

## A Retrospective Study on Cholera: Problematizing the Plight of the IDPs in Baidoa, Southwest State of Somalia

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### ABSTRACT

Cholera outbreaks occur recurrently in Baidoa, taking away the lives of so many people most of whom are children and the elderly. An earlier study on the subject discussed several aspects of the disease and its fatal consequences to the people, creating a debate over whether cholera mostly affected the large communities in the IDPs in Baidoa district and its environs or whether the host community constituted the largest number of the victims of the epidemic. To come to the bottom of the problem, this study was carried out to understand some of the possible reasons leading to outbreak of the epidemic as well as collect evidence from relevant medical personnel involved in the operation during the outbreak. The study utilizes the qualitative method to demonstrate some the reasons behind the 2017 cholera outbreak and the most affected among the people in Baidoa consisting of the host community and the IDPs. It used unstructured, open-ended interviews with health personnel consisting of medical doctors and nurses who had participated in the containment of the cholera outbreak in 2017. The results revealed that the epidemic struck the IDP communities harder than the host community in Baidoa due to factors identified as: overcrowding in IDP Camps, poor sanitation, lack of clean drinking water, lack of (or improper) latrines, faeces/ rubbish/garbage in the IDPs camps, and unpreparedness on the side of the authorities, among other causes.

**KEYWORDS:** Baidoa, Baydhabo, cholera, disease, health, IDPs.

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### I. INTRODUCTION

Somalia is among the poorest nations that are prone to epidemics. It has also been a failed state since 1991 in that even the regional and state administrations created over the past three decades exist and operate ineffectively, and remain unstable and unsustainable. Within that vicious social, political and economic environment came the devastation of the cholera epidemic of 2017 which spread fast. Baidoa district, which is in the Bay region of the Southwest State of Somalia, was one of the areas in the country that were hardest hit by the outbreak.

In a measure to contain the outbreak, the young administration of the Southwest State assigned Bayhaaw Hospital to be the referral institution for the admission and treatment of cholera patients, as there was not an existing disaster preparedness mechanism to deal with the epidemic. Coupled with this situation was the fact that a single hospital alone was not enough to deal with the vast number of cholera cases on the increase day after day. Yet, despite the government of the Southwest State of Somalia's effort to set up more health facilities in Baidoa, the administration did not have the capability to reach health centers in the surrounding

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villages due to financial and security problems. The pressure from those villages took a magnificent toll on the overall operation of dealing with the epidemic.

Prior to the outbreak of the 2017 cholera epidemic, Baidoa had a serious problem of internally displaced persons (IDPs) settled in camps in different parts of the district. As a result of the effects of recurrent floods, droughts, locust attacks, famine, joblessness and instability in other towns and regions neighboring Bay region, Baidoa district has become host to successive influxes of IDPs and the establishment of growing numbers of camps to shelter them. The increase in population and IDPs year after year since the civil war has

## **II. LITERATURE REVIEW**

### **Reviewing Cholera in Somalia**

The first cholera case was recorded in Somalia in 1970, immediately after the military regime of Mohamed Siad Barre came to power in a coup d'état in October 1969. Ever since that time, the epidemic has been recurrent. Since 1990, the largest outbreaks were reported in 1994-1996, 1999, 2003, 2007, 2011-2012 and 2016-2017 (UNICEF 2018). The situation becomes very serious in that large scale epidemics have increased over the past two decades, as was highlighted by UNICEF in its report titled Cholera Fact Sheet Somalia (UNICEF, 2018). According to the UNICEF report, "During 2012 and 2016-2018, epidemiological surveillance reported 112,736 suspected cholera cases." Out of this number, UNICEF confirms that "South Central Somalia accounted for 77% of all reported cholera cases." In more specific terms, the report acknowledges that within South Central area, "the regions of Banadir and Bay were the most affected with a combined 32.3% of all suspected cases during the near four-year period" the monitoring was conducted (UNICEF, 2018).

