

Intersectoral actions in response to cholera in Zimbabwe: From emergency response to institution building

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All for Equity

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Disclaimer

The opinions expressed in this paper are those of the authors based on experience managing the cholera outbreak and discussions undertaken for the purposes of developing this paper.

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Executive Summary

Between August 2008 and July 2009, Zimbabwe experienced a catastrophic cholera outbreak that resulted in almost 100,000 cases and over 4000 deaths. A national emergency was declared in December 2008, paving the way for a widespread multi-sectoral response to deal with the outbreak that was affecting nearly every district in the country and overwhelming the Ministry of Health and Child Welfare's capacity to respond. At the same time as instituting a comprehensive emergency response, it was important to build inter-sectoral action to address the social determinants of health driving the outbreak (including water and sanitation, poor hygiene practices), particularly given the prevailing context of poverty and national systemic constraints that accompanied the outbreak.

The emergency declaration led to the establishment of a multi-sectoral government task force under the leadership of local government. The Ministry of Health and Child Welfare took the key leadership and coordination role across all stakeholders, with the support of a wide range of Government Ministries, United Nations Agencies, donors, bilateral governments and agencies, Non-governmental Organizations and Community Based Organizations. A Cholera Command and Control Centre (C4) was established to give technical guidance and coordination support to the response, bringing together the support of a WASH cluster, Health Cluster and Logistics Cluster, and mobilizing technical and financial resources for work to be done.

Action was taken across a wide range of sectors including to address thematic areas of surveillance and laboratory, case management, Water, Sanitation and Hygiene (WASH), social mobilization and logistics.

By July 2009 the cholera outbreak was declared over, although the country remains vigilant and engaged in ongoing efforts to improve preparedness to respond to future outbreaks as well as address the social determinants of health driving the original outbreak, in particular water and sanitation. Additional impacts observed as a result of the response included the improved and harmonized action of multiple stakeholders, and strengthening of the health system.

Lessons learned and tools developed have been shared internationally. Key lessons particularly related to the Social Determinants of Health include:

- The Ministry of Health and Child Welfare must take the lead in coordinating a multi-sectoral response to disease outbreaks with social causes, and need to be mandated / supported to do so by the highest level of government in their stewardship role
- Responding to an outbreak requires addressing the health emergency at the same time as the determinants of health – stakeholders outside the health sector need to be identified, made aware of their responsibilities and given a central role in responding
- Without a strong, well responding health system including human resources for health, material supplies and community awareness raising, it is not possible to contain an epidemic
- The emergency became an opportunity to work towards better preparedness in responding to future outbreaks using a multi-sectoral approach and better coordination
- Data on health inequities and the social determinants of health needs to be systematically gathered and documented as part of the ongoing work of the MOHCW

Problem Space

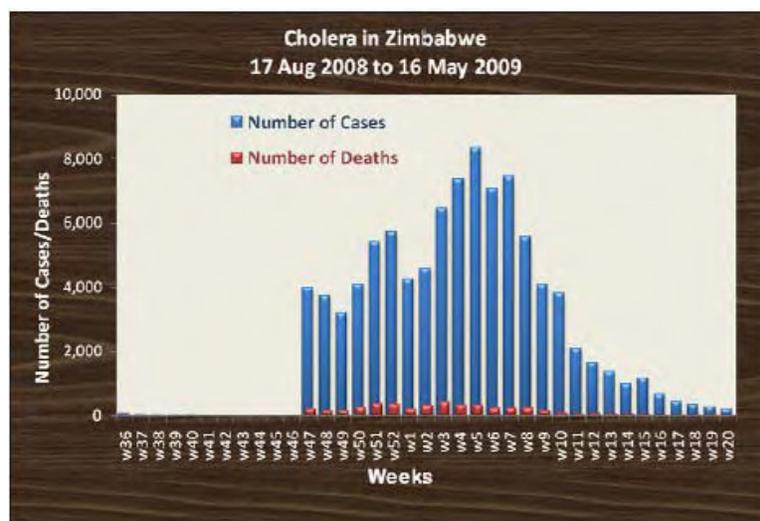
Statement of the problem: *Ensuring that an emergency response to the cholera outbreak in Zimbabwe reached universal coverage, then transitioning to the long term institution building and co-operation needed for action on the social determinants of the epidemic (building on cooperation and partnership of the acute response to the emergency).*

Between August 2008 and July 2009, Zimbabwe experienced a catastrophic cholera outbreak which ultimately resulted in 98,592 cases and 4,288 deaths. 55 of Zimbabwe's 62 districts (89%) were affected. The overall Crude Case Fatality rate was 4.3%, well above the acceptable WHO level of 1%. 61.4% of all reported deaths took place in the community. This outbreak in Zimbabwe took place against a backdrop of increasingly frequent outbreaks since 1998. However the previous outbreaks



were confined to discrete geographical zones, were of limited duration and affected far fewer people. Several risk factors were identified in this outbreak including unsafe water sources, poor sanitation and poor personal hygiene in both urban and rural areas. The mobility of populations within urban areas, and from urban to rural areas, became major factors in the spread, with an ongoing shortage of Environmental Health Technicians and Village Health Workers limiting early detection of outbreaks at grassroots level.

