ZIMBABWE
Cholera outbreak

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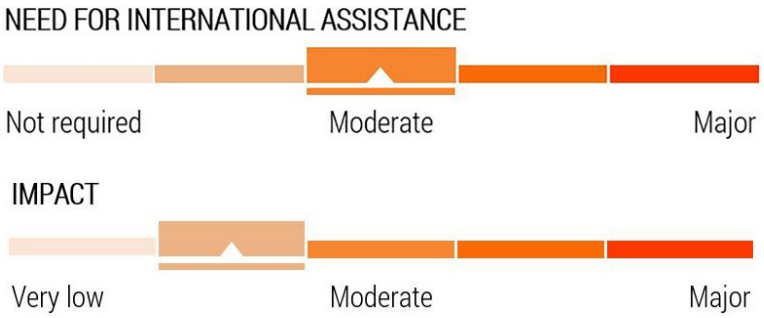
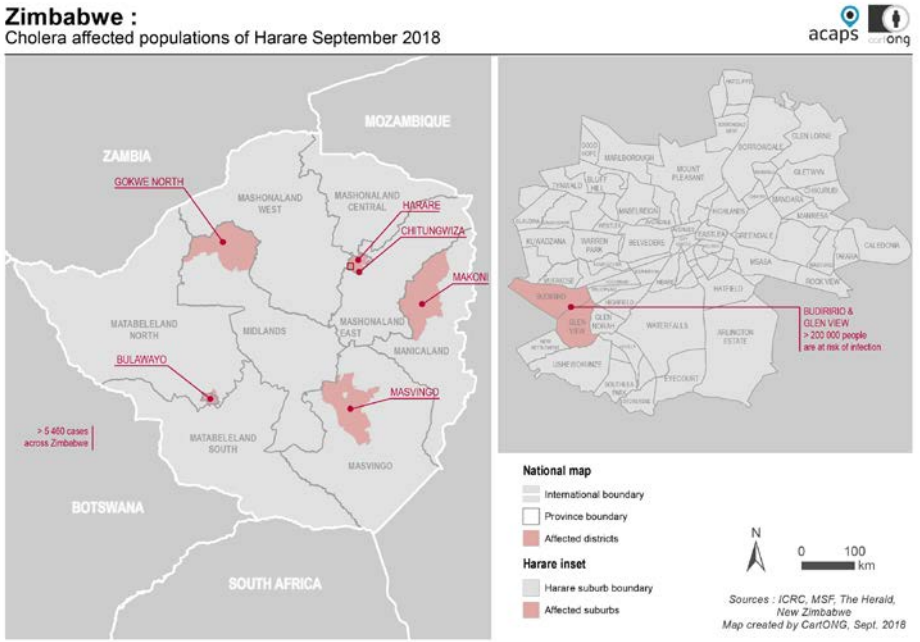
Briefing note – 18 September 2018

An outbreak of cholera declared on 6 September has killed at least 30 people and infected at least 5,460. The most severely affected areas are the two epicentres of the outbreaks in the suburbs of Glenview and Budiriro in western Harare. The outbreak has spread from Harare to Chitungwiza, and west to Gokwe and Bulawayo. Cholera is reportedly spreading to different areas of the country. Poor WASH and health infrastructure are facilitating the rapid spread of the disease. High WASH needs, including clean drinking water, hygiene promotion and temporary sanitation facilities, have been reported.





Anticipated scope and scale

The dense population of **Glenview and Budiriro** suburbs, combined with the use of Gokwe as a business centre and transit hub, **increases the likelihood of transmission in Harare as well as to other areas of Zimbabwe**, unless strong preventative action is taken. The spread of cholera is likely to increase when Zimbabwe's rainy season begins in November.

Key priorities

+5,460
Cholera cases

Poor WASH infrastructure
enabling the spread of cholera

Medicine and staff shortages
risk of increased mortality rate

Humanitarian constraints

The most significant factor contributing to the outbreak is the poor WASH infrastructure, which has become dilapidated after years of neglect. Humanitarian actors may struggle to prevent cholera from spreading unless local officials address sanitation shortfalls.

Limitations: Limited information is available about the condition and number of health facilities within the two most affected areas of Harare. Information regarding cases is also reported in an inconsistent manner by the ministry of health. This briefing note is also limited in scope by a general lack of information about the conditions and needs of individuals in Chitungwiza.

