Chapter 4: Trends, Occurrence and Prevalence of Communicable and Infectious Diseases in Harare Metropolitan Region Since 1900

Communicable and infectious diseases are a hazard to public health and welfare. A rising trajectory of disease occurrence and prevalence is an indicator of poor public health provision. In this regard, the study of disease trends over time encompasses an examination of both local and central authority capabilities in administering health amenities to the public. Noteworthy is that both the colonial and post-colonial disease incidences in Harare Metropolitan Region are of interest to this research. By and large, a comparison of public provision during these distinct political eras, as divided by the 1980 independence watershed, is inevitable.

The colonial era was pronounced by discrimination in policy implementation among the native Africans and the white settlers. This significantly affected public health provision in Harare Metropolitan Region, known as the sphere of influence of Salisbury, during that time. On the other hand, independent Harare Metropolitan Region is influenced by inappropriate and outmoded urban planning provisions that, in turn, negatively impact upon public provision of health facilities in this area. By and large, the people in this area are entangled in this set-up that is inherently handicapped to offer adequate healthy provisions as enhanced by water and sanitation facilities. Resultantly, disease outbreaks and disasters as triggered by these factors are common in the study area. The chapter analyses the trends, occurrence, and prevalence of communicable and infectious diseases in Harare Metropolitan Region since 1900. It seeks to understand the historical context and evolution of disease patterns to inform current public health challenges and future interventions in the region.

The mounting of the Union Jack on 12 September 1890 in Salisbury marked the colonization of Zimbabwe by Britain. The subsequent policies were meant to serve a dual purpose of suppressing African activism and upholding white supremacy. In the health sector, there was no political will to provide for universal health coverage as the public health policies were determined by

economic interests whereby health facilities were concentrated in urban areas and mining areas to preserve the labour force (Packard, 1997). For example, Holland (1976: 219) puts forward that "Sexually transmitted diseases were shown to be an important, but neglected, social and medical problem in Rhodesia". On the other hand, Arnold (1988) contends that the white settlers were suspicious of the way the native Africans dealt with the diseases such as malaria and smallpox that were rampant in the Tropics and therefore deepened their quest to subjugate the Africans as a philanthropic duty since the Africans were seen as a reservoir of such diseases (Vaughan, 1993). As such, the European public health policies were sometimes used as a colonisation tool to lure the Africans into subjugation, and this was bound to fail as the Africans had their own ways of dealing with the diseases as enhanced by indigenous knowledge systems (Brown, 2004).

By and large, the incompatibility of the motives of public health provision between the white settlers and the native Africans led to some of the diseases such as malaria and sexual transmitted infections (STIs) to become endemic in Zimbabwe during the colonial era. On the other hand, Chikumbu (undated) contends that colonialism changed African means of controlling diseases, citing sleeping sickness that was controlled through environmental modification during the precolonial era, and thus became difficult to implement after the establishment of colonial rule. By and large, UNEP and ILRI (2020) submits that the expansion of colonial rule in Africa facilitated outbreaks of zoonotic sleeping sickness that killed one third of the population in Uganda and up to one fifth of the people living in the Congo River Basin in the first decade of the twentieth century.

At independence, the Zimbabwean government inherited a dual health system that was biased towards developing urban health facilities, relegating rural health needs. Simmons (2012) puts forward that inequalities were evident as health facilities in urban areas are more resourced than those in rural areas. This contributed to localization of some diseases in Zimbabwe. For example, Holland (1976) submits that STIs were more concentrated in urban areas during the colonial era owing to the following factors: population imbalance owing to the discriminatory colonial rule that allowed only the male sex to reside in production locations, and a relatively young population

that is largely sexually active. On the other hand, diseases such as malaria and smallpox were concentrated in rural areas owing to geographical factors such as low terrain (Freeman, 1995). On the other hand, some enteric diseases such as cholera and typhoid have become more common in urban areas of Zimbabwe than in rural areas (UNHabitat, 2005). Nonetheless, governmental interventions such as the primary health care (PHC) initiatives that were more pronounced after independence have helped in blurring the ruralized disease occurrences in Zimbabwe. For example, at national levels, the annual malaria incidence (cases per 1,000 population) has decreased substantially from 153 in 2004 to 19 in 2018 (Zimbabwe DHIS2, 2018).

