Responding to the cholera pandemic in Budiriro Township: Implications for disaster management practices.

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By

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The undersigned certify that they have read and recommended to Midlands State University for acceptance a dissertation entitled, **"Responding to the Cholera Pandemic in Budiriro Township: Implications for Disaster Management Practices"** submitted by Mahuntse Samuel Lisenga in partial fulfilment of the Master of Social Work-Developmental Track in the Faculty of Social Sciences.

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DECLARATION

I **Samuel Lisenga Mahuntse** (R186809V) declare that this dissertation is my own original work and has never been submitted to any institution for academic examination purposes or for publication. I further declare that all other people's work cited is properly acknowledged and referenced. The work has been subjected to the University's anti-plagiarism check and it passed.

..... **.....**

Samuel Lisenga Mahuntse **Date**

ABSTRACT

The cholera pandemic has become endemic in Zimbabwe and social work research in this area remains limited. Available research highlights that cholera response has been more medical and remedial in approach hence the social issues remain largely unattended to which creates an urgent need for wider research in this area for better disaster management. Against this backdrop, the goal of the study was to explore the response to the 2018 cholera pandemic in Budiriro, a township in Harare, and its implications for disaster management within the Zimbabwean context. A case study research design as the research's guiding design. Data was collected from a sample of 25 participants and 4 key informants who were selected using purposive sampling. In-depth interviewing was used to collect data from the participants and semi-structured interview schedules were used as data collection instruments. Thematic analysis was used to analyse data. It was evident from the findings of the study that the strategies used to respond to cholera were largely effective but lacked a preventative focus. The findings also pointed to a number of challenges faced by stakeholders during the response which then compromised the efficacy of strategies used to combat cholera. The researcher then made recommendations in line with the study questions and among the recommendations, it was noted that this study will contribute to a general understanding of cholera response strategies and its efficacy. In addition, the study findings may help expose the challenges associated with cholera response and that the insights gleaned from this study may be used to inform policy, practice in settings where social workers practice disaster response and management as well as inform areas of future research.

Key words: *Cholera, cholera response, disaster preparedness, social work*

DEDICATION

To all those who perished from cholera and typhoid between 2018 and 2019 from the cholera outbreak in Zimbabwe, this work is dedicated to you. This study is also a special dedication to cholera survivors and their families and to the dedicated disaster management teams in Zimbabwe and beyond.

LIST OF ACRONYMS AND ABBREVIATIONS

AIDS	Acquired Immuno Deficiency Syndrome
CFR	Cholera Fatality Rate
CP	Community Participant
CPU	Civil Protection Unit
DDF	District Development Fund
DRR	Disaster Risk Reduction
HIV	Human Immuno Virus
IEC	Information Education and Communication
MDCA	Movement for Democratic Change Alliance
MoHC	Ministry of Health and Child Care
MoHCW	Ministry of Health and Child Welfare
M and E	Monitoring and Evaluation
NAC	National Action Committee
NGO	Non-Governmental Organisations
NFI	Non Food Items
OPC	Office of the President
PAR	Pressure and Release
SADC	Southern African Development Committee
SP	Stakeholders Participant
USA	United States of America
UN	United Nations
UNICEF	United Nations Children's Emergency Fund
WHO	World Health Organisation

ZANU PF Zimbabwe African National Union Patriotic Front

ZINWA Zimbabwe Water Authority

ZRP Zimbabwe Republic Police

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CHAPTER 1: INTRODUCTION AND BACKGROUND TO THE STUDY

1.1.Introduction

The first chapter gives an overall introduction and background to the study. The research title, research question and research objectives are stated. In addition, the chapter explores the research problem through a detailed statement of the problem. The significance of the study is provided and at the end of the chapter the theoretical framework of the study is also explored.

1.2.Background of the study

Cholera remains a major trigger of morbidity and mortality the world over (Phelps, M., Linnet Perner, M., Pitzer, E, V., Andreasen, V., Jensen, K, M., Simonsen, L *et al.* 2018). Cholera is estimated by the World Health Organisation as a disease killing about 100, 000 to 130, 000 people a year globally (UNICEF, 2011; WHO, 2010; Kazaji, 2010). In addition, about three to five million cases are reported in a year globally (UNICEF, 2011). The cholera epidemic is dreaded for its quick and extensive spread affecting many people in many areas (Merrill, 2017). Cholera across the world is associated with overcrowding, poor sanitation, poor hygiene as well as poor health and medical delivery system (Merrill, 2017). In addition, it has been classified as a water borne disease with contaminated water being considered as the major source of Cholera (Bhundari, 2016).

The world history of cholera indicates that the first pandemic was recorded in 1817 to 1823 along the Granges River in India but later spread to other countries such as Japan, China, Madagascar, Middle East and South-east Asia (Korta and Gessler, 2014). The pandemic continued to ensue in India as the epicentre with the second pandemic recorded between the years 1829 to 1849, the third pandemic was recorded in 1852 to 1859, the fifth up to the seventh continued to occur in India especially in the Bengal region but spreading to Europe and other areas killing more than 200 000 people in Russia and almost 90 000 people in Japan (Korta and Gessler, 2014).

In Africa, sub-Saharan Africa is the most affected with cases of Cholera being reported in countries such as South Sudan, Uganda, South Africa, Mozambique, Zambia, Botswana and Zimbabwe almost annually or at an interval of 3 to 5 years (Abubakar, A., Bwire, G., Azman, A.S., Bouhenia, M., Deng, L.L., Wamala, J.F., Rumunu, J., Kagirita, A., Rauzier,J., Grout, L., Martin, S., Orach, C.G., Luquero, F.J., Quilici, M.L *et al.* 2018; Kazaji, 2015). Cholera in Zimbabwe has, in the recent past and the just contained 2018 to 2019 cholera outbreak in Budiriro, become more frequent and more fatal than before (Mason, 2009). The increased

frequency has also been accompanied by worsened severity with more than 88 834 cases reported in the 2008-2009 outbreak by March 2009 (Mintz and Guerrant, 2009).

Recent studies on the Zimbabwean outbreak of cholera in 2008 to 2009 indicate that by the time the pandemic was declared officially over, more than 4 287 were reported dead whilst the reported cases stood slightly below a 100 000 mark with 98 585 cases reported (Cuneo, Sollom, and Beyre, 2017). Cholera outbreak has been confined to cities and towns but in recent years it has become an urban phenomenon with Harare being the worst hit although all provinces did record cases in their cities and some sections of their rural areas. The outbreak used to be contained in a shorter space of time but now due to a decade-and-half of economic melt-down which resulted in a broken down health system, the country's response to cholera has been affected dismally (Watyoka, 2016).

Factors contributing to the spread of cholera in Harare and other major cities in sub-Saharan Africa include, but are not limited to (Pande *et al*. 2018; Chirisa *et al*. 2015):

(a) Inadequacy of clean and safe drinking water for people

(b) Collapse of the waste management system

(c) Poor water supply and sanitation systems of cities and towns

(d) Open defecation.

One notes the worrying trend whereby cholera has become a permanent feature of our cities and towns in sub-Saharan Africa. In addition, the pandemic is threatening the collapse of an already ailing economy as its containment demands both human and financial resources normally not budgeted for in the national budget. Whereas the world has made significant strides in eliminating the cholera pandemic as back as the end of the 19th century, Africa remains plagued by the cholera pandemic on a more regular intervals and leaving an unpleasant trail of death of thousands of people and a lot more are left strained socially and –economically (Phelps *et al*. 2018). Against this background, this study explores the responses to the cholera pandemic that happened in Budiriro in 2018 focusing largely on the implications of the findings on disaster management practices in the country.

1.3.Statement of the problem

Cholera epidemic in recent years and the just contained 2018 outbreak in Budiriro Township have gradually become more fatal than before. Cholera has not only increased its lethality but its regularity and severity (Mason, 2009). In addition, cholera has been known to be a

phenomenon of the towns and communities near borders such as the Zimbabwe and Mozambique border, the Zambia and Zimbabwe border and the South Africa and Zimbabwe border but it has, in recent years proved to be a permanent feature of townships in the Harare metropolitan province. In fact, Harare is reported to have the highest numbers of cholera cases in Zimbabwe (Mason, 2009). Large cities in Africa have been characterised as hubs of cholera transmission, Harare included (Abubakar *et al*. 2018). The impact of cholera outbreaks on both the economy and the people is too huge to bear let alone ignore (Chipare, 2010). In most European countries and some sections of Asia, they last experienced fatal cholera outbreaks in the 19th century yet in sub-Saharan Africa, it is on the increase in the 21st century (Mason, 2009).

It is worrying that despite the increased frequency of cholera outbreaks in Zimbabwe, this area remains under-studied. Although a significant number of studies were done for the 2006 and 2008 cholera outbreaks, the recent 2018 outbreak remains largely understudied. Studies done in the past are more focused on addressing scientific concerns around cholera such as modes of transmission, causes, treatment and symptoms, leaving out the socio-political and economic worldviews of the epidemic (Arvidson, 2018; Christie, 1987; WHO, 2019). This has also left out the voices of the affected people within the cholera studies, hence the need to carry out studies which put the affected people at the fore of socially constructing their understanding of the epidemic and ensuing interventions by outsiders (NGOs, Government departments, UN agencies, private sector). As such this study focuses on investigating disaster response on cholera in Budiriro and thus, bring about a social perspective to disaster management in Zimbabwe because this area has been neglected, yet it is very central to social work.

1.4.Significance of the study

By undertaking this study on the cholera pandemic that largely affected Budiriro Township, government departments, academics and NGOs can use the findings when making interventions in Harare's Townships which may be hit by the cholera epidemic in the near future. Given the limited number of past studies in the area in Zimbabwe, I expect the study to contribute immensely into the post-cholera outbreak debates and to shape discourses around cholera response strategies, lessons learnt and best practices. This ultimately is likely to create a more equipped disaster management system for the country. The study is relevant and important at all levels; household, community and at policy level. At household level they may become more aware of their own perceptions about the impact of cholera pandemic to their

families. In addition, the study may help the affected households to reflect on the external support they received hence it is likely going to act as a feedback mechanism to disaster managers on what the affected population make of the disaster interventions rolled out in Budiriro Township. At policy level, it may help policy makers to come up with evidence based cholera response strategies for Harare's high density suburbs which are mainly the epicentres of the outbreak.

1.5.Research objectives

This study was based on the following objectives;

- To explore community perspectives on the efficacy of the strategies used to combat the cholera outbreak in Budiriro, Harare
- To explore challenges experienced by stakeholders in responding to the cholera epidemic in Budiriro, Harare
- To examine the disaster management lessons that can be gleaned from the stakeholders' experiences in responding to the Budiriro cholera epidemic

1.6.Research questions

Major research question

What are the disaster management implications of urban cholera response?

Sub questions

The following sub questions guided the study;

- What are the community perspectives about the efficacy of the strategies used to combat cholera outbreak?
- What are the challenges experienced by stakeholders in responding to the cholera epidemic in Budiriro Township?
- What are the disaster management lessons that can be gleaned from the stakeholders experiences in responding to the Budiriro epidemic?

1.7.Organisation of the report

Chapter One: Chapter one introduces the study. The chapter further focuses on the background to the study, the problem statement research objectives and research questions. In addition, the chapter provides the delimitations and limitations of the study.

Chapter Two: Focuses on reviewing literature related to the study questions which describes cholera response and disaster management, as well as the conceptual framework associated with disaster management.

Chapter Three: It looks at the research methodology of the study. This comprises of a description of the research approach, research design, data collection methods, data analysis methods, sampling procedures and the ethical considerations associated with the study.

Chapter Four: Provides a presentation and in-depth discussion of findings that emerged from the study.

Chapter Five: Summarises the major findings and the proposed recommendations emanating from the study.

1.9 Chapter summary

The chapter extensively introduced the essential components of the study, covering the research title, research objectives and research questions. Furthermore, the significance of the study was found to evolve around its probability to help policy makers and disaster risk reduction and disaster management practitioners to reflect on the current strategies and glean lessons from the study findings for better strategies. In addition, at household level the significance of the study as presented by the chapter centred on the probability of households using the research as a healing process and an opportunity to empty their unpleasant experiences through having conversations with the researcher during the interviews. The chapter also highlighted the limitations of the study as largely associated with resources such as money and time, whilst the delimitations of the study were also dealt with.

CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

This chapter locates the niche of the study within the gaps of existing literature through an extensive review of various sources. An overview of cholera as an epidemic including its history, signs and symptoms, mode of transmission and its vicious mortality and morbidity will be provided. The global, regional and local trends and issues about the cholera epidemic are extensively reviewed through the discussion of a wide range of literature which include, among other things, academic journal articles, books and online sources. Literature relating to the concept of disaster risk reduction, disaster risk management and disaster management is also reviewed in the chapter. Moreover, the chapter also explores the role of social work in disaster risk reduction and disaster management especially the cholera epidemic.

2.2. Theoretical framework: a conceptual framework for understanding cholera response and disaster management practice.

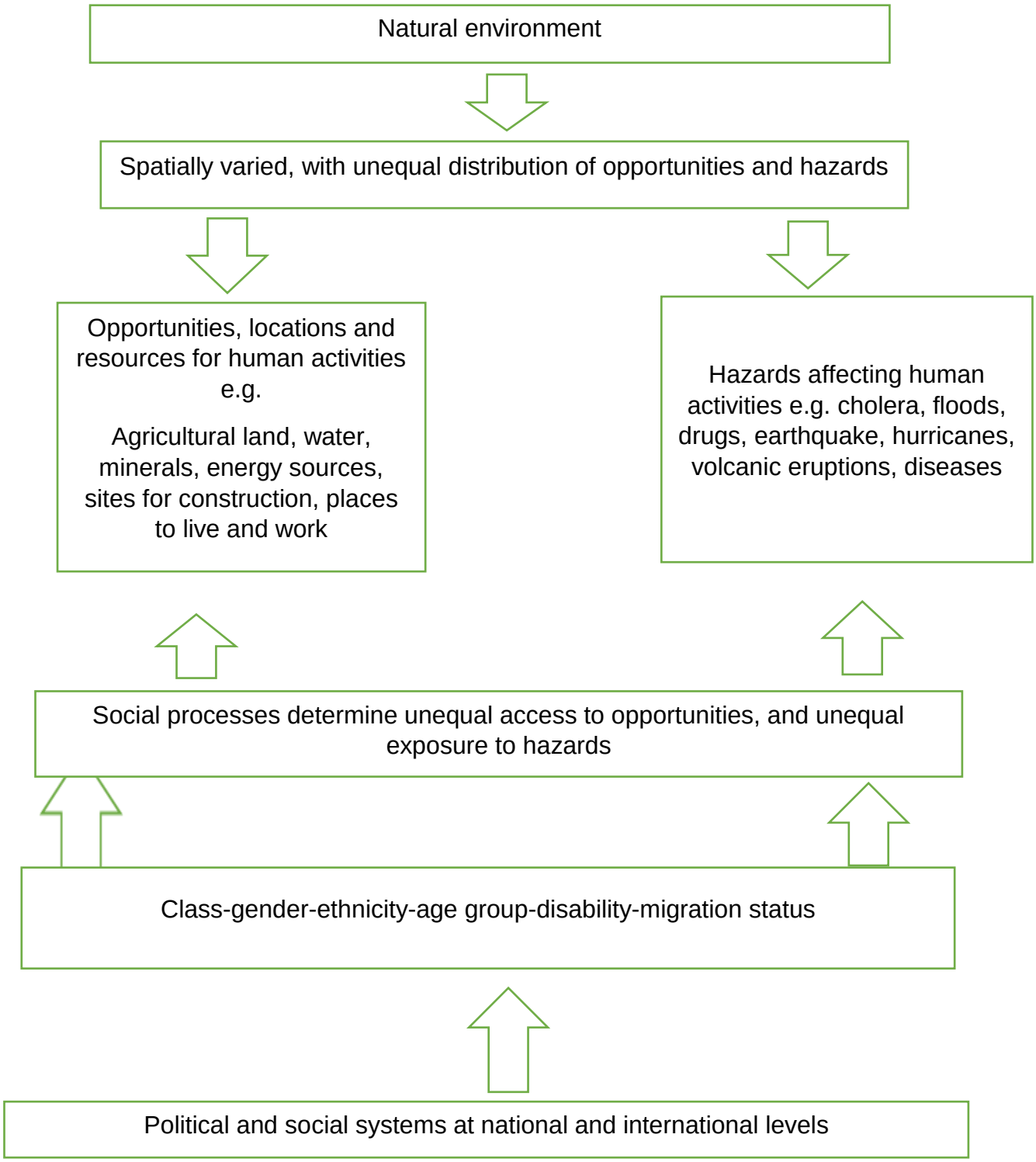
A theory plays an important role to aid and guide the researcher in understanding, explaining or describing the phenomenon they will be investigating (De Vos and Strydom, 2011a). It is of paramount importance to clarify the theoretical framework upon which the study is based (Tudge, Mokrova, Hatfield and Karrick, 2009). This study is based on the Pressure and Release (PAR) model. This model is supported by the Access model which is an extended explanation of some concepts of the PAR model.

2.2.1. Pressure and Release (PAR) model

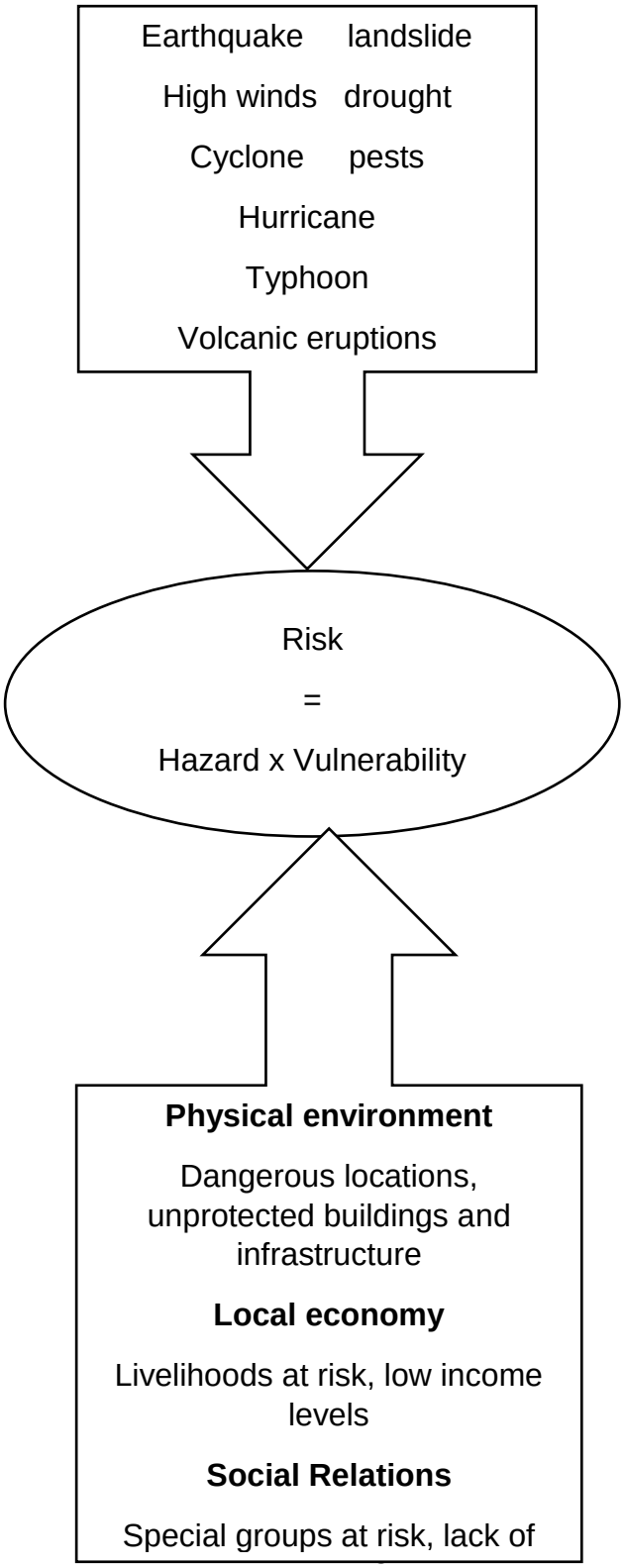
The model is credited to the work of Wisner and colleagues (Wisner, Blaikie, Cannon, and Davis, 2003). Others credited Blaikie (2004) to be the brain behind the theory but together with his colleagues (Mukanganise, 2011). The model's assumptions is that vulnerability is determined by social systems and power not entirely by natural forces alone hence disasters has to be understood in the context of political and economic systems at national and global levels which leads to what the authors term social causation of disasters (Wisner *e tal*. 2013). This could be better conceived through a diagram below:

