Global Task Force on Cholera Control (GTFCC) Working Group on Case Management

Improving access to treatment for cholera: experience from the field

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Acronyms and abbreviations

AWD	acute watery diarrhoea
CFR	case fatality rate
CHAZ	Churches Health Association of Zambia
CHW	community health worker
CTC	cholera treatment centre
CTU	cholera treatment unit
DHA	district health authority
GTFCC	Global Task Force on Cholera Control
HAS	health surveillance assistant
IBS	indicator-based surveillance
IDP	internally displaced population
IDSR	Integrated Disease Surveillance and Response
IFRC	International Federation of Red Cross and Red Crescent Societies
MSF	Médécins sans Frontières
NCCP	national cholera control plan
NGO	non-governmental organization
OCV	oral cholera vaccine
ORP	oral rehydration point
ORS	oral rehydration solution
ORT	oral rehydration therapy
RDT	rapid diagnostic test
RRT	rapid response team
UN	United Nations
UNICEF	UN Children's Fund
US CDC	US Centers for Disease Control and Prevention
WASH	water, sanitation and hygiene
WHO	World Health Organization

Note to the reader

This report condenses discussions according to the subjects addressed, rather than attempting to provide a chronological summary. It addresses the themes emerging from wide-ranging discussions among all speakers, and does not necessarily imply consensus. Summaries of presentations and points made in discussion are presented as the opinions expressed; no judgement is implied as to their veracity or otherwise.

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Improving access to treatment for cholera: experience from the field

At the core of *Ending Cholera: a global roadmap to 2030* is the concept of national multi-year, multi-sectoral plans for long term control of cholera (NCPs). For case management, the primary objective of NCPs is to increase early access to effective treatment in order to reduce overall cholera deaths. This means ensuring effective treatment is available for patients as close to home as possible.

In this webinar, countries and partners presented some of the steps they are taking and programmes they are implementing to improve access to treatment for cholera patients.

Cholera case management: the Zambian experience

***Dr. Fred Kapaya**, National Cholera Program Coordinator*

Between 1977 and 2019, Zambia experienced 30 cholera outbreaks of varying magnitude of morbidity and mortality. Weaknesses in case management has mainly been due to lack of adequate preparedness and response, including issues such as: ignorance about the location and intensity of cholera hotspots and a failure to position medical supplies and consumables in those hotspots; inadequate skilled manpower; delayed health-seeking by those affected; inadequate laboratory sites for confirmation of cholera, with labs situated far from most hotspots; long distances between patients and cholera treatment centres, exacerbated by a lack of transport; and stigma.

In 2018, as well as cosponsoring World Health Assembly Resolution 71.4 to end cholera by 2030, Zambia adopted the bold goal of eliminating cholera nationally by 2025. To achieve this, Zambia's approach is aligned with the three axes of the Ending Cholera Roadmap: quick detection and quick response to contain outbreaks at an early stage; a multisectoral approach to prevent cholera in hotspots; and an effective mechanism of coordination for technical support, resource mobilization

and partnership at local and global levels. A multi-sectoral cholera elimination plan (NCEP) has been prepared, launched and disseminated.

A number of measures have been put in place to improve case management in accordance with these goals. These include high level leadership commitment with cholera control led from the office of the Vice President and the President also heavily involved in the fight. The NCEP provides overarching leadership and coordination for cholera control and step-by-step guidance on how to improve case management. A Cholera Case Management Technical Working Group and a technical focal point have been established, and a case management implementation plan with budget, activities and strict timelines has been prepared.

Following a multisectoral approach to cholera response, health systems have been strengthened to ensure the availability of adequate trained human resources. The Ministry of Health has been given special treasury authority to employ key staff; Rapid Response Teams (RRTs) have been set up in at national and subnational levels; cholera case management teams have been formed in each hotspot; and trainings on cholera detection and clinical management have been conducted (and are ongoing) for RRTs at national, provincial and district levels. Measures have been taken to ensure the availability of adequate equipment for effective management of cholera patients, including through a procurement plan and budget for equipment and supplies for cholera treatment centres in all hotspots. Transport—a significant barrier—has also been addressed, with plans to provide each cholera hotspot with at least one vehicle and two motorcycles and/or boats for cholera.

Community cholera case management has been strengthened in a number of ways. These include community participation in case management (case identification and management at household level); training, onsite mentorship and technical supervision of community health workers (CHWs) on preparation and use of oral rehydration solution (ORS); establishment of "Oral Rehydration Corners" at strategic points in communities; support of community based volunteers by partners including the Churches Health Association of Zambia (CHAZ), OXFAM, the Red Cross and UNICEF; door-to-door outreach work including giving ORS and sensitizing churches, markets and schools; and health promotion activities to enhance community case management through posters and brochures, TV and radio programmes and messaging through public addresses, drama, and adverts.

Work has been done to strengthen infrastructure and boost early access to effective patient care, including by planning and designing well-equipped, gender segregated cholera treatment facilities in all districts in the country; building prefabricated treatment facilities for hotspots; and identifying and renovating existing further structures as treatment facilities.