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Crisis impact

A state of emergency was declared in Harare on 11 September following an outbreak of cholera in Zimbabwe's capital. The Ministry of Health declared a cholera outbreak on 6 September (WHO 7/09/2018, The New York Times 11/09/2018). According to the minister for health and child care, reported cases reached 5,460 as of 17 September, surging from 3,000 on 13 September (The Herald 17/09/2018 Al Jazeera 15/09/2018 IFRC 13/09/2018). Reporting indicates that 30 people have died from the disease, while the bacterium fuelling the outbreak may have become drug resistant (The Herald 17/09/2018 VOA 14/09/2018 Reuters 11/09/2018).

The most affected localities are the Harare suburbs of Glenview and Budiriro. Health officials say two affected boreholes and a well, normally used by the local population for drinking water, were contaminated by water flowing from burst sewage pipes in these areas. All have since been decommissioned and are now undergoing repairs (The Herald 10/09/2018, African Independent 10/09/2018, Reuters 11/09/2018). Nevertheless, the caseload of cholera has continued to grow rapidly since 6 September. Initial estimates have suggested around 200,000 people are considered at risk of contracting the disease in the two epicentres (UNICEF 13/09/2018).

The disease has spread to Gokwe (Midlands province) and Chitungwiza (Harare province), where four cases and five cases respectively, were reported on 10 September, and Bulawayo in the southwest of the country, where there are 10 suspected cases (Nehanda Radio 17/09/2018 New Zimbabwe 10/09/2018). All new cases in Midlands province have been linked back to Harare (The Herald 11/09/2018). Gokwe presents strong transmission risks across the country if the outbreak is not contained, as there is heavy traffic of people into and out of the area (Zimbabwe Situation 16/09/2018).

WASH:. Sewer bursts and blockages are common throughout Harare and are, alongside Harare's dilapidated WASH infrastructure, thought to be responsible for the recent cholera outbreak, as sewage water has contaminated two boreholes in the west of the city. Bursts and blockages have affected Glenview for at least three months (All Africa 07/09/2018).

It is unclear how many people were using the contaminated boreholes for drinking water, but Glenview and Budiriro are densely populated suburbs and estimates suggest around 200,000 people may be affected (UNICEF 13/09/2018). The local council has struggled for years to provide enough drinking water for the population (African Independent 10/09/2018, Devidiscourse 10/09/2018). Harare's water and sewage system was last upgraded in 1994 to serve 1.5 million people, rather than the 4.5 million now resident in the capital and its outskirts (NewzWire 17/09/2018). Only a quarter (200 megalitres) of daily water demands (800 megalitres) are met in Harare, leaving huge shortfalls (All Africa 07/09/2018).

The lack of available water has led residents to use alternative water sources, including unsafe boreholes and open wells, while up to 60% of treated water is lost in choke points at water treatment sites or through damaged pipes (NewzWire 17/09/2018).

The closure of the contaminated boreholes in Glenview and Burdiririo will further stress the WASH infrastructure and water availability in these areas, as local residents will have to use other sources both through official council-provided sources and unofficial boreholes. Chlorine tablets and other water treatment equipment are needed. Although reports indicate that hygiene consumables including soap, chlorine tablets and large water containers are being distributed in Glenview, it is unclear if there are enough to meet the needs of everyone affected in Glenview and Burdiriro (The Herald 10/09/2018).

Waste collection and adequate toilets are also required, along with efforts to raise hygiene awareness, which remains low across Harare (VOA 07/09/2018). A 2017 survey by the Ministry of Health in Harare indicated 55% of those surveyed had faecal matter on their hands, which is significant given that cholera is spread by the faecal-oral route (NewzWire 17/09/2018). Current information about the WASH situation in Chitungwiza is unavailable.

Health: Between January and 5 September, 177 suspected cases of cholera, including seven deaths, were reported in Zimbabwe (UNICEF 5/09/2018). At 17 September, an estimated 5,460 cases of cholera have been reported since the outbreak was declared, with at least 30 deaths across Zimbabwe and a current CFR of 0.5% (The Herald 17/09/2018 Reuters 11/09/2018).

Some residents have gone for testing and treatment at the Beatrice Road Infectious Diseases Hospital. While cholera is usually treated with rehydration solutions and intravenous fluids, the outbreak has reportedly become drug resistant, as some patients requiring antibiotics are not responding to those typically used. Consequently, health workers have had to treat patients with second and third line drugs, many of which are being imported due to lack of local availability (Gulf News 16/09/2018 VOA 14/09/2018).