Although the report by the Task Force on cholera lays emphasis on the South-Central region, particularly the regions of Banadir and Bay, there have been cholera outbreaks in other parts of the country at various times over the years. However, the worst and largest cholera epidemic is believed to have occurred in the country in 2017. During this difficult period, the country has experienced a very serious situation in which, according to WHO:

78000 cases, including 1159 deaths (case fatality ratio=1.5) were reported from 16 regions. The outbreak reached its peak in April 2017 and gradually declined from June until August 2017, and only few sporadic suspected cases were recorded between October and November 2017 (WHO, Cholera-Somalia, 2018).

Data obtained from the records of the WHO, the organization that was among the agencies at the forefront in battling the numerous outbreaks of the cholera epidemic in Baidoa as well as in the entire country, shed more light on the subject by elaborating, "As of 30 July 2016, a total number of

caused the mass multiplication of the volume of garbage in the city amid an acute shortage of water and deplorable situation of the sanitation. The water from the Isha Spring (locally known as Isha Baydhabo) has turned to an ugly green color, developing very sickly odor. The rubbish from many parts of the city is dumped into the Spring and children from different parts of the district come to swim in the contaminated water. These factors as well as lack of effective authority to oversee the public health situation, has significantly taken a negative impact on the overall health and sanitation system of the society.

13,055 suspected cholera cases including 491 deaths (CFR 3.7%) have been reported in 25 districts in south and central regions of Somalia [which includes Bay region]. Of these, 6178 (47.3%) are female and 7549 (58%) are children below 5 years of age" (WHO, 2016).

At the end of August 2016, the WHO produced an alarming report that says: "As of 31 August 2016, a total number of 13453 suspected cases of cholera, including 496 deaths (case fatality rate 3.7%), have been reported in 25 districts in south and central regions of Somalia." While the inclusion of South Central is worrying because Bay region is usually placed at the core of the spread of the epidemic, the data provide more worrisome information regarding the breakdown of the victims. The report notes, "Of these, 6378 (47.5%) are female and 7791 (58%) are children below 5 years of age." The report attempts to draw a conclusive picture that most of the victims of the cholera outbreak identified in the South-Central area consist of women and children under the age of 5; thus, a hint that these are the most vulnerable categories of people to the epidemic. In terms of diagnosis to identify the epidemic and its nature, the report further highlights, "Of the 100 stool samples collected from different sites, 45 stool samples (45%) were tested positive for *Vibrio cholera* serotypes Inaba and Ogawa," (WHO, August 2016), hence confirming the seriousness of the situation and vulnerability of the categories of victims specified in the report.

### **Cholera as a Mayhem Since 1817**

Continuing its monitoring task of the epidemic, the WHO produced a monthly report of cholera outbreak updates in September 2016 which partly revealed that "As of September 2016, a cumulative number of 13598 [an increase of 145 in a month] acute watery diarrhea/cholera cases and 497 (case-fatality rate 3.64%) deaths have been reported in 25 districts. Of these, 6452 (47.5%) were women and 7884 (57.79%) were children under 5 years of age," (WHO, September 2016). From the statistical data recorded above, the epidemic has been affecting the residents of South-Central region of Somalia, including Bay region, on month-by-month basis. Subsequently, the data shows that despite the

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rise of the cases, the death rate was somehow low. Significantly, the WHO results indicate that there were efforts to contain the epidemic; otherwise, the death rate would have been much bigger than highlighted in the report.

It was in 2017 that the largest cholera epidemic occurred in Asia and Africa since the onset of the first recorded cases of the disease in 1817. In particular, Africa has hit hard with a very high loss of lives. As the WHO (September 2018, p. 1) indicates, “The year 2017 was historic for cholera in several ways: it marked 200 years since the onset of the first recognized cholera pandemic in 1817, while the current seventh pandemic continues as the longest ever recorded.” In fact, the report mentions how “Explosive, country-wide epidemics of cholera killed thousands of people in Yemen (2261), the Democratic Republic of the Congo (DRC) (1190) and Somalia (1007)” (Ibid.). Although “Yemen was the first country on record to report more than one million suspected cases in a single year,” it was not the only country that experienced the plague of the cholera outbreak. For instance, in sub-Saharan Africa, the DRC and Somalia had suspected cases of 131,604. The report highlights in detail that: “DRC (56190) and Somalia (75414) approached the highest numbers of cases in their recent history,” (Ibid).