Moves have been made to secure emergency cholera supplies, prepositioning essential medical supplies and other consumables in all hotspots and supplying some with emergency cholera kits; establishing and maintaining buffer stocks of essential supplies at all health facilities at district and provincial levels; ensuring adequate emergency stocks at national level to replenish stocks at lower levels once exhausted; and ensuring that all health facilities have set up Oral Rehydration Points.

Laboratory testing and confirmation have been improved, with all 10 provincial hospitals and other general hospitals now able to do culture for cholera confirmation; laboratory staff trained in cholera culture; microbiology equipment installed; and quarterly technical support supervision provided to hotspot districts. This has been supplemented with improved courier facilities for sample referral to testing sites.

Early detection and reporting of cholera cases have been boosted by improved acute watery diarrhoea (AWD) surveillance, the designation of two surveillance officers per district, and the

training of further surveillance officers and community health workers in event- and community-based surveillance.

Despite all these measures and initiatives, challenges remain. Significant among these are the following:

- Inadequate partner support for cholera control
- A lack of transport for sample transportation, especially marine and motor vehicles
- Inadequate human resources
- Myths and misconceptions among members of the public that affect cholera case management, and poor health seeking behaviour
- Inadequate medical supplies for cholera case management
- A lack of transport to bring patients to treatment facilities, exacerbated by a poor road network: many roads are inaccessible by vehicle, especially in the rainy season, and some areas can only be accessed using expensive air or water transport.

Building Bridges: a community and branch based cholera preparedness approach

***Chris Brewer**, International Federation of Red Cross and Red Crescent Societies (IFRC) Africa Cholera Coordinator*

This preparedness approach aims to build bridges into communities and between sectors to control cholera. It was founded on the 2017 IFRC Africa Cholera Framework and after discussions with external partners. It is composed of three elements: access to oral rehydration therapy (ORT); transmission breaking water, sanitation and hygiene (WASH) interventions; and support for OCV campaigns at community level. It is founded on the unique strengths of the Red Cross/Red Crescent: the permanent presence of branches and the reach of community level volunteers.

This approach aims to resolve a number of perceived gaps and issues, including a lack of immediate access to ORT and trained personnel; the fact that first cases of cholera tend to go untreated or to be treated late; a lack of preparedness capacity in hotspots; the fact that scale up is often delayed when it is most needed; and a common lack of focused interventions to break transmission routes. It requires coordination between National Societies and governments, standardized kits and training, and cooperation with external partners.

Using this approach, 19 ORT trainers have already been trained in national societies; community volunteers in 20 branches of nine national societies have been trained to function as level 1 ORT Volunteers and level 2 oral rehydration point (ORP) operators; ORP kits and training have been standardized and training on their use has been undertaken (with government cooperation and participation); and the first standardized kits have been procured and distributed.

Ongoing work includes the prepositioning of further kits; country overviews of cholera preparedness carried out by the national societies to identify capacities and gaps; the development of ORT and ORP manuals and online training resources; and training in transmission interventions. In addition, small national contingency funds for mobilizations are being created. In the future, this will be bolstered by consolidation of and further advocacy for the model; collection of evidence from responses and real time evaluations; and development of oral cholera vaccine (OCV) training for volunteers.

Looking at specificcountry case studies, in Zambia two trainers have already been trained for

ongoing capacity building; volunteers in three branches have been trained as ORT volunteers and ORP operators; two further trainings are planned to cover five more branches; and two standard ORP kits have been sent to Zambia, with further funds provided to upgrade existing kits. In addition, a programme by the US Centres for Disease Control and Prevention (US CDC) will equip and train branch volunteers to implement transmission-breaking interventions in four branches.

In Malawi two trainers have been trained; volunteers in two branches have been trained; further training is planned in three more locations; and two standard ORP kits have been provided, with funds made available to upgrade 15 further existing kits. In addition, a US CDC programme will equip and train branch volunteers to implement transmission-breaking interventions, and Evidence Action is producing chlorine at branch and community level. In Malawi, work has been tailored to the national context. When occasional AWD cases occur outside cholera season, ORT volunteers diagnose, treat and refer them, then carry out awareness and preparedness work with the community and manage chlorine dispensing. As cholera season approaches, the frequency of messaging is increased, and communications approaches are checked with the District Health Authority (DHA), Health Surveillance Assistants (HSAs) and the branch. In limited outbreaks of AWD/cholera during cholera season, ORT volunteers diagnose, treat and refer cases and report case numbers to the DHA and the relevant branch. Should there be a significant increase in cases, ORT volunteers and HSAs request scale up; the DHA and the relevant branch agree on the operationalization of ORPs; and transmission intervention teams move into affected households and neighbourhoods.

With the bridging of sectors key to an effective response, transmission breaking needs to be focused on case clusters. Branch Emergency WASH Teams use line lists from health facilities, ORPs and ORTs to guide the location of interventions, and those interventions start with hygiene and disinfection support in “case households” before moving into neighbourhoods.

