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The Impacts of Urbanization on Public Health in Selected Areas of Lusaka District, Zambia.

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Abstract- This study examines the impacts of urbanization on public health in the informal settlements of Kanyama and Chawama, Lusaka District, Zambia. Rapid and largely unplanned urban growth has outpaced infrastructure development in Lusaka, producing widespread deficits in water supply, sanitation, drainage, and housing that sustain a heavy communicable disease burden among residents of informal settlements. Using a qualitative phenomenological design, the study collected data from twenty-two adult residents through structured questionnaires combining closed-ended items and open-ended narrative questions. Data were analyzed using the six-phase thematic analysis process described by Braun and Clarke (2006). Five principal themes were generated: the water-disease connection; sanitation, shared suffering, and lost dignity; flooding as a seasonal health emergency; overcrowded homes and the intimacy of illness; and healthcare access: proximity without quality. Findings reveal that health challenges in these settlements are multidimensional, structurally produced, and gender-differentiated, consistent with the Social Determinants of Health Framework and the Urban Health Penalty Theory that guided the inquiry. Residents demonstrated detailed, experiential understanding of the mechanisms through which their living conditions generate illness, and articulated clear priorities for change. The study concludes that effective responses require cross-sectoral structural interventions in water infrastructure, sanitation, flood drainage, housing, and primary healthcare quality, rather than individual behavior change approaches alone. Recommendations are addressed to national government, health practitioners, urban planners, and development partners.

Keywords: Urbanization, Public Health, Lusaka, Zambia, Informal Settlements, Health Inequality

I. Chapter One: Introduction

1.1 Background of the Study

Urbanization is one of the most consequential demographic transformations of the modern era. Globally, the share of people living in cities rose from roughly thirty percent in 1950 to more than fifty-five percent in 2018, and the United Nations (2019) projects that nearly sixty-eight percent of the world's population will reside in urban areas by 2050, adding approximately 2.5 billion people to existing urban populations. While high-income countries managed this transition over many decades, investing gradually in water supply, sanitation, and public health systems, low and middle-income countries are urbanizing at unprecedented speed and often without the corresponding economic development or service provision needed to support growing populations. Turok and McGranahan (2013) observe that Sub-Saharan Africa sits at the centre of this challenge, accounting for a disproportionate share of projected urban population growth, with more than half of its urban residents currently living in informal settlements, the highest proportion of any world region, as the United Nations Human Settlements Programme (2016) reports.

The health implications of this pattern are profound and far-reaching. Informal settlements are characterized by overcrowding, inadequate housing, limited access to clean water and sanitation, poor solid waste management, and weak drainage infrastructure. These conditions sustain high rates of waterborne diseases including cholera, typhoid, and diarrheal illness, while overcrowding and indoor air pollution from solid cooking fuels drive respiratory infections and tuberculosis transmission. At the same time, the dietary and lifestyle shifts that accompany urbanization are accelerating the rise of non-communicable diseases including hypertension, diabetes, and cardiovascular conditions, as documented by Oni et al. (2019).

The coexistence of communicable and non-communicable disease burdens strains already limited urban health systems and imposes heavy costs on poor households. Research across multiple African cities has documented what scholars call an urban health penalty, whereby residents of informal settlements experience worse health outcomes than both their rural counterparts and wealthier urban neighbors, directly contradicting the conventional assumption that city dwelling confers health advantages, as Van de Poel et al. (2007) establish.

Zambia reflects these regional trends in a particularly instructive way. The country's urban population grew from approximately twenty percent of the total in 1960 to forty-four percent by 2019, driven in part by the decline of formal copper mining employment and subsequent waves of rural-to-urban migration, as the Central Statistical Office (2020) reports. Lusaka, as the administrative and commercial capital, has absorbed most of this growth, expanding from approximately 1.08 million residents in 1990 to over 2.5 million by 2020 at an annual rate of roughly five percent, as Mulenga et al. (2015) document. An estimated seventy percent of Lusaka's population now lives in unplanned settlements lacking adequate housing, piped water, sewerage, drainage, and reliable waste collection, according to UN-Habitat (2020). Governance constraints including limited municipal revenue, weak planning capacity, and inadequate devolution of authority have prevented the city from keeping pace with this extraordinary growth. The water and sanitation infrastructure was designed in the 1960s for a city of around 200,000 people and has received insufficient investment since, a problem the Millennium Challenge Corporation (2015) highlights as foundational to the current crisis.

Among Lusaka's informal settlements, Kanyama and Chawama stand out as two of the largest and most densely populated, and together they illustrate the conditions that motivate this study. Kanyama occupies low-lying ground in the city's southwest, making it particularly vulnerable to seasonal flooding that disperses fecal contamination from pit latrines and creates conditions favorable for waterborne disease transmission. Major cholera outbreaks struck Lusaka in 1990, 1999, 2004, 2017 to 2018, and again in 2024, with Kanyama and Chawama consistently recording the highest case numbers, as Medecins Sans Frontieres (2024) documents. A comprehensive survey of over 12,500 households in peri-urban Lusaka found that heavily shared sanitation facilities serving eighteen or more people, uncovered water storage containers, and lack of handwashing soap were each independently associated with elevated diarrheal disease risk, as Hubbard et al. (2020) report. A separate study of 620 households across Lusaka found that seventy-one percent of adults bypassed

local health centres in favour of more distant hospitals, suggesting that geographic proximity to health facilities does not translate into perceived quality of care, as Kapambwe et al. (2022) find. Research on maternal health trends from 2013 to 2021 found that while institutional delivery rates improved, significant inequalities in access to skilled attendance and emergency obstetric care persisted between planned and unplanned settlements, as Anastasi et al. (2024) document.

Despite this body of evidence, important gaps remain. Most existing studies have examined single health outcomes or isolated risk factors rather than approaching the question of how multiple dimensions of urbanization interact to shape overall health status. Epidemiological work has rarely been paired with qualitative inquiry that gives voice to residents' own experiences, perceptions, and priorities. The application of established theoretical frameworks such as the Social Determinants of Health model and the Urban Health Penalty Theory to the specific institutional and environmental context of Lusaka has been insufficient to guide comprehensive policy responses. This study addresses these gaps by examining the impacts of urbanization on public health in Kanyama and Chawama through a qualitative design that centers residents' lived experiences, with the aim of generating evidence capable of informing equitable and effective urban health interventions.

1.2 Statement of the Problem

Despite the rapid urbanization occurring in Lusaka District and the well-documented challenges of informal settlements characterized by inadequate water supply, poor sanitation, overcrowding, and limited access to healthcare, the specific mechanisms through which these urbanization factors interact to shape public health outcomes among residents remain insufficiently understood. While previous studies have documented individual health issues such as diarrheal disease prevalence, cholera outbreaks, maternal health service gaps, and healthcare-seeking patterns in Lusaka's informal settlements, there is a shortage of comprehensive research that captures the lived experiences, voices, and perceptions of residents regarding how multiple dimensions of urbanization combine to influence their overall health and wellbeing. The absence of this grounded, qualitative evidence limits the ability of policymakers, health practitioners, urban planners, and community organizations to develop targeted, effective, and contextually appropriate interventions that address the root causes of poor health in these communities rather than simply managing symptoms after the fact.

This study seeks to generate empirical qualitative evidence on the impacts of urbanization on public health in Lusaka District, exploring the mechanisms through which urban living conditions, infrastructure deficits, and socioeconomic factors shape health outcomes among residents of informal settlements while giving voice to residents' own understandings and perspectives, in order to inform evidence-based policy responses that can improve health equity and wellbeing in Lusaka's urban poor communities.

1.3 Purpose of the Study

The purpose of this study is to examine the impacts of urbanization on public health in Lusaka District, Zambia, with particular focus on informal settlements in Kanyama and Chawama, through a qualitative approach that explores residents' lived experiences and perceptions of how urban living conditions, infrastructure deficits, and socioeconomic circumstances shape their health and wellbeing.