Figure 1: Trends in cholera cases and deaths over time



Source: Zimbabwe health cluster bulletin number 14

The outbreak began in Chitungwiza, a high density suburb near Harare and quickly spread as a result of contamination of water in shallow wells in close proximity to sewage systems being dug by residents due to water cuts. The initial response to the outbreak was through existing MoHCW policy and implementation frameworks for epidemiology and disease control, with all protocols being followed and additional support coming in from health partners on the ground on a relatively ad-hoc basis. However, by December 2008 the situation had deteriorated further: from a total of 30 cases by the 1st of September 2008, the number had quickly escalated to over 15,500 by 10th December. Cases had been reported in nine out of the ten provinces of the country. Most healthcare institutions were not operating, and there were shortages of key health workers including

Environmental Health Technicians (EHTs) and Village Health Workers (VHWs) who traditionally detect and manage illness at grassroots level. Some health manpower had left the mainstream health care system as a result of unsatisfactory working conditions and therefore not available to initiate a rapid response. The scale of the outbreak was far beyond any that the Ministry of Health and Child Welfare had experienced before, with the worst previous outbreak in 1999 yielding a total of 4081 cases in six provinces. As such, the MoHCW found itself underprepared and unable to manage alone.

The severity of the situation with high numbers of cases, widespread death and fear within the population demanded action, and with the support of key development partners (including UNICEF and WHO), led the Government of Zimbabwe to declare the outbreak a National Emergency on 6th December 2009. Existing resources in the country had proved inadequate in managing an outbreak of such scale, and the declaration of a National Emergency was a critical step in allowing mobilization of the substantial additional resources required to manage all acute cases and bring the outbreak under control.

At that time the health information system was battling to function, given the prevailing context of poor telecommunications and electricity supplies, lack of radio networking and inadequate transport. The remaining health workers on the ground were also over-stretched in responding to the numbers of cases and documentation may have suffered as a result. As such the surveillance data was initially of very low timeliness and completeness, further complicating understanding of the outbreak and making action difficult. Donors and partners with good communications systems played a key role in strengthening data.

Context

Cholera is a diarrhoeal disease caused by the bacterium *Vibrio cholera* and is usually transmitted through faecally contaminated water or food. Cholera has a very short incubation period (2 hours to 5 days) and if left untreated, the severe loss of large amounts of fluid and salts can lead to dehydration and death within hours. Outbreaks occur in environments where water supply, sanitation, food safety and hygiene are inadequate.

The outbreak in Zimbabwe highlighted a number of key inequities in both those affected by cholera, and those accessing and using care for cholera. It is generally understood that the following inequities were evident:

- Place of residence: the urban high density inhabitants were disproportionately affected in comparison to urban low density inhabitants. There was also widespread variation in the number of cases by province/city, with Bulawayo province least affected (445 cases) and Mashonaland West province worst affected (22, 753 cases). This was thought to be a result of differing response mechanisms, as well as variations in access to care at health facilities.
- Wealth group: the poor were disproportionately affected in comparison to the rich, in part due to their living conditions and poor access to safe water and sanitation, and possibly educational level affecting food and water hygiene practices
- Sex: A slight preponderance of female cases and deaths believed to be the case although data was not routinely disaggregated by sex, thought to be linked to the female caregiver role and contact with other cholera sufferers
- Race/Colour: Black people were vastly more affected than white, coloured or Indian or Chinese people.
- Occupational level: Informal trading was extensive during the period of the cholera outbreak as the prevailing economic situation led people into ways of generating income. This mobile population were therefore disproportionately affected by the outbreak
- Educational level: Those with lower educational level / lack of functional literacy were disproportionately affected due to their limited knowledge of safe water and hygiene practices.

The case fatality rate (CFR), or the proportion of patients with cholera and dying from cholera, was reported to vary from district to district, and was thought to reflect issues around access to care, quality of care, and the underlying prevalence of co-morbid conditions such as HIV and malnutrition. The majority of deaths took place in the community (61% of total deaths), due to factors such as limited geographical access, lack of commodities such as sugar and salt to make SSS at home, soap for hand washing, lack of awareness and access to adequate information and lack of knowledge

about how cholera spreads. Late responses to clinical cases were seen due to low numbers of EHTs and VHWs on the ground, and poor communications systems.