### **Cholera Yet Unabated in 2017**

As early as the first few months of 2017, according to the Ministry of Health of the Federal Republic of Somalia (MOHFRS) and World Health Organization (WHO), the number of cholera cases in Somalia was increasing. In April 2017, Somalia had witnessed a significant upsurge of suspected cholera cases, recording new cases that reached up to 16612, including 249 related deaths (CFR 1.5%) for the month of April. During this particular month of April, there is confirmation that 28 out of 30 diagnostic stool samples collected from patients suspected of the deadly epidemic, tested positive for Vibrio cholera 01 (Serotype Ogawa). From the beginning of 2017, the cumulative number of suspected cases of cholera reported was estimated at 36066, out of which 697 lives were lost in case fatality rate of 1.9 %, (MOH & WHO, 2017).

According to the review of the literature presented here, and drawing upon the reports and studies by researchers and health experts, cholera is a major health problem in the world, with millions of cholera cases reported each year and thousands of deaths worldwide, particularly the outbreak of 2017. By September 2018, the WHO was providing evidence of the increase of cholera all over the world. As the international health authority, the World Health Organization presents, “Globally, in 2017, 71 countries provided data on cholera to WHO: 34 countries reported a total of 1, 227, 391 cases and 5,654 deaths (global case fatality rate (GFR):0.5% and 37 countries reported 0 cases for the year,” (WHO 2018, September, p.1). An analysis of the global statistics indicates

that Yemen alone “accounted for 84% of all suspected cases reported and for 41% of cholera attributed fatalities” (Ibid.).

Despite the statistical analysis supporting the increase, the data “complicates analysis of global temporal cholera trends that include 2017.” This complication is attributed to the fact that, “If Yemen is excluded, 194371 cases and 3388 deaths (GFR: 1.7%) were reported by Member States, which presents an increase of 45% in the number of cases and 33% in the number of deaths over the global totals in 2016 (132121 cases and 2420 deaths, GFR: 1.8%),” (WHO 2018). Apart from that, the evidence provided by the experts suggests that “The increase in 2017 is due largely to severe epidemics in DRC, Nigeria, Somalia and South Sudan,” (Ibid.). It is from the background of this situation of serious concern of the cholera epidemic in Somalia, particularly as mentioned of South and Central Somalia (with Baidoa being at the heart of the issue), that the next section aims to review briefly cholera in the district of Baidoa.

### **An Outlook of Cholera in Baidoa**

Many health actors and researchers have written about the situation of cholera endemic in Somalia. Among these includes Africa’s Voices Foundation (AVF) ([www.africavoices.org](http://www.africavoices.org)) which notes: “In 2017 Somalia experienced the worst cholera outbreak in five years, with over 79,000 cases and over 1,100 deaths, mainly among children under five years,” (Africa’s Voices Foundation, 2017). AVF further acknowledges Somalia’s efforts towards the fight against cholera, asserting: “Longitudinal analysis of case reports confirms that despite many years of public health interventions, cholera remains a recurring and major risk to vulnerable communities in the country.” The recurrence is a common knowledge in that the AVF states, “Cholera is endemic in Somalia and outbreaks occur during both the rainy and dry seasons,” (Ibid.). In a statement discussing the possible containment of the situation of the epidemic, the AVF suggests, “Rapid understanding of community perceptions of risk and how they correlate with the actual risk could help refine public health response efforts” (Ibid), particularly areas like Baidoa where the epidemic has been recurrent.