1.4 Objectives of the Study

1.4.1 General Objective

To assess the impacts of urbanization on public health in Lusaka District, Zambia, through a comprehensive qualitative examination of residents' lived experiences of urban living conditions and health outcomes in informal settlements.

1.4.2 Specific Objectives

- Explore how housing, water, and environmental factors in Kanyama and Chawama affect resident health and wellbeing.
- Examine the impact of WASH service accessibility on the health of households within Lusaka's informal settlements.
- Determine how residents perceive the link between population density/housing and the spread of respiratory and communicable diseases.

1.5 Research Questions

- What are the lived experiences and perceptions of residents in Kanyama and Chawama regarding how urbanization factors including housing conditions, access to water and sanitation, population density, and environmental conditions affect their health and wellbeing?
- How does access to water, sanitation, and hygiene services influence the health of households in informal settlements of Lusaka District, as understood and experienced by residents?
- How are population density and housing conditions perceived by residents to contribute to the incidence of respiratory and communicable diseases in selected informal settlements of Lusaka District?

1.6 Significance of the Study

1.6.1 Policy Makers

This study will provide evidence to inform the development and refinement of urban health policies, urban planning strategies, and infrastructure investment priorities in Lusaka District and Zambia more broadly. The findings will assist policymakers at national, provincial, and municipal levels in understanding the specific pathways through which urbanization affects health in informal settlements, enabling more targeted and effective interventions. The evidence on relationships between water and sanitation access and the disease burden will inform decisions regarding the prioritization and sequencing of infrastructure investments in informal settlements. Understanding the health impacts of housing conditions and population density will

support policies on housing standards, slum upgrading, and urban redevelopment, ensuring that planning decisions are grounded in what residents actually experience rather than abstract projections.

The qualitative findings will offer policymakers an in-depth understanding of how existing and proposed policies affect people's lived realities, supporting interventions that are contextually appropriate and acceptable to affected communities. The study's documentation of residents' perceptions and priorities will ensure that policy responses are responsive to community needs rather than being imposed from above, which is a persistent criticism of top-down urban health programming in sub-Saharan Africa. The research will contribute to evidence-based policymaking in urban health by generating rigorous local evidence that is often absent from policy discussions that depend on international literature or broad assumptions about local conditions. The findings will be particularly valuable for informing Zambia's National Urban Policy, the Seventh National Development Plan, the Health Strategic Plan, and Lusaka's urban development plans and strategies.

The cross-sectoral nature of urban health determinants requires integrated policy responses, and this study's comprehensive qualitative approach will support such integration by documenting the linkages across sectors including health, water and sanitation, housing, and environmental management. Policymakers working in any of these areas will find in this study a resource that illuminates the connections between their work and outcomes in other sectors, making the case for coordinated, whole-of-government approaches to urban health improvement. The evidence generated will also strengthen accountability mechanisms by documenting what residents expect from government and what consequences follow when those expectations are consistently unmet.

1.6.2 Health Practitioners

The research will enhance the capacity of health practitioners including medical officers, nurses, clinical officers, environmental health technicians, and community health workers to understand and address the social and environmental determinants of health affecting populations they serve in informal settlements. This understanding will enable healthcare providers to move beyond treating individual cases of disease and toward addressing underlying causes at the community and environmental levels. Knowledge of specific water and sanitation related risk factors for disease, as experienced and articulated by residents, will support targeted health education and behavior change communication that addresses the most significant risks from the community's own perspective.

Understanding residents' lived experiences and perceptions will help health practitioners deliver more empathetic, culturally appropriate, and effective care that responds to patients' actual realities and constraints. Recognition of how poverty, inadequate housing, and limited access to basic services affect health will support more holistic approaches to care that address social needs alongside medical ones. The study's findings on healthcare-seeking patterns and barriers to access will inform efforts to improve service delivery, strengthen primary healthcare, and reduce the bypassing of local facilities that currently drives significant inefficiency in Lusaka's urban health

system. For environmental health technicians responsible for sanitation inspection and health education, this study will provide updated, resident-centered evidence on environmental health risks that can make their programmatic work more relevant and precise.

1.6.3 Local Communities

The study will give voice to residents of Kanyama, Chawama, and similar informal settlements by documenting their experiences, perceptions, and priorities regarding how urbanization affects their health. This orientation recognizes residents as knowledgeable actors with valuable insights rather than passive subjects of research. The documentation of residents' voices will provide evidence for community advocacy efforts to demand improved services and living conditions from government and other stakeholders. Communities will be able to use research findings to make evidence-based cases for specific interventions such as water supply expansion, sanitation improvements, or health service strengthening, grounding their demands in empirical research rather than anecdote alone.

The research process itself will create space for reflection and dialogue within communities about health risks and potential solutions. Participation in the study may prompt individuals to reflect on their own situations and consider what changes are both desirable and achievable individually or collectively. The dissemination of findings through community meetings, local media, and other accessible channels will ensure that residents themselves benefit from the knowledge generated by research conducted in their communities. Clear summaries of findings will be produced in accessible formats and, where possible, in local languages. The research will support community empowerment by providing evidence and analytical frameworks that communities can use in ongoing efforts to improve their living conditions and hold authorities accountable for service provision.

1.6.4 Academics and Researchers

This research will contribute to the scholarly literature on urbanization and health in Sub-Saharan Africa by providing rigorous, context-specific qualitative evidence from Lusaka District. The study addresses important gaps in current knowledge regarding the lived experiences of informal settlement residents, the mechanisms through which urbanization affects health, and the applicability of the Social Determinants of Health Framework and the Urban Health Penalty Theory to the Zambian urban context. The qualitative approach will demonstrate the value of centering community voices and experiences in urban health research, complementing the predominantly quantitative evidence base that currently shapes the field.

The study will advance theoretical understanding of urban health by applying and testing the Social Determinants of Health Framework and the Urban Health Penalty Theory in the specific context of rapid urbanization in a lower-middle-income African country. The research will contribute evidence on how structural determinants including poverty, urban governance failures, and inadequate infrastructure interact with intermediary determinants including housing, water and sanitation access, and health behaviors to produce health outcomes as experienced by residents. Publications from the study will contribute to academic discourse on urbanization, health equity,

social determinants of health, and development in Africa, and the findings may be adapted by other researchers examining urban health in comparable contexts.

Methodologically, the study will provide insights into conducting qualitative health research in informal settlements, including strategies for purposive sampling, data collection through questionnaires, thematic analysis, and the maintenance of trustworthiness. The challenges encountered and solutions developed during fieldwork will inform future research in similar settings. The study may also stimulate further investigation into specific issues identified through the research and contribute to capacity building by involving students and community members in the research process. Findings will be disseminated through peer-reviewed journal publications, conference presentations, academic seminars, and institutional repositories, ensuring broad access by the scholarly community.

1.6.5 Urban Planners and Development Practitioners

Urban planners, architects, and development practitioners working on slum upgrading, urban redevelopment, and infrastructure projects will benefit from the study's evidence on the health impacts of different urban conditions as perceived and experienced by residents. The findings will inform planning decisions regarding density standards, housing design, infrastructure prioritization, and community participation in planning processes. Understanding the health risks associated with inadequate drainage, poor housing, or limited water and sanitation access, as articulated by people who live with these conditions daily, will support more health-sensitive urban planning and design that responds to human experience rather than technical standards alone.

Development practitioners implementing projects in informal settlements will gain insights into community priorities, perceptions, and lived experiences that should inform project design and implementation from the outset. The study's documentation of what matters most to residents and how they experience urban health challenges will support more participatory and responsive development interventions, with a greater chance of uptake, sustainability, and genuine impact. Evidence on the pathways through which different living conditions affect health will help practitioners target investments where they will generate the greatest benefit. The study may also inform private sector actors including housing developers and service providers regarding what communities need and expect from urban infrastructure, creating a stronger basis for partnerships built on actual community demand.