These inequities can be understood to have arisen from the social determinants of health (SDH). Key SDH driving the inequity in Zimbabwe's cholera outbreak included:

- Individual factors – no cholera immunity from previous exposure to cholera, weakened immune systems due to HIV and AIDS, and poor nutritional status
- Individual lifestyle factors – hand washing, sanitation, water consumption, food preparation, storage and consumption
- Social and community networks – consumption of food at funeral gatherings; traditional practices of preparing the dead for burial; practice of handshaking at funerals; history of recent travel to a cholera area; belonging to a sect which discourages seeking medical attention
- Living and working conditions – declining access to safe water and improved sanitation; daily water supply of less than 20 litres per day; use of water from a common container to wash hands after toilet use; storage of water in wide-mouth containers;
- General socio-economic, cultural and environmental factors – the prevailing situation in the country including collapse of the healthcare system (in itself a SDH). The poor economic environment also led to regular border travel to purchase basic commodities, leading to massive congestion at borders with sale of water and unsafe food.

In the 2005/6 Demographic Health Survey¹, the majority of households (78%) were found to have access to an improved source of drinking water (99% in urban areas and 67% in rural areas). Most households (87%) at that time did not treat their drinking water (78% in urban and 91% in rural areas). 40% of households had improved toilet facilities that were not shared with other households (58.5% in urban and 30.5% in rural areas), of which 19% flushed to a piped sewer system. However it is anticipated that the 2010 DHS, results currently pending, may demonstrate decreased access to

¹ Central Statistical Office (CSO) (Zimbabwe) and Macro International Inc. 2007. *Zimbabwe Demographic and Health Survey, 2005-2006*. Calverton, Maryland: CSO and Macro International Inc.

water and sanitation facilities, particularly in urban areas where breakdown in the water system was widespread in 2008/9. Addressing the water and sanitation issues were therefore a critical priority in managing the cholera outbreak. NOTE

Controlling the cholera outbreak was complicated by the fact that the outbreak occurred during a period of great socio-economic challenge to the country as a whole. Macroeconomic contextual factors being experienced at the onset of the outbreak included negative gross domestic product and massive inflation, with a severe and generalized lack of resources. Socio-political challenges included a recently disputed election with unresolved government status and sanctions against Zimbabwe. These combined factors contributed to a number of severe additional challenges for the country including high unemployment, brain drain of skilled health workers, food insecurity, shortages of basic commodities, reduced household incomes, transport failures, shortages of supplies and commodities, closure of many health facilities and progressive dilapidation of infrastructure including water and sewage systems).

As such, while the outbreak became known initially to the Ministry of Health and Child Welfare (MoHCW) as a health emergency, it was clear that controlling the outbreak and preventing ongoing spread represented a multi-sectoral challenge and would require the cooperation and collaboration of multiple stakeholders at all levels.

Planning

Following the declaration of a National Emergency by the Minister of Health and Child Welfare on December 6th (ref), a Cabinet level multi-sectoral task force was immediately established to coordinate the Government response to the situation. Chaired by the Ministry of Local Government and Public Works with the Civil Protection Unit as secretariat, this task force brought together high level leadership (including Ministers and Permanent Secretaries) to elucidate policy direction on the outbreak. Representation included:

- The Office of the President and Cabinet
- The Ministry of Health and Child Welfare
- The Ministry of Water Resources and Infrastructural Development



- The Ministry of Finance
- Ministry of Energy and Power Development
- Ministry of Information and Publicity
- Ministry of Home Affairs
- Ministry of Transport and Communications
- Ministry of Defense
- Ministry of Foreign Affairs

This was supported by a working party of officials and a command centre with various sub-committees to take forward the work. Unfortunately the work of the Task Force was limited by a generalized lack of resources to meet all of the identified needs. Several countries including Namibia, Botswana, South Africa, Zambia, China and Russia responded with donations in kind including IV fluids, bicycles and other commodities. But given the prevailing context in the country, many large donors were unable to provide funds directly to the Government of Zimbabwe.

