Chapter 5: The Nexus between Place of Selected Disease Prevalence and Placement of Urban Health Facilities

The present chapter critically explores disease incidence in urban areas. It explains the intractable relationship that exists between places of disease prevalence in urban areas and the placement of health facilities in which it seeks to discuss the connection between urban infrastructure and the occurrence of diseases within the urban space. The main argument presented in the present chapter is that urban areas are mostly affected by certain diseases such as Infectious diseases, respiratory diseases, epidemic diseases, that arise due to poor sanitation and the increasing rate of urbanisation hence the quicker the spread of the diseases as the proximity of people is too close. The chapter deals with how certain diseases are most common in the urban environment and the likelihood of the dwellers being affected by these diseases at a given period. The study deploys a desktop study that engaged literature. Secondary data sources that include books, research articles and journals were used to collect the information used in the chapter. Data was analysed using both quantitative and qualitative techniques. Results indicate that urban societies are more prone to several diseases in which huge amounts of people get affected with new cases being recorded each time. Some of these diseases such as epidemic diseases are more common in the urban environment because of poor urban facilities. The trends show that high populated areas are the most prone to diseases and there are high speeds of spreading. It is argued that urban areas have become the super spreader of diseases due to high population rates. In conclusion, the incidence of diseases in urban environments are very high with high frequency rate mostly among the lower income classes. It is recommended that steps be taken in the positioning of the urban facilities that is one step towards the curbing of disease prevalence and their incidence.

The chapter aims to explain the variability of diseases in urban settlements specifically in Zimbabwe and how they prevail over time. It seeks to disclose the connection that exist between the occurrences of diseases in urban areas, they pattern and the most affected group with the existing urban facilities. It

has been noted in the study that different urban infrastructures such as the health facilities, sanitation facilities, public transport and housing infrastructures have a permanent role in the prevalence of diseases in urban environments. The contributions of these facilities, their positioning and functionality might be both positive and negative with regards to the spread of diseases in the urban areas. The chapter also discusses many diseases that are in two categories namely communicable and non-communicable diseases that are mostly common within the urban space such as infectious diseases, respiratory diseases and waterborne diseases and explains how they affect the urban populace. It explains the incidence of both communicable and non-communicable diseases in the urban set up. Some of the diseases that are put into consideration in the chapter includes cholera, typhoid, bilharzia and coronavirus that has become the biggest battle that the whole world is fighting against. The prevalence of diseases in the urban areas is a risk to the lives and health of the population of different countries across the earth as most of the people are believed to be staying in the urban areas. Previous studies have noted that due to urbanisation and natural population growth, 60% of the world's population resides in the urban areas. It has been observed that the most affected population are the low-income earning residents of the urban cities. Thousands of people are losing their lives due to increased transmission of diseases in urban areas with many people becoming orphans, widows and childless. This calls for a serious lookout on the development of the urban facilities that are a result of the outbreak and spread of diseases and poor health facilities that are failing to be utilized in controlling diseases in the urban space.

Looking deep into this matter and finding solutions to it were beneficial in saving the lives of the people that will also increase the life expectancy and standards of living as well. The study was compiled using secondary information from previous studies. Articles, book chapters, journals among other academic documents were utilised to collect the data used in the chapter that support and gives evidence on the prevalence and incidence diseases in the urban areas and their relationship with the existing urban facilities especially the health facilities found in the urban areas. The validation of the information presented in the chapter was done through cross

referencing and the use of more than one source of data. The results show that the incidence of diseases in the urban areas is high due to the closeness of people to each other and high population volumes. Due to rapid urbanisation disease prevalence is also at its peak as the outbreak of diseases is increasing as the population increases especially communicable diseases.

Results also indicate that the prevalence of diseases in the urban areas is related to the urban facilities with some disease prone areas noted for having deteriorating infrastructure and poor health facilities for the citizens. It can be argued that the health of the people is very important as it marks the development of an area and an indicator of improved standards of living. In summation it can be said that more efforts should be done to curb the incidence and prevalence of diseases in the urban environments. It is recommended that investments be done in the health sector to improve the delivery of health facilities among urban areas and restoration of urban infrastructure that are a result of the continuous outbreak of diseases in the urban environment.