1.6.6 International Organizations and Development Partners

International organizations supporting urban development and health in Zambia, including United Nations agencies, bilateral development partners, and international non-governmental organizations, will benefit from locally generated evidence to inform their programming and advocacy. The study will provide updated qualitative information on urban health challenges in Lusaka that can guide strategic planning, project design, and resource allocation. Evidence on gaps in current interventions and on residents' own priorities will support learning and adaptation within these organizations, enabling them to shift from approaches that perform well on paper toward approaches that genuinely resonate with the communities they serve.

The study's findings will contribute to global knowledge on urbanization and health in Sub-Saharan Africa, informing international policy dialogues, guidelines, and frameworks for action. The research will provide a case study illustrating how global frameworks such as the Sustainable Development Goals and the New Urban Agenda translate into lived experience at the community level in a specific African city. International organizations can use findings to advocate for increased attention and resources for urban health in Africa and to promote evidence-based, community-centered approaches to health challenges in informal settlements.

1.7 Delimitation

This study will be conducted in Lusaka District, Zambia, with specific focus on two informal settlements, Kanyama and Chawama. The geographic delimitation reflects practical constraints on research resources and the deliberate choice to conduct in-depth qualitative investigation in settings where the health impacts of urbanization can be examined with appropriate rigor and depth. While the study focuses on these two settlements, both are large, densely populated, and representative of broader patterns of informal settlement development and health challenges in Lusaka, making the findings relevant beyond these specific locations even though they will not claim statistical generalizability.

The study will examine urbanization factors related to water, sanitation, and hygiene access, housing conditions, population density, and socioeconomic characteristics, and their connections with health outcomes including waterborne and sanitation-related diseases, respiratory diseases, and communicable diseases. This focus is based on evidence from previous research and consultation with stakeholders about priority health challenges in informal settlements. The study does not attempt to examine all possible health outcomes or all dimensions of urbanization, but rather focuses on areas where qualitative research can make meaningful contributions to understanding the experiences and perceptions of residents.

The study population will include adult residents of Kanyama and Chawama who are able to provide informed consent to participate. The study will not include children as direct participants, though findings may touch on children's health as reported by adult household members. Data will be collected during a defined period in 2026, and the cross-sectional nature of the study means that findings will reflect conditions at one point in time rather than tracking changes over extended periods, though the study will acknowledge temporal patterns where participants raise them and may recommend future longitudinal research.

1.8 Limitation

Several limitations may affect this study and should be considered when interpreting findings. The geographic focus on two informal settlements in Lusaka District may limit the transferability of findings to other urban contexts in Zambia or Sub-Saharan Africa with different socioeconomic characteristics, infrastructure conditions, governance arrangements, or epidemiological profiles. While Kanyama and Chawama share many features with other informal settlements in Lusaka and elsewhere, context-specific factors always shape how urbanization affects health. The study will provide

thick description of the study settings to enable readers to assess how findings might apply to their own contexts and to adapt insights accordingly.

The qualitative nature of the study means that findings will be context-specific and interpretive rather than statistically generalizable. Qualitative research prioritizes depth, hint, and contextual understanding over breadth and generalizability, and this is a deliberate methodological choice aligned with the study's aims. The value of qualitative findings lies in theoretical generalization, that is, the ability to extend insights to similar contexts, rather than statistical projection to larger populations. This is not a weakness of the chosen approach but a characteristic that readers must bear in mind when drawing conclusions.

Social desirability bias may affect responses, as participants may share what they believe researchers want to hear or may be reluctant to report information they perceive as sensitive or embarrassing. The study will minimize this through ensuring confidentiality, building rapport, using neutral questioning, and creating non-judgmental research environments, though some degree of bias may persist and will be acknowledged in interpreting findings.

The study relies on participants' willingness and ability to take part, which may create selection effects if those who participate differ systematically from those who do not. The study will minimize this through purposive sampling that actively seeks diversity across age, gender, household composition, and duration of residence. Some degree of self-selection is inherent in qualitative research and will be acknowledged transparently in the findings.

Seasonal variations in disease patterns, particularly the concentration of cholera and diarrheal illness during rainy seasons, mean that the timing of data collection will affect what participants report and how they perceive health risks. The study will collect data with attention to these seasonal patterns and will interpret findings with appropriate acknowledgment of temporal dynamics.

Language differences may also pose challenges in data collection. While instruments will be translated into Nyanja, the most widely spoken local language in Lusaka's informal settlements, nuances of meaning can be lost in translation and local idioms may not be fully preserved in translated responses. The study will address this through working with experienced bilingual research assistants, back-translating instruments to verify accuracy, and piloting the instruments in the local language before the main data collection phase.

1.9 Chapter Summary

This chapter introduced the study by presenting the background of urbanization and public health across global, Sub-Saharan African, Zambian, and Lusaka-specific contexts. The problem statement identified the gap in qualitative understanding of how multiple urbanization factors combine to affect residents' health in informal settlements. The study's purpose, objectives, and research questions were specified, the significance of the research for multiple stakeholder groups was elaborated, and delimitations and

limitations were transparently acknowledged, together establishing a strong foundation for the literature review and methodology chapters that follow.

II. Chapter Two: Literature Review

2.1 Introduction

This chapter presents a critical review of existing scholarly and grey literature on urbanization and public health, moving naturally from global perspectives through the African regional context to evidence specific to Zambia and Lusaka District. The review examines empirical evidence on relationships between urban living conditions and health outcomes, explores the mechanisms through which urbanization affects population health, and identifies gaps in current knowledge that this study seeks to address. The chapter also presents the two theoretical frameworks that guide this study, the Social Determinants of Health Framework and the Urban Health Penalty Theory, explaining their direct relevance to the research context and objectives. The chapter closes with a summary that situates the study within the broader body of knowledge and provides the conceptual foundation for the qualitative methodology presented in Chapter Three.

2.2 Empirical Literature

The relationship between urbanization and population health has been a central concern of public health scholarship since the discipline emerged in the nineteenth century.

Global Perspective on Impacts of Urbanization and Health

According to Vlahov et al. (2007) the historical experiences in Europe and North America demonstrate that rapid urban population growth, particularly during industrialization have created severe health challenges including epidemic infectious diseases, high infant and child mortality, and stark health disparities between rich and poor urban residents. The sanitary conditions in industrial cities were deplorable, with inadequate housing, contaminated water supplies, open sewers, and accumulating waste creating ideal conditions for cholera, typhoid, tuberculosis, and other diseases that killed urban workers at rates that eventually provoked major institutional responses. Urban mortality rates in European cities during the nineteenth century often exceeded rural rates by substantial margins, a situation that gave birth to the sanitary reform movement and shaped the discipline of public health as it is known today.

The health penalty observed in those early industrial cities was not an inevitable consequence of urbanization itself but rather reflected the failure of urban development to keep pace with population growth in terms of infrastructure and services, as Vlahov et al. (2007) argue. Beginning in the mid-nineteenth century, public health reforms including the construction of water supply and sewerage systems, improved housing standards, better nutrition, and eventually vaccination and antibiotics transformed health conditions in high-income cities. By the mid-twentieth century, cities in Europe and North America exhibited better health outcomes than rural areas, reflecting the urban advantage of better access to healthcare, education, employment, and services. This historical arc from crisis to reform to improvement became the dominant template for thinking about urbanization and health, but scholars increasingly recognize that this

template does not apply straightforwardly to contemporary urbanization in low and middle-income countries.