However, at national level, three major diseases continue to impact heavily on Zimbabwe and these are HIV, Malaria and Tuberculosis. This public health threat has led to the country benefitting from the Global Fund to fight AIDS, Tuberculosis and Malaria (GFATM, 2012). Nonetheless, with regards to malaria, at the national level, annual incidence (cases per 1,000 population) has decreased substantially over the last 15 years, from 153 in 2004 to 19 in 2018 (President's Malaria Initiative Report, 2020).

On the other hand, besides donor funding, communicable and infectious diseases in the country have become a concern for both local authorities and the central authority in the country. Noteworthy is the fact that the Zimbabwe Public Health Act CAP 15/17 No. 11/2018 Section 26 offers that "Every local authority shall take all lawful and necessary precautions for the prevention of the occurrence, or for dealing with the outbreak or prevalence, of any infectious or communicable diseases, and shall exercise the powers and perform the duties conferred or imposed on it by this Act or by any other enactment." The Act, as a regulatory law for the provision of public health in Zimbabwe, defines infectious disease as any communicable disease caused by pathogenic microorganisms, such as bacteria, viruses, parasites or fungi that can be spread, directly or indirectly, from one person to another as specified in section. In this context, a communicable disease means a disease that can be transmitted from one person to another. However, most local authorities in Zimbabwe are associated with corruption, inefficient service delivery, and political bickering (Chanza *et al*., 2014; Isbell and Konke, 2018).

By and large, the present chapter seeks to critically examine the trends, occurrence and prevalence of communicable and infectious diseases focussing on the contribution of both colonial and post-colonial local authorities in exacerbating and/or abating such diseases within the context of Harare Metropolitan Region. The World Bank (2015) documents the fact that the Harare Metropolitan Region Metropolitan Area encompasses five urban areas of Harare, Chitungwiza, Epworth, Ruwa and Norton. Although these areas are overseen by independent urban authorities, they are linked together based on sharing a common water supply system and a common destination for their wastewater into the supply dams (The World Bank, *ibid.*). Therefore, since water and sanitary facilities are central to most disease outbreaks in the country, it is only convenient to study disease patterns in such a large metropolitan area.

Research has proven that the neighbourhood factor is sometimes a more significant variable than individual, or rather personal factors, in determining risk to diseases (Gabrysch *et al*., 2008; Boyce *et al*., 2019). Inversely, if the neighbourhood is poorly planned to ensure efficient public health delivery, the risk factor for contracting or transmitting a disease is enhanced. Employing a meta-population model, Brizuela *et al*. (2020) demonstrate that the agglomeration of daily activities can largely influence the growth rate, size and timing of urban epidemics. By and large, "smart" urban city planning fosters a convenient neighbourhood to reduce the prevalence of both communicable and infectious diseases since these are diseases that are susceptible to be passed from one person to the other (The Norwegian Institute of Public Health, 2020).

Comparing the prevalence of infectious diseases (IDs) and non-communicable diseases (NCDs), WHO (2004) submits that infectious diseases (IDs) have been the most important contributor to human morbidity and mortality yet there are now trends of NCDs sometimes exceeding infections. In this context, WHO (2011) confers that a communicable disease is an illness caused by a specific infectious agent or its toxic products and arises through transmission of that agent or its products from an infected person, animal, or inanimate reservoir to a susceptible host, either directly or indirectly. In this case, an infectious disease were described under communicable diseases as

the disease is transmissible from person to person by direct contact with an affected individual or discharges or by indirect means. Nonetheless, although infectious diseases can affect people of all ages, they are a direct threat to children under five as they lack the immunity to fight these diseases in most cases.