Fig 1: ***Pressure and Release Model: Social Causation***

Adapted from Wisner *et al.* (2003:8)



The theory does not deny the role played by natural hazards in triggering disasters but it puts emphasis on the role played by social, economic and political systems which then make people vulnerable (Wisner *et al*., 2003). Disaster then arise as a result of the interaction between a hazard and the people's vulnerabilities. This is captured aptly in the diagram below;



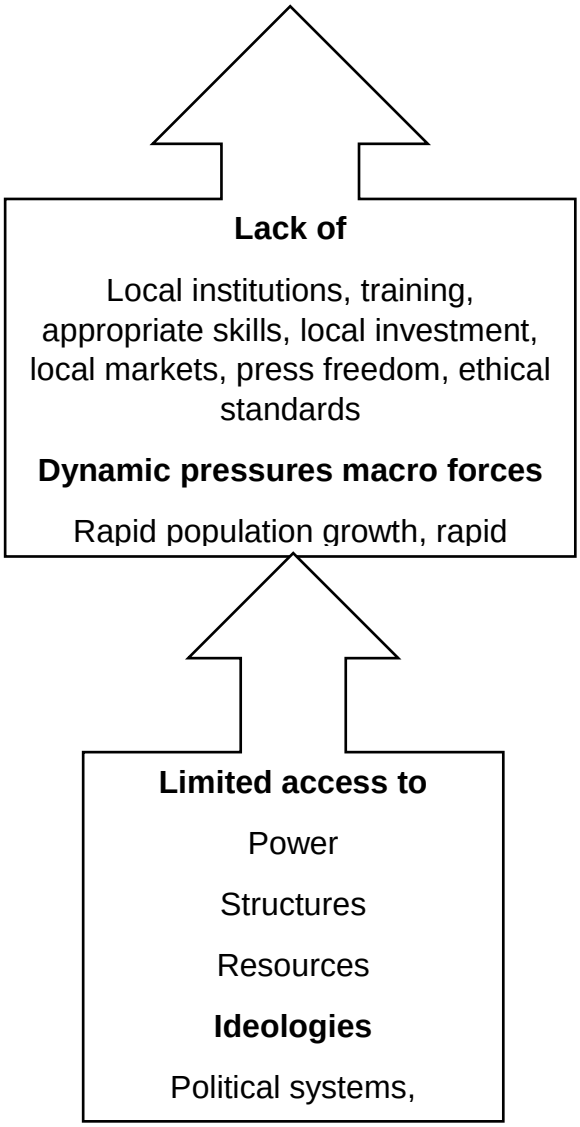


Fig 2: ***Pressure and release model (PAR): progression of vulnerability***

Adapted from Wisner *et al*. (2003:61)

2.2.2. The Access Model

The access model is chosen to support the PAR model largely because this was designed to address the weakness of the PAR model (Wisner *et al.*, 2003). It is regarded as an expanded explanation and analysis of certain aspects of the PAR model which seems to have not gained elaborate attention from the PAR (Wisner *et al*., 2003). Thus the PAR model was found to be not providing a detailed and theoretical analysis of the 'pressure point' which is interaction of the environment and society at the pressure point. The access model focuses on the middle part of the PAR which is looking at differentiated vulnerabilities as they related to a hazard ultimately generating into a disaster when the vulnerabilities are not reduced (Wisner *et al.* 2003). The differentiated abilities underscored by the access model include occupation,

locality, gender, age among other indicators (Wisner *et al.* 2003). This means that individuals and households would be impacted upon by the cholera differently depending on their individual access to resources and capabilities they have.

2.3. Cholera disease: A historical overview

Cholera has been around for a while since the first case of cholera was reported in India (Arvidson, 2018). Currently, about 3 to 5 million people globally are infected by cholera and cholera mortality stands at about 100 000 deaths per year in the whole world (UNICEF, 2011). The disease is now regarded as an ancient epidemic as evidenced by early medical writings among the Chinese, Arabs and Hindus (Arvidson, 2018). The first case of cholera is believed to be dated back as far as 1563 in India though the outbreak later spread to other countries and the rest of the globe by the year 1817 (Arvidson, 2018).

The term cholera was first used in reference to sporadic diarrhoeal disease (Hamlin, 2009). Cholera as a term is driven from two distinct words which are 'Chole' meaning bile and 'rein' meaning to flow or it was also known as Cholades which means intestines (Barva and Greenough, 1992). In the 17th century, London used the term Cholera morbus to describe the epidemic which has come to be known as cholera (Langslow, 2006). In India, the term Visucika was anciently used to refer to what has come to be known as cholera (Bhushagratna, 1963). It was largely viewed as a condition associated with vomiting and dehydration (Nelson, 2013). The Arabs in some sections of India knew cholera as 'hachaiza' all again associated with vomiting and diarrhoea (Srabani, 2012). In the field of research, the history of researching the cholera pandemic is traced back to the work of Doctor John Snow (1813-1858) who did a research on the London cholera outbreak (Cameron and Jones, 1983).

Cholera is regarded as a pandemic given that when it erupts it affects huge tracts of geographical areas and it attacks more people at a rapid rate (Morens, Folkers, and Fanci, 2009). The first recorded cholera pandemic is the (1817-1823) which occurred in India in the Granges River region (Kotar and Gessler, 2014). This cholera outbreak later spread to other parts of the world especially China, Japan, South-East Asia, Middle East, Madagascar and East African Coast (Kotar and Gessler, 2014). The second cholera pandemic occurred in the years (1829-1849) started again in India and later spread to other parts of the world such as Finland, Russia, Poland (Kotar and Gessler). It spread to most parts of Europe and North Africa which warranted attention of the press of the time as cholera pandemic was reported in the press (Morens *et al.* 2009).

The third pandemic (1852-1859) started again in India and spread through its usual routes to Asia, Europe, North America and in Africa (Vinten-Johanson, 2003). In the year 1854, the cholera pandemic reached Britain and killed about 23, 000 and thus during this pandemic that Doctor John Snow made a ground breaking discovery on cholera (Vinten-Johanson, 2003). The fourth cholera pandemic (1863-1879) occurred in India's Bengal region believed to have originated with the Muslims who had brought during their pilgrimage to Meca (Kotar and Gessler, 2014). The 5th cholera pandemic (1881-1896) erupted in Bengal region of India and spread to the usual countries and regions in Asia, North Africa, Europe and South America killing about 200, 000 in Russia (Kotar and Gessler, 2014). It is during the 5th pandemic that the first cholera human vaccine was developed (Greenbaum, 2011).

The cholera pandemic continued to erupt largely in India as its genesis, thus the 6th pandemic (1899 to 1923) killed more than 800,000 people in India but as usual it did not end in India, it spread to other parts of the world like the Middle East, Russia and other parts of Europe (Phelps *et al*. 2018). The world since 1961 has suffered the 7th cholera pandemic which erupted in Indonesia and spread to most parts of the world and has continued to erupt at an interval of 3 to 5 years (Phelps *et al*. 2018). In Zimbabwe the history of cholera could be traced back to 1972 when the first cholera case was recorded along the Nyamapanda border in Mashonaland East Province (Minsitry of Health and Child Welfare and World Health Organisations, 2009). Since then, Zimbabwe has experienced a litany of cholera outbreaks in the years 1975 to 2008 (Ministry of Health and Child Welfare and World Health Organisation, 2009). The first recorded case of cholera in Nyamapanda border area confirms the argument that cholera in Zimbabwe was largely a border phenomenon and was unknown in large inland cities such as Harare (Mason, 2009).

2.4. Transmission, signs and symptoms of the cholera disease

The cholera agent is a bacteria called Vibrio Cholerae (Centre for Diseases Control Prevention, 2013). It is mainly transmitted through contaminated water or food by human or animal faeces infected with Vibrio cholerae (WHO, 2014). The transmission of cholera is strongly associated with poor sanitation conditions (WHO, 2014). It is transmitted through food such as raw or under-cooked fish (Centre for Diseases Control Prevention, 2013). In summary, the cholera reservoirs are largely water, fish, algae and humans (Richard, 1996; WHO, 2014). The World Health Organisation (2019) concurs that the transmission of cholera is largely through

ingestion of food or water containing cholera bacteria (Vibrio Cholerae). The sources of contamination is usually the faeces of an infected person or contaminated water (WHO, 2019).

Food borne cholera transmission is projected to account for about 60 percent of cholera cases on probability (WHO, 2014). The signs and symptoms of cholera are numerous hence they may not present all on each case (Mayo Clinic Staff, 2014). The following is part of the signs and symptoms of cholera (Mayo Clinic Staff, 2014):

- extreme diarrhoea
- nausea and vomiting
- dehydration loosing fluids almost a litre in an hour
- dry mouth
- sunken eyes
- extreme thirsty
- little or no urine
- dry and shrivelled skin
- irregular heart break
- low blood pressure

2.5. Global overview: Cholera trends and issues in the world

Cholera outbreaks since the first case was reported in India have become a permanent irritating feature of the world and has continued to dominate health discourses for decades. The first cholera recorded case was in 1817 in the Granges River in India (Kotar and Gessler, 2014). The world has suffered seventh pandemics up to date and it is the 7th cholera pandemic which is ongoing (Kotar and Gessler, 2014). The current and ongoing cholera outbreaks is still vicious and ravaging the world (Yoshukawa *et al.*, 1980). The major factors contributing to cholera the world over are largely coalescing around poor water and sanitation infrastructure, broken down health care system and issues to do with personal hygiene (Chipare, 2010).

As it stands, Africa, Southeast Asia and South America dominates the current and ongoing 7th cholera pandemic's various outbreaks which have been witnessed in the world (Griffith *et al.* 2006). Europe and North America has enjoyed relative peace and freedom from cholera for nearly a century since the last outbreak was witnessed during the sixth cholera outbreak which ravaged some parts of Europe (Chipare, 2010). Although on very rare occasion the mighty United States of America has reported cholera cases within the current and ongoing 7th cholera

pandemic attributed to eating of raw food which was believed to have been imported from the South Americas (Tan *et al.* 2008). However, cholera remains predominantly confined to tropical and subtropical countries which are associated with broken down water and sanitation systems (Chipare, 2010).

Statistics on cholera project a trend whereby the developing countries are the largest bearers of cholera with India having accounted for about 64 percent of cholera cases in the years 1999-2001 whilst the remainder was shared across Africa and Asia (Chipare, 2010). In the year 2007, a total of 178 677 cases were reported and resulted in 4 033 deaths (Kirigia *et al*. 2009). Whilst these figures are still scaring high, when compared with the number of cases and deaths reported in other pandemics since the first pandemic in 1817, there is a decline in the number of cases being reported perhaps a sign of major strides being taken by countries to fight cholera (Chipare, 2010). However, the worrying trend being that cholera has largely remained the diseases for less developed countries from Asia, Africa and South America as such 88 percent of cholera cases are from Africa whilst the remainder is shared by Southeast Asia and South America (Griffith *et al*. 2006).

2.6. A regional overview: Cholera trends and issues in Africa

As already acknowledged in some the literature review sections, the African continent is the hardest hit by Cholera (Chipare, 2010). In 2005, Africa reported about one hundred and twenty five thousand and eighteen (125 018) cases of cholera were reported to the World Health Organisation (Kirigia *et al*. 2009). Two years later, in 2007 about one hundred and seventy eight thousand, six hundred and seventy seven (178 677) were reported in Africa with an average of the Cholera Fatality Rate (CFR) of 1, 8 percent (Chipare, 2010). West and Central Africa could be said to be one of the regions hardest hit by cholera especially the Great Lakes Region counties (Chipare, 2010). The economic loss suffered by cholera could not be ignored as it averages from US$39 million to US$53 million for 40 years and 53 years life expectancy countries (Kirigia, 2009).

2.7. Cholera in Zimbabwe: Factors, trends and issues

Cholera has become endemic to Zimbabwe hence it has dominated the health discourse of Zimbabwe. This makes it imperative to have a reflection on the whole health fabric of the country given that cholera response primarily rests and depends on the country's health sector systems. In the main, Zimbabwe is reeling under the scourge of HIV and AIDS which has reduced life expectancy to an average of 35 years by 2008 (United Nations Development Programme, 2009). There has been a growing concern that the health sector in Zimbabwe as represented by the Ministry of Health and Child Care is under budgeted (Chipare, 2010). Zimbabwe suffers from a political impasse and a crumbling economy which has seen even international development partners such as the Global Fund investing less in the country when compared to what they put in countries with better relations with the international community such as Lesotho (Mafume, 2006). Zimbabwe's numerous health sector challenges include but not limited to (Watyoka, 2016):

- skills drain due to poor remunerations and working conditions versus lucrative packages offered by the outside world especially South Africa, European countries and the United States of America
- essential drugs and equipment shortages
- Dilapidated health facilities infrastructure which cannot cope with the numerous cholera outbreaks

Cholera in Zimbabwe has been around for a while since the first cholera case was recorded in Mashonaland East along the Nyamapanda border (Bata and Mgemezulu, 2009). In 1992, the country experienced a high case fatality rate (CFR) which rose to 5.1 percent and in 1993 it continued to spiral to 6.7 percent whilst in 1999 it shot further to 6.8 percent but began to fall in 2002 to 6.1 percent. (Chipare, 2010). The 2008-2009 though unprecedented in the volumes of cases reported the CFR to 1.7 percent though about 4 288 deaths were recorded from 98 592 cases (World Health Organisation, 2010). Of these deaths, community deaths are on the high side accounting for 58.5 percent deaths (Chipare, 2010). Zimbabwe is also known for its politicisation of cholera whereby in the 2008-2009 cholera outbreak as the British biological warfare against the people of Zimbabwe (Chipare, 2009).

Several authors concur that there are a litany of factors and underlying causes which triggers cholera in Zimbabwe and these underlying causes include but not limited to(MSF, 2009; WHO, 2009; Watyoka, 2016):

- internal displacement of people
- lack of strong coordinated responses
- poor surveillance
- poor leadership and governance issues
- dilapidated infrastructure
- lack of political will
- erratic water supply
- broken down water and sanitation and hygiene infrastructure
- broken down health system

All these factors and underlying causes can be divided into broader categories such as political factors and socio-economic factors. These various factors project cholera as a macro challenge in SADC countries hence it has to be tackled from a macro-level both from a political and a health perspective (Funke, Jacobs, Said, Nenaber, and Steyn, 2009). Looking at the socio-economic factors the World Health Organisation has argued that vulnerability to cholera is high amongst the poor as compared to the middle and upper class (WHO, 2009). The major immediate causes of cholera in Zimbabwe has to do with ingestion of cholera bacteria (vibrio cholera) which include but not limited to;

(a) contaminated food
(b) contaminated water
(c) contact with contaminated hands
(d) faecal-oral-route

At the local level, one can at least be able to discuss a total of seven factors associated with cholera in Zimbabwe. These factors are; political factors, socio-economic factors, nutritional status and HIV and AIDS, handling of corpses of cholera patients, person to person transmission, contaminated food and water and unimproved water sources (Watyoka, 2016). Zimbabwe's main challenge when it comes to cholera has been its poor water sources characterised by sewer systems challenges (PHR, 2008:24). In addition, the City of Harare has been battling to procure adequate chemicals to treat and purify the water to make it adequately safe for drinking (City of Harare, 2008). More so, the City suffers from an unreliable supply of water to its suburbs which has resulted in suburbs resorting to digging shallow wells for drinking water (Chipare, 2010).

Contaminated food and water is another major contributing factor to cholera in Zimbabwe especially in Harare's suburbs such as Budiriro (Watyoka, 2016). The Ministry of Health and Child care (MoHC) together with the World Health Organisation identified the following as major sources of cholera transmission in Zimbabwe; fish, fruits and vegetables which were infected through contaminated water used to wash or irrigate the fruits and vegetables (MoHCW and WHO, 2009). The challenge of shallow wells is an inherited problem which has bedevilled Harare since the 1970s (Christie, 1987). As early as at the turn of the new millennium faecal contamination of drinking water in Harare and other major cities in Zimbabwe has become rampant (Szewzyk *et al*., 2000). Chipare (2010), also add their voice on erratic water supply and water treatment as well as poor maintenance of water facilities has been a major factor in causing cholera. Contaminated water sources account for 79 percent of cholera transmission whilst rainfall and flooding account for 25 percent (Griffith *et al*. 2006). Rural Zimbabwe also faces access to clean water challenges (Chipare, 2010). Thus contaminated water, contaminated food and unimproved water sources are a major contributing factor to cholera outbreaks in Zimbabwe.

Person to person transmission and corpses of cholera patients are other key factors to take into consideration when discussing cholera issues in Zimbabwe. Person to person transmission are through direct contact through hand shaking which is a culture and a tradition of many Africans in Zimbabwe (UNICEF and MWRDM, 2009a). Cholera infected people can be carriers of the dieses for months without them showing out the signs and symptoms of cholera (Lamond and Kinyagwi, 2012). Moreso, funerals of people who have died of cholera are a fertile ground for potential spread of cholera (Watyoka, 2016). This is the reason why a health worker should monitor funerals of people who have succumbed to cholera (MoHCW and WHO, 2009:61). The spread of cholera through corpses is due to the fact that some sections of Zimbabwean people wash the corpses as part of the burial rituals and the practice of handshaking at the backdrop of cholera corpses being highly infectious (Lamond & Linyagwi, 2012).

Zimbabwe is a highly political country hence it is imperative to reflect on the political factors contributing to cholera outbreaks in Zimbabwe. Watyoka (2016) identifies two main issues under political factors as weak institutions and policy framework and lack of political will. In addition, the strained political relations between Zimbabwe and countries such as USA has resulted in an economic embargo (sanctions) imposed on Zimbabwe by the USA and European Union. Whilst the country has laws in place such as the Water Act (Chapter 20:24), Public Health Act (Chapter 15:09) and Zimbabwe National Water Authority (ZINWA) Act (Chapter

20:25) among many other laws governing issues of health, water and sanitation it suffers from poor implementation of these laws and policies (NAC, 2011). The political factors compound with socio-economic factors to rip havoc in the health sector as these factors including power cuts, inflation, poor health system, unemployment among other factors renders the country prone to cholera (United Nations, 2011; Coulibaly-Kone, 2010). In addition, the country was not spared from the HIV and AIDS pandemic and low nutritional status which increases the country's vulnerabilities to cholera (Centre for Diseases Control, 2013; WHO, 2009).

2.8. Conceptualising disaster risk reduction (DRR)

The concept of disaster risk reduction could only be conceived when closely linked to terms such as a hazard, vulnerability, disaster response and recovery (Wamsler, *et al*. 2013). Hazards are flagged as influencing vulnerability however vulnerability and resilience as terms often used in DRR are not well defined (Fekete, Hufschmidt, and Kruse, 2014). The concept of DRR is historically rooted in humanitarian assistance work (Tearfund, 2005). Disaster preparedness is yet another term closely linked to DRR. The term disaster preparedness refers to interventions, activities and systems put in place prior to a disaster to ensure readiness to deal with the impending disaster with its aim being to reduce the impact of disaster on life and property (Mavhura, 2015). A disaster could be conceived as a disruption of a community and society's full functioning involving depleting the human, economic, material and environmental capacities to function without an external help (UNIDSR, 2009).

There are generally two types of disasters which are natural and human induced disasters, these could be further broken down into biological, metrological, geophysical, hydrological and climatological (Below *et al*. 2009). Communities in the 21st century have become increasingly vulnerable to natural disasters. The disasters are scoring more harm than before (Ahmed, 2013). The impact of disasters is amplified by weak legislative frameworks characterising most states (Manyena *et al*. 2013). When a hazard hit, disaster occur when communities' capacity to resist and manage the effects of hazards are overpowered (UNISDR, 2008). It is when the communities and society fail to deal with a hazard or to reduce its risk and impact that it degenerate into a disaster (Armas & Gavris, 2013). Therefore whilst some of the hazards could not be avoided but their risks could surely be reduced (Birkman and Tenchman, 2010). Thus improved disaster preparedness goes a long way in helping to reduce disaster risks (UNISDR, 2009b).