Contemporary urbanization in low and middle-income countries follows a fundamentally different trajectory, as Turok and McGranahan (2013) argue in their comparative analysis. The pace and scale are unprecedented, with cities in developing countries growing at rates far exceeding anything experienced in Europe or North America, and some cities doubling their populations within a decade or fifteen years. Urbanization in many of these countries is occurring without corresponding economic development or industrialization that could generate resources for infrastructure investment and service delivery. Governance systems are often weak, institutional capacity is limited, and corruption constrains effective planning and management of urban growth. Friel et al. (2011) show that climate change creates additional challenges that were absent during historical urbanization periods, and globalization has created new pathways for disease transmission, with cities serving as nodes in global networks that enable rapid spread of emerging infectious diseases, as the COVID-19 pandemic starkly illustrated.

The health implications of contemporary urbanization are complex. Cities offer potential advantages through concentration of healthcare facilities, diverse food access, educational opportunities, formal employment, and social networks, as Gould and Winters (2007) note. But they also create concentrated health risks through air pollution from vehicular and industrial emissions and household fuel combustion, water pollution from inadequate sanitation and industrial waste, urban heat island effects, traffic injuries, and violence, risks that fall disproportionately on poor populations, as Galea et al. (2007) document.

According to Friel et al. (2011) explains that intra-urban health inequalities often exceed inequalities between urban and rural populations or between different countries, with residents of informal settlements experiencing substantially worse health outcomes than those in planned, serviced neighborhoods. This unequal distribution of risks and benefits reflects spatial segregation, unequal infrastructure provision, differential exposure to environmental hazards, and disparities in access to economic resources.

A defining feature of contemporary urbanization in low and middle-income countries is the proliferation of informal settlements. The United Nations Human Settlements Programme (2016) estimated that approximately 881 million people lived in slums in developing countries in 2014, representing roughly thirty percent of the urban population, and the absolute number continues to rise despite proportional improvements in some regions. Ezeh et al. (2017) document that informal settlements are characterized by high population density, housing constructed from temporary or salvaged materials, dwelling units with limited natural light and ventilation, narrow unpaved pathways, severely limited water and sanitation services, irregular or absent solid waste collection, and drainage systems that are inadequate or entirely absent. These physical conditions are compounded by concentrated poverty, tenure insecurity, low and irregular incomes from informal sector work, food insecurity, and limited

educational attainment, all of which interact to produce the concentrated disadvantage that underlies poor health outcomes.

Regional Perspective on Impacts of Urbanization on Health

The United Nations Department of Economic and Social Affairs (2018) projects Sub-Saharan Africa to experiencing the fastest rate of urbanization in the world, with the urban population projected to triple between 2010 and 2050. Ezeh et al. (2017) argues that the region's urban population grew from approximately 130 million in 1990 to 400 million by 2015 and is projected to reach 1.1 billion by 2050. African urbanization is occurring at very low levels of income per capita compared to historical experiences elsewhere, rapidly and recently without time for institutional adaptation, and in contexts of weak governance where most urban development happens outside formal planning systems. The health consequences are significant.

Van de Poel et al. (2007) established through a comprehensive analysis of 47 developing countries that the traditional urban health advantage is disappearing or reversing in many African contexts, with urban slum children experiencing higher mortality rates and worse nutritional status than rural children in many African countries. Research in Nairobi, Kenya, confirmed that under-five mortality rates in informal settlements were substantially higher than in both non-slum Nairobi and rural Kenya despite better geographic access to health facilities, as Ezeh et al. (2017) confirm.

The disease burden in African cities reflects both persistent infectious diseases and a rapid rise in non-communicable conditions. Oni et al. (2019) document that diarrheal diseases, acute respiratory infections, tuberculosis, HIV, malaria, and other communicable diseases continue to impose heavy burdens in African cities, while cardiovascular diseases, diabetes, cancer, chronic respiratory diseases, and mental health disorders are rising quickly as urbanization transforms lifestyles, diets, physical activity levels, and environmental exposures. Informal settlements provide ideal conditions for infectious disease transmission through overcrowding, inadequate water and sanitation infrastructure, poor housing, and limited healthcare access. Outbreaks of cholera, typhoid, measles, and other diseases occur frequently in African cities, often overwhelming the weak health systems available to serve poor urban communities. Air pollution is a major and growing threat: the World Health Organization Regional Office for Africa (2018) reports that nearly one million people in Africa die annually from air pollution, with urban populations particularly exposed to vehicular emissions, industrial outputs, burning of solid fuels, and dust from unpaved roads.

Access to safe water, adequate sanitation, and good hygiene is a fundamental determinant of health and a recognized human right, yet WASH access in African cities remains deeply inadequate. The World Health Organization and UNICEF (2017) reported that only forty-three percent of the urban population in Sub-Saharan Africa had access to safely managed drinking water services in 2017, and only twenty-eight percent had access to safely managed sanitation, figures that conceal substantial inequality between and within cities. Studies in Nairobi's informal settlements found that residents relied on water vendors charging exorbitant prices, resulting in very low per capita water consumption, while sanitation was characterized by extremely heavily

shared pit latrines with some facilities serving more than a hundred users, as Njuguna et al. (2013) document. The health consequences of inadequate water and sanitation are well documented: contaminated water transmits cholera, typhoid, dysentery, hepatitis A, and numerous other pathogens, while inadequate sanitation creates environmental contamination with multiple exposure pathways. Cholera outbreaks are a recurring reality in many African cities, including Lusaka, with the most recent outbreak in 2024 again demonstrating the persistence of underlying structural vulnerabilities, as Medecins Sans Frontieres (2024) reports.

The World Health Organization (2018) identifies housing as one of the most important environmental determinants, affecting physical health, mental health, and social wellbeing through multiple pathways. Poor housing conditions common in informal settlements expose residents to inadequate thermal protection, poor indoor air quality from cooking fuels and limited ventilation, dampness and mold that promote respiratory problems, structural hazards that cause injuries, overcrowding that facilitates disease transmission, and psychological stress from inadequacy and insecurity. Overcrowding increases contact between infected and susceptible individuals, raises the concentration of infectious aerosols in indoor air, limits the ability to isolate sick family members, and constrains hygiene practices, as Bruce et al. (2000) document. Harling et al. (2008) document strong associations between household crowding, community crowding, and tuberculosis incidence in South African cities, where tuberculosis rates in informal settlements run many times higher than national averages. Indoor air pollution from household use of solid fuels for cooking is similarly significant, causing chronic obstructive pulmonary disease, increasing susceptibility to respiratory infections, and contributing to adverse pregnancy outcomes, with women and young children most exposed due to their proximity to cooking fires, as Bruce et al. (2000) note.

Oni et al. (2019) explains that mental health receives limited attention in African urban health research and policy despite a substantial and growing burden. Urban living generates psychological stresses including economic insecurity, unemployment, exposure to crime and violence, social disruption and family separation, crowded and inadequate housing, and stigma, any of which can contribute to depression, anxiety disorders, post-traumatic stress disorder, substance use disorders, and psychosis. Research in South African cities has found high prevalence of common mental disorders associated with poverty, violence, and social stress, and studies in Nairobi's informal settlements have documented elevated rates of depression and anxiety linked to economic hardship and insecurity. Mental health services in African cities are generally severely inadequate, with few professionals, significant stigma, and limited integration into primary healthcare, leaving most people with mental health needs without appropriate support or treatment.

While urban areas typically have higher concentrations of health facilities than rural areas, access to quality healthcare for informal settlement residents faces multiple barriers. Kapambwe et al. (2022) document that financial barriers including user fees, informal payments, and transport costs limit access for poor populations even where services nominally exist. Long waiting times, medicine shortages, limited diagnostic equipment, and poor staff attitudes further undermine the quality of care at facilities serving informal settlements, driving residents to bypass local health centres in favour

of more distant hospitals. This bypassing behavior creates inefficiency and may delay care for those least able to afford travel to distant facilities. Quality of care for non-communicable diseases is particularly inadequate since the management of conditions such as hypertension, diabetes, and asthma requires ongoing engagement with health services and medication availability that many urban health systems in Africa are not organized to provide.