Empirical evidence suggest that infectious diseases are directly related to extreme weather events (EWEs). In this regard, WHO (2004) puts forward that the major Earth's climate/oceans system, the El Niño Southern Oscillation (ENSO) events, have become more frequent and intense, leading to extreme weather conditions such as droughts and storms. By and large, ENSO years have been associated with epidemics of infections including malaria, dengue, cholera and viral encephalitis (Kovats, 2000). Epstein (2000) argue how there are two main channels through that ENSO events lead to disease outbreaks: public health system breakdown due to accompanying disasters; and also, the spread of "nuisance" organisms. For example, Cyclone Eline of 2000 resulted in floods that caused internal displacement of people, leading to major outbreaks of typhoid and cholera in Mozambique (Epstein, 2000).

Additionally, the United Nations Environment Programme (UNEP) and International Livestock Research Institute (ILRI) report (2020) observes how climate change has been instrumental in facilitating newly emerging infectious diseases in tropical regions where the warm temperatures suit the lifecycles of both pathogen and vectors. Moreover, climate change influences the geographic distribution of mosquitos and other vectors that transmit viruses such as the chikungunya virus and West Nile virus. The 2010 Rift Valley fever outbreak was influenced by higher-than-normal average rainfall (UNEP and ILRI, 2020). The Centre for International Governance Innovation (CIGI, 2009: 10) argues how the increases in temperature, climate change-induced natural disasters and scarcity of safe drinking water due to droughts are major contributors to the spread of infectious and water-borne communicable diseases in Africa. On the other hand, Nava *et al.* (2017) attributes the outbreak of infectious diseases in Brazil to El Niño and La Niña EWEs.

The UNEP and ILRI (2020) organisations partnered on a research about zoonotic diseases. The research established that about 60 per cent of human infections are estimated to have an animal origin, and of all new and emerging human infectious diseases, some 75 per cent "jump species" from (non-human) animals to people (UNEP and ILRI, 2020: 07). For example, the research revealed that most human pandemic influenza viruses have a complex evolution with mixing of viruses in different domestic animal compartments, usually pigs and poultry and interacting with human influenzas to produce highly pathogenic human influenza pandemics, with pandemic human influenza (H1N1), Middle East respiratory syndrome (MERS), and severe acute respiratory syndrome (SARS) having proven or suspected domestic animal involvement in transmission.

Unsustainable utilisation of natural resources accelerated by urbanisation, land use change and extractive industries leads to an increased interaction between animals and people and this promotes human exposure to insects, ticks and other vectors of wildlife pathogens. In this vein, Clavel *et al.* (1986) submit that the natural reservoirs for HIV Type 1 are Chimpanzee and that for HIV Type 2 are the Sooty Mangabeys. On the other hand, monkeys and apes are the immediate hosts for Ebola Virus, with unconfirmed reports that the natural reservoirs for the Virus being the African fruit bats of the *Pteropodidae* family (UNEP and ILRI, 2020). Such revelations argue how unplanned urbanisation systems that involves the destruction of natural habitats for the fauna may lead to zoonotic disease outbreaks due to an increased interaction between people and animals.

In 2019, Matthew R. Boyce, Rebecca Katz and Claire J. Standley carried out literature review research in a bid to have a better understanding of infectious disease risk factors specific to urban settings in Sub-Saharan Africa (Boyce *et al.*, 2019). It was found out that infectious diseases remain a substantial source of morbidity and mortality, especially among children, in the region. The most common infectious diseases in Sub-Saharan Africa, as covered by the literature reviewed were the following: malaria, HIV&AIDS, and diarrheal diseases. This corresponds with the findings by Havelaar *et al.* (2015) that among the major infectious diseases in Africa are HIV/ AIDS and malaria.

Nonetheless, Boyce *et al.* (2019) contends that urbanisation may directly contribute to the emergence or re-emergence of infectious diseases through the degradation of ecosystems, intensification of agriculture, and increased opportunities for the human-animal interface, especially with rodent or peri-domestic reservoir species. This finding is in line with those observed by the UNEP and ILRI research partnership (UNEP and ILRI, 2020).