Hazards are not a daily routine hence authorities normally do not face pressure to scale up their investment in disaster preparedness systems (Kolen and Helsloot, 2014). Unfortunately, disaster risk reduction and response remains largely a responsibility of central governments yet they are characterised by weak legislative framework (Mavhura, 2015). Disaster preparedness has become more pronounced given the shift from the hazard paradigm of the 1930s and the vulnerability paradigm of the 1960s to the resilience paradigm which is dominant in the current era (Mavhura, 2015). The focus on resilience rather than vulnerability is a baby of the International Decade for Natural Disaster Reduction (1990 to 1999) which begot the Hyogo Framework for Action (HFA) (UNISDR, 2009b). Whilst DRR in Zimbabwe has evolved as well it is still trapped in response and moving at a slow pace to build strong disaster preparedness systems.

2.9. The role of social work in cholera response

Social work as a dynamic and diverse profession has an obvious role to play in disaster response including cholera. The social worker is critical as member of a multi-disciplinary response team can be involved in disaster planning through a thoughtful production of scenarios plans and interventions plans. These plans are then used to execute disaster response (Baumens and Naturale, 2017). In a traditional social work approach, the social worker plays a clinical role including taking care of the mental health services provision which is likely associated with the aftermath of traumatic disasters such as cholera (American Red Cross, 2016). In addition, the social worker conducts research to come up with evidence based response packages this ensures the social worker then moves away from their clinical cage to building capacities of individuals, families and communities to ensure prevention (Neria *et al*. 2007).

The social worker in summary undertakes the following activities though not exhaustive (Javadiaan, 2014):

- supply of essentials such as food items, non-food items and other materials
- linking survivors of disasters to resources
- sometimes represent governments as agents of social control
- formulate and implement disaster preparedness plans
- develop response and mitigation plans
- develop and implement recovery plans
- registration and verification of beneficiaries

- act as advocates of social justice and human rights calling to change of oppressive structural systems to make programs more responsive to clients' needs

With the advent of the strengths perspectives in social work practice, the role of the social worker in disaster response has evolved from being pathological about disasters to being prevention focused (Pattoni, 2012). The strengths perspectives in disaster response values the affected people's capacity, skills, knowledge, connections and the potentials of individuals to liberate themselves from the disaster (Pattoni, 2012). Thus the social worker work and collaborate together with the affected communities and other like-minded disaster response teams and influence the focus to shift from response to prevention and empowerment (Christie, 2011; Scottish Government, 2010b). The strengths perspective in social practice with disaster struck communities moves from focusing on communities and individuals' deficiencies and focus on possibilities and solutions as well as utilising resources from the environment (Pattoni, 2012; Pulla, 2017).

The social worker creates an environment for affected individuals, families and communities to discover their strengths (Pulla, 2017). The strengths perspective in social work makes the following assumptions (Pulla, 2017):

- all people have strengths and capacities
- people are capable of changing
- people change and grow through their strengths and capacities
- problems can blind people from noticing their strengths
- people have expertise to solving problems

The above assumptions indicate that the social worker is called upon to promote resilience and move away from their obsession with pathology and human deficits (Pulla, 2006). Thus the social worker drifts away from psychotherapeutic medical models to reflective practice (Guo and Tsui, 2010). This helps the social worker to identify, recognise and acknowledge barriers of oppression and cherish that human beings are born with an inherent capacity to overcome (Pulla, 2014b). The strengths perspectives is grounded on the following firm beliefs (Pulla, 2017):

- avoid cause effect thinking
- believe the client
- lead the client to discover their needs
- accepting uniqueness of the client

- speaking in the client's own language
- avoid blaming
- avoid diagnosing
- tackles structural oppression

These beliefs are hinged on principles such as social justice, transparency, power with and not power over, respect, self-determination, focus on strengths and capabilities and collaborative partnerships (Pulla, 2017). However, this does not mean that the social worker then shuts themselves out of crisis management. They still need to be active in crisis management ensuring that lives are saved, numbers of victims are reduced and damage to humans, property and environment is minimised (Iravani and Parasat, 2014).

2.10. Vulnerability of Zimbabwe to disasters

Zimbabwe is faced by a number of hazards which easily degenerate into disasters. These hazards are generally classified into hydro-meteorological hazards, geological hazards, biological hazards and technological hazards (Mavhura, 2015). The study's interest is on the biological hazards which includes cholera. An understanding of biological hazards in Zimbabwe could be enhanced through use of a hazard map designed by the Government of Zimbabwe's Civil Protection Department as follows:

Table 1: Hazard map

Hazard	Likely Time and Season	Areas largely affected
Cholera	Rain season	Nationwide
Typhoid	Rain season	Harare and peri-urban areas
Measles	Rain season	Nationwide
Polio	Any time	Nationwide spreading to rural areas
Malaria	Rain season	Malaria prone areas
Zoo noses	Any time	

Source: Adapted from the Government of Zimbabwe Department of Civil Protection (2013)

With all these hazards one could expect Zimbabwe to be well ahead in terms of building its capacity to deal with hazards before they degenerate into disasters. This seems not the case as various researchers have viewed Zimbabwe as a vulnerable state with multiple vulnerabilities (Chigodora, 1997; Gwimbi, 2009; Hondora, 2009; Moss and Patrick, 2006). Zimbabwe is largely rural, with more than two thirds of its populace living in the rural areas and these people over rely on natural resources for livelihoods (Chigodora, 1997). Thus when the rains do not come they are likely to face hunger reducing their nutrition level hence making them more susceptible to hazards such as cholera (Watyoka, 2016). Gwimbi (2009) also singled out floods and droughts as also a common feature of rural areas which further weaken rural areas' capacity to deal with hazards hence rural areas easily succumbs to disasters such as cholera, typhoid and cyclones.

Another major factor making Zimbabwe vulnerable to all sorts of disasters is malnutrition (IFPRI, 2002). In addition, poor environment management measures and systems exposes Zimbabwe to all sorts of vulnerabilities to disasters (Chitiga and Chigora, 2010). Thus due to poor waste management systems in the City of Harare, every rain season there has been fears of cholera. There has been also complains on the underfunding of disaster risk reduction initiatives in the country which incapacitate the DRR institutions like the Civil Protection Unit to adequately roll out DRR activities and response to ensure they mitigate against the impact of disasters and reduce disaster risks (Madamombe, 2004). The underfunding of DRR and the mother ministry the Ministry of Health and Child Care has been alluded to an ailing economy and corruption which see resources being diverted to non-essential things (Hondora, 2009). All this means the country is left so vulnerable that every hazard easily degenerate into a disaster. In addition, the poor economy has also resulted in a mass exodus of skilled personnel in the area of DRR which again makes Zimbabwe vulnerable to disasters (Moss and Patrick, 2006).

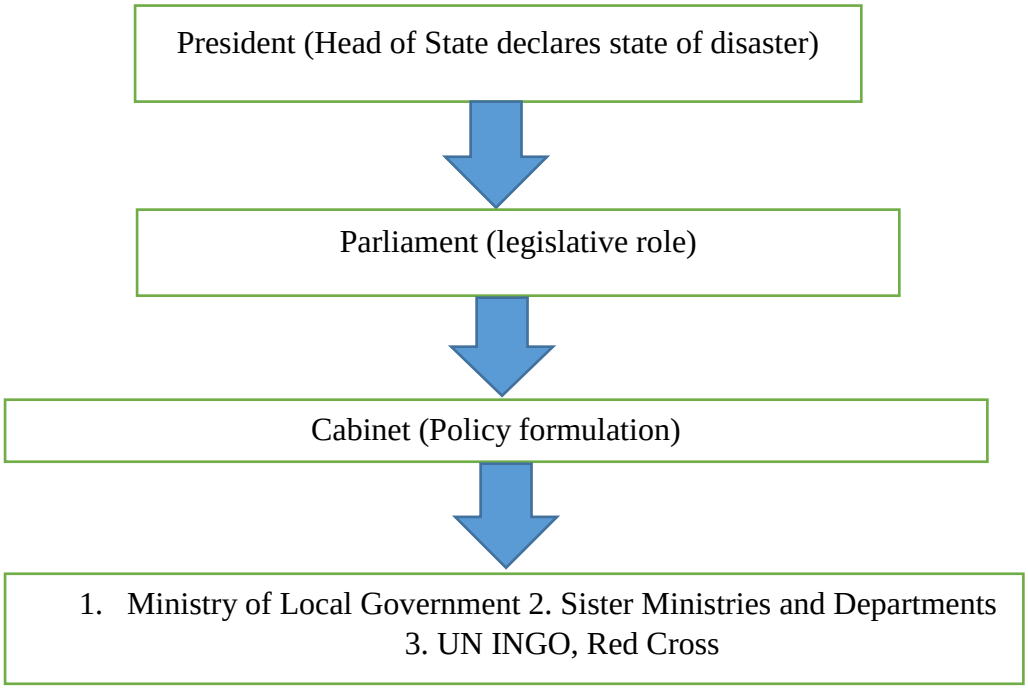
2.11. Disaster risk reduction and disaster management legal and policy framework

When it comes to policy and laws governing DRR Zimbabwe is counted to have some basic framework for DRR and disaster management. Betera (2011) explains that the country has a National Civil Protection policy and the Civil Protection Act, No. 5 of 1989 as the major legislative framework for preventing, responding and managing disasters in general. The Act provides for the establishment and coordination of disaster preparedness and management initiatives, provides guidelines for action and use of resources, establishment of a National

Civil Protection Fund and provides for the state president to be the one who has the mandate to declare a state of disaster (Betera, 2011).

Figure 3: *The Structure of the Civil Protection systems in Zimbabwe*

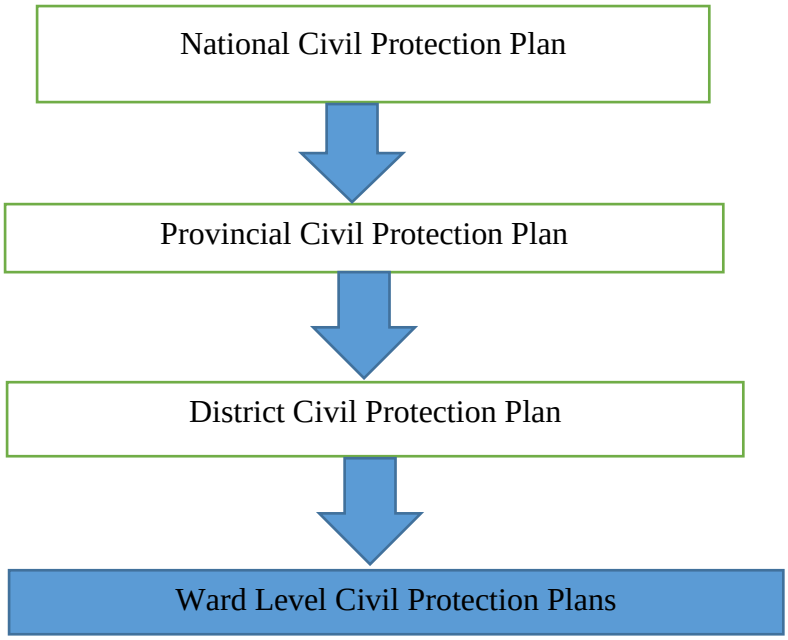
Adapted from the Department of Civil Protection Unit (2013:6)



According to the Zimbabwean law, there are various levels of emergency disaster preparedness planning in Zimbabwe as indicated below;

Figure 4. *Levels of Emergency preparedness planning in Zimbabwe*

Adapted from Department of Civil Protection Unit (2013:7).



2.12. Chapter summary

The chapter reviewed literature related to the study objectives. The sections within the chapter discussed the historical perspective of cholera, the global and regional issues and trends of cholera. In addition, an overview of cholera as a diseases, its signs, symptoms and modes of transmission were discussed at length. Factors contributing to cholera in Zimbabwe were also covered within the chapter. Issues of disaster management, risk reduction and disaster preparedness were also discussed using past and current literature. The role of social work and the contribution of developmental social work to cholera response was also explored in the chapter. It also provides the review of literature pertaining to the theoretical framework of the study.

CHAPTER 3: RESEARCH METHODOLOGY

3.1. Introduction

This chapter focuses on presenting the research design and methodology used in the study. In particular, the chapter discusses the research approach, research design, sampling methods, research instruments and data collection methods, data analysis and ethical considerations that guided the undertaking of the study. In this study, the researcher used the case study design which is a qualitative design. This proved to be an asset to the researcher as he was able to study the Budiriro Cholera case in great and in-depth detail.

3.2. Research site

The findings are based on a study carried out in Harare metropolitan province, in particular the study was carried out in Budiriro Township. Budiriro is one of Harare's high density suburbs affected by the 2018 cholera outbreak. It is a cholera prone area given that in 2008 it was not spared by the major cholera outbreak which resulted in the death of many people**.**

3.3. Research approach

A research approach is conceived as a plan of action giving direction on how the research would be conducted efficiently and systematically (Mohajan, 2017). There is a general consensus that there are three research approaches which are quantitative, qualitative and mixed methods research (Creswell, 2009; Williams, 2007). The researcher used the qualitative research approach because it allowed for the gathering of detailed data associated with descriptions and narrations of a phenomenon, and further allowed the researcher to capture conversations, experiences, meanings and words of the research participants in natural settings (Williams, 2007; Kumar, 2005). The qualitative approach was in line with the aim of the study which was to explore views and perspectives of research participants on disaster responses and management of the cholera outbreak in Budiriro. The study involved a small sample and as such qualitative research is associated with small samples which are purposively selected (Delport and De Vos, 2011). In addition, qualitative research approach was chosen for the following reasons (Creswell, 2009; Leedy and Ormrod, 2010):

- Field work is conducted in natural setting giving the researcher an opportunity to interface with the participants the sources of knowledge.
- Preference for use of descriptive data to describe a phenomenon, this augurs well with the researcher's exploratory objectives revolving around unlocking the people's views

on cholera disaster response and management strategies

- It searches for meaning focusing on how people try to make sense of their lives and experiences, in this case the study gives an opportunity for participants to make sense of their personal experiences with the cholera pandemic.

3.4. Research design

A research design is understood as the main method used by researchers when conducting research (Denzin and Lincoln, 1998). It is regarded as the basis for the whole research process key in ensuring that the research meets its aims and objectives and guides the researcher's subsequent research methods decisions and operations (Bless, Higson-Smith and Kagee, 2006). The researcher chose the case study research design for its ability to facilitate enquiry of a phenomenon using a variety of data sources (Yin, 2003). In addition, a case study design enables the study to use multiple lens in exploring an issue allowing for multiple facets of a phenomenon to be explored (Baxter and Jack, 2008). A case study design acknowledges the subjective role of researchers and participants in creating meaning out of their lived reality and experiences although objectivity still remains valued (Zucker, 2009). The design allows for the participants to share their stories with the researcher and the researcher has an advantage of being in a position to listen and gain an insight into the participants' views, experiences and the meaning they attach to their actions (Baxter and Jack, 2008). In order for the researcher to gather accurate data, the case study design demands the researcher to be knowledgeable about the phenomenon they will be investigating, listening and questioning skills are also a must (Baxter and Jack, 2008). This adopted research design allowed the researcher to explore and unpack the perceptions of participants on the efficacy of cholera response and disaster management strategies in Budiriro.

3.5. Study population

A population of the study functions to limit the boundaries of the research unit to those who possess specific features (Strydom and Venter, 2002). A study population could further be understood as a group of people under which the study is targeting (Babbie, 2007). Selection of a subset of persons from a larger group (population) is part of the study process and the larger group from which a sample is finally drawn from is also referred to as a sampling frame (Scott and Morrison, 2007). The target population of this study comprised all residents of Budiriro Township and all cholera response teams involved in the epidemic response. Thus the population was delimited by residential boundaries hence only residents of Budiriro who were in the residential area during the study period were considered as the study target population.

3.6. Sampling procedures and sample size

A sample is small fraction of the population and it is meant to represent the particular population from which it is drawn from (Neuman, 2011, Babbie and Mouton, 2004). In line with the demands of the qualitative study research designs, non-probability sampling procedures were used to select participants (Cozby, 2009). Thus, purposive sampling was used to select participants for both samples that is the sample comprising of affected residents and the sample comprising of the cholera response teams. In addition, key informants were selected using the purposive sampling procedure. Thus the City of Harare health officers and community and social services officers were targeted as key informants. Purposive sampling is about choosing participants on their ability to answer research questions posed during the study (Padgett, 2008; Denscombe, 2010). The number of participants in both samples was deemed sufficient but the saturation principle of diminishing returns which implies that as the research progresses additional sources of information would supply less new information until no new information is obtained at all but a repetition of already obtained information is witnessed was applied (Wiedner, and Ansari, 2017). The key informants for the study were sampled using the key informant sampling based on their expertise in the phenomenon under investigation (Strydom and Delport, 2011).

- **Sample One**

The study was limited to the people who are residents of Budiriro and were affected by the cholera epidemic. This was done using purposive sampling techniques. Purposive sampling is also known as judgmental sampling (Latham, 2007; Babbie, 1990). Purposive sampling is useful when wanting to study a small subset of a larger population hence this suited this study which intended to interview only 15 participants from Budiriro a population in the Harare metropolitan province (Latham, 2007). Snowball sampling was also adopted for its ability to be used in cases where the population of interest cannot be easily identified by the researcher other than by someone who knows them (MacNeally, 1999).It was a daunting task for the researcher to identify the families and individuals affected by cholera in the sites hence the need to rely on the snowball techniques to identify more participants. Dongre (2009:2) asserts that it is not easy to determine a sample size in qualitative research given that there is no mathematical formula to calculate the sample. Dongre et al (2009) goes ahead to argue that sample size depends on the purpose of the study and availability of resources. Thus 15 participants were selected as the sample on subject to the principle of data saturation. In particular people fitting the following criteria shall were selected;

- a household member of a household with one or more people confirmed to have cholera or typhoid
- either male or female can participate
- resident in Budiriro during the time of the study
- Household should have received some form of assistance either medical, psycho-social support, educational information among other cholera disaster management interventions
- willing to participate

- **Sample two**

The second sample constituted of the frontline disaster response teams. These were drawn from the pool of nurses, NGOs personnel, City of Harare personnel, and private sector personnel like Econet and government departments officials involved in disasters. A total of 10 participants are targeted as part of the second sample. This would bring the study sample size to 25 participants and 4 key informants. In particular participation is open to people fitting the following criteria;

- either male or female
- had contact with households affected with Cholera during and after the outbreak
- resident in Harare metropolitan province during the period of data collection
- Willingness to participate in the study.

3.7. Research instruments

A research instrument is a tool used by researchers to gather data or acquire information related to a phenomenon under investigation (Kumar, 2005). In this study, semi-structured interview schedules were used by the researcher. Interviews are known for being flexible and can be utilised to collect huge amount of data and information. Semi-structured interviews are comprised of open ended questions which allows the research participants to say as much as they know and allows the researcher the privilege to explore more new ideas through probing (Legard, Keegan and Ward, 2003). Three different structured interview schedules were used one for households affected with cholera, another for disaster response teams and the third one for key informants (See Appendices A, B and C).

3.8. Pre-testing

Pre-testing refers to the practice of checking the suitability of questions for the desired participants and to check questions clarity (Becker and Bryman, 2004). The purpose of piloting is largely to determine whether the proposed methodology, sampling, instruments, data collection and data analysis techniques would be adequate and appropriate (Bless *et al.* 2006). Pre-testing allows the researcher to use the actual interview questions and follow the interview procedures as they will be in the actual study (Janesick, 1994). According to Rubin and Babbie (2011), the pre-testing avails the following benefits to the researcher;

- allows the researcher to detect methodological flaws before the actual study
- unclear and ambiguous formulated items on research instruments are exposed hence the researcher can rectify ahead of the study
- allows for detection of content that may be unsuitable and uncomfortable for the participants
- it is an opportunity to assess whether research questions addresses the aim and objectives of the study

For this study, two participants were selected for the pre-testing phase with one participant representing characteristics of households to be interviewed whilst another person included in the pre-test represented the disaster management practitioners. Those interviewed as part of piloting were not participants for the actual study.