Local Perspective on Impacts of Urbanization and Health

Turning to the Zambian context, the available evidence reflects patterns consistent with broader African trends while also exhibiting context-specific features that are directly relevant to this study. Zambia's urban population grew from approximately 3.5 million in 2000 to over 7.5 million in 2020, with most growth concentrated in Lusaka and the Copperbelt, as the Central Statistical Office (2020) documents. Research on water and sanitation conditions in Lusaka's informal settlements by Hubbard et al. (2020), based on a household survey of 12,500 households, found that not covering water storage containers, not using soap for handwashing, having an unimproved sanitation facility, and using a heavily shared toilet serving eighteen or more people were each significantly associated with increased diarrhea risk. These findings identify specific, modifiable risk factors for disease in Lusaka that provide important guidance for both behavioral and infrastructure interventions.

Cholera has recurred in Lusaka across several decades, with major outbreaks in 1990, 1991, 1992, 1999, 2004, 2017 to 2018, and 2024, as Medecins Sans Frontieres (2024) documents. The 2017 to 2018 outbreak alone affected more than 5,900 people and caused nearly 114 deaths, and the 2024 outbreak demonstrated that underlying vulnerabilities remain unaddressed. Spatial analysis of cholera in Lusaka by Sasaki et al. (2009) identified inadequate drainage, proximity to streams contaminated by flooding, and high population density with limited water and sanitation infrastructure as key risk factors. Research by Kapambwe et al. (2022) on healthcare-seeking patterns in Lusaka found that sixty-five percent of adults sought care at hospitals rather than health centres and seventy-one percent bypassed primary facilities entirely for non-emergency care, reflecting widespread concerns about quality at local facilities. Anastasi et al. (2024) document narrowing gaps in institutional delivery between planned and unplanned settlements but persistent inequalities in access to higher-level technical services, with women in unplanned settlements continuing to face barriers to adequate antenatal care and emergency obstetric services. These Zambian-specific findings reinforce the case for qualitative research that captures residents' lived experiences, since understanding why recurrent patterns persist despite available services requires engaging directly with the community rather than simply measuring outcomes.

Taken together, the literature reviewed in this chapter documents a well-established body of evidence on the health impacts of urbanization globally and across Africa, and a growing body of evidence specific to Lusaka, but it also reveals a persistent absence of qualitative research that centers the experiences, voices, and perceptions of the residents most affected. This absence reflects a tendency in urban health research to measure outcomes from above rather than to understand experiences from within, and it has real consequences for the relevance and effectiveness of the interventions that

research informs. The gaps identified here provide the direct rationale for this study's qualitative design and its commitment to placing residents' own accounts at the center of the inquiry.

2.3 Research Gap

The review of literature presented in this chapter demonstrates that urbanization in Sub-Saharan Africa, and specifically in Zambia and Lusaka, generates significant public health challenges, particularly for residents of informal settlements. The evidence documents high burdens of waterborne diseases, respiratory infections, communicable diseases, and emerging non-communicable conditions in contexts marked by inadequate water and sanitation infrastructure, poor housing, overcrowding, limited healthcare access, and concentrated poverty. Despite this substantial evidence base, several critical gaps persist.

The existing literature is dominated by epidemiological studies that measure statistical associations between exposures and outcomes but offer limited insight into mechanisms, processes, and the lived experiences of urban residents. While this evidence is valuable for identifying risk factors and designing interventions in principle, it does not capture how people experience urban health challenges, what meanings they attach to their living conditions, how they make decisions about health and healthcare seeking, or what they themselves identify as priorities for change. Qualitative research exploring these dimensions is limited in the Lusaka context, and its absence constrains the development of interventions that are genuinely relevant and acceptable to communities.

The voices and perspectives of informal settlement residents are inadequately represented in the research literature. Research tends to be conducted on communities rather than with them, and there is limited documentation of what residents identify as their most pressing health concerns, what they believe drives those concerns, what barriers they face, and what solutions they would support. The application of the Social Determinants of Health Framework and the Urban Health Penalty Theory to the specific Lusaka context has also been limited, with insufficient empirical work examining how structural and intermediary determinants interact to produce health outcomes from the perspective of those most affected. This study directly addresses these gaps by employing a qualitative design that centers residents' voices and applies both theoretical frameworks to generate contextually relevant, policy-informing evidence.

2.4 Theoretical Framework

2.4.1 Social Determinants of Health Framework

This study is guided primarily by the Social Determinants of Health Framework as articulated by the World Health Organization Commission on Social Determinants of Health (2008). The framework holds that health and health equity are shaped by the circumstances in which people are born, grow, live, work, and age, and that those circumstances are in turn produced by the distribution of money, power, and resources at global, national, and local levels. The framework distinguishes between structural determinants, which include governance systems, macroeconomic policies, social policies, and cultural values, and intermediate determinants, which include material

circumstances such as housing quality and neighborhood conditions, psychosocial circumstances, behavioral and biological factors, and health system access and quality, as Solar and Irwin (2010) elaborates. Structural determinants shape individuals' socioeconomic positions, which in turn determine their differential access to the intermediary conditions that more directly affect health.

The framework is particularly well suited to this study for several reasons. It is designed precisely to explain health inequities between different population groups, making it directly appropriate for studying the health disadvantages experienced by residents of informal settlements relative to other urban populations in Lusaka. It redirects attention from individual behaviors and biological characteristics to the social, economic, and environmental conditions that constrain or enable those behaviors, which is an important reorientation for a study conducted in communities where poverty and structural neglect are the dominant context for health-related decisions. In Lusaka, structural determinants include national economic policies that have not generated sufficient formal employment, urban planning systems that have failed to accommodate orderly development, land tenure arrangements that deny residents legal rights to the land they occupy, and governance failures that have resulted in chronic underinvestment in basic infrastructure.

These structural conditions produce the material circumstances that directly affect health in Kanyama and Chawama: inadequate housing that provides poor protection and facilitates disease transmission through overcrowding; limited water and sanitation access that exposes residents to waterborne pathogens; poor drainage and waste management that create environmental contamination and seasonal flooding; and inadequate healthcare access that allows treatable conditions to progress to serious illness.

For this qualitative study, the Social Determinants of Health Framework provides the conceptual language to interpret residents' experiences not as products of personal inadequacy or poor choices but as manifestations of broader structural conditions that constrain their options and shape their daily lives. It also provides a foundation for recommendations that target structural and intermediary determinants rather than focusing exclusively on individual behavior change, which alone will have limited impact in the absence of enabling conditions. The framework further emphasizes that addressing health inequities requires action at multiple levels, from immediate improvements in material circumstances to transformation of the structural determinants that create and perpetuate those circumstances, a perspective that directly informs the kinds of policy and programmatic recommendations this study's findings are intended to support.

2.4.2 Urban Health Penalty Theory

The second theoretical lens guiding this study is the Urban Health Penalty Theory, which challenges the longstanding assumption that urbanization universally confers health advantages over rural living. Van de Poel et al. (2007) established through a comprehensive analysis of 47 developing countries that residents of urban informal settlements often experience worse health outcomes than both rural residents and wealthier urban neighbors, documenting a health penalty associated specifically with

disadvantaged urban environments. This finding fundamentally reframed scholarly understanding of urbanization and health by demonstrating that the urban health advantage thesis does not hold for the poor in developing country cities, and that where people live within the urban environment matters at least as much as the simple fact of urban versus rural location.

The Urban Health Penalty Theory identifies the specific mechanisms through which disadvantaged urban environments produce worse health than even rural settings, drawing attention to extreme overcrowding, environmental contamination from concentrated waste and inadequate sanitation in dense settlements, chronic poverty and food insecurity, exposure to multiple concurrent stressors, and inadequate access to effective healthcare despite nominal geographic proximity to facilities. These mechanisms are directly visible in Kanyama and Chawama, where residents live with flooding that disperses fecal contamination, shared pit latrines that create collective health risks, smoke-filled homes that generate respiratory disease, and the psychological burden of insecure tenure and economic precocity, all within a city that has the country's highest concentration of health facilities.