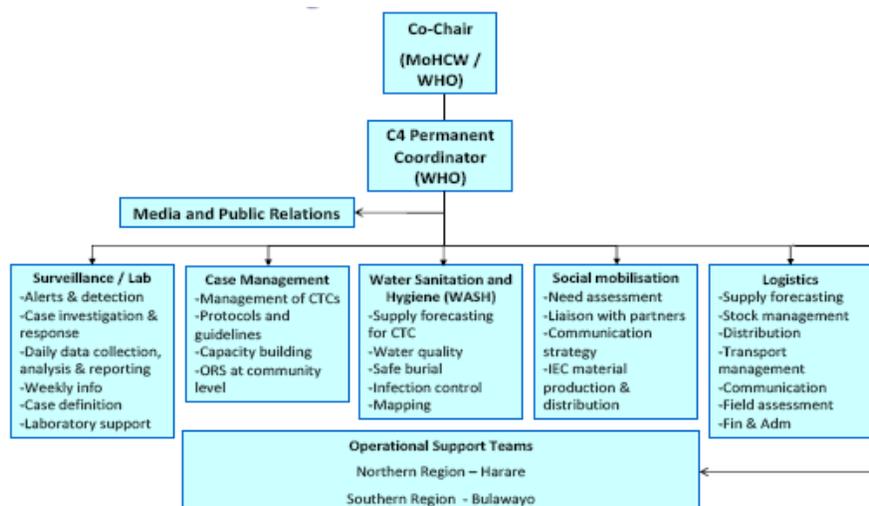
For this reason and after being officially approached by the Government of Zimbabwe, the World Health Organization simultaneously strengthened the United Nations Humanitarian “Cluster” system of responding to emergencies, with a Health Cluster chaired by WHO, a WASH (Water, Sanitation and Hygiene) Cluster chaired by UNICEF and formation of a new Logistics cluster chaired by WFP. A new entity, the “C4” (Cholera Command and Control Centre), co-chaired by the MOHCW and WHO, was established to facilitate the scaling up of interventions to fight cholera and coordinate the work of a very wide range of agencies and NGOs providing critical support for implementation of the response in the form of finance, equipment, manpower, medicines and medical sundries. The C4 also coordinated the inputs of key technical expertise including from the International Centre for Diarrheal Diseases Research in Bangladesh, the US Centers for Disease Control, and the Global Outbreak Alert and Response network. Resources were mobilized for the work of C4 and its partners from a variety of donors including the African Development Bank, AusAid, Government of Botswana, Central Emergency Response Fund, United Kingdom Department for International Development, ECHO, Government of Greece, Republic of Korea, SIDA, OFDA/USAID, World Vision Australia, Canada and the USA.



Discussions took place as to the location of the C4; ideally it would have been housed within the MoHCW offices. However at that time, the MOHCW did not have functional sanitation facilities and its location within a government security building would have led to difficulties in the necessary round-the-clock access. As such, a neutral location in the WHO Annexe (at one of the tertiary hospitals (Parirenyatwa) was selected and compromised upon as the location. While this meant that resources for C4 did not come directly to building capacity in the MOHCW, it also meant that the centre was able to function at full capacity as quickly and effectively as possible.

The core interventions decided upon were based around five main pillars identified within the C4 with the key objectives / tasks outlined within each pillar below:

Figure 2: Cholera Command and Control Centre Organization Structure



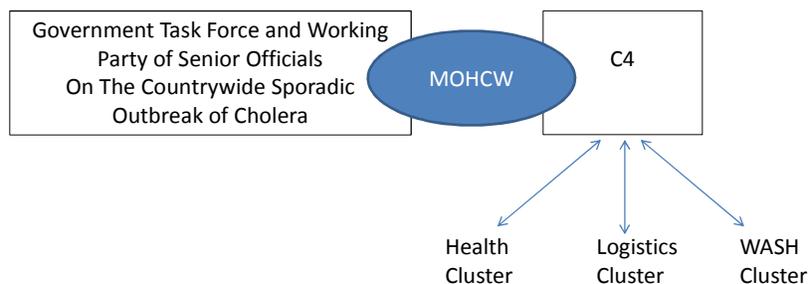
Source: Establishment of Cholera Command and Control Centre (C4) in Zimbabwe, Ministry of Health and Child Welfare, Zimbabwe and the World Health Organization. December 2008.

While the C4 originally operated at national level, it was also planned to have decentralized structures at provincial level to assist in lower level coordination. However the roll-out of the decentralized structures was delayed until March 2009. In the interim provincial and district levels

established or maintained their existing structures and plans for mobilizing resources and coordinating the response to an outbreak through revitalizing their disease control committees, civil protection committees or formation of new Cholera Action Committees (CACs) composed of all organizations operating at that level, who then developed local plans to manage the outbreak.

The MoHCW acted as the focal point between both the C4 and the multi-sectoral government task force to ensure coordination of all actions across a wide range of government and non-governmental agencies as shown in Figure 3 below. In spite of the challenges with coordination and the many different perspectives on what needed to be done, all stakeholders were united in a commonality of purpose and a determination to stop the avoidable loss of life from cholera that was afflicting the nation, under the leadership and coordination of the MOHCW with support of WHO and partners.