3.9. Data collection

Semi-structured interview schedules composed of largely open ended questions was used to solicit for data from participants. These interview schedules were used to interview the participants selected from the two study samples. Ballou (2008) argue that the advantage of open ended questions is that it gives room for probing for more information, which is an important element for qualitative studies.

3.10. Data analysis

The researcher utilised thematic content analysis to analyse the collected data. The model stipulates that data analysis is an ongoing process which starts prior to the first interview (Creswell, 2014). The model further dictates that, "The process of data analysis and interpretation can best be represented by a spiral image- a data analysis spiral." (Schurink, Fouche and De Vos, 2011). In line with this model, the researcher analysed data in the following manner:

Phase 1:

Step 1: A close reading of the data

During data collection, audio recorders were used therefore the pre-data analysis process included transcribing of the interviews. After transcription, the researcher read and re-read the transcribed data to make sense of it. This process involved checking, confirming and testing data accuracy provided by the study participants (De Wet and Erasmus, 2005). After transcriptions, the researcher examined the transcribed data with the aim of becoming more familiar with the transcribed data (Greenstein, Robert and Sitas, 2003). Thus the researcher examined the collected raw data detecting errors and omissions and these were corrected whenever it was deemed necessary. The researcher read and re-read the transcribed data several times to make notes and summaries of the data.

Step 2: First level coding

Data analysis and data processing involves numerous steps and procedures which evolves around summarising and organising the collected data in a manner that ensures the data answers the research questions (Dawson, 2002). Thus data was data was summarised and organised into their main emerging groups.

Phase 2:

Step 1: Identifying clusters and hierarchies of information

After summarising and organising, emphasis is put on the need to then order the data in accordance with the emerging themes which then allows the researcher to create clusters and hierarchies of the processed information to simplify further analysis of the findings (De Wet and Erasmus, 2005). Therefore, data was analysed and summarised in a way that made easy for the data to answer the study research questions regarding the efficacy of cholera response

strategies, challenges associated with disaster response as well as lessons which could be gleaned from such experiences. The study findings were further analysed and grouped on the basis of common emerging themes for example the strategies used in cholera response, challenges experienced during response and the lessons gleaned.

Step 2: Identifying complex relationships, patterns and possible explanations

Qualitative data has to be analysed and further be interpreted in order for it to have a meaning (Bahn and Weatherill, 2012). Thus the researcher evaluated the findings from the participants in order to draw conclusions of their views and perceptions on the efficacy of cholera response strategies and the lessons which could be gleaned for future intervention.

3.11. Delimitation of the study

The study was limited to households with one or more members confirmed to have contracted cholera including those who might have succumbed to the pandemic or survived after treatment. In addition, only those households in Budiriro were sampled to participate and of the eligible households only those found resident in Budiriro during data collection period participated in the study. More so, disaster management practitioners who were actively involved in the 2018-2019 Budiriro cholera response are the only ones who were considered as participants, those who may have responded to previous cholera outbreak fell outside the study boundaries.

3.12. Limitations of the study

Every study has its own limitations some unique to itself (De Vos, 2011). The study limitations evolved around time constraints, given the tight university timelines the researcher did not have more time in the area to deeply understand the circumstances of the participants. In addition, the researcher operated on a tight self-financed budget which did not allow the researcher to do several visits to the sites hence data collection though sufficiently done was condensed in a single week giving less time for ongoing data analysis to take place which was going to inform the remaining interviews on reshaping the research questions basing on the emerging themes. The limitations can be summarised around generalizability, subjectivity and trustworthiness of the study as follows:

Generalizability

The sample was too small as only 25 participants could be interviewed, hence the findings could not be generalised although valuable lessons could be gleaned from the findings. Generalizability is the extent to which the research findings could be applied to a broader context (Creswell, 2009).

Subjectivity

Subjectivity refers to the researcher's own feelings and thoughts towards research data which at all cost should not end up influencing the data analysis process (Guttentag, 1973). The researcher was on high alert ensuring being open minded in analysing the research data however the researcher's own pre-occupations could not be totally ruled out in influencing the interpretation of the data.

Trustworthiness

Trustworthiness in research refers to a process and extent to which the researcher can improve the quality of trust both in the qualitative research process and ultimately the research findings (Lietz and Zayas, 2010). It aids the researcher support the argument that their research findings are worthy paying attention to (Lincoln and Guba, 1985). This include credibility (the authenticity and realistic nature of the research), transferability (the extent to which the findings could be applied to other different settings when the same research procedures are followed), dependability (the extent of the likelihood of obtaining similar findings should the study be replicated in a similar context), and conformability of the research project and its findings (Lincoln and Guba, 1985). The researcher enhanced trustworthiness by encouraging the participants to be open, genuine and honest in the information they gave and only those interested in the study were involved which possibly reduced the chances of getting falsified information. In addition, the researcher has provided a detailed account of the research design and research methodology to enable replication by any researcher who may want to replicate or comparison by any future researchers who may desire to conduct similar studies. However, all the precautions taken may not with certainty guarantee that all respondents were honest as some may want to portray a particular image for various reasons.

3.12. Ethical considerations

Research ethics is viewed as a branch of philosophy concerned with decision making on choosing what is right or wrong historically linked to the Greek philosophy of morality (Fouka and Mantzorou, 2011). It is a conduct and behaviour expected of a researcher to reflect on whether or not they are conducting their studies in a professional, acceptable and correct way (Core, Corey and Callanan, 1993) cited in Strydom (2011). The main emphasis of any research ethics is on minimising risks whilst maximising benefits (beneficence versus maleficence). In summary the following are central research ethics; informed consent, beneficence and non-maleficence, respect for anonymity and confidentiality, respect for privacy, actions and competences of the researcher, approval of researches by institutional ethics committee and publication of findings (Fouka and Mantzorou, 2011). The researcher obtained written permission from the Midlands State University and from the City of Harare to conduct the study. The researcher, throughout the entire study from research design, data collection, and data analysis to publication of findings also adhered to an array of ethical issues as per Midlands State University standards and as required and acceptable within the Social Sciences and Humanities research ethics guidelines. The following particular ethics were be observed:

i. Informed consent

The researcher adhered to the principle of informed consent. Adequate and all possible information about the study was provided to all participants, key informants and research assistants. The goal of the study, the objectives of the study, research procedures to be followed from data collection to data analysis, possible risks, advantages and disadvantages of the study as well as the credentials of the researcher were explained (Strydom, 2011b).

ii. Beneficence

Beneficence refers to ensuring that the researcher act and exhibit acts of kindness and goodness concern to all research participants at all times (Irwin, 2006). To achieve the principle of beneficence the researcher recognised diversity and respected every participant during the process of data collection. In addition, the researcher applied a non-judgemental attitude to all responses and views that were given by participants.

iii. Voluntary participation and the right to withdraw from the study

The researcher informed participants of their right to choose whether to participate or not to participate in the study (Taylor, 2000:7). Participants were informed that even if they choose to participate, they still have right to discontinue their participation at any given time during the study. The researcher did not coerce any participant to participate in the study hence the principle of voluntary participation was be adhered to (Babbie, 2001).

iv. Avoidance of harm or non-maleficence

No harm was anticipated, however, given that the study comes barely some few months after the residents of Budiriro have experienced the cholera outbreak, the research questions may trigger in them unpleasant memories of the past which may cause emotional distress. To mitigate against this, the researcher made provision to refer any case to the City of Harare social services department for such participants to receive psycho-social support if needed.

v. Violation of Privacy, Anonymity or Confidentiality

The anonymity of research participants was assured. Participants were assigned code numbers so that their identification is protected. However, on the letters of consent research participants had to write their names and sign since this is a legal contractual document. Stern measures were taken to ensure that the consent letters are kept in a secure and safe place.

vi. Approval of studies by institutional ethics committee

The research data collection process only commenced after the researcher received ethics clearance from the Midlands State University, School of Social Work Research Ethics Committee.

vii. Publication of findings and feedback given to participants

The findings of the study will be reported in a moral and ethical way both in the research report and subsequent publications that might arise. Efforts will be made not to deceive anybody in relation to the findings of the study through ensuring that results are not manipulated or misrepresented. The research report was compiled in an accurate and objective manner (Strydom, 2011b). The limitations and shortcomings of the study emanating from the research process were objectively reported (Rubin and Babbie, 2011). As a form of accountability to the participants and society in general, research findings will be shared with the participants, the Midlands State University, Government Departments, City of Harare, Social Workers and

academics, this will be done in an objective manner (Strydom, 2011b).

3.13. Chapter Summary

The chapter has described the research methodology and research methods adopted during the study. The type of research was identified as exploratory research and the study utilised intepretivism as the research paradigm. The methods of data collection and data analysis were described in detail. Moreover, research ethics applicable to the study were explained and elaboration given where necessary.

CHAPTER 4: ANALYSIS, PRESENTATION AND DISCUSSION OF RESEARCH FINDINGS

4.1. Introduction

The chapter focuses on the presentation and discussion of findings of the study that were analysed using thematic content analysis. The presentation and discussion is aligned to the research objectives of the study. The discussion of the findings is based on the participants' views and perspectives on the research questions.

4.2. Research participants' demographic profiles overview

The research had three categories of participants which were; 15 residents of Budiriro affected by cholera outbreak, 10 officials from the different stakeholders who were involved in the cholera response side drawn from state agencies, non-state agencies and business. The key informants were drawn from the City of Harare officials and medical personnel involved in the cholera response in the Budiriro cholera outbreak. Thus a total of 29 individuals were involved in the study.

Table 2: Demographic details of community participants

CODE	SEX	AGE	HOUSEHOLD SIZE	YEARS RESIDENT IN BUDIRIRO	HH MEMBERS REPORTED CHOLERA SYSMPTOMS
CP1	Female	43	5	14	3
CP2	Female	32	3	10	1
CP3	Male	48	4	3	1
CP4	Female	40	4	7	1
CP5	Female	28	6	2	1
CP6	Female	30	3	11	3
CP7	Female	31	5	12	1
CP8	Male	54	7	24	2
CP9	Male	37	3	4	1
CP10	Female	42	4	17	1
CP11	Male	40	4	1	1
CP12	Male	57	6	6	1
CP13	Female	29	6	11	4
CP14	Female	36	3	4	1
CP15	Male	43	5	9	1

Total N=15 participants

*****KEY: CP for Community Participant**

A total of 15 community members representing households were interviewed as shown on the table above. A total of 9 participants were female whilst the remainder were males, this might be reflective of the Zimbabwe National Statistics findings that Zimbabwe has more women than men (Zimbabwe National Statistics, 2017).

Table 3: Demographic details of participants drawn from stakeholders

CODE	SEX	AGE
SP1	Male	40
SP2	Male	28
SP3	Male	29
SP4	Male	31
SP5	Female	34
SP6	Female	37
SP7	Male	46
SP8	Male	43
SP9	Female	41
SP10	Female	40
SP11	Female	46

Total N= 11 participants

*****KEY: SPF for Stakeholder participant**

The demographic details in the table above indicates that a total of 11 participants drawn from stakeholders involved in cholera response were interviewed. A total of 6 men and 5 females were interviewed. In addition, the oldest participant is 46 years old and the youngest was 29 years.

4.3. PRESENTATION AND DISCUSSION OF FINDINGS

This section presents an analysis and a discussion of key findings by themes and sub-themes. The researcher followed the Creswell's (2009) model of data analysis of qualitative data using the following steps:

- data collection
- data transcription, reading and memorising
- description, classification and interpretation
- representation and visualisation

The initial steps of data collection involved ensuring that audio recorded interviews were transcribed and later analysed into themes and further refined into subthemes and further compressed into categories were necessary (Schurink, *et al*. 2011). Direct quotes of participants are used to ensure that findings discussed maintain the originality of the participants' lived experiences.

OBJECTIVE 1: COMMUNITY PERSPECTIVES ON THE EFFICACY OF STRATEGIES USED TO COMBAT THE CHOLERA OUTBREAK

The first objective was on community perspectives on the efficacy of the strategies used in cholera response. Various strategies were made bare by the study and these included but not limited to; awareness campaigns, distribution of NFI, distribution of IEC materials, setting up of cholera treatment centres, coordination meetings, monitoring and evaluation among other strategies identified. Awareness campaigns, cholera treatment centres and distribution of NFI were touted by participants as the most effective in awareness raising which may have led to better hygiene practices. The majority of households reported to have had only one household member to have gone to a health facility with cholera symptoms, this corroborated the findings from the interviews with key informants and stakeholders who said there was massive education and awareness campaigns which might have made family members aware of hygiene issues among other practices which ensured that the disease did not spread to more members of the household.

In addition, chapter 2 of this study also discussed strategies used and its efficacy to combat cholera based on a literature review of past and current findings on the other cholera outbreaks in and outside Zimbabwe (Watyoka, 2016; Mavhura, 2015). Thus to a larger extent the first objective of the study was met in chapter 2 and chapter 4 of the study. Throughout the various interview transcriptions of all participants and key informants there was general consensus and common understanding of the strategies used to combat the just ended cholera outbreak in

Budiriro. As such this objective is analysed thematically into various themes which are basically the strategies used to combat the pandemic. On each theme, the findings point to how the strategies were carried out, that is the actual activities done under each strategy, the challenges and the lessons gleaned are also clarified. These themes are discussed below:

4.4. COMMUNITY PERSPECTIVES ON THE EFFICACY OF THE STRATEGIES USED TO COMBAT CHOLERA OUTBREAK IN BUDIRIRO

4.4.1. Theme 1: Awareness campaigns

The findings of the study show awareness campaigns as an effective strategy in combating cholera. Awareness campaigns took different forms which included distribution of IEC material, road shows and health, hygiene and education promotion. Awareness campaigns developed as one of the salient themes on strategies used during the cholera response. The response strategies were tailor made to address issues of unimproved water sources, insufficient water and sanitation and ensuring people do not eat contaminated food or water. Hence in achieving these goals people were supposed to be made aware of the dangers of falling prey to drinking and eating contaminated water and food. This confirms the findings from literature which revealed that cholera response should target to improve water supply, promote hygiene practices and ensure people do not eat or drink contaminated food or water (Chipare, 2010; Rusakaniko *et al.* 2009).

The strategies were found to be largely useful as a cholera response mechanism but were dissed for being not prevention focused. However, the World Health Organisation notes that response strategies by design are not meant to satisfy prevention efforts but that they are meant to extinguish the cholera pandemic as an emergency though it is then desirable for response teams to remain behind after disasters to build the capacity of communities to prevent and respond to future disasters (WHO, 2019). Lastly, the theme also revealed that most of the intervention was done by outsiders with the communities being passive recipients of the assistance something needing attention in future response efforts to ensure communities participate. When asked on what exactly was done on awareness campaigns and whether there were any challenges or lessons learnt from engaging in awareness campaigns as a strategy to combat cholera some of the participants had this to say:

"Various organisations and companies stormed Budiriro with various campaigns strategies the most dominant was the use of roadshows where organisations and companies brought life

to the cholera hit area through a lot of music and dancing and then they would draw huge crowds normally at our local township shopping areas. They would give a talk on hygiene, causes of cholera, symptoms and what one can do when they suspect to have cholera or typhoid. They would also ask quiz questions and giving out prizes. It was actually funny but through that funny we were learning vital empowering information about cholera." (CP5)

"Some just brought fliers with basic information like information on cholera symptoms and cholera prevention. They would also have bigger posters pasted on walls of shops, churches, clinics, combis and other strategic areas where people could see." (CP13)

The views of the community participants on campaigns were corroborated with the views of the stakeholder participants who had this to say about campaigns:

"Well….we put a lot money and a lot of investment in terms of time, money and human resources in education campaigns. We were serious about that. We went to the extent of engaging known artists like your favourite musicians especially those crowd pullers. We engaged dancers and professional masters of ceremonies who serenaded the masses whilst our officers would make an interlude to educate the communities on cholera prevention, cholera treatment, cholera symptoms among other issues. That was a huge activity I tell you and maybe that is the reason why this time around cholera was defeated in shorter space of time and killed less people as compared to the 2008 cholera outbreak." (SP4)

On challenges and lessons learnt about the use of awareness campaigns some of the interviewees had this to say:

"I think these campaigns though were good as people some of us were more concerned to listening to our favourite artists sing than listen to the messages, I think that is a set back on its own…." (CP15)

"Such massive campaigns come at a huge financial costs. Musicians and other artists are business persons, they want to make profit so they charge exorbitant fees at times which is costly as compared to perhaps just distributing fliers. But all the same, the activity drew huge crowds which means there was reach to many people in a single day though we may have to monitor and see if that was effective or not." (SP2)

The above direct verbatim quotes from study participants indicates that awareness campaigns was effective in reaching huge numbers of people with cholera messages. However, the study

established that it is difficult to measure the effectiveness of the method when it comes to outcomes given that huge crowds were said to be difficulty to record on an attendance register. In addition, accountability for resources used then becomes compromised due to the absence of verifiable attendance registers. The number reached by an awareness campaigns through roadshows was found by the study to rely on estimates of responsible disaster response teams such as officials of NGOs, a sponsoring company, City of Harare or government department such as the CPU which leaves it prone to manipulation. Thus the study concluded that there is need to ensure that despite the huge crowds some registration of attendees should be done in one form or the other. However the study has found out that despite its weaknesses the strategy seems to have worked judging by the majority of community participants who mentioned it and could remember some of the slogans and messages chanted during the roadshows. Two subthemes emerged from this theme and these are health, hygiene and education promotion and distribution of IEC materials and these are discussed below:

4.4.1.1. Sub-theme: Health, education promotion

Closely linked to awareness raising is the concept of health education promotion which is a tenet of primary health care system. Whereas this was used as a strategy during the outbreak, it is an ongoing activity within the City of Harare's health department. Thus the City of Harare has community based cadres who are trained volunteers who then do door to door campaigns and encourages the concept of participatory hygiene and sanitation initiatives. One of such initiatives include identification of model clean homesteads where other households are then referred for emulation. The majority of participants cited health education promotion as one of the effective awareness campaign strategy used to respond to cholera. They indicated that this is more developmental as it is an instituted activity but only scaled up in times of disasters. In particular the participants held the following views;

"Health education and promotion was also a key strategy. However I must hasten to add that we have a whole health promotion department within the City of Harare but when there are disasters such as cholera the department scales up its activities to ensure that there is amplified health promotion activities in suburbs." (SP6)

"We have that health education department but these are some of those departments which when cholera strike you want where they will be because their primary role is to educate people at household level about health and hygiene. They have a community network of volunteers

whose mandate is to work with households to practice good hygiene and health issues but still cholera strike when we have such a structure" (SP1)

"The health education promotion volunteers in particular increased their visits to us encouraging us to have clean and smart homes so as a way to fight cholera. They also taught us to wash our hands always especially after visiting the toilet or after having greeted people so before taking any food you have to wash your hands. These are some of the things they were doing. These volunteers are not new to us, they had been around for a while but it is only that when there is an outbreak they increase their visibility…" (CP14)

The study has found out that City of Harare on the developmental and prevention agenda on diseases it has systems in place inclusive of the health education promotion structure. It was further established by the study that the health promotion seem to be ignored and only to be revamped when there is a disaster which defeats the purpose of establishing such a system for prevention purposes. The findings also indicate that health promotion continue to be used for reactionary purposes contrary to its aim of preventing occurrences of diseases through educating members of the public on good health and hygiene practices. In addition, the strategy was effective in encouraging household level hygiene practices such as washing of hands, proper care of uncontaminated water for domestic use among other practices. The community cadres of the City of Harare proved to have become popular in Townships especially during outbreaks and are associated with championing of hygiene purposes. Whereas the strategy was effective, it was hampered by lack of a supportive resource base such as ongoing supervision of community cadres by City Health Department when there is no cholera outbreak. Those charged with responsibility of supervising and mentoring these cadres also cited lack of resources such as vehicles and fuels as the major setback why they could not effectively support the cadres beyond the post disaster era. This is tied to the fact that most if not all cholera response agencies leave the site once the disaster is declared over. This then grounds the City Health Department which is in dire need of resources to carry out its operations. Lack of resources cited as a challenge in rolling out health, hygiene education promotion corroborates the findings from literature where it was indicated that lack of resources is a major setback in cholera response (Watyoka, 2016; Chipare, 2010).