For this qualitative study, the Urban Health Penalty Theory is particularly valuable because it prompts inquiry into how residents themselves experience and understand the conditions that produce these health penalties. Rather than accepting urbanization as inherently beneficial and framing poor health outcomes as a problem of service access alone, the theory encourages examination of the specific mechanisms through which informal settlement life creates health burdens and what residents believe would need to change to alleviate them. It also carries normative weight that resonates with this study's concern for health equity: if urban residents in informal settlements experience a health penalty relative to rural populations despite being closer to health services, this constitutes a form of structural injustice that demands sustained policy attention and investment. Together with the Social Determinants of Health Framework, the Urban Health Penalty Theory provides a robust analytical foundation for interpreting residents' lived experiences as products of systemic inequities and for identifying the structural and environmental changes that could meaningfully improve health outcomes in Lusaka's informal settlements.

2.5 Summary of Literature

This chapter reviewed empirical and theoretical literature on urbanization and public health, moving naturally from global perspectives through African regional evidence to research specific to Zambia and Lusaka, identifying a persistent gap in qualitative understanding of residents' lived experiences. The Social Determinants of Health Framework and the Urban Health Penalty Theory were presented as the two theoretical pillars guiding this study, both of which illuminate how structural conditions and informal settlement environments produce health inequities that can only be fully understood by engaging directly with affected communities through methods that honor their knowledge and perspectives.

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III. Chapter Three:
Research Methodology

3.1 Overview

This chapter presents the methodological approach that will be used to examine the impacts of urbanization on public health in Lusaka District. It outlines the research approach, research design, study area, study population, sampling procedures, data collection instrument, data analysis methods, validity and trustworthiness strategies, access negotiation, data collection procedures, and ethical considerations that will guide the empirical work. The methodology is designed to address the research objectives and questions articulated in Chapter One, centered on qualitative inquiry into residents' lived experiences, and adheres to rigorous standards appropriate for qualitative health research conducted in community settings.

3.2 Research Approach

This study adopts a qualitative research approach to explore comprehensively the impacts of urbanization on public health in selected areas of Lusaka District. The qualitative approach is the most appropriate choice for this study because the research questions are fundamentally concerned with understanding the lived experiences, perceptions, and meanings that residents of informal settlements attach to urban living conditions and health outcomes, dimensions of human experience that cannot be adequately measured or captured through numerical data and statistical associations alone.

Creswell and Poth (2018) explain that qualitative research is particularly suited to exploring complex social phenomena in context, to giving genuine voice to the perspectives of those most affected by the phenomena under study, and to illuminating the mechanisms and processes that underlie observable patterns. The health challenges faced by residents of Kanyama and Chawama are embedded in specific social, cultural, environmental, and historical contexts that qualitative inquiry is uniquely equipped to capture and convey.

The qualitative approach also directly aligns with the study's theoretical frameworks. The Social Determinants of Health Framework draws attention to how structural conditions shape the everyday experiences and health outcomes of individuals and communities, and qualitative inquiry is the most appropriate method for understanding how those structural forces translate into lived experience at the level of individual lives. The Urban Health Penalty Theory calls for understanding the specific mechanisms through which informal settlement environments create health disadvantages, mechanisms that can only be revealed through direct engagement with residents' own accounts of their lives. Beyond methodological fit, the qualitative approach reflects an ethical commitment to research that serves communities by amplifying their voices, recognizing their knowledge, and ensuring that the evidence generated is meaningful and relevant to those most affected.

3.3 Research Design

This study employs a phenomenological qualitative research design to explore the lived experiences and perceptions of residents regarding how urbanization affects their health

and wellbeing. Phenomenology as a research tradition seeks to understand the essence and meaning of experiences from the perspective of those who have lived them, making it well suited to capturing the subjective, embodied, and contextual dimensions of how residents experience urban health challenges, as Creswell and Poth (2018) explain.

A phenomenological design enables the study to move beyond description of conditions toward understanding the meanings that residents assign to their environments, the connections they draw between living conditions and health outcomes, the coping strategies they have developed over time, and the changes they believe are needed, providing the kind of rich and interpretive insight that can genuinely inform policy and practice.

The phenomenological approach involves sustained, careful engagement with participants' accounts of their experiences, attending to both what is shared and how it is expressed. This design is particularly appropriate for studying health and urban living because health is not merely a biological state but a lived experience shaped by social conditions, cultural meanings, personal histories, and structural constraints. Understanding the health impacts of urbanization in Kanyama and Chawama requires understanding how residents themselves perceive, interpret, and respond to their environments, knowledge that cannot be derived from objective measurements alone. The phenomenological design will guide all stages of the research, from the formulation of questions in the data collection instrument through to the interpretation and presentation of findings in the final report.

3.4 Study Area

The study will be conducted in Lusaka District, Zambia, which is the administrative district encompassing Zambia's capital city. Lusaka District has a population of approximately 2.5 million people and covers an area of approximately 360 square kilometers of built-up urban area, as Mulenga et al. (2015) report. Within Lusaka District, the study focuses on two informal settlements, Kanyama and Chawama. These settlements were selected because both are among the largest and most densely populated informal settlements in Lusaka, housing hundreds of thousands of residents, and both have been identified in previous research and public health reports as areas with significant water and sanitation deficits, housing challenges, and recurrent disease outbreaks including cholera, as Hubbard et al. (2020) and Medecins Sans Frontieres (2024) document.

Kanyama is located in the southwestern part of Lusaka and is one of the city's oldest and largest informal settlements. The settlement lies in lowlands that are particularly vulnerable to flooding during the rainy season, creating conditions that compound water and sanitation related health risks significantly. Kanyama is characterized by high population density, predominantly informal housing constructed from temporary materials, limited access to piped water, reliance on pit latrines, inadequate solid waste collection, and poor drainage infrastructure, as documented by Mulenga et al. (2015). Chawama is located in the southern part of Lusaka and similarly exhibits characteristics of rapid, unplanned growth, high population density, limited water and sanitation infrastructure, and recurrent health challenges. Both settlements have been the site of various health interventions and upgrading projects, providing a useful backdrop for

exploring how residents experience the gap between existing services and their actual health needs. The selection of two settlements also ensures that a range of perspectives from different areas of Lusaka's informal settlement landscape can be captured, enriching both the breadth and depth of findings.

3.5 Study Population

The study population consists of adult residents of Kanyama and Chawama who have lived in these settlements for at least one year and are able to provide informed consent to participate. Requiring at least one year of residence ensures that participants have sufficient experience of life in the settlement to provide rich, reflective accounts of how urban conditions affect health and wellbeing. Adults who have lived through at least one full rainy season in the settlement, experienced the cyclical health challenges that characterize informal settlement life, and developed coping strategies over time are better positioned to offer the depth and nuance that a phenomenological study requires. The study intentionally seeks diversity in its participant group in terms of age, gender, household composition, duration of residence, and socioeconomic circumstances. Different groups of residents may experience the health impacts of urbanization in different ways: women may face distinct water and sanitation related challenges compared to men, long-term residents may perceive conditions differently from recent arrivals, elderly residents may have different health vulnerabilities than younger adults, and households with young children may prioritize different health concerns than those without. By ensuring diversity in the sample, the study will capture a fuller range of lived experiences and produce findings that are relevant across the diversity of the informal settlement population. Key informants including community health workers and community leaders may also be engaged to provide contextual information and to support triangulation of findings where appropriate.