The increase in the outbreak of diseases within the urban areas of Zimbabwe has led to the need to dig through to reveal the trends of diseases prevalence in these areas. Due to the increased urbanisation and the expansion of the cities, the incidence of diseases has yet increased leading to loss of lives and poor health among the affected groups of the urban environment. Unlike in the past, urban areas are the most affected by diseases outbreaks due to increased population density. The situation has resulted in the study that seeks to understand how diseases are spreading and come with ways in which the urban facilities can be improved to curb the disasters associated with diseases prevalence in the urban area. It also identifies the diseases that are of most concern in the urban areas around Zimbabwe and develop a understanding on how the incidence and prevalence of these diseases is linked to the urban facilities with most concern centred on the urban health facilities in the urban Zimbabwe and finding how viable these urban facilities are and how they can be improved to ensure that the health of the urban dwellers is secured and there is a reduction in the prevalence of diseases in the urban cycles.

The key concept premising the present chapter is to articulate the occurrence of diseases in urban areas and the connectedness that exist between the prevalence of diseases in connection with the urban facilities. The chapter agrees that incidence of diseases and their prevalence in the urban environments .... It has been noted from different studies around the world that the prevalence of diseases in urban areas are because of the available infrastructures among other factors such as economic conditions and socio-economic conditions that are less relevant to the study as the focus is on the facilities in different urban settlements. The chapter focuses on both communicable and non-communicable diseases that are most common in the urban areas. Among these diseases are Infectious diseases, respiratory diseases, and epidemic diseases. Many studies have investigated on how urban facilities contribute to diseases incidence and prevalence in urban cities, but little concern has been put forward to upgrade these limitations especially in the less developed countries where the prevalence of diseases is increasingly due to the dilapidation of the facilities in these areas. Urban areas can be defined as places where people live with advanced technologies and better standards of living, unlike the countryside.

At a global scale, the incidence of diseases in urban areas varies with the type of disease affecting the population and the places of the disease occurrence in the given area. It has been noted that the incidence of water-borne and infectious diseases is more common in the developing world than the developed countries with quiet several people at risk, as more than half of the developing countries are more vulnerable. Moreover, urban environments are not homogeneous, so risk factors are likely to vary across the continent, across a country, and even within a city. It has been noted that urban environments are not homogeneous, so risk factors are likely to vary across the continent, across a country, and even within a city. It is argued that there is an increasing susceptibility to infectious disease, especially emerging infectious disease (Quammen 2012). Susceptibility of the low-income population to diseases has been very high hence the high rates of disease incidence among this group. Locally the incidence of diseases is more common in highly populated areas where the circulations of people are very high and among large families residing in a limited or smaller apartment.

Most communicable diseases such as cholera and typhoid spread fast in the highly populated ghettos and the low-income earning people as compared to the low-density areas. Neiderud (2019) suggests that malaria risk in urban areas is higher in irregularly or sparsely built-up areas and that high building density reduces dengue risk. It is in poor quality housing that the risk factor for respiratory diseases and malaria. Inadequate water supplies and sanitation and waste management are also associated with high incidence of diseases as there is much time spent in queues waiting for water thus allowing people to associate with each other. The density of inhabitants and the close contact between people in urban areas are potential hot spots for rapid spread of merging infectious diseases such as severe acute respiratory syndrome and the avian flu.

The prevalence of diseases at a global level is believed to be increasing time and again. This is because of different factors such as the increased urbanisation rate throughout the universe. Gowda, Bhojani, Devadassan and Beerenahally (2015) argue that the occurrence of chronic diseases around the world are on a rise due to inequalities in the accessibility of health services especially among the urban poor. In India, urbanisation has been discovered to be the major cause of the prevalence of chronic diseases [World Health Organisation (WHO) 2011]. Gowda *et al.* (2015), discovered a huge inequity among the poor urban dwellers as the struggle to get access to the basic amenities and health services. This clearly indicates that the prevalence of diseases is high among the urban poor people as compared to the high-income earning residents (Brashier, Londhe, Madas, Vincent and Salvi 2012). In a study carried out in Bengaluru, in India, it has been discovered the prevalence of chronic diseases is increasing and has surpassed the numbers obtained in the previous study. Some diseases such as Hypertension, Diabetes, heart problems among others have been identified to be affecting the poor dwellers of the urban area (Godwa *et al.*, 2015). It has also been observed among urban cities of Sri Lanka that chronic diseases are more prevalent among medium and high urbanist groups (Eckert and Kohler 2014). In a study carried out in Sri Lanka, it was noted that the prevalence of overweight and diabetes mellitus is more common among men in the high urban category (Eckert and Kohler 2014).

Regional trends articulate that the number of newly diagnosed cases in urban areas is increasing as the population is also expanding hence the proximity of the people is becoming high leading to the spread of the diseases. In some cases, urbanisation may directly contribute to the emergence or re-emergence of infectious diseases through the degradation of ecosystems. In Africa several common diseases hit the urban environments such as typhoid, cholera and malaria among others that are mostly caused by poor sanitation within the urban environment. At regional level, it has been noted that the prevalence of diseases is high in largely populated areas. Some authors argue that high population density areas are frequently identified risk factor for infectious disease in sub-Saharan Africa.

Apart from that, increased prevalence has been identified in diseases such as malaria, fevers and respiratory diseases. These high transmission in high population density urban environments are because of the proximity of people especially in marketplaces, stadiums, cinemas among others. Apart from that, high-density neighbourhoods, and informal settlements have been factored out as places that are at an increased risk for infectious disease. At the household level, with one study showing that larger households were at a higher risk for enteric diseases. In Accra city, a town in Ghana, the prevalence of communicable diseases has been noted in the urban environments. Infectious diseases were identified in a study in Accra to prevail in the city that are affects the urban poor and in areas with deteriorating facilities, compared to the other residents of the city. Malaria and diarrhoea most common and being the cause of thousands of deaths around urban society (Fobil *et al*., 2011). In Zimbabwe, the prevalence of diseases is high among the low-income earning groups.

Urban facilities have always had an impact on the standards of living of the urban settlers that constitutes the health of the people. Among the infrastructures found within the urban space are the commercial centres, industrial, housing infrastructures, transport facilities among others. Higher population density, poor housing, and poor sanitation infrastructure as compared to rural areas have also been shown to increase the risks associated with some infectious diseases. These facilities are believed to be offering services for the people living in the urban areas. However, it has been noted

that the processes of extended urbanisation, that include suburbanisation, post-suburbanisation and peri-urbanisation, has result in increased vulnerability to infectious disease spread among different groups of people as pressure has been increased on the available facilities that are failing to cater for the growing population. The re-emerging infectious disease events and outbreaks around the world to reveal how extended urbanisation in the broadest sense has amplified the conditions necessary for the spread of infectious diseases. The increase urbanisation has resulted in the shortages and pressure on the urban facilities that has resulted in the spread of epidemic diseases in the urban space. This research mainly focuses on several urban facilities and their linkage to the prevalence of diseases in the urban space. It seeks to discuss how health, transport, sanitary and housing facilities have contributed to the increase of disease outbreaks and multiplication of the cases of people affected with certain selected diseases that prevail within the urban environment. Human movement was another significant risk factor and encompassed several different behaviours. The risk for multiple diseases is increased because of travel, including travel by urbanites to areas where certain disease prevalence is high.

The prevalence of diseases and the urban facilities have a linkage. It can be argued that the quality of facilities determines the health of the people and the physical environment in which they stay. Good quality infrastructure improves the health of the people and as well lowers the prevalence of diseases within the settlement areas. The built environment characteristics are an important factor for diseases risks in urban areas. The prevalence of malaria in urban areas has been identified especially in spatially populated areas of the city where there is enough space for mosquitoes breeding and poorly built houses. The risk of malaria infection is lower among residents of completed houses. Risk of respiratory diseases in the urban environment is associated with poor quality housing therefore the informal settlements are more prone to influenza and other respiratory diseases.

At a global scale, it has been noticed that urban facilities are very crucial for keeping the urban residents healthy. In developed countries, many sustainable developments that are being done to maintain the health standards of the people in both the countryside and the urban communities.