4.4.1.2. Sub-theme: Distribution of information education and communication materials

Distribution of IEC material emerged as the second and last subtheme to emerge from the awareness campaigns theme. Participants viewed distribution of Information Education Communication (IEC) materials as yet another activity done as part of awareness campaigns during cholera response. This was said to have been combined with other activities such as distribution during road shows designed to raise awareness and sometimes IEC was distributed by health promoters during their routine visits of the households and wards. The IEC material has messages evolving around cholera transmission, signs and symptoms of cholera and a snap directory of services which one could access when suspecting to have fallen prey to cholera. The commuter omni-buses were also used as a distribution point, thus some of the IEC material were stuck on commuter buses walls whereas some IEC materials were distributed as bus terminuses as well as given to bus conductors and rank marshals to distribute to passengers during their trip to work or their trip back home. This was found to be an innovative strategy employed by the disaster response teams. The following are some of the views of the participants:

"They also distributed fliers with messages on cholera prevention and cholera symptoms among other things…" (CP12)

"They went door to door distributing fliers to us during their visits to our ward and sometimes we received these during roadshows held at our local shops" (CP8)

Thus the verbatim quotes indicates that distribution of IEC material was largely mainstreamed into other activities of which this could be singled out as a best practice as this is economic and likely to save time and resources as compared to doing it as a stand-alone activity. However, the study also established that the development of IEC materials seem to be elitist in nature as the messages are developed by the elites within the NGOs, City of Harare, government and other entities and the end users who are the masses professed that they were not consulted but they were just given the IEC material written in English and some in Shona. Despite these challenges distribution of IEC material remains one of the effective ways of getting information to the people in a fast and efficient way. This gives a household some fact reference sheet which they can refer to from time to time given that hard copies were handed over to beneficiaries either on commuter buses, at their household or on road shows as well as during religious gatherings. The distribution network was multi-thronged targeting all settings where people are

found including churches, other religious places, beer halls, schools, funerals, community meetings and at work places. However, the distribution of IEC material ended soon after the cholera disaster was pronounced as over which would mean people are left without reminders until when there is another cholera outbreak.

4.5.2. Theme: Setting up cholera treatment centres

It emerged from the data collected that as part of cholera response cholera treatment centres were set up. These centres utilised the already existing health infrastructure as City of Harare poly clinics and hospitals such as the Beatrice Infectious Hospital. The setting up of these centres were meant to ensure that such health facilities were properly resourced including materials such as drugs, protective clothing and human capital base. This was also meant to ensure that cholera cases received undivided attention as opposed to using ordinary health facilities. Cholera is a highly infectious disease hence the treatment centres were also meant to quarantine the cholera patients from the rest of the world to curb further spread. Whereas, the strategy by its design is an effective strategy to combating cholera it was weakened by socio-economic and political macro systems such as perennial shortages of drugs, demotivated personnel as well as allegations of corruption on the meagre resources allocated to procure essential materials. These cholera treatment centres were set up in Budiriro and Glenview which ensured accessibility of the services by the people in line with the tenets of primary health care. Unsurprisingly, treatment of cholera cases was dominantly singled out as one of the strategies. Those who responded to questions related to treatment as a strategy mentioned the following highlighting issues of challenges and effectiveness;

"Treatment is a key response intervention to any cholera disaster because without it more confirmed cases can result in death, however our challenge was that of shortages of drugs and protective clothing. In addition, those medical personnel like the nurses and doctors also need motivation in form of allowances and remuneration so that was also an issue which affected treatment but by and large it was a huge success" (KI1)

"Our biggest lesson as a country is that we should always have stokes of cholera drugs within the national health system because it is not a secret that we are a cholera prone country especially our city, Harare. Why should we be caught very much unprepared to respond to cholera when we have all signs indicating to us being vulnerable to cholera attack?" (SP10)

The findings points to treatment as a central cholera response package which could not be absent in any cholera disaster response. Treatment was touted as key in averting death among cholera patients. This confirms the findings from literature that in the 2008-2009 cholera outbreak, treatment was a central intervention and helped reduce deaths among cholera patients (Watyoka, 2016). The study also established that treatment is marred by challenges such as drug shortages, demotivated medical personnel and shortage of protective clothing and disinfectants. This points to a nation with weak disaster preparedness systems hence it is an indicator that Zimbabwe is still lagging behind in terms of disaster preparedness. As such the views of the participants were that the nation should have a minimal stoke of drugs to cover even over three thousand cases so as to be in a position to promptly respond to cholera. The reactionary nature of cholera treatment centre was up to design as the World Health Organisation in their several publications indicate that saving life through treatment is a key intervention in cholera response (WHO, 2009; WHO, 2017).

4.5.3. Theme 3: Distribution of Non Food Items (NFI)

The findings of the study show distribution of Distribution of NFI as one of the themes to emerge from the community perspectives on the efficacy of cholera response utilised. Thus distribution of NFIs was cited as one of the strategies used to respond to cholera. The main items distributed were said to include buckets for water storage, water guard, sanitizers, soap and IEC materials among other things. Distribution was preceded by a registration and verification of beneficiaries. The line lists were used as the starting point to find deserving beneficiaries. Line lists refers to lists with demographic profiles of all people presenting at cholera treatment centres regardless of whether they were confirmed to have cholera or not. This is an initial registration of every client who visits a cholera treatment centre to seek services. Distribution of NFI was said to be effective as it ensured that after being made aware people had resources to practice their new knowledge through NFI. Thus they managed to practice good water storage practices and hand washing because they had the resources. Some of those interviewed held the following views:

"We were given buckets, water tablets and soaps among other things. Key to that was water, they brought clean and safe drinking water which was also key in fighting cholera…" (CP9)

"Various agencies came to our rescue, they distributed water tables, buckets for safe storage of clean water among other items. Though these were not enough they helped us a lot…"

(CP11)

From the testimonies of the participants captured in the above verbatim quotes, it is evident that distribution of NFI was popular with communities. It is also telling from the above quotes that they were various agencies including NGOs, the UN system and private companies involved in distribution of NFI. Whereas this was cited as an effective strategy in building the capacity of households to respond to cholera it is bound to create a donor dependence syndrome. However, it was encouraging to note that there were other partners who chose a market based distribution of NFI system through selling of such materials such as water chemicals like the water guard at affordable prices in shops. In addition, buckets for water storage were also found in shops as such agencies encouraged the business community to also respond to the cholera pandemic. This shows that issues of disaster preparedness should also remotely involve the business community, they have to also prepare adequately for influx of cholera related products such as sanitisers, water chemicals and water storage containers. The study also stablished that most shops ran out of basic supply of sanitisers within three weeks of outbreak due to unpreparedness. This could have been confounded by the country's poor early warning systems which means stakeholders were caught unaware or it could indicate the exclusion of the business community in disaster management equation.

4.5.4. Theme 4: Family and contact tracing

Family tracing was identified as one major strategy used during cholera response. Family tracing was established by the study as referring to a process of trying to establish a cholera patient's family network given that they may have presented themselves at a local facility or fell ill whilst away from their family and found themselves in a cholera treatment centre or a health facility without their family networks knowing. This was said to involve efforts to establish the patient's family networks and their physical address and ultimately reunifying and reintegrating the patient back to their families. Contact tracing was also done to establish the networks of people suspected or confirmed to have cholera. These networks include one's work mates, family, church among other networks they may have come in contact with. Those who raised family and contact tracing as a strategy used during the cholera response had this to say;

"Working with the police the City of Harare also do contact tracing whereby a person suspected to have cholera or a confirmed case as city of Harare we have to trace them to their work place, home, church among other networks to test those people as well to ascertain that they were not infected as well with cholera.." (SP7)

"The City of Harare also rely on the Zimbabwe Republic Police on contact tracing and family tracing, as you know a person could fall ill whilst at work or in the middle of the City and then they are admitted at a cholera treatment centre, they can even die and so the ZRP and the City of Harare has to trace the family of the cholera patients for reunion." (SP3)

All the views of the participants point to the fact that contact and family tracing was largely done by the Zimbabwe Republic Police and the City of Harare. It is also evident in the quotes that contact tracing is very important as a prevention measure as it militates against spread of cholera from one person to all their network and contacts. Family tracing was touted for its ability to reunify and reintegrate patients who might have been separated with their families due to cholera treatment. However, the effectiveness of the strategy was hampered by limited availability of resources. Family and contact tracing involves travelling hence vehicles and fuel are a key input to the success of family and contact tracing. Hence whilst in terms of meeting its design objectives family tracing was effective these challenges associated with resources constraints then compromised its effectiveness. In addition, contact tracing also creates sigma and discrimination, as colleagues of index cases tend to shun such individuals who would have led to them being tracked down for the fear of contracting cholera.

4.5.5. Theme 5: Coordination meetings

The study established that there were some form of coordination done through various meetings held within the City Health Department. Coordination, was also done at national level through cabinet core team comprising of the Ministry of Health and Child Care, Ministry of Finance and Economic Development, Ministry of Public Service, Labour and Social Welfare and the Ministry of Local Government and Public Works. The Minister of Local Government and Public Works reported to cabinet which is chaired by a state president this is an indicator that there was some form of coordination at various levels. At operational level the coordination including the defence and state security arms such as the Zimbabwe National Army (ZNA) and the Zimbabwe Republic Police (ZRP). The following were the views of the participants on coordination meetings as a strategy used during the cholera response:

"*Without coordination we would have not won the fight against cholera. So stakeholders met largely hosted by the City of Harare for coordination meetings. These meetings were critical in mapping resources available and the gaps. The meetings also mapped the partners and*

corporates who were on site to ensure that there was no duplication of reach. In addition, these meetings also acted as a feedback platform and a monitoring and evaluation conduit because it is during these meetings that various stakeholders reported their progress, challenges encountered and lessons gleaned…" (KI2).

"I must say coordination meetings helped a lot to also clarify the clashes which were emerging amongst the partners. For example there was accusation of misappropriation of funds by the state hence those meetings also addressed such issues to restore confidence of sponsors and the public in public institutions. There were also accusations and counter accusations between the City of Harare and the Ministry of Local Government on who was letting down the people so coordination meetings were also handy in sprucing up relations and do away with the politicking." (SP6)

It is evident from the participants' views that coordination meetings played a central role in ensuring that there was strategic guidance, advice and technical backstopping to partners rolling out the cholera response. Coordination meetings as aptly captured by the views of the participants also helped to eliminate mistrust amongst stakeholders and to build a common understanding of what was transpiring. In addition, coordination meetings also played a central role in role clarity for partners who may have not been very much aware of who was supposed to do what. Sadly, the study established that the coordination meetings was an elitist affair. It was the meeting of the state elites, City of Harare elites, NGOs elites among other development practitioners without a representation of the affected people. Whilst the study further found that there was an effort to engage residents associations, the associations were again represented by elites working for these agencies rather than the residents themselves. This calls for innovative ways to ensure participation of the community in these meetings where intervention concerning them would be discussed. The roles played by various entities in coordination was in sync with the Civil Protection Act of 1989 (Civil Protection Act [Chap 10:06]).

4.5.6. Theme 6: Monitoring and evaluation

Monitoring and evaluation is one of the subthemes which emerged from the main theme of the strategies used during the cholera response. Monitoring and evaluation took different dimension, it included cases tracking by WHO and the Ministry of Health and Child Care to establish if cholera was continuing to spread or being contained. In addition, new confirmed cases were tracked to its origin to establish the cholera epicentre and monitoring to establish if

there was another epicentre other than Glenview and Budiriro. Evaluation, also involved a reflection by stakeholders on whether the strategies they were employing were being effective or not. The following were some of the views shared by the participants;

*"We were helped largely by UN agencies including the World Health Organisation to monitor and evaluate progress. Monitoring and evaluation was multi-faceted it included tracking the number of cases and confirmed cases observing the trends to see if the new cases were falling or rising mainly through the use of graphs. Then comes the coordination meetings which also played an important M and E role…" (*SP5)

It is evident from the quote that M and E was done both through coordination meetings and through data collection and analysis to observe trends. Once again. The study established that the monitoring and evaluation was key in informing decision making relating to resources distribution and relating to establishing the efficacy of the strategies employed. However, there is no evidence that there was an evaluation done by the disaster response teams and agencies post the cholera containment which could go a long way in gleaning various lessons for the future. In addition, it is also evident in the views of the participants captured above that the M and E done during cholera response was largely non-participatory as it involved collation of data gathered during response such as intake profiling at cholera treatment centres and then develop graphs to establish cholera trends.

4.5.7. Theme 7: Resource mobilisation

The findings of the study also established resource mobilisation as one of the central themes emerging from the community perspectives on the efficacy of cholera response strategies. Resources mobilisation was found to be one of the key strategies used. Mobilisation was done by various entities, at various levels and through various means. The state through the Office of the President and Cabinet (OPC) used appeals to the UN and companies to chip in. Private companies used mobile money biller codes opened specifically to solicit for donations from the company customers whereas NGOs used proposal writing to fundraise for the disaster response. This was established to be the mainstay of all other strategies given that the majority of strategies hinged on resources in order for them to be actualised. In particular participants had this to say;

"*I think you know that a disaster is declared by the state president in our case of the laws, once*

that is done, disaster response becomes a central role of the Civil Protection Unit which is housed within the Ministry of Local Government. Thus the ministry plays a pivotal role in mobilisation of resources for the disaster response, sometimes also play a pivotal role in launching an appeal for assistance to the donor community."(SP6)

"Under the Civil Protection Act, it is the OPC through the state president who declares any calamity or pandemic a disaster hence the OPC in that regard played a major role in declaring the cholera a state of disaster. This is key because it allows for mobilisation of resources because some of the donors simply wait for the declaration in order for them to chip in. In addition, the OPC also played a an important role in mobilising resources you remember that the president himself made several calls for the international communities, NGOs, business, churches among other stakeholders to support the disaster response initiatives and that paid dividends."(SP11)

"As a company we mobilised resources from our clients through launching an appeal for assistance and clients responded by way of donations through mobile money platforms. We raised huge funds from that which we then complimented through our own funds. The funds were critical in purchasing critical materials such as drugs and protective clothing including provision of clean water." (SP7)

From the quotes above it is apparent that resource mobilisation for cholera was multi-thronged. The state played a central role in launching an official appeal for cholera response following its declaration of a state of disaster. A considerable amount of money was raised and response was largely from the UN agencies, private companies and NGOs. Resources mobilisation done by the state and companies was coordinated by the Ministry of Local Government on the mobilisation side but the financial management side was managed by the Ministry of Finance and Economic Development. This seemed to have been a political move to spruce up government's image on management of funds so as to restore public confidence. However, mobilisation of resources seemed to focus more on companies, NGOs and the UN ignoring the communities which can be mobilised to offer various resources which they may have. Communities could offer their labour as volunteers, others could offer material support to fellow residents but this was not tapped into.

Exploring community based resources mobilisation becomes a possibility in future and is likely to reap results given an example of what was later witnessed with the Cyclone Idai disaster.

Communities donated huge goods and services to fellows affected by the disaster. Perforating through the participants' views it also evident that funds mobilised by NGOs seems to be managed entirely by the NGOs hence without honest declaration of amounts received by the respective NGOs then the state may be groping in the dark on the total amount received for the cholera response. The fact that NGOs prefers to manage their own resources may also be a pointer of lack of trust between the state and the NGOs. It is the researcher's conclusion based on the findings that Zimbabwe seem to be under funding emergencies from its national budget hence relaying on donors. There is need for allocation of resources for emergencies to ensure that when a disaster strike the state could fund more than 70 percent of the response. In addition, resources mobilised were largely for the response in a reactionary approach very little was raised to address the root causes of cholera and to build the capacity of institutions and households to prevent cholera and also to be able to respond to cholera in the event of an outbreak. Thus resources to go towards sewer system, refuse collection, waste management and water management and delivery were left unattended to as noted by other researchers in the area of cholera (WHO 2013; Watyoka, 2016).

OBJECTIVE 2: EXPLORING THE CHALLENGES EXPERIENCED BY STAKEHOLDERS IN RESPONDING TO THE 2018 CHOLERA EPIDEMIC IN BUDIRIRO TOWNSHIP

The challenges identified included the following but not limited to; mushrooming illegal settlements, poor early warning systems, lack of disaster preparedness, poor coordination among others. In chapter 2, challenges associated with response to cholera were also discussed based on literature review on other cholera outbreaks in the past in and outside Zimbabwe. This therefore indicates that the second study objective was largely met through discussions in chapter 2 and the study findings in this chapter.

A closer look at the challenges discussed through the various themes and subthemes which emerged from the study shows that the challenges were both macro and micro in nature. At macro level, stakeholders faced challenges such as illegal structures and illegal settlements, red taps in disaster management, poor WASH infrastructure and politics and politicisation of cholera. These challenges could not be fixed by those immediately responding to cholera neither could they be fixed during the intervention but these demand long term planning and political commitment to tackle them so as to achieve sustainability in addressing cholera

outbreaks. Some of the challenges which were largely micro in nature included poor coordination amongst stakeholders. Such challenges were at least said to have been addressed through coordination meetings. These challenges established by the study confirms what other studies found (Watyoka, 2016). The themes which emerged under this objective are presented, analysed and discussed below with aid of direct quotes of participants to ensure that the original views of the research participants are retained:

4.6. CHALLENGES EXPERIENCED BY STAKEHOLDERS IN RESPONDING TO THE 2018 CHOLERA EPIDEMIC IN BUDIRIRO

4.6.1. Theme 1: Poor early warning systems

It emerged from the data that poor early warning systems was a major theme. This was shared across the board that is the stakeholders, community members and the key informants in strategic areas. Early warning is the art and practice of detecting and forecasting an impending disaster and then be able to communicate to all stakeholders likely to be affected by that disaster. The aim of early warning is to adequately prepare for the eventuality of a disaster, from a Pressure and Release (PAR) theoretical perspective the preparations aim to reduce vulnerabilities and make communities more resilient so that when a hazard finally strikes its impact is minimised (Wisner *et al*, 2003). An analysis of data indicates that Zimbabwe still suffers from poor early warning signs. Whereas NGOs such as MSF and the UN system such as the World Health Organisation play their part in issuing warnings, the state sometimes were accused of turning a blind eye on warnings and continue business as usual. The following are the views of some of the participants who gave their opinion:

"Another challenge is that we have poor early warning systems as such cholera was only identified after 8 people were already dead from cholera so such poor early warning systems always cost us as country and as a City." (SP6)

"MSF, that organisation of Doctors Without Borders if you know it, they warned of a cholera outbreak and sited reasons but that warning was ignored, what happened we woke up 8 people dead and everyone was now running like a headless chicken. We need to have strong early warning systems which would help us prepare and if possible avoid the outbreak at all if it happens it finds us prepared. It is possible, the reason we did not witness a cholera outbreak in Chimanimani in the aftermath of a Cyclone whilst in Mozambique they witnessed an outbreak it is because this time around people took early warning signs serious. Even the

President I heard him say we may have other calamities like cholera in Chimanimani that saw stakeholders putting WASH facilities and educate the people on good health practices in Cyclone affected areas up to today we have not experienced a cholera outbreak in that area."(SP4)

"The English people say to be forewarned is to be forearmed, so we need to have strong early warning systems than what we have now. And when we are warned we need to take the warning seriously if we are to achieve results because to be warned as one thing and to auctioning on the warning is another thing."(SP2)

The views of the participants above indicates that Zimbabwe needs to strengthen its early warning systems as opposed to relying on the World Health Organisation and other NGOs to detect impending disasters. Another striking finding is that early warning signs are all over but the state is said to be reluctant to action on the early warning signs. Thus if the state is not comfortable with early warning signs issued by external entities thin it is prudent for the state to consider strengthening its own early warning systems to avoid the huge costs that comes with disasters such as cholera. The findings also points to an intricate relationship between early warning system and disaster preparedness, thus a poor early warning system leads to poor disaster preparedness. As evident, in the above quotes from participants, early warning systems is the state's alarm bell for an impending disaster in order for stakeholders to adequately put in place disaster preparedness systems. In addition, the study findings also points to the need to make communities more responsive to early warning signs so that they take seriously communication on impending disasters seriously. Hence, to improve Zimbabwe's early warning system it will take improving and strengthening the science and research, communication and also awareness raising on early warning system so as to enhance the consumption of early warning signs by communities, business entities, NGOs among others. This would ensure that the improved early warning system would directly translate to an improved disaster preparedness system. The need for early warning systems were also recognised by various authors (Betera, 2011; Chipare, 2010; Watyoka, 2016).