The district of Baidoa, which is the capital of Bay Region, has one of the highest cholera cases in Somalia. In particular, the cholera outbreak of 2017 is marked as the most devastating, as identified in the AVF report cited above, although new cases are identified time after time. As Reliefweb describes, “From January 2017 to April 2017 a total of 18126 cholera cases and 317 deaths have been reported in South West State of Somalia.” The Reliefweb further emphasizes how the figure it noted here “is more than 60% of all cholera cases reported in the country since the start of the outbreak” and how in fact “most of the cases were reported in Baidoa” (Reliefweb, 2017). According to the

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Ministry of Health of Somalia and World Health Organization, “a total of 2691 [acute watery diarrhea] AWD/Cholera cases and 22 deaths (CFR0.8%) were reported during week 18 (1<sup>st</sup>-7<sup>th</sup> May 2017) in 44 districts in 15 regions,” (MOH & WHO, 2017, p. 1). As observed from available data, these cases were mostly reported in Baidoa district in Bay region, South- West State, Somalia (Reliefweb, 2017).

In a very recent report, the World Health Organization (WHO) reveals, “From January 2020 till the end of August 2020 the total number of suspected cholera cases registered at Bay region stands at 554 cases” (WHO, 2020). Most of these cases were from inside Baidoa district, including Baidoa city and IDP camps and outlying villages

### **III. RESEARCH METHOD**

This is a retrospective study that observes the outbreak of the 2017 cholera epidemic in Baidoa and builds on a previous study by Abdinor et al. (2021). The methodological approach the study used is the qualitative case study (QCS) method of research as discussed in Gerring (2007), Creswell (2014), and Eno & Dammak (2014). According to Boblin et al. (2013, p. 1268) discussing the works of QCS gurus like Yin (2009), Stake (1995, 2005), and Merriam (1988), “the case study approach allows for a holistic understanding of a phenomenon within real-life contexts from the perspective of those involved.” The preceding description of the scholars qualifies the respondents in this study as appropriate participants due to the relevance of their experience of the cholera phenomenon under discussion here. Moreover, the case study (CS) method was utilized to further illuminate on the complexities underlying the factor/s being studied (Boblin et al. 2013; Stake 1995).

#### **Data Collection**

The study used two unstructured, open-ended interview questions in which each of the respondents answered to the same two questions to give every participant equal opportunity to express his/her views of the matter under investigation. To capture a real picture of the situation from the right informants, the study chose a design of purposive sampling thereby collecting data from 20 medical personnel with good experience of the cholera outbreaks in Baidoa, particularly the epidemic that struck the district in 2017. As Charmaz explains, “Qualitative interviewing provides an open-ended, in-depth exploration of an aspect of life about which the interviewee has substantial experience, often combined with considerable insight” (Charmaz, 2008, p. 29). Data was collected in the presence of at least two members of the research team.

Interviews were conducted separately and after appointments were fixed at the convenience of both the researchers and respondents. While a team member was assigned to pose the questions to an interviewee, the other

considered to be part of Baidoa district. The first suspected cholera cases of 2020 were admitted at Bay Regional Hospital and Bayhaaw Hospital; however, after confirmation of positive test for cholera, the cases were referred exclusively to Bayhaaw Hospital, the health facility where the administration of the Southwest State of Somalia designated to operate as the Cholera Treatment Center (CTC). Interestingly, and comparative to the WHO report, the Ministry of Health of the Federal Republic of Somalia issued a detailed report that during the same period of January 2020 up to the end of August 2020, in Baidoa district alone, “A total of 577 cholera cases [23 cases more than the figure by the WHO] including 3 deaths (CFR 0.5%) have been reported between week 22 and 34 of which 269 (47% are aged 2 years and below” (MOH, 2020).

member/s would write down the responses. The dominant Somali Maay language indigenous to the local community was the medium, while the Somali Maxaa language or English was used simultaneously to transcribe the responses. After the day’s scheduled interview was conducted, the members would meet to compare and discuss data and then write the final draft in English. Data was then saved in a computer for safe custody.

#### **Inclusion and Exclusion Criteria**

Unlike a previous study by Abdinor et al. (2021), which surveyed perceptions of participants from targeted hospitals, the current study considered its inclusion process based on two criteria: (1) The study considered inclusion of qualified medical personnel with a minimum of a post-secondary diploma in a field of health science; (2) The study accepted inclusion for medical professional; who participated at least in the fight against the 2017 cholera outbreak or at any other cholera epidemic in the district. Thus, the study excluded from participation any other medical staff short of the criteria provided. By following these two criteria as standard, the study aimed to maintain good validity of the data through human sources with real experience of the subject matter.