The health response faces strong infrastructural challenges, with shortages of drugs and medical supplies commonplace throughout the country, as well as staff shortages that equate to 1.23 health workers per 1,000 people (News Day 11/09/2018 Council on Foreign Relations 25/01/2018). Makeshift wards and field hospitals are being erected to expand capacity (BBC 18/09/2018).

Food and livelihoods: In response to the outbreak, the health ministry has banned the sale of fish, meat and other fresh products by local vendors in Glenview and Budiriro as well as pledging to end unlicensed food vending, which it has linked to the cholera outbreak (Reuters 11/09/2018). It is unclear how this has affected the availability of food or access to markets for the affected population. It is also unclear exactly why the

government has linked unlicensed food vending to the outbreak. It is possibly related to the use of contaminated water in the preparation of products or concerns regarding food hygiene and handling by vendors. However, local vendors have argued that the prevention of sales is having a negative impact on their livelihoods and that the sale of their goods is unrelated to the cholera outbreak. (VOA 16/09/2018 The Herald 17/09/2018)

Education: A school in Glenview 5 sub-district was closed after two children contracted cholera and died. A further 20 children at the school have been infected (ZimEye 11/09/2018). The school's well water was also found to be contaminated with cholera (NewzWire 17/09/2018).

Vulnerable groups affected

Children are at a greater risk of infection by cholera especially when left unattended, as they are more likely to drink from unclean sources of water, eat food that hasn't been washed and prepared properly, or play in places that have been contaminated. Children are also at a greater risk of dying when infected. Diarrhoea from cholera can cause extreme dehydration that will affect children more severely than adults, as their immune systems are not fully developed. Malnourished children are especially at risk (WHO accessed 11/09/2018).

Girls are also particularly vulnerable in Zimbabwe because of the WASH situation in schools, where the student-to-toilet ratio remains low across the country and there is a lack of adequate hygiene facilities for girls. Unsafe defecation practices in school due to inadequate facilities put girls at risk of SGBV as they are may spend more time alone in isolated areas in search of privacy. About one in five schools uses unsafe water sources (UNICEF Accessed 11/09/2018).

Aggravating factors

Poor WASH infrastructure

Local authorities in Harare have been struggling to provide adequate WASH facilities for the last decade. Corruption and funding issues have prevented the necessary upgrades to the city's WASH infrastructure and local council workers say they have been unable to safely clear blocked or burst sewers due to a shortage of protective materials that dates back to 2017 (ZWNews 17/09/2018). Cholera and typhoid persist because people are forced to drink unsafe water and cannot access adequate toilet facilities (Devidiscourse 10/09/2018, The Herald 27/03/2018). More than 90% of boreholes in the less-populated suburbs of Harare were condemned in 2017 (The Zimbabwe Mail 08/09/2018).

Although data suggests that access to drinking water, particularly in urban areas, has improved, poor sanitation remains a countrywide problem. About a quarter of households have no toilet facilities and Harare had only 113 public toilets in 2017, not all of which were functioning. The provision of public toilets, is at a rate of roughly one every 8.5 square kilometres, which is significantly below sphere minimum standards of 1 toilet per 20 people (The Herald 01/08/2017, UNICEF Accessed 11/09/2018, The Sphere Project Accessed 11/09/2018). Across Zimbabwe, only 54% of people in urban areas have access to basic sanitation services (WHO 2015 data, accessed 11/09/2018). Open defection and the unsafe disposal of child faeces exacerbate the impact of cholera because of the potential for effluent water to contaminate boreholes, open wells and other sources of drinking water with faecal matter (The Herald 01/08/2017, UNICEF Accessed 11/09/2018).

Burial practices

Transporting bodies affected by cholera to localities outside the affected areas for burial poses high risks of transmitting cholera to other parts of the country. A councillor for the suburb of Glenview noted that people had already transported bodies from Harare to rural areas, where they posed a transmission threat. A lack of awareness about how to handle deceased cholera patients and the importance of gloves and handwashing to prevent contraction of the disease are exacerbating this threat (Zimbabwe Situation 9/09/2018, ZoomZimbabwe 09/09/2018, WHO 01/02/2018).

Simultaneous Typhoid Outbreak

The threat from co-existing disease outbreaks is high as typhoid has affected Harare in January and June (News Day 18/06/2018). A number of areas affected by cholera are already suffering from typhoid outbreaks, which increase both the needs for medical care and the resources required for an effective response (IFRC 13/09/2018).