4.6.2. Theme 2: Illegal settlements

A look at the data revealed that illegal structures and illegal settlements within the City of Harare is one of the long-term causes of cholera. Illegal settlements referred to settlements not approved by the City authorities. These settlements were characterised by poverty and squalor, poor road network, lack of WASH basic facilities and lack of health services. All these characteristics exposes the dwellers to a number of vulnerabilities which then make them easy prey of cholera. Illegal settlements is also a going concern for the City of Harare as they find it difficult to extent critical WASH services due to geographical siting of the settlements for example some settlements would be on rocky areas making it difficult to lay water and sewer reticulation pipes. The following are the views of the participants on illegal settlements as a contributing factor to the cholera outbreaks being experienced in Harare more frequently:

"Now let us discuss about the cholera response challenges that you may have encountered? In your intervention, what are some of the challenges faced by stakeholders? *They were multifaceted challenges which include the long term challenges which continue to militate against us , this include the illegal mushrooming settlements which are without sewer, no access to roads, no clinics and they are difficult to trace cases in such settlements because there are adequate road. So cholera is bound to break out when we have poor WASH infrastructure."* (SP11)

"You see illegal settlements increases the number of people in cities and these people because they are illegal they are normally not counted by the City planners, there is scant information about them which then distorts the actual population of urban dwellers. It then means we cannot plan adequately on service delivery because we are in the dark on the actual number people we are servicing. In addition, illegal settlements are normally without WASH facilities because some of them are located on rocky areas which were avoided by the City on the very basis that it is impossible to lay water and sewer pipes to such locations…." (SP1)

"The mushrooming settlements in Budiriro and some other parts of Harare if not dealt with will continue to be the breeding ground for cholera. Such areas are so overcrowded that when cholera strike it spreads so fast so that is a big challenge…" (SP2)

The direct quotes above is evidence that various people and stakeholders believe that illegal settlements in Harare is fuelling cholera. This is so given the multi challenges which are then generated from the illegal settlements. The findings point to lack of WASH facilities including water, toilets and sewer systems which results in high open defecation among other ills. It also

makes spatial planning very difficult as the City cannot ascertain its population as more and more people keep coming to suburbs settling in the illegal settlements. The people are also made more vulnerable to cholera by the absence of health services including City of Harare's health education promotion initiatives such as the use of volunteers to monitor households on issues of hygiene and health practices. This is due to the fact that illegal settlements do not have a formal City of Harare volunteer network. Based on the study findings, it is important that the City of Harare must have to be vigilant and tough in avoiding illegal settlements where settlements have already creeped in then there is need for a swift move to regularise the illegal settlements so as not to expose children, women and other vulnerable groups to diseases of overcrowding such as cholera which spreads fast in overcrowded areas without WASH facilities. The findings also show the need for the City of Harare to reflect deeply on the increased pressure for housing and have innovative housing solutions such as high rising buildings to accommodate more people so as to minimise mushrooming of illegal settlements which then poses a threat to cholera outbreaks. Watyoka (2016) also identified the challenge of illegal settlements as a setback to cholera response.

4.6.3. Theme 3: Lack of preparedness

Linked to poor early warning systems is the lack of preparedness. The study findings revealed that Zimbabwe is still very much behind in terms of preparedness to tackle disasters. Disaster preparedness refers to a process of pre-disaster planning including risk reduction planning and implementation as well as initiatives put in place to build community resilience so that communities could repel or cope with the effects of disasters. Disaster preparedness also include having established disaster response systems including availability of resources for disaster response which are in place prior a disaster. The study found disaster preparedness lacking in Zimbabwe in relation to the cholera outbreak that hit Budiriro in 2018. Those who responded to questions linked to disaster preparedness has this to say;

"Another challenge is that of preparedness. We seem to be perpetually ill prepared to deal with disasters. We are always without resources, we are always with leaking water pipes, and we are without drugs so we always finds ourselves being under scourge from cholera." (SP1)

"Our challenge as a country is we seem to learn nothing from each cholera outbreak we witness. How can in 2018 we find ourselves not ready to respond to cholera when we all know that we are a cholera prone area? We continue to appeal to external support when disaster

strike, our coffers for disaster response are always empty. We are always unprepared."(SP8)
"We lack preparedness for any disaster in this country. The CPU is incapacitated and underfunded …" (SP3)

"I think ours is an attitude and culture challenge. We seem to have an attitude of being reactionary as opposed to being proactive. You do not hear a lot of noise in mobilising resources for cholera in anticipation that the rain seasons may results in outbreaks, no! It is not like that in this country. People spring up into action and make a lot of noise, have numerous meeting when there is a cholera confirmed case. That is wrong, we should put more of our effort in ensuring that we have a polished up disaster response machinery should a disaster erupt." (SP9).

The analysis of the participants' views such as those quoted above reveals that Zimbabwe is still lagging behind in terms of disaster preparedness. The first set back to preparedness has to do with attitude, traditions and culture of doing things. The institutions and the elites manning the institutions linked to disaster risk reduction and disaster response seems to only see reason to have disaster response meetings than to have disaster preparedness planning meetings. Disaster response here refers to actions and interventions taken to address a disaster that has already occurred whereas disaster preparedness is a concept of ensuring that response systems are put in place in anticipation of a disaster. It does not in any way mean the same with disaster prevention though disaster prevention is the most ideal case. Lack of preparedness manifests itself in lack of various resources when a disaster strike. It is also the view of the researcher based on the analysis of data and the pieces of legislation related to disaster that the way the law is designed does not encourage disaster preparedness. For instance, when a disaster strike the president has to officially declare a state of disaster otherwise the UN, NGOs, the state departments and other entities do not spring up into action. Thus once the disaster is officially declared as over the majority if not all disaster response stakeholders and entities exit the sites, retrench the hired staff and none is left behind to do capacity building of communities, institutions, households and individuals to prevent another cholera and in the event of another outbreak to be able to respond to it with minimal external support.

4.6.4. Theme 4: Lack of material resources

Another theme to emerge from the theme of challenges experienced by stakeholders during the response was the lack of material resources. Material resources referred to things such as drugs, protective clothing, fuel, vehicles, water, water storage buckets and stationery among other things. These materials is critical for effective response hence lack of material resources has a bearing on the efficacy of the cholera response strategies employed. Material resources was cited as a major setback to the response teams. Those who responded to questions to challenges experienced by stakeholders and cited lack of materials has the following to say:

"So we are lacking capacity to respond to disasters and that we are not prepared for disasters we only react without resources, when a disaster is proclaimed we only start from zero to mobilise resources." (SP4)

*"If you look at cholera, we all know that we are a cholera prone country but why don't we keep enough stalks of treatment drugs, protective clothing and other materials needed. We always start the procurement process when the cholera pandemic has already killed people, what a shame! [**Okay, any more challenges stakeholders face in the cholera response]**"* (SP3)

"Lack of resources is the major challenge faced by all stakeholders in response, transport, drugs, protective clothing among other critical resources these are only mobilised when the disaster is already taking its toll on our people" (SP2)

The major material resources constraints identified by the study were transport, drugs, protective clothing, NFI (non-food items) and food items for patients at cholera treatment centres. Participants revealed that in most cases the treatment centres ran out of essential drugs especially when there was demands from other outbreaks from other provinces. Lack of material resources as a challenge is an indicator that Zimbabwe lacks disaster preparedness. The critical materials for cholera response is only procured and mobilised when cholera has already killed one or two. There is need for the state to procure materials such as essential drugs, protective clothing and NFI just in anticipation of a disaster so that when it strikes there is a swift response to the outbreak.

4.6.5. Theme 5: Human capital

One of the challenges faced by stakeholders responding to cholera outbreaks in Budiriro was human capital. Human capital referrers to availability or unavailability of staff to do cholera response work stretching from the medical teams, psycho-social support teams, engineers, social workers among other critical skills. Thus in some instance staff was there but they lacked technical skills to effectively respond to disasters. This is also telling of our higher education training that whereas we have some qualification in disaster management that may need to be mainstreamed to other professionals such as social workers, nurses, doctors, engineers, health promoters and politicians. These people find themselves in the middle of disaster response by virtue of their offices yet they may be lacking comprehensive technical expertise in disaster response and disaster management. This was cited by many participants especially the ones drawn from institutions, however even the household based participants were also aware that the response teams lacked human capital. Those who responded has the following to say:

"We also suffer challenges of being under staffed to the extent that whenever a disaster hit we rely on NGOs like UNICEF and others to complement our staff." (SP11)

"You could see it that the majority of the people who visited us were newly recruited people some of them were very young perhaps there were still in college." (CP15)

Human capital is a critical component in any disaster response hence its shortage is a disaster on its own. It cripples all the response effort. In this study human capital shortage was cited as a challenge of the City of Harare and statutory agencies. In most interviews the Zimbabwe National Army was cited as a better equipped institution with qualified personnel which was called upon to beef up the human capital base that was charged with response. There is need for the hiring of specialised staff including nurses, doctors and health promoters who need to be on long term service mimicking the fire fighters model. The City recruits fire-fighters, train them and they go on drills everyday yet one can go for a year without having attended to a fire emergency. That should be the same with cholera, there should be a standing staff that is charged with campaigns when there is no cholera but just to keep people aware that in lapse in hygiene and health practices one can contract cholera. The trained medical personnel would be ready that once there is an outbreak they are ready to set up special cholera treatment centres. To keep them active such teams when they are outbreaks in neighbouring countries they could be seconded to such countries just to make sure that they are kept abreast with their specialised

training.

4.6.6. Theme 6: Poor WASH infrastructure

Poor Water Sanitation and Hygiene (WASH) infrastructure was cited as one of the challenges encountered by stakeholders whilst responding to the cholera pandemic. WASH infrastructure include sewer reticulation system, water facilities and ablution system. The sewer reticulation system which comprise of sewer pipes and sewer treatment process was found to be old hence they were bursting more often. The water infrastructure is largely composed of the Morton Jeffrey water treatment plants and other smaller water treatment facilities. In addition, the infrastructure include water connecting pipes. This infrastructure was again found to be old hence always break down. In addition, the infrastructure was not upgraded to cope with the growing urban population this means there is now a mismatch between the growing urban population and the carrying capacity of the water infrastructure. As such the participants has this to say concerning the poor WASH infrastructure;

"[Now let us discuss about the cholera response challenges that you may have encountered? In your intervention, what are some of the challenges faced by stakeholders?] *They were multifaceted challenges which include the long term challenges which continue to militate against us , this include the illegal mushrooming settlements which are without sewer, no access to roads, no clinics and they are difficult to trace cases in such settlements because there are adequate road. So cholera is bound to break out when we have poor WASH infrastructure."* (SP11)

"Then comes our poor infrastructure like our bursting sewer pipes which go for months without attention, our water infrastructure is also poor and this is worsened by corrupt tendencies within those who are supposed to ensure that these resources are in place." (SP9)

The lack of safe water, poor sewer reticulation system, lack of ablution facilities and poor hygiene practices were the threat to the cholera response. Thus despite the intervention and other strategies such as campaigns lack of water saw new cases continuing to sky rocket until when adequate clean water was delivered to the affected areas. There was also a challenge of non-functioning sewer system including broken sewer pipes which had gone unaddressed hence when there was an outbreak the running sewer combined with vendors who hid their wares under the bridges including sewer points was cited as a threat to the ongoing response

that was happening. This shows that for effective response there is need to address the WASH infrastructure issues. This would actually act as a long term intervention to cholera as many contamination is linked to poor WASH facilities as observed by many more researchers (Mukanganise, 2011; Watyoka, 2016; Chipare, 2010).

4.6.7. Theme 7: Poor stakeholders' coordination

Poor stakeholder coordination is one of the themes which emerged. Coordination involved feedback meetings and also oversight role. Those charged with coordination were several but key was the cabinet inter-ministerial committee on disaster which comprised of the Ministry of Health and Child Care, Ministry of Local Government and Public Works, Ministry of Public Service, Labour and Social Welfare and the Ministry of Finance and Economic Development. The City of Harare coordinated at the level of operations, thus all disaster response teams were to meet weekly and give feedback to all stakeholders chaired by the City Health Department. UNICEF and UNOCHA also has a coordination mechanism including its WASH cluster which is a conglomeration of WASH implementing agencies. The fact that there are multiple coordination platforms means poor coordination is bound to arise due to confusion on roles and responsibilities. The following is what some of the participants said about poor stakeholder coordination;

"There is also a challenge of poor coordination, NGOs just go into the community and start drilling boreholes sometimes without the approval of City of Harare engineers…" (KI3)

"There is also a lack of role clarity between the City of Harare and the parent ministry the Ministry of Local Government." (KI4)

Whereas poor coordination was established by the study as a challenge it should not overshadow the efforts which were evident throughout the study that there was high level of coordination given the coordination meetings which were held at the City of Harare directorate for health and social services. In addition, WHO, UNICEF, UNOCHA and other agencies also helped in coordinating information flow and mapping of partners and resources. However, some participants felt that there was still poor coordination on the ground. They argued that NGOs and City of Harare used different line lists which obviously posed a threat of duplicating reporting. Line lists refers to the lists containing demographics of every person who present at a health facility suspecting themselves to have contracted cholera even if they are later satisfied

as being cholera free. Another weakness observed as indicated in some of the quotes above is that there was confusion on the role of the City of Harare, with that of CPU and the Ministry of Local Government. At most there was acrimony between the City of Harare and the Ministry of Local Government and this was manifestation of macro politics between ZANU PF and the MDC Alliance. The Ministry accused the City of Harare of neglecting its duties in terms of service delivery whilst the City of Harare blamed the failing economy for its woes this was said to have escalated poor coordination of the response by these key institutions as they concentrated in their infighting than coordinating the disaster response.

4.6.8. Theme 8: Politics and politicisation of Cholera

Politics and politicisation of cholera emerged as one of the themes from the analysed qualitative interviews held with household level participants, stakeholder's participant and key informants. The politics was around the issue of partisan political interests. The City of Harare is run by the opposition the Movement for Democratic Change Alliance whereas the central government is run by the ruling party the Zimbabwe African National Union-Patriotic Front. Hence, there was blackmail between the central government and the City of Harare to the detriment of cholera response efforts. The politicisation of cholera went beyond party politics, this involved even NGOs and private companies. For NGOs, they were said to have politicised cholera through over reporting of cases to build their own case for fundraising whereas on the other hand the government was accused of under reporting in order to manage its image. Some of the participants who responded to the research question and sub question has this to say;

"Then the bigger challenge is that of politics. Politics is a bigger multifaceted challenge, remember Budiriro and Glenview and Harare in general is an MDC run municipality hence there is always a clash between the Ministry and City of Harare and a lot of blame shifting among these key stakeholders and that represent a tension between the ruling party and the opposition in the country. Again due to politics we suffer the issue of over-reporting and under-reporting, the state would obviously under report to spruce up its image whilst the NGOs and donor community would inflate the figures for the sake of appealing for donor funds and to justify their blame on the City and government on failing." (SP4)

The above quotation is evidence that the cholera response was marred by the challenge of politics and politicisation of cholera. This politics was fuelled by both the state and none state actors. The state politics was largely said to be linked to under reporting for fear of poor

branding of the state among its peers. Thus in-order to spruce up its image the state was accused of under representing the number of confirmed cases and the number of deaths. On the other hand participants in their views the NGOs also played politics on the other side. Theirs was said to be over reporting for the sake of using the fictitious numbers for resource mobilisation and to prove the state as a failure. The other challenge was the real politics whereby the opposition leaders also hijacked the outbreak to score political mileage. They used the outbreak to project the failures of the current government.

On the other hand the government used the outbreak to project what it thought was the manifestation of poor City management by the opposition which is the majority party in the City of Harare. With the coming of devolution this politics may either subside or will actually spark, it may subside should the opposition party take full responsibility of running the city and also take full responsibility of the mismanagement thereafter. This can also be hampered by politics whereby the central government may fail to fully fund the City using it as a pawn to fight and trap the opposition for a failure. It may also spark, when the central government perhaps continue to be blamed for the obtaining macro-economic challenges which were cited as a major setback to City of Harare's efforts to deliver services to its citizens.

OBJECTIVE 3: EXAMINING THE DISASTER MANAGEMENT LESSONS THAT CAN BE GLEANED FROM THE STAKEHOLDERS EXPERIENCES IN RESPONDING TO THE BUDIRIRO EPIDEMIC

The third objective of the study was largely met in this chapter of the study. Numerous lessons learnt were established from the primary data as well as based on what was found from literature review. Further analysis of data produced many lessons learnt including but not limited to; bureaucracy in declaration of disaster, poor oversight role, prevention is better than cure, lack of DRR expertise within the City of Harare among other lessons learnt. These are presented, analysed and discussed at length in ensuing sections as themes emerging from the findings. This shows that to a larger extent the third objective of the study was met. A look at the data from the field and further analysis of that data has born the lessons for the future and the following lessons are later discussed:

- haphazard urban planning linked to cholera'
- vending
- primary health care
- coordination

- prevention is better than cure
- lack of DRR expertise within the City of Harare
- poor oversight role
- bureaucracy in declaration of disasters

These themes are presented in ensuing sections as follows:

4.7. DISASTER MANAGEMENT LESSONS GLEANED FROM THE STAKEHOLDERS EXPERIENCES

4.7.1. Theme 1: Haphazard urban planning linked to cholera

Haphazard planning of settlements or non-planning was cited as a major lesson for the future. The participant were of the view that there should be sound planning and non-tolerance to proliferation of unsanctioned settlements which then becomes fertile grounds for cholera outbreaks. However, haphazard urban planning was also found to be of no formal nature given that those who responded in defence of urban planners were of the view that the City has a well laid down plan thus why certain areas were exempted from human settlements but with sprouting of land barons and corruption people end up settle where they are not supposed to. The haphazard settlements have seen some houses being built on the passage of sewer reticulation system which then exposes them to cholera vulnerabilities once the pipes burst. Another thrust of haphazard urban planning on resources matching to the populace. The findings indicated that it seems there is no spatial planning in place including a City specific census which could give up to date statistics and then the city plan to match the needs of the urban dwellers. Urban planning was said to have to include the City having knowledge about all its WASH infrastructure, its state and have an inventory of which infrastructure is scheduled for service or replacement so as to avoid the decadence of WASH infrastructure. In particular, some of the participants shared the following views;

"First and foremost cholera is an urban planning issue. There is haphazard planning of settlement like you take Caledonia, Hopley and some areas in Mabvuku Tafara and Epworth some of those areas were never meant to be settled so people settle there and the next thing you have cholera because they have no clean water, no basic council service like sewer reticulation system and refuse collection from the city because the settlements are unrecognised. They do not pay money to council." (SP11)

The study as evidenced by the direct quote above established that haphazard urban planning compromises WASH related service delivery. Thus the people in such areas lack access to clean water and proper sewer management services. In addition, waste management by the City is also normally not given to areas which are hard to reach. Thus the lesson for the future is that City of Harare has to strengthen its urban planning systems if we are to win the war against cholera. In addition, City of Harare has to regularise those settlements which have been around for decades now and yet they remain unregulated as such it endangers the citizen as well as swindles City Treasury of potential revenue which could then be used to strengthen service delivery which is a key cholera prevention long term strategy.