#### **Sample size**

Purposive sampling was used to select 10 medical doctors and 10 nurses known to some members of the research team. Selection was based on participation in operations involving containment of cholera outbreaks in Baidoa, particularly the 2017 epidemic.

#### **Data analysis**

Although basically the study adheres to the qualitative approach, it produces the results by categorization of the responses in numerical display on frequencies and percentages in their thematic arrangement; thus, qualitative data presented in quantitative analysis (Srnrka & Koeszegi 2007; Mertens 2005; ACAPS 2012) Accordingly, coding was used to identify each opinion category in terms of categories

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of responses returned. Percentages were then used that were derived from the frequencies of the responses.

In more methodological terms, the study invokes Abdi Kusow’s principle of triangulation as it has no intention of claiming “that those included in the study are

representative of all [the medical/health personnel working in Baidoa].” Instead, it emphasizes “the fact that the purpose of this study is not to provide a statistical representativeness [which subsequently makes] the issue of statistical representativeness [...] moot,” (Kusow (1998:53).

### IV. ANALYSIS AND DISCUSSION

Using two questions, the study investigated facts surrounding the cholera outbreak of 2017 in Baidoa district. It explored the situation by asking two open-ended questions. The results are presented below in tables. However, the respondents’ answers during the interview are presented in frequencies and percentages as well as in textual narrative

(ACAPS 2012, p. 9; Srnka & Koeszegi 2007; Mertens 2005; Creswell & Plano Clark 2017 ).

**Question 1:** On whether majority of the 2017 cholera victims came from the IDPs camps or the host community in Baidoa District:

**Table 1: Majority of the victims of cholera**

No. of respondents	Groups	%
16	IDPs	80%
2	Host community	10%
1	Not sure	5%
1	Both communities	5%

Seeking comparative opinions regarding the majority of the victims of cholera in the District of Baidoa, the respondents replied to the question asking where most cholera cases came from and offered their responses as indicated in Table 1. They expressed unanimously at 100%, that majority of the victims of cholera as they witnessed in 2017 are the IDPs. Although this is the perception of the personnel involved in the cholera operation, it cannot be treated as mere anecdotal due to the lack of recorded statistical evidence. One reason why the respondents’ perception is uniform is based on the general observation or the wider societal view most people have about the IDPs as communities too poor in health and sanitation issues—as we expressed also above in the Literature Review chapter

quoting the World Health Organization (WHO 2017) and Médecins Sans Frontières (MSF 2020).

We need to note here that although 100% of the informants agree that the IDPs make the majority of the cholera victims; it does not mean that the host community, residents of Baidoa, was not affected by the endemic. Therefore, the high rate of IDP victims of cholera in 2017, as mentioned by the respondents, is a fact; although that does not rule out the very many residents of Baidoa who suffered in one way or another as a result of the epidemic. The next question is set to give us further detail on the reason why the IDPs make the majority of the victims of the 2017 cholera outbreak.

**Question 2:** Reasons why this group consists of most of the victims of the cholera epidemic:

**Table 2:**

Respondents’ answers	Frequency	Percentage
Overcrowding in IDP Camps	18	90%
Poor sanitation	20	100%
Lack of clean/drinking water	20	100%
Lack of/improper latrines	17	85%
Faeces/ rubbish/garbage in the IDPs	15	75%
Unpreparedness	19	95%
No preventive measures	15	95%
Lack of community awareness on cholera	14	70%
Carelessness of the host community	10	50%
Inadequate facilities	13	65%
Insufficient training	15	75%

When the respondents were asked to mention reasons why the group (IDPs), as mentioned in Question 2,

constitutes the majority of the victims, unanimously all 20 respondents gave similar answers as given below. The