Figure 3: Central role of MoHCW in coordinating a multi-sectoral response



Implementation

A number of different processes were required to happen simultaneously to address the challenges and these are most simply described under the five thematic areas of the C4 response model, having been chosen by the MOHCW and WHO as the main strategic framework within which to fight the outbreak.

Surveillance/laboratory Data on the cholera outbreak was initially not readily available to the nation, although this changed following the declaration of cholera as a national emergency. Some partners had readily available resources (transport, fuel etc) to collect and transmit data, and so had more up-to-date data than the MOHCW. The C4 helped to capture this information and guide action. It was further noted that during the time period of the outbreak, the timeliness of data reports improved owing to support given to district health facilities through MOHCW and its partners. Key people involved in surveillance data were the nursing staff, MOHCW District Medical Officers, Provincial and District Health Information Officers, Principal Medical Directors, Environmental Health Officers, Environmental Health Technicians on motorbikes and the MOHCW Department of surveillance. The PMDs and DMOs were the official spokespersons for cholera outbreaks at their respective sites in order to reduce confusion and panic through uncoordinated cholera statistics. Data from CTCs, districts and provinces was used to develop weekly epidemiological bulletins that were posted on the WHO website. Stool samples were collected from selected patients to be sent for laboratory confirmation of cholera; however challenges with availability of transport media, physical transportation of specimens and generally reduced lab capacity presented an ongoing challenge.

Case management – CTCs Case management was spearheaded through development and dissemination to health facility and community level of an appropriate case definition and management protocols for different clinical scenarios. Up to 400 Cholera Treatment Centres/Units (CTCs/CTUs) were also established at hospitals, clinics and independent sites to increase access to care and reduce community deaths. These were set up by the MOHCW and with the support of partners and had infection control as a key protocol to be followed. At the onset, case management guidelines were outdated and there were no accompanying job aides. Some partners initially wanted to “do their own thing” but the C4 assisted in bringing all efforts into line under one set of updated treatment protocols. Initially essential items such as Oral Rehydration Solution, IV fluids and antibiotics were not adequate in quantity, although this improved throughout the response with the support of partners and these improvements saw a corresponding decrease in the CFR over time. The prevailing shortage of manpower was addressed by some of the absent health workers coming

back to work to assist with the crisis, although shortage of skilled manpower remained a challenge with many newly qualified Primary Care Nurses attempting to manage the caseload in spite of inadequate experience and training. Of note, some CTCs/CTUs had more workers than others due to differences in payments / per diem rates between donors and partners.

WASH The water and sanitation situation in the country was one of the major determinants of health driving the outbreak. As such the activities of the water sector were crucial in controlling the outbreak and preventing future outbreaks. The WASH Cluster benefitted from a very large number of over 100 partners who were engaged in assisting with water, sanitation and hygiene issues at all levels, especially at grassroots level. WASH cluster members were active in improvement of safe water supplies in schools and health facilities, assessing CTCs with Environmental Health Officers, training of EHTs in infection control within CTCs, provision of Non-Food Items (e.g. buckets, soap, aquatabs), assessing the availability of material for quality water testing, emergency water supply, and maintenance of a rapid response team in each province. A joint health-WASH social mobilization working group was formed with the goal of building capacity of individuals, families and communities to prevent cholera, launching a clean-up campaign in September 2009 in conjunction with the Ministry of Environment, “Celebrating a cholera free Zimbabwe, celebrating a litter-free Zimbabwe” and being addressed by the Deputy Prime Minister. Participatory Hygiene and Health Education programmes are ongoing, as a key intervention in preventing further outbreaks and takes time to effect behavior change at community level. A number of countries supported efforts to address water systems in Harare and in February 2009, UNICEF began donating water treatment chemicals to local authorities to enable safe water to be provided to residents. This support is expected to continue until early 2012 while the government mobilizes its own resources to meet this critical need.

Addressing the water situation in the country represents a longer term development programme, and many studies and proposals for addressing the water supply issue, particularly in urban areas, have been developed. However the main challenge in implementing these plans are resources, with the country continuing to struggle in raising finance for large capital projects and some major donors unable to provide direct budget support to government for such projects.