4.7.2. Theme 2: Vending

Vending was cited as yet another big lesson for disaster response teams, the state, city of Harare and other policy makers. How the city deals with vending that was viewed as having a bearing on cholera response efforts. Vending in the city included food vending selling vegetables, fruits, fish and meat on the streets. These food items are then kept under poor hygiene conditions, for example the wares are kept on the street pavements and some are hid under drainage pipes which are dirty. Thus when one buys fruits is likely to eat without washing them due to lack of water within the vicinity hence the likelihood of eating contaminated food is very high. Given the poor economy, vending cannot be exterminated but needs regulation. This could include moving vendors to designated areas where there are proper WASH facilities for both the vendors and their customers. In particular the participants shared the following views when asked about lessons they think were learnt as a result of the 2018 cholera outbreak in Budiriro:

"Vending is our biggest lesson, let us control vending in the city if we want to also avoid cholera in the near future." (CP15)

"Why is it that we wait for cholera to strike then we regulate vending, we should have a strong policy on vending and follow it to the latter" (SP3)

"The vendors in our townships are also a menace to us, they sell their wares whilst putting them on unsafe grounds here in Budiriro and that endangers us" (CP5)

From the above quotes there was a general consensus among the participants that the issue of vending has to be addressed going forward to curb cholera occurrences. It was further established that some of the vendors hide their wares in the water drainage pipes which may result in contamination of vegetables and fruits hence if they are not properly washed it may result in people being affected by *Vibrio Cholerae* bacteria. The citing of vending is a major challenge that needs to be addressed and this could be corroborated with findings from literature that revealed the need to address vending as a strategy to arrest cholera spread (Watyoka, 2016). However, from the literature there is no consensus on the threat posed by vegetables and fruits. Some argue that the bacteria cannot survive on vegetables and fruits for more than three days hence the idea of destroying vegetables and fruits is not a panacea (Watyoka, 2016). In addition, addressing vending without addressing the economy may be rude to the thousands of people who have adopted vending as a source of livelihoods. In that regard, the best way forward may be to ensure that vendors are regulated and are on designated points where they have adequate WASH facilities for them and their customers.

4.7.3. Theme 3: Primary health care

Reflections on primary health care was made by many participants who singled it out as something that has to be taken as a lesson for the future. Primary health care is a concept which was designed to universalise health by ensuring that health services are appropriate, affordable, accessible and available to the masses. This is designed to prevent diseases where possible as opposed to waiting to cure diseases. To achieve this, primary health care amplifies the role of health and hygiene education promotion in communities. It also emphasises having health facilities within the vicinity of the residence. Those who gave their views on primary health care as a lesson learnt has this to say;

"Cholera outbreaks and the ensuing response help us to reflect on our primary health care system. Our primary health care system has degenerated hence education and health promotion activities are only amplified when there is a disaster once that subside communities goes unchecked, that needs to change." (SP11)

"Whilst we have clinics in our townships which means that we can easily access them, there are no drugs in those clinics hence it is meaningless to have them." (CP 4).

The participants' view of Primary Health Care (PHC) is that health promotion with an aim of disease prevention and community participation. In their view cholera is consistently hitting Harare and Zimbabwe as a whole as result of a collapsed PHC system. One of the major thing they observed is that health promotion which is a fundamental pillar of PHC is put to sleep when there is no an outbreak and only awakened when a disaster strike. This was found to be something needing addressing going forward. Thus health promotion should always be the centre of health delivery in the city. This should be coupled with community participation in the health delivery system if diseases such as cholera are to be prevented. The City of Harare has the community participation models in place such as the use of Ward Health Volunteers who work with communities to teach them on a range of health issues, giving them the information and helping them to practice good hygiene practices. Thus there is need of ensuring that this system is working harder and more visible beyond disaster response as a cholera prevention measure as opposed to using it as a tool of response. The multi-sectoral approach used during the cholera response should also be maintained as a good practice and a tenet of PHC. Partners should be encouraged to remain after the disaster to continue to coordinate capacity building initiatives to ensure a zero cholera occurrence in the future.

4.7.4. Theme 4: Coordination and oversight role

Another lesson gleaned from the cholera response was on coordination and oversight role. Participants felt that there is huge room for improvement of coordination and oversight in future. Coordination and oversight involved having the central government supervising the City of Harare and in turn the City of Harare is supposed to supervise all stakeholders responding to cholera in its townships. Whereas, coordination was done, there is room to build on the 2018 cholera response initiatives to improve how coordination was done. As identified during the discussion of challenges experienced by stakeholders during cholera response, the City of Harare's poor oversight role was flagged out as a lesson for the future. Those who identified poor oversight role and coordination made the following remarks;

["We also have to reflect on our City fathers are they doing enough?] *There is also poor coordination. We need to strengthen coordination, the Ministry of Local Government is not doing enough to play its oversight role. They are not monitoring the city of Harare, if they were monitoring we would not have suburbs going without clean water and uncollected refuse without the City getting a reprimand from the Ministry. The City of Harare once got the Loan Facility from China, what happened to that money? None followed that up?"* (SP7)

"City of Hare should always play its oversight role over NGOs and donors because the borehole which was the source of the outbreak here in Budiriro was drilled by a donor on a sewerage passage hence the outbreak, so there is need for the City of Harare to do due diligence." (SP5)

*"**[Is it that as a City you lack capacity to play the oversight role?]** No! Remember we have engineers, a whole department of city engineers in there. It is just negligent or maybe corruption or just lethargy in doing work properly."* (SP3)

As evidenced by the direct quotes above, City of Harare has to strengthen its oversight role and coordination mechanisms going into the posterity. The City has to coordinate all WASH related responses to ensure that no one endangers members of the public after siting boreholes and other WASH infrastructure wrongly. The City of Harare management has to closely monitor its staff to ensure that they are not corrupted by agencies which may result in them by-passing City regulations. In order for the City of Harare to be able to play its oversight role issues of workers motivation has to come into play so as to ensure that staff do their job according to the book and to the latter. In addition, the City of Harare should also have a ready WASH related map which they can avail to any partner wanting to venture into WASH infrastructure development. This ensures that none end up developing infrastructure on wrong sites. The City engineers should also be vigilante consistently monitoring developments taking place within the city which would ensure early detection of default developments hence condemning such developments before the public is exposed to danger. The views of some of the participants above show that the lessons on coordination is more on the coordination of the running of cities by the Ministry of Local Government and Public Works. Participants felt that the ministry is not doing enough to coordinate and monitor local authorities which they felt were going unchecked especially on corrupt activities. In their view, when the City of Harare has strong monitoring it may force it to be on its toes delivering services to the people which may then avert repeated occurrences of cholera.

4.7.5. Theme 5: "Prevention is better than cure"

Another theme to emerge on the lessons gleaned for the future was the mantra prevention is better than cure. The adage was prompted by the realisation that prior to eruption of cholera there were no significant intervention in areas of WASH and health care to ensure the people's vulnerabilities are minimised. Again, by the time the study was done almost eight months later, there was no evidence of post disaster intervention almost all the systems were collapsed soon after the cholera disaster was declared over. Participants expressed views that effort should be put more on prevention efforts than on response side though when an occurrence erupt a strong response is also desirable. Some of the participants had this to say on prevention is better than cure;

"We also have to reflect on our City fathers, are they doing enough? They just wait to react to an outbreak instead of them improving our WASH infrastructure and tighten our primary health care to ensure that we prevent outbreaks. They should also take charge of illegal settlements and vendors to ensure that we do not have recurrent outbreaks of cholera." (CP1)

"Prevention is better than cure. The adage is relevant here. It is costly to respond to a disaster as compared to investing in prevention of a disaster from happening."
"Imagine all those millions which were poured into the response if they were poured into prevention intervention. We would have saved money and we would have saved life." (CP6)

The above views of the participants indicate that there was general consensus that prevention should be the major focus to ensure that there are minimal cholera outbreaks. The prevention efforts are supposed to revolve around revamping WASH infrastructure and to strengthen the primary health care system. The other major thrust on prevention is dealing with illegal settlements which in the view of the participants contribute to outbreaks because the settlements have little or no access at all of WASH infrastructure. The last observation on prevention is on investment in prevention than to wait to invest in response. Thus what the participants are calling for is doable given that it largely demands political will something found by other researchers as lacking in Zimbabwe when it comes to the political will to address the driving factors of cholera (Watyoka, 2016). Thus going forward prevention efforts has to target WASH infrastructure, illegal settlements and strengthening of the primary health care system.

4.7.6. Theme 6: Lack of DRR expertise within City of Harare workforce

Participants largely viewed Harare as lacking DRR expertise hence rely on outside support such as relying on the WHO, UNOCHA, UNICEF and other agencies. Therefore this was considered as a wakeup call for future cholera outbreaks. However, others were of the view that the city personnel do have skills and experience of dealing with disasters but what they lack are the tools of the trade such as vehicles, fuel, strong weather forecast and a strong disaster early warning system. Those who responded to research questions related to lessons gleaned from the just ended cholera outbreak had the following to say;

"Council lacks expertise in DRR so there is need for capacity to be built to ensure that when disaster strike the City of Harare should be able to respond with minimal outside intervention." (SP1)

"I think we just need to thoroughly train City of Harare workforce in DRR so that they effectively coordinate disasters otherwise the human capital base is already there what is needed is to reskill and retool them" (SP2)

"I do not think they lack DRR expertise because they had been responding to cholera since time immemorial but the challenge is that they are not paid on time. They go for months without pay so such people cannot be expected to do DRR work because they are demotivated. What is need is for partners to have certain officers whom they support with salaries and ink a partnership with the City of Harare that the externally paid staff are supposed to be on 100 percent DRR oriented including prevention work when there are no outbreaks." (SP7)

Lack of Disaster Risk Reduction (DRR) expertise within city of Harare workforce was cited by many participants as one of the lessons for the future as evidenced by the several quotes above. It is apparently clear that there was no consensus on whether City of Harare workforce lack DRR expertise or not. Others were of the view that they lacked DRR skills hence they recommended training but others were of the view that the staff have skills and historical experience of dealing with cholera response but they lacked motivation and resources to deliver DRR. Reconciling these two views, it was clear that DRR training is vital for City of Harare staff given the ever changing trends and issues within the DRR field. However, such training should be accompanied by attractive remuneration and resourcing of the DRR sector so that the trained personnel do not find themselves without the tools of the trade. There is also need to have personnel dedicated on DRR when there is no disaster the role of such staff would be

to engage in disaster prevention work and also to scan for early signs of disasters so as to raise alarm should disaster loom. This would strengthen Zimbabwe's disaster's early warning signs. The theme revealed that besides the various challenges encountered during the response a lot has been learnt for the future. In addition, the findings in theme 5 revealed that most of the challenges faced and the noted successes with the strategies used were converted into some of the lessons learnt for the future. Some of the lessons learnt involved addressing the following in future: haphazard urban planning linked to cholera, vending, primary health care, coordination, prevention is better than cure, lack of DRR expertise within the City of Harare, poor oversight role, bureaucracy in declaration of disasters. If these are addressed and done the participants forecasted a more robust disaster prevention, preparedness and response could be established within the City of Harare. The institutional weaknesses noted by participants on lessons for the future confirms what the National AIDS Council established a decade ago that state related institutions are currently incapacitated to respond effectively to cholera outbreaks (NAC, 2011:5).

4.7.7. Theme 7: Bureaucracy in declaration of disasters

The bureaucracy in declaration of disasters emerged as one of the study themes and was viewed as something needing attention going into the posterity. The bureaucracy is institutionalised in the law through the Civil Protection Act which empowers the president to be the only person to declare a state of disaster. Thus before this is done some agencies such the UN system and the government departments cannot fundraise for disasters. Thus this bureaucracy then cripples disaster response in a number of ways. It also leaves the people at the mercy of politicians who if they deem it against their political interest to declare it a national disaster then people can go without any significant attention. The participants shared the following views when the issue of bureaucracy in declaration of disasters was discussed;

"And this aspect in our law that a disaster should be declared by the state president sometimes if abused it can cost life, for this outbreak the president timeously declared a state of disaster and fewer people died from cholera as compared to 2008 when cholera was declared a disaster after a sizeable number has died." (SP11)

"We may need to remove the declaration of cholera as a state of disaster from the presidency to maybe the CPU which is manned by technocrats. However, that may not guarantee that politicians would not influence the goings on in there." (SP7)

"…but let us face it, disasters are declared by presidency in most countries so it is not unique to us. We only need to have a caring president, like if you look at the 2018 outbreak of cholera and even the Cyclone Idai, these were timeously declared a state of disaster." (SP4)

The views of the participants above indicate that there was no consensus on whether the current bureaucracy in declaration of disasters has to be changed. Although the majority of participants expressed that it is not whether it's the president or not but whosoever tasked by the job should do it timeously. However, others expressed their view that entrusting politicians with declaration of disasters it's not the best option but rather that it should be within the office of technocrats like the provincial CPU. The study further established that there are no guidelines as to what really the president use to then come to conclusion that they should declare a state of disaster for example in 2008 the cholera outbreak was only declared a state of disaster after hundreds of people were killed whilst in 2018 it was declared a state of disaster before even 20 people were killed by cholera. Thus it shows that it is at the pleasure of the president to declare a disaster. As a lessons learnt, there is need for law reform to include clear guidelines to the president on what they would look at in order to declare a disaster. There should also be a clause which forces the president to do so and failure to do that there should be room for citizens to lobby parliament to declare a state of disaster to avoid the monopoly of disaster declaration by the presidency. The weaknesses of the law was also established by other studies which found it funny that declaration of a disaster was centralised within the presidency (Mavhura, 2015).

4.8. Chapter summary

Five themes were generated, presented and discussed in subthemes where applicable. The first theme focused on the strategies used to combat cholera and several subthemes emerged and were discussed within the chapter. The second theme zoomed into the stakeholders who were involved into the cholera response and again it was presented and discussed with aid of subthemes. In addition, the third theme on the strengths of strategies used was generated and discussed. This was without subthemes hence it was discussed as a stand-alone theme. The fourth theme to be generated and discussed was the challenges experienced by stakeholders during the cholera response. It was discussed with aid of a plethora of subthemes. Lastly, the fifth theme was on the lessons learnt which was presented and discussed with aid of subthemes.

CHAPTER 5: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

The chapter gives a summary, conclusions and recommendations of the study. In addition, key findings on each study theme is summarised highlighting the stand out key findings. Later, recommendations based on study findings are given based on three dimensions namely; recommendations for policy directives, recommendations for practice and recommendations for further research.

5.2. SUMMARY OF FINDINGS

5.3. Key findings and conclusions of the literature review

The researcher perused as much as possible about the subject matter under investigation before conducting the actual empirical data collection and the entire research process. This enabled the researcher to then proceed to the empirical phase of the study with a thorough theoretical background understanding of the research topic and the research goal as well as its objectives. The study and review of literature revealed that the researcher's study was unique in social work given that the majority of cholera studies are located within the medical, biological and sociological fields. As such pure social work literature on the subject was scant though adequate to have a clue to establish the gaps which the study could contribute in bridging. Literature studies and its findings were presented and discussed largely in chapter 2 and in chapter 3 literature related to research methods was reviewed, presented and discussed. In addition, the first chapter was also based on literature review largely presenting the theoretical background understanding to the study. In chapter 4 and chapter 5 a snap review of literature is done to corroborate the discussion of findings and recommendations of the study.

In chapter 1 it was established as a key finding that cholera has become a killer especially in Southern Africa and it is killing thousands of people (Phelps, et al., 2018; WHO, 2010; Kazaji, 2010). The cholera disease was found to be associated with poor sanitation, overcrowding and poor hygiene. The study of literature further established as a key finding that the genesis of cholera was India and it kept on originating in India and Indonesia up to the 7^{th} pandemic which is ongoing and is erupting in South America, South East Asia and Africa. In Africa, Sub-Saharan Africa is found to be the hardest hit with cholera and its consequences. In addition, cholera has increased in frequency and severity.

Findings in chapter 2 in a huge way has projected an unequal cholera trends in the 7th pandemic which is ongoing. Thus the trends show that Europe, North America and some parts of Asia are almost free from cholera hence they have gone for decades without a significant cholera outbreak. The transmission of cholera is largely through water and food contamination with the bacteria *Vibrio Cholerae.* The study also established that the signs and symptoms of cholera largely involve extreme diarrhoea, nausea or vomiting, dehydration, dry mouth, sunken eyes among other symptoms. In Zimbabwe the study of literature found that the first case of cholera was recorded in the 1970s in Mashonaland East province along the Nyamapanda border area. Based on the findings, it could be concluded that Africa as a continent and Sub-Saharan Africa as a region is still grappling with cholera. This is worsening the already ailing economies of these countries which further deteriorates its health infrastructure and pose increased pressure on its already weak WASH and social services. Basing on these findings from the literature it is recommended that countries like Zimbabwe should beef up their disaster preparedness systems and place themselves on cholera high alert given that the trends point to increased frequency and severity of cholera outbreaks in the country.

5.4. COMMUNITY PERSPECTIVES ON THE EFFICACY OF THE STRATEGIES USED TO COMBAT CHOLERA OUTBREAK IN BUDIRIRO

5.4.1. Awareness campaigns

It was clear from the findings of the study that community members and stakeholders alike viewed awareness campaigns in high esteem as an effective strategy in combating cholera. The study also showed that awareness campaigns were packaged in different forms which included distribution of IEC material, road shows and health, hygiene and education promotion. Awareness campaigns developed as one of the salient themes on strategies used during the cholera response. The awareness campaigns were designed to ensure people have knowledge and information so that they do not eat contaminated food or water. The strategies were found to be a useful cholera response though it was not prevention focused. Lastly, the theme also revealed that most of the intervention was done by outsiders with the communities being passive recipients of the assistance something which needs redress in future interventions.

5.4.2. Setting up cholera treatment centres

It was shared by participants that cholera treatment centres were an effective strategy to respond to cholera. The centres were found to have utilised the already existing health infrastructure as City of Harare poly clinics and hospitals such as the Beatrice Infectious Hospital. The study further established that the setting up of cholera treatment centres was designed to ensure that specialised health facilities were properly resourced with materials such as drugs, protective clothing and human capital base. In addition, this ensured that cholera patients received undivided attention from the health personnel as compared with going to an ordinary health facility. The cholera treatment centres were a huge success although the findings pointed to lack of material resources as a setback to its success. However, by and large the centres managed to meet its goals which were largely to medically case manage patients to save lives and prevent further infections through quarantining of patients

5.4.3. Distribution of Non Food Items (NFI)

The distribution of NFI was raised as one of the important cholera response strategy. The main items distributed were found to include buckets for water storage, water guard, sanitisers, soap and IEC materials. Distributions were found to have been done after beneficiary registration and verification exercise. In addition, the study found that line lists were used as the initial source of potential beneficiaries. These lists refers to lists with demographic profiles of all people presenting at cholera treatment centres regardless of whether they were confirmed to have cholera or not. Distribution of NFI was said to be effective as it built the capacity of communities to practice safe water storage practices among other hygiene practices.

5.4.4. Family and contact tracing

It emanated from this study that family tracing was identified as one major strategy used in cholera response. Family tracing was explained by the participants as referring to a process of establishing a cholera patient's family network through home visits and use of intake records. It was established that taking detailed patients profiles when they present to a facility was critical especially when the patient dies and their family was not aware of the patient's admission. This involved efforts to establish the patient's family networks and their physical address with an aim of ultimately reunifying and reintegrating the patient back to their families. Contact tracing was also done to establish the networks of people suspected or confirmed to have cholera. The Zimbabwe Republic Police's role in family and contact tracing was noted. The patient's networks include one's work mates, family, church among other networks they

may have come in contact with.

5.4.5. Coordination meetings

It also emanated from the study that coordination was done through various meetings held within the City Health Department, cabinet and the UN system such as the UNOCHA and UNICEF. The study further established that at national level coordination was done through cabinet core team made up of the Ministry of Health and Child Care, Ministry of Finance and Economic Development, Ministry of Public Service, Labour and Social Welfare and the Ministry of Local Government and Public Works. It was further found that there was coordination to lower tiers which is at operational level. The operational level coordination included the defence and state security arms such as the Zimbabwe National Army (ZNA) and the Zimbabwe Republic Police (ZRP), Harare City Health Department, the UN system, NGOs, FBOs, CBOs, residents association among other implementers on the ground.

5.4.6. Monitoring and evaluation

It was also reported that monitoring and evaluation was one of the critical strategies used during the cholera response. Monitoring and evaluation was established to have taken different dimensions. Thus it included activities such as cases tracking by WHO and the Ministry of Health and Child Care. Case tracking helped in establishing whether cholera was continuing to spread or being contained basing on complain the number of new cases by day to day and week to week comparison. In addition, case tracking enabled the response teams to monitor whether cholera was spreading to other townships or not. Hence case tracking also helped in evaluating the efficacy of the strategies used, thus communities and stakeholders alike explained that when there was increased water supply and awareness raisings the cases began going down. Evaluation, also involved a reflection by stakeholders on whether the strategies they were employing were being effective or not.

5.4.7. Resources mobilisation

The findings of the study indicated that resource mobilisation was perceived by communities as one of the central cholera response strategies employed. Resources mobilisation was done by various agencies and at various levels. Different agencies employed different means through which they fund raised. The state through the Office of the President and Cabinet (OPC) used more formalised systems of appeal to the UN system and business to assist and they also mobilised resources through a re-distributive tax regime like the 2 percent income tax. The

study found out that private companies used various platforms suitable to reach out to their customers. Some used mobile money biller codes whereas some just plunged into their reserves and advanced help to the disaster response teams. NGOs used their traditional modes of resources mobilisation which is through proposal writing for funding. This was established by the study to be the mainstay of all other strategies given that the majority of strategies hinged on resources in order for them to be actualised.

5.5. CHALLENGES EXPERIENCED BY STAKEHOLDERS IN RESPONDING TO THE 2018 CHOLERA EPIDEMIC IN BUDIRIRO

5.5.1. Poor early warning systems

It emerged from the findings that the country has poor early warning systems. There was convergence of perspectives with community members and the disaster response teams agreeing that lack of proper early warning system was a setback to disaster response. Early warning was established to be the practice of detecting and forecasting an impending disaster. This also include the ability to effectively communicate the warning to all stakeholders involved. The aim of early warning is to adequately prepare for the eventuality of a disaster. The study established that from a Pressure and Release (PAR) theoretical perspective early warning systems are designed to help minimise the impact of a hazard when it finally strikes. It reduces the likelihood of the occurrence of a hazard to then generate into disaster. Whereas NGOs such as MSF and the UN system such as the World Health Organisation were found to be playing their part in issuing warnings, the state sometimes were accused of not making use of the early warnings to actually prepare for impending disasters.

5.5.2. Illegal settlements

It was clear from the findings of the study that illegal structures and illegal settlements within the City of Harare posed predisposing factors to cholera outbreaks. The study further established that illegal settlements referred to settlements not approved by the City authorities. The study findings further point to settlements as characterised by poverty and squalor, poor road network, lack of WASH basic facilities and lack of health services which then exposes the dwellers to a number of vulnerabilities should cholera occur as what was the case in 2018. All these characteristics exposes the dwellers to a number of vulnerabilities which then make them easy prey of cholera. Illegal settlements was then found to be difficult to service with sewer reticulation services, waste management and water supply.

5.5.3. Lack of preparedness

It was also evident from the study that poor early warning systems would lead to poor disaster preparedness. The study findings revealed that Zimbabwe is still riddled with disaster preparedness inadequacies. Disaster preparedness refers to a process of pre-disaster planning including risk reduction planning and implementation as well as initiatives put in place to build community resilience so that communities could resist or cope with the effects of disasters. Disaster preparedness was established to also include having pre-disaster plans and having pre-positioned disaster resources and response team. The study further found that disaster response teams are only resourced when there is an outbreak of cholera. However, it was also found on a positive end that Zimbabwe's legislative framework do have structures which could easily be used to strengthen disaster preparedness. This include the Civil Protection Unit which is purely established to deal with disasters.

5.5.4. Lack of material resources

It emanated from this study that challenges experienced by stakeholders during the response included lack of material resources. These material resources which were in short supply included things such as drugs, protective clothing, fuel, vehicles, water, water storage buckets and stationery among other things. These materials were cited as critical for effective response hence their absence has a bearing on the efficacy of the cholera response strategies employed. Lack of material resources was said to have been acute in the initial days of the outbreak and the situation improved as the outbreak progressed. This was due to the fact that procurement of essential materials were largely done after the proclamation of a state of disaster by the Zimbabwean president. In addition, procurements of essential drugs were also affected by the ongoing foreign currency shortages given that the bulk of such materials are procured from abroad.

5.5.6. Human capital

The study found out that one of the challenges faced by stakeholders in responding to the cholera outbreak in Budiriro was human capital. Human capital included both the lack of skilled personnel with technical expertise in dealing with disasters and on another hand it included lack of disaster response staff. Thus I was established that in certain instances organisations had staff but their challenge was that their staff lacked technical skills to

effectively respond to disasters. The finding was telling of our education system which still lacks a skills match approach in its training. Thus whereas there are institutions offering qualifications in the area of disaster management, this is not adequate given the diversity of disaster response teams. Hence this challenge was said to require that disaster management be mainstreamed in the curricular of critical professionals such as doctors, nurses, engineers, social works among other professionals involved in disaster response.

5.5.7. Poor WASH infrastructure

It was evidently clear from the findings of the study that poor Water Sanitation and Hygiene (WASH) infrastructure posed a challenge to cholera response efforts. This was obvious given that every effort to eradicate cholera revolves around clean water supply, effective sewer reticulation and health, hygiene and education promotion. WASH infrastructure was found to include sewer reticulation system, water facilities and ablution systems within the Budiriro Township. The sewer reticulation system process was found to be old hence always breaking down and this was worsened by lack of rapid response to bursting sewer pipes by City of Harare. The challenge also evolved around a growing urban population versus a stagnant WASH infrastructure which was said to have not been upgraded to meet the demands of a rising population.

5.5.8. Poor stakeholders' coordination

Poor stakeholder coordination was established by the study to be one of the main challenges encountered in cholera response. It emanated from this study that coordination was done through use of feedback meetings coordinated by the City of Harare. Coordination was a responsibility of various entities including the cabinet inter-ministerial committee on disaster which comprised of the Ministry of Health and Child Care, Ministry of Local Government and Public Works, Ministry of Public Service, Labour and Social Welfare and the Ministry of Finance and Economic Development. The City of Harare was mandated to coordinate at the level of operations, thus all disaster response teams met weekly and gave feedback to all stakeholders and the meetings were chaired by the City Health Department. UNICEF and UNOCHA also have coordination mechanisms which include its WASH cluster which is a conglomeration of WASH implementing agencies. The fact that there were multiple coordination platforms, poor coordination emerged causing confusion on roles and responsibilities.

5.5.9. Politics and politicisation of Cholera

Politics and politicisation of cholera emerged as one of the key findings from the analysed qualitative interviews held with household level participants, stakeholder participants and key informants. The politics was fuelled by the selfish partisan political interests between ZANU PF and the MDC Alliance. The City of Harare is run by the opposition the Movement for Democratic Change Alliance whereas the central government is run by the ruling party the Zimbabwe African National Union-Patriotic Front and these two political antagonists transferred their political misunderstandings to disaster response. Hence, there was blackmail, accusations and counter accusations between the central government and the City of Harare to the detriment of cholera response efforts. For instance, the City of Harare blamed the failing economy as the reason why there was poor WASH infrastructure whilst the central government blamed the City of Harare for its corrupt tendencies and incompetence in service delivery as the main reason why cholera was recurring. The politicisation of cholera was found to also include NGOs and private companies. For NGOs, they were said to have politicised cholera through over reporting of cases to build their own case for fundraising whereas on the other hand the government was accused of under reporting in order to manage its image.

5.6. DISASTER MANAGEMENT LESSONS GLEANED FROM THE STAKEHOLDERS EXPERIENCES

5.6.1. Haphazard urban planning linked to cholera

It was established as a key finding of the study that haphazard planning of settlements or non-planning was as a major lesson for the future. The findings point to the need for sound planning and non-tolerance to proliferation of unsanctioned settlements which are associated with cholera outbreaks. Haphazard urban planning was also found to be not entirely the fault of City of Harare given that those who responded in defence of urban planners were of the view that the City has a well laid down plan which was violated by politically connected land barons. The haphazard settlements have resulted in some houses being built on the passage of sewer reticulation system which then exposes them to cholera vulnerabilities due to the bursting of sewer pipes. The findings also indicated that it seems there is no spatial planning in place including a City specific census which could give up to date statistics for use by City service planners. That would let the city estimate the amount of water and capacity of sewer reticulation system to be put in place to meet the demands of a growing population.

5.6.2. Theme: Vending

Vending was cited as yet another big lesson for disaster response teams, the state, city of Harare and other policy makers. The study further established that failure to address vending would always give a headache to cholera response teams every time there is a cholera outbreak. It was established by the study that vending in the city included food vending selling vegetables, fruits, fish and meat on the streets. These food items were said to be kept under poor hygiene conditions, with available data pointing to use of water drainage pipes as part of the storage. This is done to hide their wares from City of Harare police who normally ceases the wares of the vendors. It emerged from the study that vending on its own is not a challenge but the fact that it is unregulated vending it means there is no standards to be followed to ensure safety of the consumers. Given the poor economy, vending cannot be erased from the society but needs regulation. This could include moving vendors to designated areas where there are proper WASH facilities for both the vendors and their customers.

5.6.3. Primary health care

It was evident from the findings that primary health care was singled it out as something that has to be taken as a lesson for the future. It was clear from the findings that primary health care as a concept was designed to universalise health by ensuring that health services are appropriate, affordable, accessible and available to the masses. This was found to help in disease prevention. The study established that currently the practice of PHC is weak hence the need to strengthen it going forward to ensure that cholera is prevented. The study further established that as a lesson learnt the role of health and hygiene education promotion in communities should be amplified on an ongoing basis as compared to only supporting it when there is an outbreak. It also emphasises having health facilities within the vicinity of the residence.

5.6.4. Coordination and oversight role

It emanated from the study that coordination and oversight role of both the City of Harare and the Ministry of Local Government has to be strengthened for an effective cholera response.. Participants felt that there is huge room for improvement of coordination and oversight in future. Coordination and oversight involved having the central government supervising the City of Harare and in turn the City of Harare was supposed to supervise all stakeholders responding to cholera in its townships.

5.6.5. "Prevention is better than cure"

The adage "prevention is better than cure" was capture in this study as a cry for a developmental approach to cholera outbreaks. The adage was prompted by the realisation that prior to eruption of cholera there were no significant intervention in areas of WASH and health care to ensure the people's vulnerabilities were minimised which could have led to less fatality. Prevention efforts were said to have to be pinned on early warning systems, strengthening disaster preparedness efforts, strengthening of the City of Harare's health and hygiene promotion activities as well as building the human capital base and material resource base to combat cholera. Participants expressed views that effort should be put more on prevention efforts than on response side though when an occurrence erupt a strong response is also desirable.

5.6.7. Lack of DRR expertise within City of Harare workforce

Participants largely viewed Harare as lacking DRR expertise hence rely on outside support such as relying on the WHO, UNOCHA, UNICEF and other agencies. It was evident in the study that there is need to strengthen the human capital base of the City of Harare through training and most importantly motivate the staff through lobbying for better remuneration and working conditions for DRR personnel within the City. It was also evident from the study findings that some of the personnel were highly skilled hence what they lacked were the tools of trade in order for them to be effective in cholera response.

5.6.8. Bureaucracy in declaration of disasters

The bureaucracy in declaration of disasters emerged as one of the study key findings and was viewed as something needing attention going into the posterity. It emanated from this study that the bureaucracy in declaration of disasters was institutionalised into the national disaster legislative framework as such the Civil Protection Act empowers the state president to be the one declaring disasters. The study further established that in order to protect the public there is need to reform so that the power to declare a disaster can be devolved to provincial CPU structures.

5.7. RECOMMENDATIONS

Subsequently, the recommendations based on study findings and the analysis of some of the recommendations given by participants will be discussed focusing on recommendations for policy, practice and future research.

5.7.1. Recommendations for policy

The following policy directives are given basing on the findings of the study:

- It is recommended that there be legal reform to the current regime of disaster legislative framework to re-orient the law towards disaster prevention and disaster preparedness. In addition, the law should be reformed to include minimum requirements on declaration of a disaster by the presidency to ensure that the declaration of a disaster is not left to the pleasure of the presidency.
- The state has to consider adequately funding disaster prevention and disaster response as compared to leaving it to externals to fund. The state can come up with an innovative ways of fundraising for this cause such as introducing a disaster tax regime similar to the AIDS levy.
- The state has to strengthen its early warning systems to avoid the huge costs associated with disasters

5.7.2. Recommendations for practice

Based on research findings the following practice recommendations are made:

- During awareness campaigns, practitioners should put in place measures to register every person attending the roadshows to allow for a follow up visit to a sampled number of participants to measure the effectiveness of such a strategy. Registration of participants on some form of attendance register would also enhance accountability and transparency in use of resources.
- Whereas cholera treatment centres in the just outbreak under study were only set up for emergency response, it is recommended that cholera treatment centres should not be shut down completely but should be capacitated with all the equipment so as to be on standby for any outbreak.
- Cholera response teams should devise innovative ways of fostering community participation in the design and implementation of cholera response as opposed to reducing it into an elite affair of disaster response teams as technocrats.
- It is also recommended that the state should always have minimal stokes of drugs to

cover emergencies.

- It is recommended that the City of Harare should consider making a huge investment in its WASH infrastructure to break down the cycle of cholera occurrences in its Townships.

5.7.3. Recommendations for future research

For future research the following should be considered:

- Similar studies to be conducted in other cholera prone townships in Harare such as Glenview, Epworth, Chitungwiza and Mbare. Such studies could also be replicated in other towns and provinces experiencing outbreaks at the same time Harare experience them. These cities and towns could include Chiredzi, Gweru, Bulawayo, Mutare among other places.
- Replication of the study in rural sites normally reporting cholera cases is likely to bring interesting insights into cholera in rural Zimbabwe. This would shed more light on whether cholera maintains its face in rural areas or takes another face once in the rural areas. This could include investing the causes of cholera, the strategies used and challenges faced by disaster response teams hence compare these with those established by this urban study.
- Future research with a bigger sample which is more diverse in nature is needed. Findings of such a huge sample study could then be used to confirm or refute the findings of this study which was small and exploratory in nature.
- There is also room for research using child protection lenses in cholera response. Further research could then investigate whether the strategies used to combat cholera was child sensitive or not.
- A more targeted research in investigating the roles and strategies adopted by one single agency such as City of Harare which could bring out richer data on such an entity as compared to bunching all stakeholders in one study.

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APPENDIX A: Interview Guide for Households

INTERVIEW GUIDE FOR HOUSEHOLDS

1. What is your perspectives about the efficacy of the strategies used to combat cholera outbreak?

Probing questions

- What were the strategies used?
- Were they efficient in your view?
- Which strategies do you think contributed the most? Why?

2. What were the challenges do you think were experienced by stakeholders in responding to the cholera epidemic in Budiriro Township?

Probing questions

- Who were the stakeholders involved in cholera response?
- What do you view as their challenges they might have faced?
- In your view how can these challenges be overcome?

3. What are the disaster management lessons that can be gleaned from the strategies used to combat the cholera outbreak in Budiriro?

Probing questions

- What are the lessons which can be learnt by the stakeholders?
- What are the lessons which can be learnt by policy makers?
- What are the lessons which can be learnt by the affected community?

Appendix B: Interview Guide for Stakeholders

INTERVIEW GUIDE FOR STAKEHOLDERS

1. What is your perspectives about the efficacy of the strategies used to combat cholera outbreak?

Probing questions

- What are the strategies used?
- Are they efficient in your view?
- Are they effective in your own opinion?
- Which strategy do you think contributed the most? Why?

2. What are the challenges you have experienced in responding to the cholera epidemic in Budiriro Township?

Probing questions

- How were these challenges overcome?
- How can these challenges be overcome?

3. What are the disaster management lessons that can be gleaned from your experiences in responding to the Budiriro epidemic?

Probing questions

- What recommendations can you make to policy makers?
- What recommendations can you make for disaster management practitioners and agencies?

Appendix C: Key Informant Interview Guide

INTERVIEW GUIDE FOR KEY INFORMANTS

1. What is your perspectives about the efficacy of the strategies used to combat cholera outbreak?

Probing questions

- What are the strategies used?
- Are they efficient in your view?
- Are they effective in your own opinion?
- Which strategy do you think contributed the most? Why?

2. What are the challenges experienced by stakeholders in responding to the cholera epidemic in Budiriro Township?

Probing questions

- Who in your view were the stakeholders involved in cholera response?
- What do you view as their challenges they might have faced?
- How can these challenges be overcome?

3. What are the disaster management lessons that can be gleaned from the stakeholders experiences in responding to the Budiriro epidemic?

Appendix D: Letter of Informed Consent Form

LETTER OF INFORMED CONSENT

INTRODUCTION OF THE INVESTIGATOR

My name is **Samuel Lisenga Mahuntse** a final year (Msc Social Work) student from Midlands State University. I am carrying out a study on the study entitled: "Responding to the cholera pandemic in Budiriro Township: Implications for disaster management practices". I am kindly asking you to participate in this study by engaging in an in-depth discussion with me guided by about three questions which I have with aid of follow up questions.

WHAT YOU SHOULD KNOW ABOUT THE STUDY:

Purpose of the study

The purpose of the study is is to explore the response to cholera pandemic and its implications for disaster management. You were selected as a participant for the study because you have knowledge about the cholera pandemic which affected Budiriro and Glenview. You are part of the twenty participants plus four key informants participating in the study.

Procedures and duration

If you decide to participate you will be asked to sign a written letter of consent thereafter you will then be involved in an in-depth discussion with the researcher. In addition, you will be expected to nominate any person(s) you know to be knowledgeable about the subject matter whom I can approach to ask for their permission to participate in the study as well. It is expected that this will take about 45 minutes to an hour of your time during the in-depth discussion interview.

Risks and discomforts

No potential risks are anticipated to be associated with this study except that participants may lose about an hour of their time as a result of their participation in the study. It is anticipated that the study may unravel unpleasant memories of the trauma of the cholera outbreak, therefore anyone who experience such trauma will be referred to city of Harare social workers for free counselling.

Benefits and/or compensation

The study is beneficial and important at all levels; household, community and at policy level. At household level the participants may become more aware of their own perceptions about the impact of cholera pandemic to their families. In addition, the study may help the affected

households to reflect on the external support they received hence likely to act as a feedback to disaster managers on what the affected population make of the disaster interventions rolled out in Budiriro Township. At policy level, it may help policy makers to come up with evidence based cholera response strategies for Harare's high density suburbs which are mainly the epicentres of the outbreak. There will be no compensation for participating in the study, however in line with the African ethos of hospitality, a token of appreciation in form of a bath soap shall be given to each participant.

Confidentiality

The researcher uphold the ethical principle of privacy by allowing participants the right to decide to what extent they could reveal their beliefs, attitudes and behaviour, and by assigning codes to the participants so that their identity is protected. However, the participants' names and signatures will appear on the letters of informed consent. All data to be obtained from the study will be securely stored to uphold the principle of confidentiality. Participants are hereby informed about the measures undertaken to uphold confidentiality by means of these informed consent letters. The researcher would like to obtain permission from you for the use of a voice recorder. You are further informed that your contributions will be used for a research report and possible publication of scientific articles.

Voluntary participation

Participation in this study is voluntary. If participant decides not to participate in this study, their decision will not affect their future relationship with Midlands State University. If you choose to participate, you are free to withdraw your consent and to discontinue participation without penalty at any given time.

Offer to answer questions

Before you sign this form, please ask any questions on any aspect of this study that is unclear to you. You may take as much time as necessary to think it over.

AUTHORISATION

If you have decided to participate in this study please sign this form in the space provided below as an indication that you have read and understood the information provided above and have agreed to participate.

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Name of Research Participant (please print) **Date**

Signature of Research Participant or legally authorised representative

CONTACTS INFORMATION

If you have any questions concerning this study or consent form beyond those answered by the researcher including questions about the research, your rights as a research participant, or if you feel that you have been treated unfairly and would like to talk to someone other than the researcher, please feel free to contact the Midlands State University, School of Social Work at Chinhoyi corner Grant Street, Harare.

Name of Researcher: **Samuel Lisenga Mahuntse**