Rainy season and lean season

Zimbabwe's rainy season and lean season both run from November to March (FEWS NET Accessed 11/09/2018). An increase in surface and runoff waters, localised flooding and stagnant water are likely to boost contamination and infection rates for both typhoid and cholera.

As Zimbabwe enters its lean season, more poor households are expected to struggle with food security, with most areas of the country suffering from IPC Phase 2 (Stressed) or IPC Phase 3 (Crisis) (FEWS NET 24/08/2018). Though Harare is projected to remain at IPC Phase 1 (Minimal), Gokwe and Chitungwiza will experience IPC Phase 3 during the lean season. As cholera significantly impacts the nutrition of communities it

affects, malnutrition may increase because of the continued and projected food insecurity of the areas affected by the outbreak.

Prevalence of HIV/AIDS

Some 1.3 million adults and children in Zimbabwe have the HIV or AIDS virus, with new infection rates of approximately 15% (OCHA 31/07/2018 UNAIDS accessed 11/09/2018). The large community of people living with HIV, combined with a lack access to adequate and affordable healthcare countrywide, will likely increase the mortality rate of this cholera outbreak, as individuals with lower immunity are less likely to survive a cholera infection (WHO accessed 11/09/2018).

Contextual information

Cause and symptoms

Cholera is an acute waterborne infection of the vibrio cholerae bacteria. Outbreaks occur due to a lack of hygiene and adequate WASH infrastructures. The disease is usually transmitted through the ingestion of contaminated water or food (RFI 16/06/2018; WHO 01/02/2018). Most people infected only develop mild symptoms. However, the disease is highly contagious and, if untreated, it can kill within hours after the first symptoms. Cholera outbreaks are usually caused by disrupted drinking water systems, lack of chlorination and population movements. Cholera outbreaks are common in poor, overcrowded settings (WHO 01/02/2018).

Treatment

Cholera can easily be treated through oral rehydration solutions. In the event of severe dehydration, intravenous fluids or antibiotics can diminish the duration of diarrhoea, increase rehydration and help kill the bacteria. When treated properly, cholera is fatal in only 1% of the cases (WHO 01/02/2018). Three types of WHO-approved oral cholera vaccines have been frequently used during outbreaks (WHO 01/02/2018). Awareness-raising campaigns, the promotion of appropriate hygiene practices (handwashing, safe storage and preparation of food, safe disposal of children's faeces) and safe burial practices can reduce the risk of cholera outbreaks. Health education campaigns, adapted to local culture and beliefs, should promote the adoption of appropriate hygiene practices (WHO 01/02/2018).

Previous outbreaks

This is the fourth cholera outbreak in Zimbabwe in 15 years, and the most serious outbreak since 2009 (African Independent 10/09/2018). Between 2008 and 2009 a severe cholera outbreak infected around 100,000 people and killed almost 4,300 (IFRC May 2009, BBC 07/09/2018). The outbreak subsided only after sustained international assistance was provided (VOA 07/09/2018, IFRC May 2009).

Response capacity

Local and national response capacity

The Government of Zimbabwe has activated a national response mechanism and declared a state of emergency to deal with the current outbreak, which is spreading to other parts of the country. The national response taskforce, comprising several health and social ministry representatives, is responsible for containing the outbreak within Harare (The Herald 11/09/2018)

The Zimbabwe Association of Doctors for Human Rights has deployed teams around the country to support medical staff and ensure that outbreak developments are monitored (Zimbabwe Situation 9/09/2018).

International response capacity

Though a number of international NGOs and UN bodies are present in Zimbabwe, and responding to the crisis, it is currently unclear whether or not they meet the growing needs of an expanding cholera and typhoid caseload. The Ministry of Health is leading the coordination of response efforts at a national level, with support from WHO. A rapid response team has also been activated (UNICEF 13/09/2018).

Médecins sans Frontières has set up cholera treatment centres at the epicentres of the outbreak in Glenview and Buduriro and Oxfam has been distributing NFIs in the same area. The Zimbabwean Red Cross is providing water treatment services and mobilising 1,000 volunteers to go house to house in the most affected areas and deliver key hygiene and cholera prevention messages (ECHO 14/09/2018 IFRC 13/09/2018).

WHO is assisting the Zimbabwean health and child care authorities with coordination efforts and the formation of a cholera surge team, as well as providing cholera kits with items such as oral rehydration solutions, antibiotics and intravenous fluids. The Zimbabwean government is assessing the benefits of introducing an oral cholera vaccine campaign (WHO 13/09/2018). A cholera treatment camp has also been established in Gokwe North (The Herald 10/09/2018).