Sasaki and colleagues found that insufficient drainage and lack of access to a latrine increased the risk for cholera in Lusaka, Zambia. Keating and colleagues found similar results for malaria whereby households in well-drained areas had a significantly lower risk of infection. Stressing much emphasis on the health facilities in Zimbabwe, it is in a worrisome state whereby the hospitals and clinics are falling to provide the basic services that are required by the citizens. With the growing population within the urban areas, little action has been taken to expand the public health facilities that are affordable for most of the urban residents. The public around the urban spheres. Most of the informal settlements do not have access to health facilities in their respective areas leading to high prevalence of diseases. Besides the limited number of infrastructures, the public health facilities in Zimbabwe are ailing to provide enough services to the residents due to inadequate technology and shortages of medicines and other requirements for the nurses and doctors to tackle their jobs thus leading to more deaths and spread of diseases in the urban setup.

Qualitative and quantitative data collection methods were used to compile the data that is presented in the chapter. Desktop research method was made use of whereby several journals, articles book chapters among others were used. Already existing research from different places around the globe were used to give a comparison on the connection between diseases prevalence and the urban infrastructures in these areas. These existing studies contributed in finding the variability that exist with space and time.

Results show that the incidence of diseases in the urban areas varies with space. It has been noted that there is high incidence of diseases in the highly congested areas of the urban environments as compared to the scarcely populated areas. Huge numbers of cases have been recorded in most populated areas for instance the Ghetto. This is evident looking at the spread of diseases such as cholera within the urban environment. Huge number of new cases are recorded in suburbs such as Budiriro, Kuwadzana, Epworth and Mbare where people are over populated hence the pressure and frequency of sharing certain commodities such as the restrooms, kitchens among others where a single house in shared by more than two families and flats meant for bachelors become the home for a whole family. This naturally brings people

close to each other thus resulting in a quick spread of diseases and the number of people affected. Due to the use of urban public transport, it has been discovered that the transmission of respiratory diseases is more common among the people who make use of public transport for circulation within the urban space unlike the people who uses their own mode of transport. Though precautions have been taken to lower the spread of covid-19, ZUPCOs are super-spreaders of the corona virus and other respiratory diseases such as influenza. People who use public transport have been recorded to be more exposed as they meet different people whose status is unknown without any social distance and being overcrowded in these buses creating a favourable environment for the spread of diseases. The incidence and prevalence of diseases is very high due to shortage of transport as people are also made to wait in queues for a very long time waiting for transport thus resulting in the gathering of people hence the spread of the virus among the urban areas.

The prevalence of diseases in urban areas is also associated with location of the area. several epidemic diseases are more common in informally settled areas where there is inadequate basic services provision. The results from the study indicates that the prevalence of diseases in the urban areas is because of poor urban facilities. There are not enough resources to modify the infrastructures within the urban environment that will help curb the present reoccurrence of diseases in the society. It has been discovered that there is shortage on the facilities such as housing and transport hence the congestion of people has resulted in a catalysed spread of diseases in the urban societies. Due to the increasing rate of urbanisation and natural population growth among developing countries, pressure has been built on the available facilities that at the time of the urban settlement formation were meant to cater for a certain number of people.

It has been found out that there are housing shortages that has led to the creation of slum settlement such as Hopely, Epworth and Caledonia among others where no proper services in unavailable thus making these areas epicentres of diseases. Basic facilities such as hospitals, clinics, water and sewer reticulation are absent in these areas that are a threat to the prevalence of diseases. Due to lack of clinics where the adolescence can acquire information about infectious diseases and how to protect themselves and

getting some contraceptives to protect themselves during intercourse. This has resulted in the increased incidence of HIV&AIDS and many more sexually transmitted diseases among the youths.

Due to poor sanitation in areas such as Budiriro and Glen View, the prevalence of cholera remains high due to the contamination of water by bursting sewer pipes that have become eroded and overweighed as the population continue to increase. Since these ae densely populated areas thus the circulation and proximity of people is very high resulting in quick transmission of diseases. The prevalence of typhoid has been noted in Mkoba in Gweru that is also a high-density area and lacks enough basic facilities hence the outbreaks of typhoid and cholera. the prevalence of epidemic diseases is high in high-density suburbs as compared to the medium and low-density areas.

