and polygons. The number '03' is printed in a bold, red, sans-serif font, positioned centrally over the map's landmasses.

03

# Main Findings



A light gray world map is centered in the background. Overlaid on the map is a complex, light gray geometric pattern of interconnected lines forming various sized triangles and polygons. The text '03.1' is positioned in the upper-middle part of the map, over Europe and Asia.

**03.1**

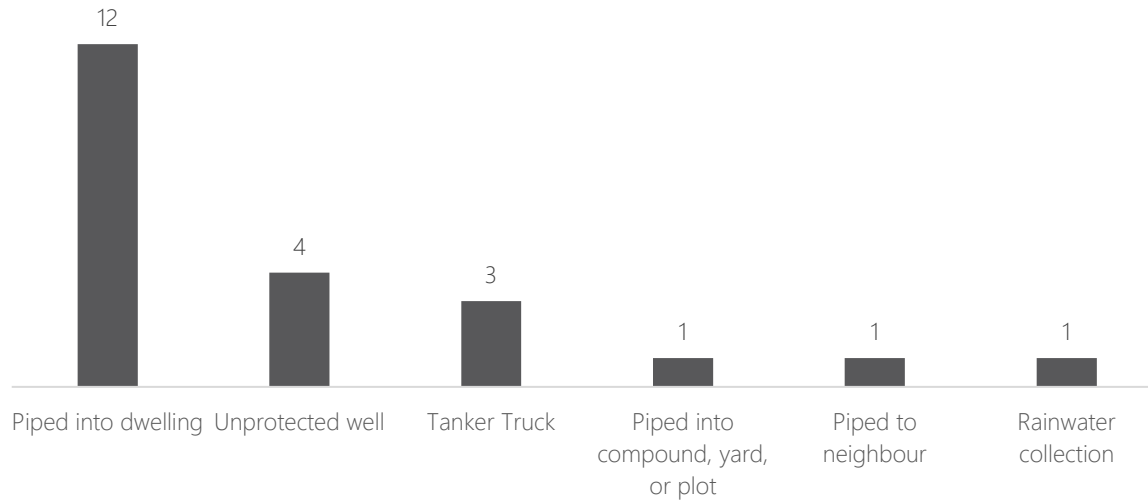
# Risk Factors

# WASH Practices



## Key Findings

Main source of drinking water reported by patients.  
(n=22)



17 Patients reported using **Improved water sources** as their main source of drinking water. 5 Patients also reported using **secondary water** sources for drinking such as: **Bottled water**, **rainwater collection**, **borehole**, **protected spring**, and **surface water (river, dam, lake, pond, stream, canal, irrigation channel)**.

The top three water storage methods used in households were **underground water tanks**, **jerry cans**, and **roof water tanks**, reported by 11, 9, and 7 patients respectively. Note: This question allowed for selecting multiple answers.

## Water Treatment Practices:

# 13/22

Patients reported not treating their water using any method to make it safer to drink.

## Handwashing Practices



- Patients who reported washing their hands reported doing so usually **before eating** (n=21), **after defecation** (n=11), and **before cooking** (n=8) using a **fixed facility tap in their dwelling** (n=3), **mobile bowl** (n=13), or **no handwashing facility is available** (n=2).
- Only **12 patients** reported having soap in their HHs. For the rest of the patients, the reasons for not having soap in their HHs were: \*
  - 7 Patients reported that soap is expensive**
  - 6 Patients reported that they ran out of soap**
  - 2 Patients reported that soap is not necessary.**

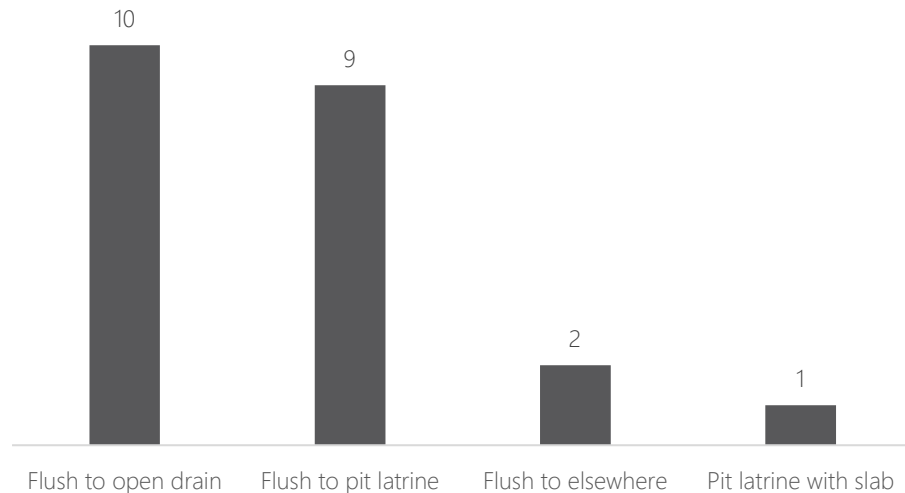
\*Multiple answers could be selected

# WASH Practices



## Key Findings

Type of sanitation facility reported being used by the patients. (n=22)



10 patients reported using Improved sanitation facilities for their HH while the rest relied on unimproved sanitation facilities. Closed pit (n=17) was the most commonly used sewage system connected to the house as reported by the patients.

In the past 30 days, solid waste/trash was frequently (n=6) and sometimes (n=9) observed by the patients, while human faeces were frequently (n=7) and sometimes (n=6) visible. Additionally, stagnant water was frequently (n=12) and sometimes (n=3) observed in the vicinity of their accommodation.

### Environmental Sanitation Systems:

## 13/22

Patients reported that there is occasional/frequently overflowing sewage in the vicinity of the accommodation in the last 30 days, most reported a sewer pit as the source of the overflowing sewage.

## Social Behaviors

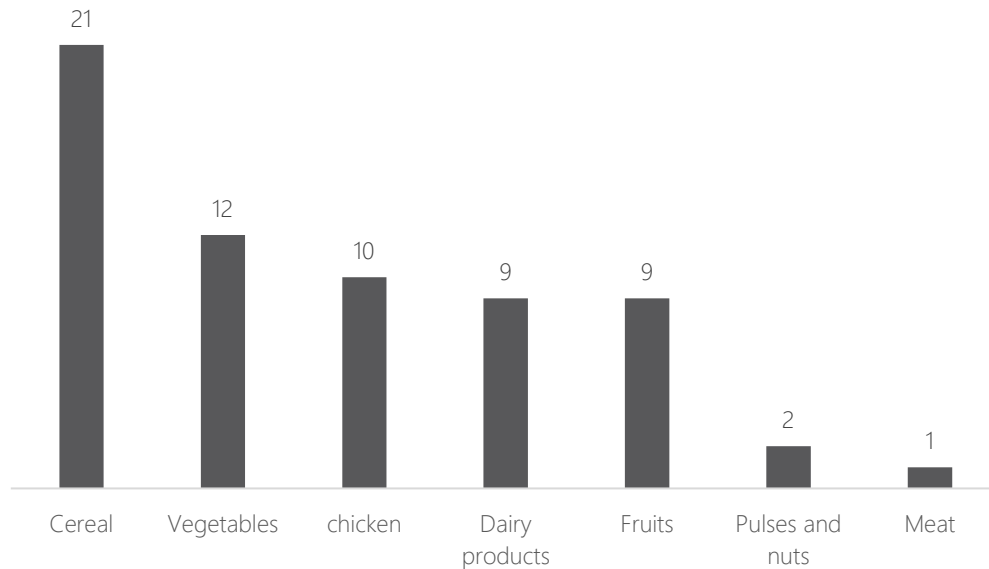
1/22 patients reported visiting a sick person in a health facility the week before experiencing symptoms.

3/22 patients reportedly attended a funeral ceremony in the week before experiencing symptoms. One of the three patients reported that the deceased has died from cholera.

# Food Consumption

## Key Findings

Types of foods consumed by patients in the week before the start of symptoms (n=22)\*



\*Multiple answers could be selected

### Hygiene Practices:

**18/19**

Patients reported washing fruits and vegetables before consumption, using **untreated water**.

- **None of the patients** reported buying food from a **restaurant** in the week before the first symptoms.
- **None of the patients** reported buying food from a **street kiosk** in the week before first experiencing symptoms.

A light gray world map is centered in the background. Overlaid on the map is a complex, light gray geometric pattern of interconnected lines forming various sized triangles and polygons. The text '03.2' is positioned in the upper-middle part of the image, over the European continent.

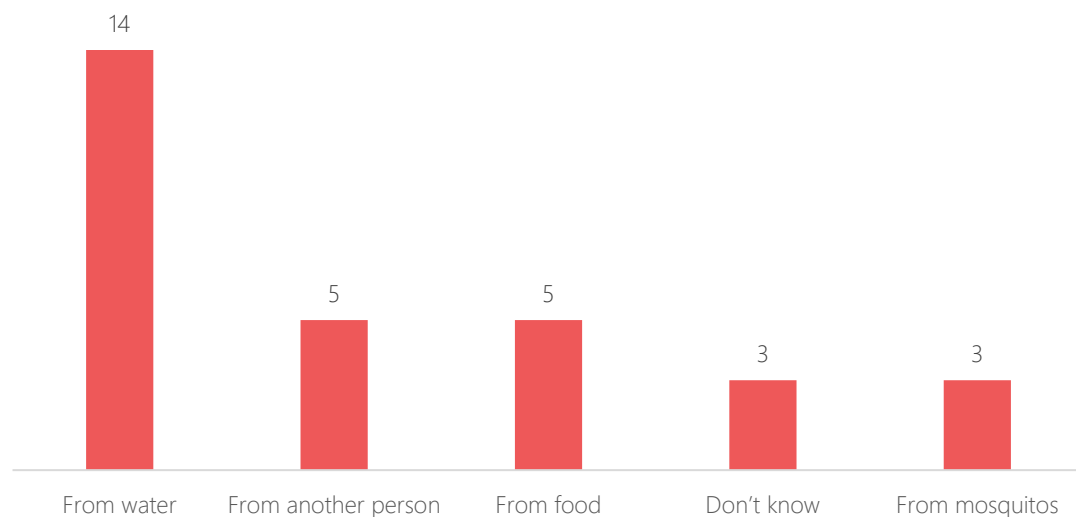
**03.2**

# Health Education

# Health Education

## Key Findings

### Patients perceived source of illness (n=22)\*

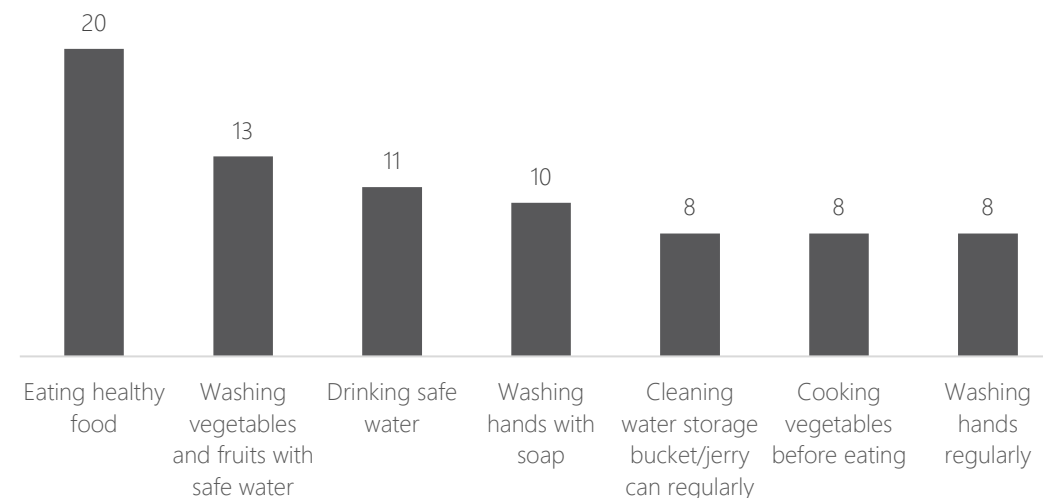


11 out of 22 patients reported having received education about cholera in the past 12 months. The sources of information reported were social media, health facility, television, or from a community volunteer.

\*Multiple answers could be selected

20 patients reported that eating healthy food would help to prevent cholera. While 13 patients reported washing vegetables and fruits with safe water regularly were methods of cholera prevention. Other ways to prevent cholera or acute water diarrhea were reported by the patients as shown in the chart below.

### Patients perceived methods of cholera prevention (n=22)\*



# Limitations

- Data collection partners raised some concerns regarding **difficulties in accessing patient lists** from health facilities to facilitate interviews. This challenge, coupled with reliance on health center data, poses obstacles to effectively conducting interviews.
- In December 2023, a joint report on cholera by the WASH and Health Cluster revealed that approximately 36% (1,262) of suspected cholera cases involved children under the age of five. However, the CIF tool restricts partners to interviewing only individuals aged 18 and older. Consequently, cases involving **individuals under 18 may be overlooked**, potentially impacting coverage and comprehension of the total suspected cases within the assessed areas.
- Patients might encounter **challenges in recalling specific details** about locations visited or individuals encountered.
- Respondents might be reluctant to disclose personal information or details regarding their illness or sick family members due to privacy concerns, **cultural or traditional sensitivities**.
- There might be constraints on following up with patients for clarifications or additional information (especially migrants/refugees) , which could result in having **incomplete data**.
- The **timeframe** between sharing the patient's name to the WASH partner and actually reaching the patient could be substantial, potentially resulting in the patient being in a different location upon arrival of the partner/enumerators. Additionally, since the WASH partner should conduct the interview within **two weeks** of the patient's discharge from the health facility, any delays could impact the accuracy and reliability of the information collected.
- Given the constraints **of limited resources and funding allocation**, coupled with the unexpected nature of the cholera outbreak outside partners' response planning strategy, we encounter **challenges in expanding the coverage** and assessing additional locations

# Thank you for your attention



Haneen Jaber, [haneen.jaber@reach-initiative.org](mailto:haneen.jaber@reach-initiative.org)

Elias S. Batbouta, [elias.batbouta@reach-initiative.org](mailto:elias.batbouta@reach-initiative.org)



**REACH** Informing  
more effective  
humanitarian action