Lessons learned

Despite the serious outbreak of cholera in 2008, many of the causes and exacerbating factors, particularly those related to the country's old and inadequate WASH infrastructure, remain the same. For those responding to the current crisis, developing sustainable long-term solutions that provide access to clean drinking water may prevent the recurrent cycle of cholera in Zimbabwe.

When trying to tackle the current outbreak, humanitarian actors may benefit from a more centralised approach to treatment and prevention, as well as larger water treatment and health centres, to ensure blanket coverage of affected populations (IFRC May 2009). Additionally, the role of aid agencies will have a lasting impact in Zimbabwe.

During the 2008-2009 outbreak, humanitarian responders drilled over 200 boreholes in and around Harare to respond to the immediate needs of the population for drinking water. However, a number of these were not maintained and reviewed by authorities or NGOs and may now pose health risks. The amount of boreholes in Harare is causing the water table to lower, creating what is termed a 'cone of depression' that allows for the contamination of Harare's aquifer with contaminated and poor quality water (NewzWire 17/09/2018). When responding to this crisis, it is important that short term responses such as drilling boreholes to meet short term water needs, do not overlook the longer-term consequences of such actions to Harare's archaic and delicate water infrastructure.

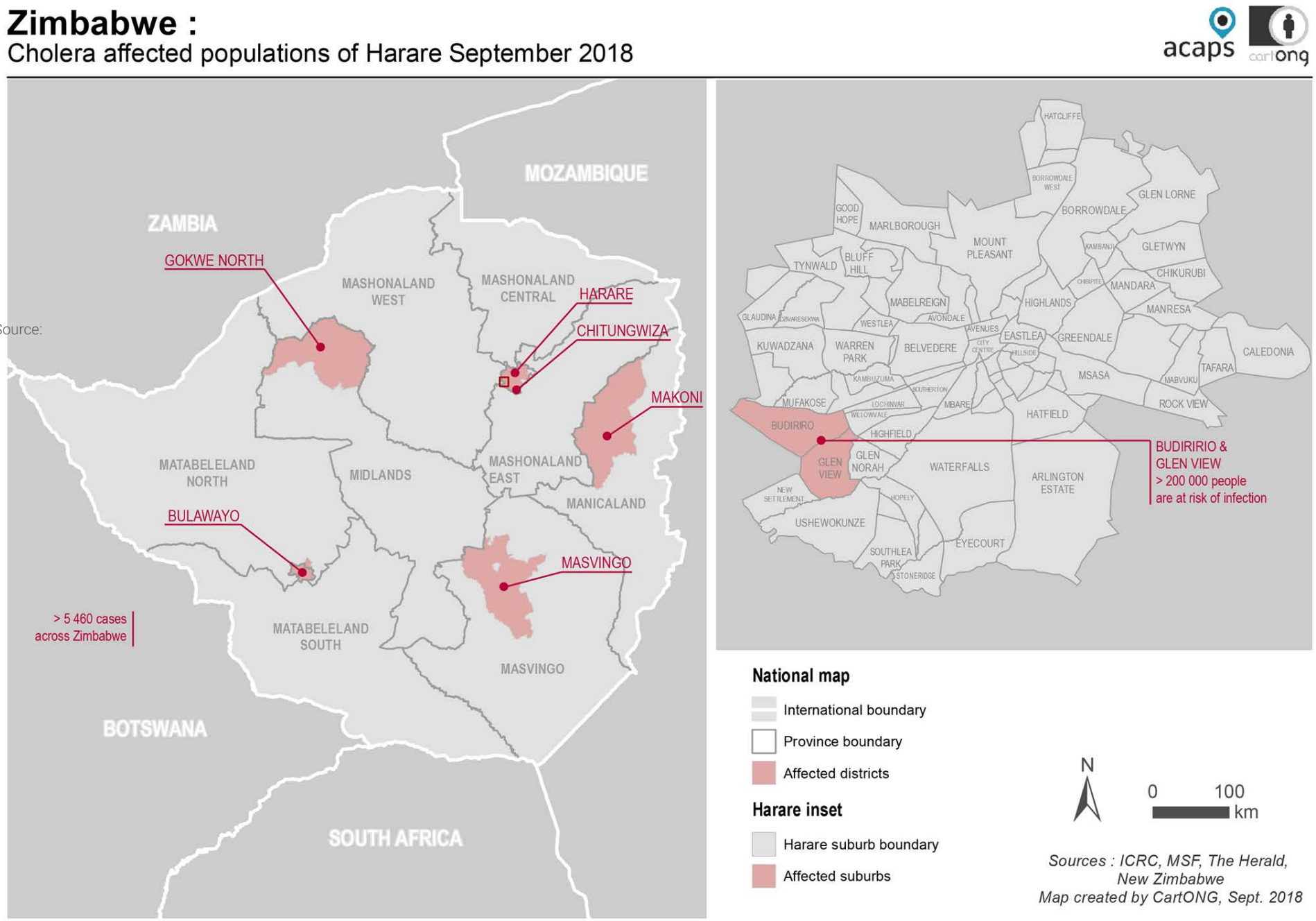
Information gaps and needs

- It is not clear how many cases of typhoid were present in Harare and other affected provinces before the start of the outbreak.
- The lack of numbers regarding the estimated affected populations across Zimbabwe limits the ability of humanitarian actors to predict the required scale of the response nationwide.
- Reporting on cases is sporadic and more information is required regarding the capacity for response in areas outside of Harare.
- Many boreholes are unofficially dug, while the sewer and water network is not well maintained or mapped. Therefore, attempts at identifying areas with the most at risk water sources and mapping a planned response are frustrated by the lack of available and up to date information of local water sources and sewer blockages.