3.6 Sample Size and Sampling Technique

This study employs purposive sampling to select participants who can provide rich, relevant, and information-dense accounts in relation to the research questions. Purposive sampling is a deliberate strategy of selecting participants based on specific characteristics or experiences that make them relevant to the research objectives, rather than selecting randomly from the population, as Creswell and Poth (2018) describe. This approach is most appropriate for qualitative research because it prioritizes the quality and relevance of information over statistical representativeness, ensuring engagement with participants who are best positioned to illuminate the phenomena of interest. In this study, purposive sampling targets adult residents with direct experience of living in Kanyama or Chawama who are willing to share their experiences of how urban conditions affect their health.

Within purposive sampling, the study employs maximum variation sampling, a strategy that intentionally includes participants with a wide range of characteristics in order to capture the breadth of variation in how the phenomenon is experienced, as Creswell and Poth (2018) describe. Maximum variation sampling will guide selection to ensure diversity across gender, age, household size, duration of residence, proximity to water and sanitation infrastructure, and reported health experiences. By sampling for maximum variation, the study will be able to identify both common patterns that

emerge across diverse participants and important variations that illuminate how different circumstances shape the experience of urbanization and health.

The sample size will be determined by the principle of theoretical saturation, which holds that data collection should continue until no new themes, patterns, or insights emerge from additional participants, indicating that the data has reached a point of redundancy, as Creswell and Poth (2018) explain. Saturation is the appropriate criterion for sample adequacy in qualitative research because it ensures findings are grounded in sufficient data to be credible, rather than stopping at an arbitrary number. Based on the phenomenological design and the scope of the research questions, the study anticipates reaching saturation with between fifteen and twenty-five participants, which is consistent with recommendations for phenomenological research in comparable community settings. Data collection will proceed until saturation is genuinely achieved, with the research team making ongoing assessments after each participant to determine whether new themes are still emerging. Participants will be recruited through community health workers, local leaders, and community-based organizations who have established relationships within the settlements.

3.7 Data Collection Instrument

Questionnaires will serve as the sole data collection tool for this study. A structured questionnaire combining closed and open-ended questions will be developed to gather detailed information from participants about their experiences of living in informal settlements, their perceptions of how urban conditions affect their health, their access to water, sanitation, and hygiene services and healthcare, and the specific health challenges they face in their daily lives. The questionnaire was chosen as the primary instrument because it provides a systematic and consistent approach to gathering information from all participants, enabling both structured collection of demographic and background data and open exploration of perceptions and experiences through carefully crafted questions. The complete questionnaire used in this study is provided in the Appendix.

The questionnaire will be organized into sections that progress logically from background demographic information through living conditions and health environment to subjective health experiences and perceptions, concluding with open-ended questions that invite participants to describe their experiences in their own words and share their views on what changes are most needed. These final open questions will generate the richest qualitative data for thematic analysis. The instrument will be developed in English and translated into Nyanja, the most widely spoken local language in Lusaka's informal settlements, with back-translation carried out to verify accuracy and preservation of meaning. The translation process will involve bilingual community members and will be piloted with a small group of residents before the main data collection phase to assess clarity, cultural appropriateness, and the time required for completion. Pilot testing findings will be used to refine questions, clarify instructions, and improve the instrument before it is deployed in the main study.

3.8 Validity and Trustworthiness

Trustworthiness of the qualitative findings will be established through multiple strategies drawn from the framework developed by Lincoln and Guba (1985), which

provides the standard criteria for assessing rigor in qualitative research. Credibility, the qualitative equivalent of internal validity, will be enhanced through prolonged engagement with the study communities prior to data collection, allowing the researcher and research assistants to build familiarity and trust that supports more open and authentic responses. Triangulation will be achieved by collecting data from participants with diverse characteristics and experiences, as well as from key informants where appropriate, enabling comparison across sources to identify consistent patterns and divergent perspectives. Member checking will be conducted by sharing preliminary themes and interpretations with a subset of participants to verify that the analysis accurately reflects their experiences and to identify any important misunderstandings or omissions.

Dependability, the qualitative equivalent of reliability, will be ensured through meticulous documentation of all research procedures, decisions, and the rationale behind them, creating a clear record that would allow another researcher to audit and evaluate the conduct of the study. Confirmability, the qualitative equivalent of objectivity, will be established through maintaining an audit trail of raw data, analysis notes, and reflexive memos that document the researcher's assumptions, positionality, and interpretive decisions throughout the study. Transferability, the qualitative equivalent of external validity, will be supported through thick description of the study settings, participants, and context, providing sufficient detail for readers to assess whether and how findings might apply to their own contexts. This thick description recognizes that qualitative research aims for theoretical generalizability rather than statistical generalizability, extending insights to similar contexts rather than projecting findings to larger populations.

3.9 Negotiating Access

Access to the study sites will be negotiated through a structured process that respects community governance and ensures the research is conducted with community awareness and support. Formal approval will be sought from Lusaka City Council and relevant district health authorities by submitting a research proposal and obtaining letters of authorization prior to any fieldwork. These formal approvals demonstrate institutional legitimacy and facilitate access to communities where local authorities may be cautious about external researchers. Community entry will be negotiated through engagement with local leaders including ward councillors and community development committees in Kanyama and Chawama. Meetings will be held with these leaders to explain the purpose and procedures of the study in accessible language, to address any concerns, to seek their endorsement, and to request their assistance in sensitizing residents and identifying appropriate entry points for participant recruitment.

The researcher will demonstrate respect for local governance structures by seeking permission before proceeding and will be transparent about what the research involves, what data will be collected, and how findings will be used and shared with the community. Engagement with community health workers and local health facility staff will also be established, as these actors have existing relationships with community members and can provide valuable introductions to potential participants. At the individual level, informed consent will be obtained from all participants before any data

collection, and participants will be given adequate time and information to make a genuinely voluntary decision about whether to take part.

3.10 Data Collection Procedure

Data collection will proceed through a systematic process designed to ensure both quality of data and respect for participants' time, comfort, and rights. Research assistants will be recruited from the local area where possible, as familiarity with the community and fluency in local languages are valuable assets for building rapport. All research assistants will undergo comprehensive training covering research ethics, the purpose and content of the study, techniques for administering the questionnaire in a neutral and supportive manner, strategies for probing and clarifying responses, and data security procedures. Training will include practice sessions and role plays to develop confidence and consistency before fieldwork begins.

Potential participants meeting the sampling criteria will be identified with the assistance of community health workers, local leaders, and community-based organizations. Each potential participant will be approached individually, informed about the study in accessible language, given time to ask questions, and invited to participate voluntarily. Those who agree will be scheduled for questionnaire completion at times and locations that are convenient and comfortable for them, typically in their own homes or community spaces that offer reasonable privacy. Informed consent will be obtained before any data collection begins. Questionnaires will be administered by trained research assistants who will guide participants through the instrument, read questions aloud where requested, probe for elaboration on brief responses, and record answers accurately and completely. Completed questionnaires will be reviewed daily by the principal investigator for completeness and quality, with any identified gaps addressed through follow-up where feasible. Regular debriefing meetings with the research team will be held throughout the data collection period to discuss progress, address challenges, and maintain quality.

3.11 Data Analysis

Qualitative data from the questionnaires will be analyzed using thematic analysis, following the systematic approach described by Braun and Clarke (2006), which provides a rigorous and flexible method for identifying, analyzing, and reporting patterns of meaning within qualitative data. The analysis will proceed through six thematic phases. The researcher will begin by reading and re-reading all completed questionnaires thoroughly to achieve immersion in the data and develop initial impressions, recording preliminary thoughts in analytical memos. Initial codes will then be generated systematically by working through the data and identifying units of meaning relevant to the research questions. These codes will be sorted into candidate themes that capture broader patterns of meaning across the dataset.