Additionally, higher population density, poor housing, and poor sanitation infrastructure increase the risks associated with some infectious diseases, notably malaria and enteric diseases. With regards to poor sanitation infrastructure, a group of researchers, notably Sasaki, Suzuki, Fujino, Kimura, and Cheelo, found that cholera outbreaks in Lusaka, Zambia were fuelled by poor drainage networks and ablution facilities. Nevertheless, one particular disease epidemic may positively lead to the other due to increased interactions among urban dwellers. This is particularly significant when one focusses on the relationship between HIV&AIDS and tuberculosis (TB): Corbett *et al.* (2009) submits that in some cases HIV infection is a significant risk factor for smear-positive prevalent TB. Concerning other respiratory diseases such as COVID-19, the Norwegian Institute of Public Health (2020) reveal that the epidemic has a higher transmissible rate in urban areas as compared to rural areas due to high population densities and high rates of intermingling among the urban people.

The research employed a literature review research methodology in tracing and examining the trends, occurrence, and prevalence of the most common communicable and infectious diseases in Harare Metropolitan Region. This research methodology was necessitated by the relatively study period between 1900 up to the present. Moreover, through a desk-top review methodology trends from official reports are easily depicted. By and large, since it was established that the most common communicable and infectious diseases in Sub-Saharan Africa include enteric diseases, particularly cholera, and malaria and HIV&AIDS, the research will also focus on these diseases within an urban context, notably, Harare Metropolitan Region. On the other hand, COVID-19 is also examined in the study as an emerging respiratory disease.

Policies during colonial rule contributed to occurrence and prevalence of STIs in Harare (formerly Salisbury). Holland (1976) observes how the most common STIs in the urban area during the colonial period were syphilis and gonorrhoea with the former being misdiagnosed as chancroid in the 1970s. The general white settler mentality regarding these diseases was that "The native is the reservoir of infective tropical disease, from that the European and his family is subject to invasion" (The Southern Rhodesia Government, 1930: 09). As such, Holland (1976) reveals that statistics gained from the European population with regards to STIs in Salisbury were not accurate, with only eight in-patients reported as suffering from such diseases in Government hospitals in 1972. However, the Medical Officer of Health report (1972) of Salisbury reveals that private laboratories reported 640 positive specific Treponema tests in Europeans during the last five months of 1971 and this translates to a monthly average of 128 patients. Such statistics confirm that STIs in European populations were not widespread in Salisbury. On the other hand, concerning the African population in this city, the survey by Holland (1976) confirmed that STIs were more common in the African population than in white settlers. The results of the study revealed that 1707 diagnoses were reported with 12% of them having syphilis, and 64% having gonorrhoea.

Due to colonial rule regulations, there was a notable sex imbalance in Salisbury in 1969 and this was 2.4 to 1, with more males than females and this was even more distinct in the 15-19 age group (Central Statistics Office, 1971). As such, Willcox (1949) argues how Salisbury had, in general, an incidence of around 80% of STIs contracted from prostitutes. Subsequently, Holland (1976: 219) argues how "Discrimination, poverty, poor housing, lack of education and opportunity all contribute to the heavy drinking in Salisbury townships with its associated marriage breakdowns, immorality and prostitution". Such factors still account for the prevalence of STIs in independent Harare.

The first recorded case of HIV&AIDS in Zimbabwe was recorded in Hurungwe district in 1986 (Duri, 2013). On the other hand, Lopman and Gregson (2008) conducted a research to find out when the epidemic peaked in Harare. Using mortality data, a back-calculation technique was employed to reconstruct historic trends in incidence of HIV&AIDS for Harare, it was

found that annual incidence peaked between 4 and 5% between 1988 and 1990 in the city and this preceded any other peak elsewhere in Zimbabwe. This argues how the epidemic was more widespread in Harare Metropolitan Region in its early years after its diagnosis and has since declined. In this vein, Duri (2013) argues how HIV&AIDS prevalence is heterogeneous at national level, with Harare having the lowest prevalence of 13% as compared to that of small towns and farms that is at 22% on average. These results correspond with the findings by the Zimbabwe Ministry of Health and Child Welfare that concurred that the highest HIV prevalence was observed in Matabeleland South (23.8%) while the lowest was in Harare (10.8%). However, UNAIDS/WHO (2004) submits that in 1994-1995, 86 percent of sex workers tested in Harare were HIV positive and this period was marked by an increase from 52% in 1990 to 71% in 1995 of HIV prevalence among STI clinic patients in the City. This reveals that sex workers are among the main groups of people who transmit HIV in Harare.

Cholera is an enteric disease that is fuelled by contaminated water and poor sanitary infrastructure (WHO, 1997). For example, Christie (1987) cites that there were cholera outbreaks in 1974 and 1975 in Manicaland province and these were triggered by a contaminated borehole. Noteworthy is the fact that the first cholera case in Zimbabwe was recorded in 1972 (Chipare, 2010). Nonetheless, there is no history of recorded cholera outbreaks during the colonial rule in Harare. This were attributed to the fact that the two water treatment works that supply water to Harare Metropolitan Region, the Morton Jaffray Water Treatment Works (nominal capacity of 614Ml/day) and the Prince Edward Water Treatment Works (90Ml/day), were adequate in supplying the population during the colonial period. Chanza *et al.* (2014) put forward that Harare's population in 1969 was 385,000 and this rose to an estimated population of 610,000 in 1977 of which 79% were black and this was mainly attributed to rapid in-migration due to the escalating liberation war. Nonetheless, during the colonial period, the risk factors for cholera were minimal in Harare.

The post-colonial Harare has recorded several cholera outbreaks. During these outbreaks, a cholera case was defined as any patient presenting 3 or more liquid stools and/or vomiting for the last 24 hours. The most devastating

cholera outbreak was in 2008 and the first cases were recorded in Chitungwiza when on the 20th of August 2008, an outbreak of 118 cholera cases was declared (Chipare, 2010). Based on WHO (2009: 3) daily cholera updates and alert reports, of the 19 582 cases recorded in the entire City of Harare, at least 55% of them were from Budiriro and its environs alone. Following this outbreak, the location of Marindale in Norton experienced 1 400 cases of cholera and 50 deaths in 2008 (Parliament of Zimbabwe, 2010).

As observed by USAID (2009: 2), a breakdown in water and sanitation infrastructure exacerbated this cholera outbreak, and the collapsed health system was unable to respond adequately. Nevertheless, in Norton, the local authority acquiesced that some sewage pipes in Marindale had dead-ends, that is they did not flow to the main sewage pipes that carried sewage to the water works and as a result the pipes burst, releasing sewage into the residential areas. By and large, to prove that cholera has become endemic in Harare Metropolitan Region, another cholera outbreak was experienced in Harare in 2018 and this was declared on the 6th of September 2018 by the Ministry of Health of Zimbabwe that also notified WHO on the same day (WHO, 2018). Twenty-five patients were admitted at the Beatrice Infectious Disease Hospital in Harare presenting with diarrhoea and vomiting on 5 September 2018. Most cases came from Glenview 8 and 3, and Budiriro 1 and 2 suburbs. As such, Isbell and Kronke (2018) assert that besides poor sewage and water systems, the latest outbreak was also facilitated by inadequate health-care infrastructure and shortages of medicine, intravenous fluid, and protective clothing.

Polonsky *et al.* (2014) argue how typhoid is among the major public health menaces in developing countries where there is poor accessibility of clean water and sanitation facilities. As such Zimbabwe has suffered a recurrence of the hygiene-related disease and this has mostly been in urban areas, particularly Harare Metropolitan Region. Just like cholera, there is scarce evidence of recorded typhoid cases in this area during the colonial era. The WHO and the Ministry of Health and Child Welfare (2012) puts forward that a suspected typhoid case is that when any person suffers from a gradual onset of steadily increasing and then persistently high fever, chills, malaise, headache, sore throat, cough, and, sometimes, abdominal pain and

constipation or diarrhoea and a confirmed case was defined as a suspected case confirmed by isolation of S. Typhi from blood, bone marrow, bowel fluid or stool. In this regard, the diagnosis tests through blood, stool and urine samples were carried out at the Beatrice Road Infectious Disease Hospital in all the typhoid outbreaks in Harare.