Social Mobilization Social mobilization interventions were conducted before, during and post outbreak, aimed at sensitizing communities on cholera, the action to be taken and the preventive measures to be put in place. A running message on radio and TV was put in place prior to the declaration of the emergency, and following the declaration the intensity of social mobilization increased, although this was eventually scaled down as the outbreak came under control. The President's Office was instrumental in securing free broadcast space in national media. A social mobilization committee was formed to provide technical guidance to the national cholera campaign. This committee included officers from the MOHCW Health Promotion Department, WHO, WASH cluster representatives, National Healthcare Trust amongst others, and reviewed IEC materials including radio messages, cellphone messages, TV and print media. The MOHCW conducted massive health education campaigns by sending teams into villages and schools, coordinated at local and provincial level. The MOHCW also wrote to the Education sector to make sure primary and secondary schools were responsive to necessary water and sanitation measures and able to make contact with healthworkers promptly as needed. The Ministries of Youth, Local Government and Education were trained at all levels on cholera issues, and campaigns targeting the community were continuous given their critical importance of sustained control.

Logistics Logistical support was crucial to the success of controlling the outbreak. Basic supplies including buckets and soap were inadequate in country. It was noted by partners that a major challenge was inequitable distribution of resources, with supplies being delivered to one specific CTC rather than the district hospital for onward equitable distribution to all CTCs in the vicinity. This partly resulted from transport and fuel shortages which resulted in resources being delivered to the most accessible areas, with distribution of supplies not always in line with severity of the outbreak in affected areas. Supplies were also frequently delayed in arriving from where they were being procured, as a result of suppliers being overwhelmed and having insufficient stocks. This was further complicated by the need to pay import duty if supplies not organized through MOHCW which raised the cost of supplies. However this was relieved following declaration of the emergency and adequate delivery of required supplies was seen later in the course of the outbreak. The arrival of donors also greatly improved the situation in terms of supplies. Logistics clusters were put in place at

decentralized levels with district level stakeholders meeting frequently in order to share responsibilities and avoid duplication of effort in managing logistics.

Resource allocation Resources were mobilized from many sources, starting with the Government of Zimbabwe/Reserve Bank of Zimbabwe, and followed by development partners, donors, bilateral agreements and NGOs. Donations were received both in “cash” and “in kind” in the form of commodities. All resources were managed in the first instance through NATPHARM, the national pharmaceutical storage and distribution facility. Logistical and financial support was provided to NATPHARM from C4, WFP, UNICEF and other partners such as MSF. The logistics arm of C4 decided what supplies needed to go to which location. Logisticians and epidemiologists worked together to create a “formula” to quantify supplies needed by each CTC based on number of cases and other epidemiological data.

COST Estimating the total cost of the cholera response is complex, given the large number of governments, donors and stakeholders involved, the mixture of contributions in cash and in kind, as well as the prolonged time period over three years. Contributions to the Health Cluster were estimated at 36.2 million USD in 2009², but this does not include non-health cluster actions including contribution of Zimbabwe and other governments. The total cost of the response is therefore expected to be much higher.

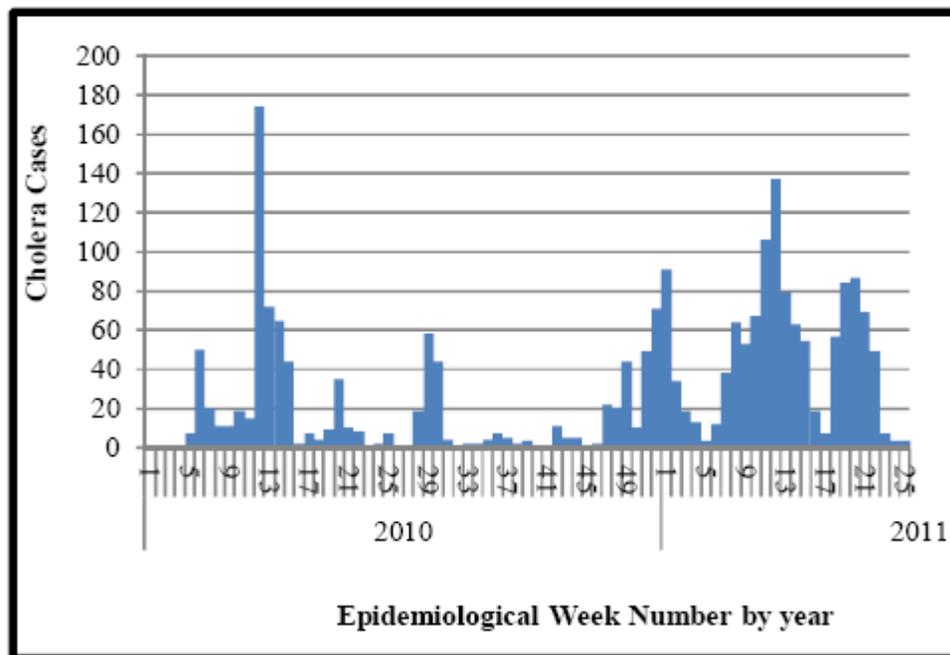
Evaluation of results and impacts, including on social determinants and health inequities

Monitoring of cholera cases continues through the routine MOHCW surveillance system and is supplemented into weekly epidemiological bulletins by the ongoing actions of the C4. Data from this system is used to inform areas where priority action is needed to rapidly contain any outbreaks, with deployment of MOHCW and Cluster teams to areas in need as identified through the data.