Key characteristics

Key indicators	Harare City
Total population	Harare City 1.49 million (UNICEF, 2012) Harare province 2.12 million (UNICEF, 2012) Harare province: Proportion of Urban: 94.8 %
Proportion of youth	Child population: 39 % Youth population, 15–24: 22.1 % (UNICEF, 2012)
Education	Proportion of 6–16 Never been to school: 1.3% Primary school net attendance ratio: 90.9 % Secondary school net attendance ratio: 75% (UNICEF, 2012)
Health	Crude birth rate: 33.3 % Under-5 mortality rate: 66:1,000 live births Infant mortality rate: 43:1,000 live births (UNICEF, 2012)
WASH figures	Access to safe sanitation: 95.5% Access to safe drinking water: 95.9% (UNICEF, 2012)
Food insecurity (Zimbabwe)	National acute malnutrition prevalence: 3.3 % Countrywide global acute malnutrition (GAM): 2.5% Most households are in Stressed (IPC Phase 2) and Crisis (IPC Phase 3) across the country. (FEWS NET 06/2018) 1.1 million food insecure people (WFP, 2018)

Map


Zimbabwe :
Cholera affected populations of Harare September 2018
acaps
cartong
MOZAMBIQUE
ZAMBIA
GOKWE NORTH
MASHONALAND WEST
MASHONALAND CENTRAL
HARARE
CHITUNGWIZA
MAKONI
MASHONALAND EAST
MANICALAND
MIDLANDS
MATABELELAND NORTH
BULAWAYO
MASVINGO
> 5 460 cases across Zimbabwe
MATABELELAND SOUTH
MASVINGO
BOTSWANA
SOUTH AFRICA
HATCLIFFE
BORROWDALE WEST
GLEN LORNE
BORROWDALE
GOOD HOPE
MARLBOROUGH
MOUNT PLEASANT
KAMBANJI
GLETWYN
TYNWALD
BLUFF HILL
CHIKURUBI
CHISIPITE
MANDARA
MABELREIGN
HIGHLANDS
MANRESA
GLAUDINA
DZIVARESEKWA
WESTLEA
AVONDALE
AVENUES
EASTLEA
GREENDALE
KUWADZANA
WARREN PARK
BELVEDERE
CITY CENTRE
HILLSIDE
CALEDONIA
KAMBUZUMA
SOUTHERTON
MSASA
TAFARA
MABVUKU
MUFAKOSE
LOCHINVAR
MBARE
ROCK VIEW
WILLOWVALE
HATFIELD
BUDIRIRO
HIGHFIELD
BUDIRIRIO & GLEN VIEW
> 200 000 people are at risk of infection
GLEN VIEW
GLEN NORAH
WATERFALLS
ARLINGTON ESTATE
NEW SETTLEMENT
HOPELY
USHEWOKUNZE
EYECOURT
SOUTHLEA PARK
STONERIDGE
National map
International boundary
Province boundary
Affected districts
Harare inset
Harare suburb boundary
Affected suburbs
N
0
100
km
Sources : ICRC, MSF, The Herald, New Zimbabwe
Map created by CartONG, Sept. 2018

Source: