Chapter 7: Occurrences of Communicable Diseases in Harare Metropolitan Region, Zimbabwe

The present chapter critically examines the occurrence and drivers of communicable diseases in Harare the capital city of Zimbabwe that is facing rapid population growth due to increasing urbanisation rate and natural population growth. The main argument articulated in the present chapter is that Harare has been identified as an epicentre of communicable diseases in the country hence the chapter seeks to discuss why there is high incidence of communicable diseases in this city. The study deploys a desktop study that engaged literature. Several data sources were reviewed. Among them are journals, articles and books among other important data sources. Both qualitative and qualitative techniques were made use of in the collection and analysis of data. Cross checking of different data sources was done to validate the information obtained for the presentation of reliable information. Results indicates that, the occurrence of communicable diseases in Harare Metropolitan Region is increasing as the population continues to increase. This is being caused by the change in land uses, social inequities, lack of public health services and sanitation issues together with the poor service delivery in the city. Conclusively, Harare is at high risk of communicable diseases as the frequency of the outbreak of diseases, such as cholera, continuously hit the city. It is recommended that measures should be implemented to curb the drivers of communicable diseases in the urban environment of Harare. There is need for sustainability in the development process and amendments are required to deal with the major problems surrounding the city leading to the outbreaks of communicable diseases.

The chapter aims to discuss the drivers and occurrence of communicable diseases in the capital city of Zimbabwe that is the Harare Metropolitan Region. Harare is one of the cities in the country with the highest population and high rates of urbanisation. The growing population has led to the creation of informal settlements due to the shortage of housing infrastructure. As the capital city, Harare is the main player in the economy of the country hence people claim it as the most functional city. Due to the increasing population growth, Harare has become more prone to communicable diseases due to several diseases derivers. Diseases, such as cholera, typhoid, COVID-19,

influenza, among others, have been identified in Harare. Several drivers are related to the occurrence of these diseases and among them is climate change, increased population growth, change in land use, and service delivery among others. The chapter explains and discuss how these drivers result in the outbreak of diseases in the city and how this can be dealt with to maintain a healthy people within the urban environment.

The present chapter notes that though the drivers and the occurrence of communicable diseases in Harare has been looked at in the past little effort has been done to improve and eradicate the problems that are leading to the outbreak of diseases. The outbreak of diseases remains a concern in the health sector especially among the urban poor living in the ghetto. The chapter seeks to present how change can be brought about and how best improvements can be reached in mitigating the causes and outbreaks of communicable diseases in the Harare Metropolitan Region. A desktop study was undertaken in compelling the information presented in the chapter. The use of secondary data from the previous studies was done and both qualitative and quantitative data collection techniques were used for the aim of the chapter. Validation for reliability of data was done through triangulation of the different sources of information and data sources.

The results indicate that the occurrence of communicable diseases in Harare is frequently increasing especially among the highly congested areas. The deteriorating standards of living in the city is raising much capability of diseases outbreaks. Urbanisation has been found to be the major cause of diseases outbreak around the city and poor health facilities together with poor sanitation are the push factors of the occurrence of diseases in the urban environment of Harare. Disease outbreaks is one of the challenges the city is facing. It is argued that with the present situation of the city a lot needs to be done to mitigate the occurrence of the diseases and to maintain the health of the dwellers of the great Harare. In conclusion, Harare is vulnerable to the drivers and occurrence of diseases due to the proximity of the people that is because of the increasing population. Population growth can be attributed to be the major cause of the drivers of communicable diseases in the urban environment of the Harare Metropolitan Region. It is recommended that, ways to curb or lower the occurrence of diseases in Harare be found to create

a healthy living space and enhance the health of the people. It is recommended that the drivers of diseases outbreak be dealt with in a well thought way to avoid the worsening of the situation.

Maintaining the health of the people is one of the main goals of the development of different countries as the health status of the people is threatened. The study is been pushed by the appeal by the Millennium Development Goals that seeks the improvement of the health of the people throughout the whole world. Mukherjee (2017) argues that the goals highlighted the need for the health systems to strengthen to achieve the health improvements promised to be reached by the year 2030.

Africa is one of the continents among other developing continents is in hard moments due to the occurrence of communicable diseases in both its rural areas and urban setups. Mason (2009) notes that, cholera is endemic in several countries in southern Africa, and minor outbreaks have been recorded in Zimbabwe many times in the past. This indicates that the outbreak of communicable diseases is not just a problem that is being faced by Harare along but the southern region of the continent is also struggling to curb these diseases with Zimbabwe.

In Zimbabwe, the occurrence of communicable diseases has been driven by a few factors. Malaria, cholera, typhoid, influenza ad recently COVID-19 virus has been part of the health issues the government through the Ministry of Health had to deal with. In areas, such as Kariba and the Lowveld, the occurrence of malaria has been high due to the prevalence of mosquitoes. Due to poor sanitation and other hygienic issues the prevalence and occurrence of waterborne diseases.

At a local scale, Harare is one of the cities that has been repeatedly hit by communicable diseases especially water-borne diseases, such as cholera and typhoid. In 2008, there was a cholera outbreak that struck the city and resulted in the death of many people around the city. In the past ears, another outbreak was recorded by the Ministry of health. This indicates that cholera has become part and parcel of the city and a biggest threat to the lives of the people especially the population residing in the high-density suburbs. Several

drivers have been picked to be the main sources of the continuous outbreak of waterborne diseases in the urban environment.

The key issue of the chapter is to expose the causes of communicable diseases occurrence in the City of Harare. Communicable diseases are understood to be diseases that occur due to the existence of pathogens. Olson (2015) notes that there should be conditions that leads to the emergence of pathogens that ae understood in the chapter as the drivers leading to the existence of diseases in the urban environment of the Harare Metropolitan Region. The occurrence of communicable diseases can be attributed to several factors that are locally recognised. The deteriorating health facilities of the urban residents in Harare has raised eyebrows of many as they seek to understand why the occurrence of diseases in the urban areas in gradually increasing from time to time. The city has been affected by several communicable diseases with cholera being on the top, claiming lives of many urban citizens. The aim of the chapter is to look on the drivers of these communicable diseases and draw ways in which they can be mitigated. The study is very important as the occurrence of diseases is interrelated to the drivers of their existence hence the need to study the underlining key factors of the causes of the diseases in the urban setup. From the prevailing literature infectious diseases that is one example of communicable diseases occur when underlying mix of antecedent epidemiologic drivers provide the necessary conditions for a pathogen to emerge in susceptible population (Olson 2015). This clearly shows that diseases occurrence is driven by certain conditions that the chapter tries to convey.

Communicable diseases tend to vary with places and Harare is mainly affected with waterborne diseases as there is more conditions that leads to the outbreak of such diseases. The continued impacts of communicable diseases in Zimbabwe have led to the main objectives of the chapter as it seeks to dig through to find out the root cause of the continued diseases outbreak in the Harare Metropolitan Region and how best they can be controlled as the health of the people constitute to the development of the country's economy. Though there is effectiveness in the diagnosis and treatment of diseases during outbreak times, little efforts have been made to eradicate the drivers of communicable diseases in the urban area of Harare.

However, from that in the chapter that previous researches and studies' main focus was on the outbreaks of waterborne diseases with little focus centred on the other types of communicable diseases that includes vector borne and respiratory diseases among others. Therefore, the study seeks to unveil the occurrence of such diseases in Harare and the key drivers to their occurrence and how best they can be eradicated. The chapter tries to identify what efforts are being done to eradicate respiratory diseases and other communicable diseases in Harare.

At a global scale, communicable diseases are seen to vary with space and time. Different types of communicable diseases have been listed by The World Health Organisation (2001). These were grouped into four groups that include waterborne, respiratory born, vector borne and .... . Communicable diseases are defined as illnesses caused by virus or bacteria that people spread to one another through contact with contaminated surfaces, bodily fluids, blood products, insect bites and through the air (Edemekong and Huang 2021). Globally respiratory diseases have been seen to affect all countries as there are different outbreaks of flues in every region each year due to coldness and other effects. The occurrence of respiratory diseases is believed to prevail in many nations as these viruses float through the air and can be easily passed from one person to the other through the air. This can be seconded by the global pandemic recently faced by all nations that is the COVID-19 outbreak in China that has managed to spread throughout the whole world and claiming lives of many people around the world.

Some communicable diseases become a universal problem due to their nature of spreading hence affect everyone with no consideration of what is their social group or level of development. In most developed countries the prevalence of communicable diseases, such as waterborne and vector borne diseases is very limited due to the level of service delivery and their standards of living that are high. Besides that, the developed countries have enough technology and facilities that can help eradicate these diseases without causing much harm to their health services and the people. United Nations (2018) asserts that, Cholera that is one of the water-borne diseases is transmitted mainly through contaminated water and food, and the

breakdown in water supply and sewerage disposal in urban areas is believed to be the underlying cause for the rapid emergence of cholera in the cities.

At a global perspective, communicable diseases have been noted to be the major cause of deaths for ages. These are driven by various factors and affect different age groups with some having high prevalence in children as compared to the adults while some tend to affect women more than men. Most of the waterborne communicable diseases are mostly associated with the less developed countries and the poor citizens of different countries especially the urban poor people. This clearly shows that communicable diseases, such as cholera and typhoid, mostly affect the poverty-stricken groups more than the other social groups. Due to the level of development, most communicable diseases are known to affect the developing countries, such as the Asian continent, Africa and South America. Edemekong and Huang (2021), observed that there is high prevalence of communicable diseases in endemic areas that includes parts of Africa, Asia and Latin America with most infections occurring in the early childhood as compared to areas, such as North America and Western Europe that record few infections during childhood.

At a global level, the occurrence of respiratory diseases has been noticed through ages with all the continents and countries being affected. It is discovered in the previous studies that there have been different types of respiratory diseases that emerged in different countries throughout the ages up to the present moment where COVID-19 has threatened the health systems of the people and resulted in the most deaths that has occurred between 2019 and 2021. History states the occurrence of respiratory diseases that are global is not just a recent problem but has prevailed for decades with the records dating the most severe pandemics and epidemics such as the Spanish flu of 1918, the Asian flu of 1957and Hong Kong flu of 1968 (Madhav, Oppeneim, Galivan, Mulembakani, Rubin and Wolfe 2018).

At regional levels, most countries get affected with certain diseases in which countries adjacent to each other suffer common pandemics. One of the pandemics that occurred in the Asian continent is the Severe Acute Respiratory Syndrome (SARS) that affected 37 countries among them is

Taiwan, Singapore, Canada and China. Besides this, the occurrence of respiratory diseases has been recorded in Latin America, Brazil, the Caribbean together with other 76 countries in South America (Madhav *et al*., 2018) have been noted through the outbreak of Zika virus in 2015. In Africa, the occurrence of respiratory diseases cannot be denied as witnessed by the outbreak of Ebola virus diseases epidemic that affected the western part of the continent, including 22 countries among them being Guinea, Liberia and Sierra Leone (Marsh 2020). This has also been noted in the Middle East in countries, such as Saudi Arabia, Korea, United Arab Emirates and other 22 countries within the region through the occurrence of the Middle East Respiratory Syndrome pandemic in 2012 (Marsh 2020). Therefore, it is sad that the occurrence of communicable diseases especially respiratory diseases is universal and have different impacts in different regions. On local basis, communicable diseases occur among people of different social groups and age gapes though in some cases they affect the whole population. Swine flu of 2009 that affected in South Korea is an example of the occurrence of respiratory diseases on a local sphere of influence.

Communicable diseases are because of different factors that might be locational meaning that they are driven by the location in which the diseases it is occurring. In a study in Europe, seventeen drivers of infectious diseases were identified (Semenza *et al*., 2016). It is argued that there are three main categories of infectious diseases drivers in Europe that are the public health systems, globalization and environment and lastly sociodemographic issues (Suk and Semenza 2011). The drivers of communicable diseases can be argued to be either economic, social, environmental or political depending on the area in which they occur. This means that the drivers of communicable diseases vary from place to place and with time. Some of the key drivers noted by Olson (2015) includes, climate change, industrial development, and social inequality, lack of proper sanitation, poor health facilities, poverty and change in land use among others.

Climate change has become one of the greatest fears of the whole world and has begun to shake the health of the people with many people suffering from communicable diseases that are because of it. Suk and Semenza (2011) in a study carried out in Europe, argues that change in temperature, wind, rainfall

or humidity influence the health of the people as this can expose them to vector borne diseases and water borne diseases. At a global scale urbanisation has always found to influence the health of the urban people. It is argued that propagation and dissemination of pathogens are attributed to urbanisation, change in land use and the built environment and the industries. Giving reference to the outbreak of cholera in Manchester City during the industrialization revolution period the expansion of the population is a threat to the occurrence of communicable diseases in the urban environments. Therefore, it is argued that communicable diseases are a universal problem that affects very country though their impacts vary with the level of development and availability of resources among other factors.

In Europe, the occurrence of diseases is also attributed to travel and tourism. In other words, the migration of people is a threat to the occurrence of diseases in different areas around the world as noted travellers contributed to the spread of the COVID-19 virus around the universe. Emigrant, asylum seekers and immigrant settlers are seen to be contributing to the spread of infectious diseases in their origin country, transit and the countries of their destination as the importation of infected people trigger the occurrence of airborne diseases. The movement of people is related to the importation of vectors, pathogens and infected persons into Europe. It has also been noted that the use of public transport, such as automobile, train, ship and airline is associated with the spread of communicable diseases in the European continent (Semenza *et al*., 2016).

Drivers of communicable diseases have been identified in different countries around the African continent. In Afghanistan, several drivers causing the outbreak of communicable diseases were identified in a study done by (Word Health Organisation [WHO], 2001) that includes migration of people from one place to the other thus carrying the infection with them to the other community, overcrowding, cold weather, lack of safe water and poor sanitation, contamination of water and food and poor health services. This have led to the occurrence of diseases, such as tuberculosis, typhoid, cholera, diarrheal diseases, among other communicable diseases that have affected the area.

At a national level, several communicable diseases have been identified and these have different drivers with regards to the location of the areas. It is argued that one of the key drivers of the occurrence of diseases in the rural areas of Zimbabwe is mainly due to migration of people to and from the reported areas of outbreaks. It has also been noted that areas that are close to the boarders are at high risk of communicable diseases in Zimbabwe. Among the identified is Chipinge, Chiredzi, Beit-bridge, Kariba, Binga and Manicaland province. It is discovered the pattern of occurrence of diseases in Zimbabwe is changing with time as urban areas are becoming more prone to waterborne diseases and this is attributed to the local drivers within these urban areas. Mason (2009) commented that Zimbabwe is becoming an epicentre of cholera for the countries bordering it. This can be seconded by the occurrence of cholera in the urban areas of Zimbabwe due to poor sanitation and service provision.

At a local scale, it is understood that there are a few drivers that has been identified to be the cause of communicable diseases in the urban environment especially in Harare. The rapid increase in population can be the key driver of communicable diseases in Harare. In Harare, several key drivers were found among them is the dilapidation of water and sanitation infrastructure in which both sewer and water pipes bursts resulting in the contamination if clean water. The supply of clean water remains a major problem in Harare and continues to be the cause of disease outbreak as the local authorities fail to meet the demand due to shortages of water supply sources and the finances to invest in the recycling of water. United Nations (2018), notes that, experiences in erratic municipal water supplies were implicated in unprecedented cholera outbreak of 2008/9. The degradation of health and sanitary infrastructure that occurred over time is another driver of the occurrence of diseases in Harare as argued by United Nations (2018).

The challenges of lacking chronic piped water and dilapidation of sewage system forced the people to rely on water from boreholes and shallow wells that are contaminated as was revealed from the water quality assessments during the 2018 cholera outbreak investigation (USAID Global Health 2020). The other driver is the transfer of responsibility for water supply and sewerage disposal from City Councils to the Zimbabwe National Water

Authority (ZINWA) that is incapacitated and lack the required resources to provide clean water that is a necessity for the urban dwellers. Although ZINWA has promised on many occasions to correct the supply problems, lack of finance from central government has limited their ability to do this. The transfer of responsibility has resulted in some parts of Harare and Chitungwiza to go for more than 2years without running water. This has contributed to more reliance on shallow wells that were readily contaminated because of the lack of sewage disposal.

Missing in the literature is how best these drivers of communicable diseases can be eradicated. the identification of the drivers of these diseases is not a new dichotomy but this was done at all levels from the global scale to the local levels, but the main objective of the chapter is to come out with the ways in which they can be dealt with to limit or to erase the prevailing diseases outbreaks

The chapter used desktop research whereby several case studies were reviewed. Secondary data sources were used to collect information that was used to justify different concepts raised in this research. A desktop study was undertaken in compelling the information presented in the chapter. Data from the previous studies was done and both qualitative and quantitative data collection techniques were used for the aim of the chapter. Validation for reliability of data was done through triangulation of the different sources of information and data sources.

The occurrence of communicable diseases in Harare is frequently increasing especially among the highly congested areas. Some areas identified to be more prone to the occurrence of these diseases are the poorly serviced residential areas together with the informal settlements around the city. The deteriorating standards of living in the city is raising much capability of diseases outbreaks. Urbanisation has been found to be the major cause of diseases outbreak around the city and poor health facilities together with poor sanitation are the push factors of the occurrence of diseases in the urban environment of Harare. Disease outbreaks is one of the challenges the city is facing.

The occurrence of communicable diseases in Harare Metropolitan Region is increasing as the population continues to increase. Rapid urbanisation as people move from the rural areas and other small cities to seek employment in the capital city that is believed to be the centre of economic growth and better living standards are assumed to prevail there. Natural population growth has also led to the overcrowding in the City of Harare thus making more susceptible to the occurrence of diseases. The proximity of residents is becoming too high resulting in quick transmission of diseases. Overpopulation gas been noticed to be one key driver of the occurrence of disease in the urban area of Harare. This been the reason that too much pressure is put on the available resources such that the sewer and water systems that were planned for a certain number of people is forced to service more than 70% of the expected figures thus leading to water shortages and bursting of sewer systems. This can be argued to be a driver to the occurrence of communicable diseases in Harare as it has effects on the standards of living of the people.

Without putting much blame on the growing urban population, the service provision in Harare has been discovered to be bad as residents go for weeks without garbage collection on that leads to dumping of litter on the available open spaces within the residential areas that can be regarded as breeding spaces for pathogens. Most of the open spaces have been turned into dumping sites, producing odour smells in other words air pollution and breeding areas for mosquitoes, flies and other insert that carry viruses to the people hence the occurrence of infectious diseases. Limited public transport has contributed to high occurrence of respiratory diseases in Harare.

Social inequities are another driver of diseases occurrence in Harare, this can be noticed through the database of the affected people as more numbers are recorded among the poor urban dwellers who fail to afford the private health services and purchase clean water and equipping themselves to other private service providers such as Clean City that is responsible for garbage collection and delivery of safe water to the residents. Lack of public health services can be driving the occurrence of communicable diseases in Harare. The occurrence of communicable diseases in Harare has been noted to be frequently increasing in these results. This is attributed to poor health

delivery around the city. Health systems have been compromised by the critical shortage of financial capabilities as the sector is under-funded by the government and declining health infrastructure due to lack of resources to renovate these infrastructures.

Harare is more prone to the occurrence of communicable diseases. Several drivers to the occurrence of communicable diseases have been identified in the city. With the present situation of the City of Harare service provision, there is high risk that the occurrence of infectious diseases might struck the people at any moment. The results stipulate that the occurrence of cholera in hare is because of lack of effective services provision. Most of the residential areas struggle to get clean water supply leading to the sinking of deep wells that becomes a danger to the health of the people as they get contaminated. The collection of solid waste has been noted to be absent in most of the residential areas leading to the creation of dumping sites within the residential areas' open spaces. Results demonstrate that the occurrence of diseases is still a risk factor for the City of Harare as the key drivers of their occurrence still prevail and the situation continues to worsen as the economy devastate.

It is concluded in the present chapter that the occurrence of communicable diseases in Harare especially waterborne diseases still needs a long way to go as there need for dealing with the key drivers of their occurrence is still low. To reduce the occurrence of these diseases, there is need to work on the root causes that is the different drivers of communicable diseases in Harare in particular. Several recommendations have been gathered that will improve the situation in Harare if they are followed well. It is recommended that for a complete eradication of communicable diseases in Harare, there is need for the proper ad skilful approach to dealing with the drivers of the diseases. The identified drivers of communicable diseases need to be addressed for instance the shortage of housing that have led to the creation of slums that are the super spreaders and epicentres of diseases. The government needs to develop housing projects that will help increase shelter for the growing population. Affordable housing infrastructure should be allocated for the urban poor people.

Investment in public health is one of the best approaches that needs to be taken in dealing with the increasing risk of diseases in the City of Harare. The health facilities need to be subsidised by the local government through the provision of medications at a lower price and investing in new technologies that can be used for the benefits of the residents in the eradication of communicable diseases in the city. To meet the growing population of Harare there is need to construct more hospitals and clinics as this will reduce pressure on the available infrastructures. With the growth of the population, there is need to increase the infectious diseases hospital and the health facilities in the city.

Service provision should be an essential element of the city. Proper disposition of wastes is another key issue that needs to be dealt with in reducing the occurrence of diseases in the city. Recycling of solid wastes, such as plastics and other commodities, will help reduce pollution. Besides the local authorities should invest in wastewater treatment ad recycling as this will help solve the shortage of water supply systems as noted that the water supplies are becoming limited as the sources cannot deliver the demand of the whole city therefore the recycling of wastewater and its use will reduce losses incurred through the divergence of wastewater into the rivers and the expenses of piping water from faraway water sources. Proper disposition of wastes is advocated for as it is the major cause of the outbreak of diseases, such as cholera and typhoid, as food and water get contaminated.

The decongestion of the city is one of the ideas that will reduce the occurrence of diseases in the City of Harare. This can be done through creation of small towns and the development of rural areas that will limit the number of people migrating to the city as the services and jobs they were seeking were readily available in their local areas.

The present chapter has critically examined the occurrence and drivers of communicable diseases in Harare, the capital city of Zimbabwe, which has faced rapid population growth due to increasing urbanisation and natural population growth. The main argument has been that Harare has been identified as an epicentre of communicable diseases in the country, and the chapter has sought to discuss the reasons behind the high incidence of such

diseases in the city. A desktop study has been deployed, engaging various literature sources, including journals, articles, and books. Both qualitative and quantitative techniques have been used in the collection and analysis of data, and cross-checking of different data sources has been conducted to validate the reliability of the information. The occurrence of communicable diseases in Harare Metropolitan Region has increased as the population has continued to grow. This trend has been driven by changes in land use, social inequities, lack of public health services, sanitation issues, and poor service delivery. Harare has remained at high risk of communicable diseases, as outbreaks such as cholera have continued to affect the city. Measures should be implemented to curb the drivers of communicable diseases, ensuring sustainability in urban development and necessary amendments to address the root causes of disease outbreaks.