As highlighted above, typhoid is an endemic public problem for Harare Metropolitan Region. Muti et al. (2014) argue how in January 2010 there was a typhoid fever outbreak in Mabvuku and Tafara suburbs of the City of Harare. There was a resurgence of the disease in Harare from October 2011to June 2012 and the first positive case was confirmed through laboratory tests at the Beatrice Infectious Disease Hospital. Muti *et al*. (2014) notes that in Dzivarasekwa twenty-four cases were found to be positive for Salmonella typhi in stool, urine or blood and only one death was reported. For the same outbreak of 2011, Polonsky *et al*. (2014) argue how as of 17 March 2012, a total of 3795 cases of typhoid fever had been reported, of which 62 (1.2%) were confirmed by laboratory diagnosis. During this outbreak, two deaths were reported and this corresponds to a case fatality ratio of 0.05%. Noteworthy is the fact that the diseases were more intense in the suburbs of Dzivaresekwa and Kuwadzana that accounted for 67.7% of the case-patients (Polonsky *et al*., 2014). Compounding the problems associated with ongoing COVID-19 epidemic, UNOCHA (2020) reveals that in August 2020, another typhoid outbreak was recorded in Harare, and this had 695 cases and 10 deaths.

As observed by UNEP and ILRI (2020), there have been there have been at least six major outbreaks of novel coronaviruses in the last century and the latest is the ongoing COVID-19 epidemic. In Zimbabwe, this disease was first detected in Harare on 20 March 2020. As observed by UNOCHA (2020), the highest weekly incidence risk for COVID-19 has been in the urban provinces of Bulawayo and Harare, with a consistent sharp increase in incidence in Harare since the second week of July 2020, increasing incidence in Harare Metropolitan Region. This reveals that due to the high transmission rates in large cities, Harare is a high-risk area for contracting the disease. It was established that the disease was imported as it was first detected in China in December 2019. Therefore, since Zimbabwe's largest airport, the Robert Mugabe International airport in Harare, this increases the risk factor for

COVID-19. Moreover, despite the fact that the third wave of the epidemic, that is mostly propelled by the Delta strain of the coronavirus, has hit Kwekwe, sporadic positive COVID-19 cases are still evident in Harare, a relic of it once being a hotspot for the disease in early 2021.

Corbett *et al*. (2007) contend that tuberculosis (TB) disease can result from either rapidly progressive disease following recent infection with Mycobacterium tuberculosis or from reactivation of latent TB infection. As such, Havelaar *et al*. (2015) argue how TB is among the top three infectious diseases together with HIV&AIDS and malaria in developing countries. Commenting on the case of Harare, TB incidence would be expected to rise during the course of an HIV epidemic, even if TB transmission rates were in decline owing to increased numbers of highly susceptible individuals (Corbett *et al*., 2007). However, in developing countries, that are highly susceptible to HIV&AIDS epidemics, the burden of TB prevalence is uncertain (Dye *et al*., 2005). As such, basing on a research carried out by Corbett and colleagues in 2009, it is established that Harare has a substantial burden of infectious TB, "with 4 in every 1000 screened individuals having smear-positive culture-positive TB, predominantly due to undiagnosed disease" (Corbett *et al*., 2009: 05). By and large, as low case detection proves to be the main setback for the control of TB in Harare, it is imperative to advocate for the control of the disease through intensified case-finding strategies.

The communicable and infectious diseases that are common in Harare Metropolitan Region are those associated with poor sustainable development. It is submitted that the recurrent outbreaks of cholera and typhoid are directly related to poor service delivery in this metropolitan area. This is attributed to many factors chief among them being the following: overpopulation; poor urban planning, socio-economic hardships, and corruption.

The dawn of the liberation war was a push factor for rapid urbanisation in Harare as people emigrated from rural areas into the city for protective reasons. This led to the establishment of most suburbs in the south-west of Harare city. On the other hand, socio-economic inequalities between rural

areas and urban areas also contributed to rapid urbanisation in Harare Metropolitan Region. By and large, such an influx of people into the urban area also put pressure in peri-urban areas such as Epworth and suburbs in the outskirts of the City such as Mabvuku and Tafara. Moreover, the strategy to relieve population pressure in Harare by establishing Chitungwiza as a satellite town of the City did little to ameliorate the situation since Harare remained the core city and these intervention measures only served to increase its immediate sphere of influence. As such, the necessary service delivery system was derailed. The two Water Treatment Works that serve Harare Metropolitan Region are inadequate and this has resulted in water shortages and poor water quality. These are the risk factors for diseases such as cholera and typhoid since the people are forced to tolerate poor quality sources of water for domestic use. The overpopulation factor for promoting these diseases is supported by the fact that during the colonial era, when the population in Harare Metropolitan Region was relatively small, there were scarce incidences for such diseases yet they cannot be described as emergent diseases.