The development and expansion of these areas is slower than the rate in which the population is increasing thus the accumulation of people on the little infrastructures available. There have been records of housing infrastructure shortages that has led to the sharing of small apartments meant for bachelors by the whole family or more thus leading to the increased breeding space for diseases and their spread especially respiratory diseases and water-borne diseases such as cholera and the recent COVID-19 viruses. Apart from the occupation of available housing infrastructures by more than the expected number, informal settlements have become a problem within the urban space that are the super spreaders of diseases and the generators of most communicable diseases in the urban areas. As observed by … different risk factors in the urban environment can, for example, be poor housing that can lead to proliferation of insect and rodent vector diseases. These areas lack basic services such as sanitation systems, absence of water and sewer reticulation have led to the genesis of typhoid, cholera among other diseases.

The prevalence of diseases within the urban space is associated with the poor urban facilities. It has been noted that the prevalence of cholera and typhoid is one of the major challenges within the high-density suburbs of most cities in Zimbabwe that is associated with lack of service delivery and the proximity of the people to each other that is noted that the more closeness

the people are the high the incidence of diseases in these areas. Failure to meet the need for public health facilities increase has led to the continuous prevalence of diseases among the urban poor that lacks financial capacity to acquire health services in the private hospitals and clinics this due to the little response put on the increasing urban population that has led to the need for the expansion of health facilities in the urban environments. Prevalence of diseases in urban areas can be attributed to the failure of the local authorities to provide for the urban facilities such as housing, sanitation and the health facilities.

Conclusively, the prevalence of diseases in the urban areas of Zimbabwe is mostly associated to the poo urban facilities provision. The prevalence of diseases in the urban areas is increasing each day as the population continue to increase thus leading to the shortages or pressure on the available facilities that are failing to sustain the population. Serous measures need to be taken to deal with the causes of the prevalence of diseases in the urban areas with more effort put on how the incidence of diseases be controlled and reduced. The connection that exists between the prevalence of diseases and urban facilities is strained hence there is need to fill up the gap for sustainable urban health of the people. There is need to develop the housing infrastructure that suit the increasing population due to urbanisation and natural population growth as this will reduce the incidence of diseases in most crowded areas where more than one family is forced by the situation to share a house meant for one family.

Apart from housing facilities, the service providers must make sure that there is proper sanitation in all suburbs with proper disposition of waters and their management and the provision of clean sources of water to regulate the prevalence of epidemic diseases among the urban residents. It is also recommended that the government must subsides and invest in the construction of new hospitals and clinics around the urban areas. New technology should be provided in these health facilities together with the medications at a reasonable price for the urban poor people to afford them and fight prevailing diseases in the urban space. Provision of housing infrastructure and the upgrading of informal settlements should be implemented to reduce the existence of diseases breeding areas where there

are no services, and the risk of epidemic diseases are very high and their incidence among the community. He local authorities should also rehabilitate the deteriorating services such as waste management and the provision of clean water within the residential areas.

The present chapter critically explored disease incidence in urban areas, specifically examining the relationship between disease prevalence, urban infrastructure, and the placement of health facilities. It argued that urban areas are disproportionately affected by diseases like infectious, respiratory, and epidemic illnesses due to factors such as poor sanitation and rapid urbanisation, which facilitate quicker disease spread. The chapter deployed a desktop study, engaging with books, research articles, and journals to collect secondary data, which was then analyzed using both quantitative and qualitative techniques. Results indicated that urban societies are indeed more prone to various diseases, with high population density exacerbating the issue and leading to faster transmission rates. The chapter concluded that the incidence of diseases in urban environments is notably high, especially among lower-income classes, and recommended strategic positioning of urban facilities as a crucial step toward curbing disease prevalence. The chapter also discussed both communicable and non-communicable diseases and how they affect urban populations, noting that factors such as health facilities, sanitation, and public transport play a significant role in disease prevalence.