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findings of the study, as demonstrated in Table 2, show that the respondents had a 100% response rate to each of the two causes of “poor sanitation” and “lack of clean water” for human consumption. Comparatively, “overcrowding in the IDP camps” was noted as a significant cause by 90% of the respondents, which is only 5% below “unpreparedness” which scored 95% as being among the contributors or causes of cholera. Among other contributors, “unavailability” or “absence” of latrines is rated as 85%, “rubbish, garbage, faeces” were mentioned by 75% of the interviewees as being among the problems attributed to the cholera outbreak, falling at par with “insufficient training” which similarly stands at 75% and therefore above “inadequate facilities” with 65% and “carelessness of the host community” 50% and the lowest; “lack of community awareness” 70%, against “lack of proper latrines” 85%, and absence “...preventive measures” has been identified by 95% as being among the main contributors to outbreak.

The reason why cholera mostly affects the communities in the IDPs more than the host community is that their shelters (deplorable and unfit to live in) are very close to each other, with some of the respondents claiming “toilets and latrines are not there.” And where these facilities exist, “they are improperly located” because “latrines are not far from the tents where the IDP families sleep.” A closer look at the data reveals how the IDPs suffer from unavailability of water—not to talk about clean drinking water, a necessity for both human consumption and sanitation. In particular, the

high frequency of “lack of clean water” as a major cause and contributor to the outbreak of cholera suggests the nature of the sufferance the IDPs undergo, although a relatively large number of the host community shares the same difficult experience—as unhealthy or unhygienic water is widely consumed for drinking, particularly during the dry season.

As the findings suggest, interviewed medical personnel confirm unanimously that these problems are attributed to have played a major role in the outbreak in 2017 that mostly devastated the populations in the IDP camps. Mention is to be made here that, despite the IDPs constituting a majority of the victims, as an earlier study by Abdinor et al. (2021) confirmed, poor members of the host community, namely residents of Baidoa city and environs covering the district geographically, where the Isha Spring or Isha Valley flows, share the problem in common with the IDP communities hosted in the various camps in the district. The use of contaminated water, as some of the respondents highlighted, occurs due to the victims’ inability to access clean water as they are more often than not unable to afford the resources needed to purchase clean water. So, apart from the IDPs, these low-income residents are among those who are very likely affected by the epidemic due to their poor living condition which is not any better than that of the IDPs—hence the accusation “carelessness of the host community” as was mentioned by a section of the interviewees.

## **V. CONCLUSION AND RECOMMENDATIONS**

### **Conclusion**

This study tasked itself to investigate three phenomena related to the outbreak of cholera in the District of Baidoa. First, it determined that the group most likely affected by the cholera outbreak is the communities settled in the IDPs in comparison with the host community in the District of Baidoa. Secondly, it demonstrated the factors and contributors behind the IDPs susceptibility to the cholera epidemic. The results further identify multiple contributors to the problem including overcrowding in IDP Camps, Faseses/rubbish/garbage in the IDPs, unpreparedness, Lack of clean water, Inadequate facilities, Poor sanitation, Lack of/improper latrines, Carelessness of the host community, lack of preventive strategies, insufficient training, and lack of community awareness on cholera. The results bear a degree of validity and reliability considering the fact that the respondents were composed of a sample selected among qualified medical personnel with good knowledge of the trends of the cholera epidemic within Somali society as well as professionals who have experienced at least the nature of the 2017 cholera outbreak that struck Baidoa District and its environs.

### **Recommendations**

Based on the factors presented throughout the sections, the study recommends the following:

1. The health authority of the Southwest State to improve the deplorable situation of the IDP camps housing the IDPs;
2. The health authorities and local and international partners to plan a durable solution to the IDPs problem;
3. Hosts (Baidoa residents) and IDPs to form a joint health committee to create awareness on hygiene and sanitation to improve the health situation of all;
4. Community Based Organizations (CBOs), jointly with the health authority, to conduct health and sanitation awareness campaigns;
5. Southwest health authority to establish active disaster preparedness committee that can deal with an outbreak effectively at any time;
6. Health authority to engage higher learning institutions to conduct/participate in fieldworks for the promotion of health awareness exercises;
7. Health authority to set up cholera diagnosis facility and train staff to develop skills in diagnostic work.

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