The prevalence of some diseases such as STIs, cholera and typhoid may also be attributed to poor urban planning and bad governance practices. During the colonial period, STIs were mostly prevalent in production locations such as farms, mining areas, and towns. The discriminatory laws dictated a separation of men and their female counterparts and this caused a sex imbalance in these locations, resulting in sex work being a lucrative business due to a high demand. This promoted the spread of STIs in these locations and thus increased morbidity and mortality rates from such diseases. According Chanza *et al.* (2014), the first settlement for African workers in Harare (formerly Salisbury) was established in 1892, and legislation in 1906 allowed the designation of separate black residential areas, and made it compulsory for all African workers not living at their place of work to live in these locations.

Davison (2000) argues how urban planning during this time was mainly determined by imported urban planning concepts such as the "garden city", the "neighbourhood" and the Radburn design concepts. However, such imported urban planning concepts were not meant for Zimbabwean mode of

urbanisation that is mostly characterized by informality and a rapid influx of a relatively young population. Therefore, since urban planning in Harare Metropolitan Region has its foundations in such imported urban planning concepts, the planning products have proven to be ineffective in promoting sustainable urbanisation. For example, it was pointed out that the cholera outbreak in Norton was due to poor drainage systems and this has fostered bursting of sewage pipes, and thus promoting the occurrence of diseases.

As such, Boyce *et al.* (2019) argue how urban planning was an under-utilised yet important tool in reducing the risk factors for the occurrence and prevalence of diseases. By and large, the effect of neighbourhood characteristics has a great bearing on disease outbreaks as shown by the incidences of HIV&AIDS (Gabrysch *et al.*, 2008). The neighbourhood concept is of great significance in the consideration of disease outbreaks such as cholera and COVID-19 since it propounds proactive planning and designing of urban areas to circumvent the spread of diseases. On the other hand, bad governance practises, as indicated by rampant corruption cases in local authorities, have worsened the situation in metropolitan Harare since the resources used to promote public health in this urban area are sometimes diverted for different uses by those in authority (Isbell and Konke, 2018).

Disease trends, occurrences and prevalence are indicators of public health delivery. As such, endemic communicable and infectious diseases depict poor public health delivery in most cases. The control of such diseases needs a holistic approach that is buttressed in sustainability of city development. In this regard, proactive urban planning in city development considers environmental, social and economic factors, aiming for an equilibrium. This way, inequalities and deprivation effects in public health service delivery would be reduced. On the other hand, good governance practise and political will are relevant factors in determining communicable and infectious diseases. As such, corruption and political unaccountability in Harare Metropolitan Region have failed the metropolitan area in sustainable public health delivery. Therefore, there is need for all stakeholders to be effectively involved in public health issues, and these are specifically the central authority, respective local authorities, resident organisations, and other civic organisations. Such an inclusive partnership in planning and execution of public health concerns

would effectively impact upon disease patterns in Harare Metropolitan Region.

The chapter has presented a historical analysis of communicable and infectious diseases in Harare Metropolitan Region since 1900, revealing shifts in disease patterns influenced by urbanisation, economic factors, and public health interventions. Initially, diseases like malaria and tuberculosis were dominant, but the city has faced outbreaks of cholera, typhoid, and diarrheal illnesses, particularly affecting high-density suburbs due to poor sanitation and inadequate infrastructure. The chapter likely explored specific epidemics, such as the 2008 cholera outbreak, highlighting the interplay between economic crises, a collapsing health system, and social vulnerabilities. It also explored how factors like water contamination, overcrowding, and spatial inequalities contribute to disease prevalence. Overall, the chapter provided a historical foundation for understanding current epidemiological challenges and informing targeted public health strategies.