² Health Cluster Bulletin No.15 2009 MOHCW WHO

IMPACT 1: Reduction in Cholera cases

The combined multi-sectoral efforts described resulted, in the first instance, in control of the severe cholera outbreak which was declared officially over in August 2009. Although there have continued to be sporadic outbreaks, the multi-sectoral measures put in place since December 2009 have enabled the country to be in a continued state of readiness and have resulted in a dramatic reduction in both cholera cases and deaths across the country, with no cholera cases reporting in the last six weeks to the time of writing this report (August 2011).



Cholera Epidemic Curve, Zimbabwe, Week 5 2010 to week 26, 2011

Source: Zimbabwe Weekly Epidemiological Bulletin No.123, Epidemiological week 31; August 2011

This is thought to be the combined result of improved population awareness of cholera, improved behavior towards hygiene including hand washing and improved environment in terms of water and sanitation resulting in improved quality and quantity of water being provided to some areas of the population. However, the Case Fatality Rate remains high and this may be due to delays in patients with cholera seeking care, particularly amongst certain religious groups and unpredictability of



outbreak spots.

IMPACT 2: Improved state of readiness

The country has learned and evolved a great deal as a result of the severe cholera outbreak. It was clear that the health system was overwhelmed by the sheer scale of the outbreak at the onset, and many lessons have been learned and systems established at national and sub-national level to enable future response to disease outbreaks. This includes development of updated Integrated Disease Surveillance and Response (IDSR) guidelines; updated training modules for health workers; case management training for epidemic diarrhoeal diseases; Zimbabwe cholera control guidelines including guidelines on food hygiene; and training of Rapid Response Teams at district level.

IMPACT 3: Harmonised action by multiple stakeholders

There is now much greater harmonization of action across both government and non-governmental agencies, with all stakeholders using the same sets of guidelines under the leadership of the Department of Epidemiology and Disease Control in the MOHCW. Continued coordination is facilitated through the ongoing Cluster system, although its transition towards a more development-oriented model is an ongoing discussion.

IMPACT 4: Strengthening of the health system

The health system was strengthened as a result of the actions of the MOHCW, Health Cluster and other stakeholders, with improved medical and equipment supply to health institutions and an increase in community confidence with the health care system as the response to the outbreak progressed.

Documentation and evaluation of implementation During the implementation phase, the focus of documentation was mainly related to ensuring adequate and accurate surveillance of cases to inform the control response. This was managed through the MoHCW with the technical support of the surveillance arm of the C4. There was little emphasis on documentation of process and lessons learned at that time as the main emphasis was necessarily on controlling and containing the situation. However, once the acute crisis was under control, two main efforts at documentation were

made:

1. Vic Falls Report

In April 2009, the MOHCW, WHO, UNICEF and other stakeholders held a two day meeting to review the preparedness and control strategies seven months into the outbreak. This meeting reviewed strengths and weaknesses of the response so far, and made recommendations for ongoing action including a full evaluation of the Health Cluster going forwards.

2. Evaluation of the Health Cluster Response To the cholera outbreak in Zimbabwe

A review of the health cluster response was commissioned and undertaken mid-2009. The review was undertaken by a specialize evaluation unit of the University of Zimbabwe, in collaboration with the World Health Organization and MoHCW who facilitated access to necessary documents, information and key informants at all levels. The evaluation was partially funded through the United Kingdom Department for International Development.

3. Evaluation of the WASH Cluster response to the cholera outbreak in Zimbabwe

A review of the WASH Cluster response was carried out by CDC Atlanta.

Data on changes in health inequities is hard to identify within available documentation. Routine data on cholera cases and deaths is disaggregated by age and place of residence but not by sex, wealth quintile, educational level, occupational level or other markers of potential inequity. This in itself reveals the future importance of gathering data that specifically explores potential inequities through deeper exploration of the distribution of disease. Key social determinants of health in Zimbabwe's cholera epidemic relate to hygiene practices, access to safe water and sanitation, poverty and the functionality of the health system itself. The general socio-economic situation remains fragile, and while there have been improvements in the health system as a result of concerted efforts by the MOHCW and partners, the system remains weak in all pillars (human resources, health information, health financing, health service delivery, commodities and products). Funding for health from central government and private sector donors remains low, while disposable incomes remain poor.