Approaches to improving access to cholera case management in humanitarian settings – the South Sudan experience

***Wamala Joseph Francis**, WHO, South Sudan*

South Sudan has suffered from years of conflict that have constrained social services including healthcare, education, provision of safe water, sanitation, and other development indices. In South Sudan relevant indicators for—among other things—health facility density, core health workforce density, basic use of improved water sources and basic use of improved sanitation facilities all favour endemic transmission of cholera. The most recent wave of cholera outbreaks between 2014 and 2017 occurred in the context of a protracted crisis that started in 2013, in which nearly 4 million people were displaced. In this period at least 28,676 cases and 644 deaths were reported. No cholera cases were confirmed in 2018 and 2019.

In 2016 and 2017, case fatality rates (CFRs) were highest in counties with poor access to health care (especially in populations living on islands and in cattle camps) and/or those affected by security issues, lack of ambulances and delayed initial responses to cholera. Some strategies were developed to address these issues, and these are included in ongoing cholera preparedness activities. These activities are based on a comprehensive response led by the national cholera taskforce, and use an integrated approach for cholera interventions that includes overall coordination and resource mobilization, surveillance and laboratory testing, case management, risk communication and community engagement, and optimizing access to WASH.

In this context, the objectives of cholera case management are: to ensure prompt access to

appropriate treatment to prevent cholera deaths by deploying adequate cholera treatment kits; ensuring cholera treatment facilities are available close to affected populations; using adapted case management protocols; training health workers on cholera case management; and empowering communities and households to initiate rehydration once cholera is suspected.

Strategies for Improving access to cholera case management include coordination of case management through multisectoral national and subnational taskforces; establishing a case management subcommittee charged with improving access to recommended case management; ongoing cholera preparedness activities; and establishment of a subcommittee structure chaired by government technical officers and co-chaired by partner agencies including WHO, UNICEF, Médécins sans Frontières (MSF), and other frontline health cluster partners. Ministry of Health RRTs have been established and include experts deployed to support case management, including by setting up cholera treatment facilities in government-controlled areas. Emergency response health cluster partners are deployed to support case management in opposition-controlled areas and locations with a "sub-optimal government presence." WHO Emergency Mobile Medical Teams support emergency responses to cholera and other public health emergencies, and comprise medical and public health officers, nurses, WASH officers and logisticians. These teams support cholera investigations, including through case management in locations with sub-optimal government and partner presence, where they are providers of last resort.

Routine primary health care partners have also been engaged to support case management for outbreaks in their respective counties, and emergency funds have been carved out of routine primary health care funding to support cholera control. UNICEF-contracted national non-governmental organizations (NGOs) operate ORPs and cholera treatment facilities to improve access to case management in affected populations, and international NGOs have set up further facilities.

Community health workers empower and engage communities to prevent cholera and identify and manage suspected cases. Cholera community case definitions have been distributed to facilitate early case identification at household level, and households have been educated and empowered to start cholera treatment at home, preparing and dispensing ORS immediately to people with AWD and ensuring that they continue drinking while travelling to nearest health facility, which they are advised to attend immediately. Households are trained to mix the standard and homemade oral ORS, and 3-5 ORS sachets are provided to each household during house-to-house visits.

Cholera case management is done at designated oral rehydration points (ORPs). These are set up close to affected areas to provide ready access to timely rehydration. ORPs primarily manage suspect cases with no or mild dehydration, and initiate treatment and refer suspect cases with severe dehydration to designated cholera treatment facilities. "ORS corners" are set up in affected areas without ORPs, and CHWs carry out active house-to-house case searches to identify and initiate rehydration for suspect cases. Mobile ORS teams access hard-to-reach locations (for example in nomadic communities, conflict-affected areas, among populations displaced to the bush or to secluded islands, and/or in settings affected by flooding).

Cholera case management is also done at designated cholera treatment centres or units (CTCs/CTUs). These are established as close as possible to the affected populations and zoned to manage cholera cases with no, some, and/or severe dehydration. They are made accessible to distant affected locations using an established ambulance network, with military ambulances deployed at night in insecure urban settings. These facilities have ample and well-trained staff including medical doctors, clinical officers, nurses, public health officers, and support staff. They can provide IV rehydration and antibiotics and can manage cholera complications and malnourished children with cholera.

There are a number of significant challenges to this work. Delays in deploying comprehensive initial responding teams lead to high CFR when new locations report outbreaks. Insecurity is always an issue. Poor physical access to treatment remains problematic, especially during the rainy season and floods, and there is general poor adherence to treatment protocols, including overuse of IV fluids even for patients with no or mild dehydration, and a shortage of supplies such as cholera beds.

Ways forward include improving access to basic healthcare services. There are ongoing preparedness activities for comprehensive cholera preparedness and control, with an updated plan and emergency funds and trained RRTs. Work is under way to preposition optimal cholera case management kits as part of cholera and flood preparedness planning, and an updated cholera outbreak manual that includes case management has been disseminated. Health care workers are being trained on cholera case management protocols as part of integrated disease surveillance and response (IDSR) training. There are also continued efforts to empower communities for prompt rehydration of new suspect cases.