Follow-up and lessons learned

A number of key facilitators and barriers were observed in the response:

Facilitating Factors In The Response	Barriers In The Response
<ul style="list-style-type: none"> • Convergence of purpose: all stakeholders united in their determination to avoid further loss of life • Changing of the political climate in February 2009 with the introduction of the Government of National Unity • Change of currency / dollarization to the US dollar – made logistical issues easier 	<ul style="list-style-type: none"> • The health system was at its weakest, and weak in every pillar, at the onset of the outbreak • Potential confusion with the large number of partners who had to be well coordinated • Political situation at the onset of the outbreak affecting communication, collaboration and funding • Community capacity, knowledge and awareness was low

The outbreak was declared over on July 26th 2009, but stakeholders remain on high alert to this day given the continued prevalence of predisposing factors in the social determinants of health. All relevant sectors continue working to prevent further outbreaks, in particular addressing the water and sanitation issues in which there has been an improvement over time, with increased supplies of clean water being provided across the country particularly in urban areas. The structures put in place to manage the severe cholera outbreak remain to this day in an effort to continue controlling cholera which remains a threat. However, there have been important developments and transitioning of the objectives and way work is done. For example:

The Ministry of Health and Child Welfare - The MOHCW continues with training in EPR, IDSR and Rapid Response Teams and ongoing social mobilization campaigns. The health system is being progressively strengthened following launch of the National Health Strategy 2009-2013, and resource mobilization through development and launch of the Health Sector Investment Case. Health workers benefit from a special retention scheme in an effort to retain the skilled workforce while longer term solutions to the brain-drain crisis are developed.

The Task Force on the nationwide sporadic outbreak of cholera - this group continues meeting

approximately every two weeks and has a particular focus on addressing the issues of water and sanitation. Work is at an advanced stage of transforming this task force into a standing committee for both planning and response, with work at an advanced stage on a policy, strategy and legislation for an enhanced Cabinet Committee For Disaster Risk Management. This will legislate for the standard response model used to control cholera, but will include an expanded platform in the command centre to enable inclusion of all stakeholders in the response (government departments, UN agencies, NGOs, private sector, churches, universities etc). This group has also been working hard, with Local Authorities and ZINWA (Zimbabwe National Water Authority) and relevant Ministries to improve the water and sanitation situation countrywide although there is a long way to go.

The C4 – The C4 continues to operate, but now functions mainly in support of surveillance of cases and support to MOHCW for rapid follow up of any outbreaks, with staffing being scaled down to three people. At the same time, plans are in progress to transfer all functions of C4 to the MOHCW within a purpose built Emergency Operations Centre with funding from ECHO, with C4 functions continuing during the transition phase to ensure no gap in surveillance or capacity to respond quickly to outbreaks as needed.

It should also be noted that the unprecedented scope of the outbreak required innovative response mechanisms be developed, and many of the tools and processes have already been shared at the international level (e.g. Zimbabwe's Cholera Control Guidelines were provided to Cameroon in 2010 to support them in their own cholera outbreak; the C4 model has been disseminated and adapted in a number of locations including Haiti).

While for now the cholera situation in the country is under control, future sustainability is dependent on successful national transition from emergency funding mode to a comprehensive development platform that ensures all social determinants of health driving disease outbreaks are addressed in a longer term, sustainable manner.

Key Lessons on Social Determinants of Health and cholera for Zimbabwe:

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- The Ministry of Health and Child Welfare must take the lead in coordinating a multi-sectoral response to disease outbreaks with social causes, and need to be mandated / supported to do so by the highest level of government in their stewardship role
- Responding to an outbreak requires addressing the health emergency at the same time as the determinants of health – stakeholders outside the health sector need to be identified, made aware of their responsibilities and given a central role in responding
- Without a strong, well responding health system including human resources for health, material supplies and community awareness raising, it is not possible to contain an epidemic
- The emergency became an opportunity to work towards better preparedness in responding to future outbreaks using a multi-sectoral approach and better coordination
- Data on health inequities and the social determinants of health needs to be systematically gathered and documented as part of the ongoing work of the MOHCW

Much of the information for this case study came from two key reports:

- Evaluation of the Health Cluster Response to the Cholera Outbreak in Zimbabwe, Centre for the Evaluation of Public Health Interventions (CEPHI), Department Of Community Medicine, University of Zimbabwe and the World Health Organization
- Meeting on preparedness, detection, alert and response strategy for outbreaks, 28 and 29 April 2009, Elephant Hills Hotel, Victoria Falls, Zimbabwe

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