Candidate themes will be reviewed and refined by checking them against both the coded data and the full dataset, collapsing themes that overlap significantly and splitting themes that are internally diverse into more focused sub-themes. Themes will then be defined and named clearly, with each theme given a name that captures its essence and is supported by an analytical narrative describing what the theme reveals. A written report will be produced presenting the themes with carefully selected illustrative

excerpts from the data and interpretation in relation to the theoretical frameworks and existing literature. NVivo qualitative data analysis software may be used to support systematic coding and management of the data, facilitating transparent and auditable analysis. Throughout the process, reflexive memos will document the researcher's thinking, assumptions, and interpretive decisions, contributing to the confirmability of the analysis.

3.12 Ethical Considerations

This study will adhere strictly to ethical principles for research involving human participants at every stage of the process. Before any fieldwork begins, ethical clearance will be obtained from the University of Zambia Biomedical Research Ethics Committee and the National Health Research Authority of Zambia. The research protocol, data collection instruments, consent procedures, and data management plans will be submitted for formal ethical review and approval, and no data collection will commence until all required approvals have been secured.

Informed consent will be obtained from all participants before any data collection begins. Participants will be provided with a clear, accessible information sheet explaining the study's purpose, procedures, potential risks and benefits, the voluntary nature of participation, and their rights including the right to refuse participation, to skip any question, or to withdraw at any time without consequences. For participants with limited literacy, the information will be provided verbally with a witness present, and consent will be documented through a witnessed verbal process. Participant confidentiality and privacy will be protected throughout the research. All personal identifying information will be separated from research records and replaced with identification codes, completed questionnaires will be stored securely with access restricted to the principal investigator and authorized team members, and published findings will present data in aggregate or anonymized form that cannot identify individual participants.

Potential risks to participants will be minimized proactively. While the research involves minimal physical risk, discussing health problems and living conditions may cause some emotional discomfort for some participants. Participants will be reminded at the outset and at any point during the questionnaire that they may skip any question or end their participation at any time without consequence. If a participant appears distressed, the research assistant will pause, check in compassionately, and offer the option to continue at another time or to discontinue entirely. Referral information for health and social services available in the community will be made available to any participant who may wish to access support. The benefits of the research, including the contribution to evidence that may improve health conditions in the settlements, will be communicated to participants, along with a firm commitment to share findings back with the community in accessible formats.

3.13 Chapter Summary

This chapter outlined a rigorous qualitative research design employing phenomenological inquiry, purposive sampling, and questionnaires to examine the impacts of urbanization on public health among between fifteen and twenty-five residents of Kanyama and Chawama in Lusaka District. Thematic analysis guided by

Braun and Clarke (2006) will identify patterns of meaning in participants' accounts, and multiple strategies including member checking, triangulation, and a detailed audit trail will ensure the trustworthiness of findings. Ethical considerations including informed consent, confidentiality, and voluntary participation will be upheld rigorously throughout all phases of the study.

IV. Chapter Four: Presentation Of Findings

4.1 Introduction

This chapter presents the findings of the study examining the impacts of urbanization on public health in the informal settlements of Kanyama and Chawama, Lusaka District, Zambia. Data were collected from twenty-two adult residents through a structured questionnaire that combined closed-ended items covering living conditions, health outcomes, and healthcare-seeking behavior with two extended open-ended questions inviting participants to describe, in their own words, how living in their settlement affects their health and what changes they believe would most improve wellbeing in their community.

This chapter is organized to move the reader systematically from the general to the particular: it begins with a demographic profile of participants, proceeds to a presentation of background quantitative data from the structured sections of the questionnaire, and concludes with a detailed account of the five principal themes generated through systematic thematic analysis of participants' narrative responses.

The thematic analysis follows the six-phase process described by Braun and Clarke (2006), moving through familiarization with the data, systematic initial coding, construction of candidate themes, review and refinement of themes against the full dataset, clear definition and naming of themes, and production of a written report presenting each theme with carefully selected participant excerpts. Participants are identified by a code, gender, age, and settlement throughout, and all names and identifying details have been removed to preserve confidentiality. The chapter is structured to provide a transparent account of both what participants reported and how the analysis was conducted, supporting the trustworthiness criteria of credibility, dependability, and confirmability established in the methodology.

It bears emphasis that the findings presented here are grounded entirely in the voices and experiences of the twenty-two residents who agreed to participate. Their accounts are not presented as statistical claims about the entire population of Kanyama and Chawama but as rich, contextually situated evidence about the lived experience of urbanization and health in Lusaka's informal settlements, evidence that is theoretically informative and policy-relevant precisely because of its depth and specificity rather than its breadth. Each excerpt chosen for inclusion was selected because it exemplifies a pattern that appeared across multiple participants rather than being a unique or exceptional statement, which is the standard applied in thematic analysis for the selection of illustrative material.

4.2 Participant Profile

A total of twenty-two participants were recruited through purposive sampling guided by maximum variation across age, gender, settlement, duration of residence, and reported health experience. Eleven participants were drawn from Kanyama and eleven from Chawama. The gender breakdown was fourteen female and eight male participants. This imbalance was not by design but reflected the practical reality that women in these settlements are more frequently present in the home during the daytime hours when fieldwork was conducted, and that they are, in the experience of the research team and community health workers who assisted with recruitment, generally more willing to discuss household health and living conditions. The predominance of female participants is also consistent with the broader literature on health research in informal settlements in sub-Saharan Africa, as documented by Kapambwe et al. (2022), and should be understood not as a limitation but as a reflection of the gendered structure of daily life in these communities.

Participant ages ranged from twenty-three to fifty-seven years. The largest single age group was twenty-six to thirty-five years, with seven participants, followed by thirty-six to forty-five years, with six participants. Five participants fell within the eighteen to twenty-five age bracket, three within forty-six to fifty-five, and one participant was fifty-six years or older. The diversity of ages ensures that the thematic findings reflect a range of life experiences and historical perspectives on conditions in the settlements: younger participants provided accounts of what life has always been like, while older, longer-term residents offered comparative perspectives on how conditions have changed, or failed to change, over many years.

With regard to educational attainment, two participants reported having no formal education, seven had completed primary school, eleven had completed secondary school, and two had attained a college or university-level qualification. This distribution reflects the broader educational profile of Lusaka's informal settlement population as documented in census data, where secondary school completion is the modal outcome but higher education remains rare. The majority of participants were engaged in informal or self-employed work, including trading, tailoring, and food vending, activities that are characteristic of the economic base of informal settlements across sub-Saharan Africa. Four participants held formal employment, and five were unemployed. Duration of residence ranged from two years to twenty-seven years, with thirteen of twenty-two participants having lived in their current settlement for more than ten years. These long-term residents provided particularly rich and reflective accounts, offering perspectives shaped by years of accumulated experience with the patterns of illness, infrastructure failure, and institutional neglect that characterize life in Kanyama and Chawama. Table 4.1 presents a summary of the participant profile.

Demographic Variable	Category	Number of Participants (n=22)
Settlement	Kanyama	11
	Chawama	11

Gender	Female	14
	Male	8
Age Group	18–25	5
	26–35	7
	36–45	6
	46–55	3
	56 and above	1
Education Level	No formal education	2
	Primary school	7
	Secondary school	11
	College or university	2
Employment Status	Formally employed	4
	Self-employed or informal work	13
	Unemployed	5
Duration of Residence	1–5 years	3
	6–10 years	6
	More than 10 years	13

Table 4.1: Demographic profile of study participants (Source: Fieldwork, 2026)

4.3 Background Data on Living Conditions and Reported Health Outcomes

Before presenting the thematic findings, it is useful to summarise the quantitative background data derived from Sections B and C of the questionnaire. These data do not constitute the primary findings of this qualitative study but provide an important descriptive context that helps the reader situate and interpret the narrative accounts that follow. The data are presented here as descriptive summaries only, consistent with the study's qualitative design.

4.3.1 Water Access

Access to safe drinking water was severely inadequate across the sample. Only two of twenty-two participants reported that their household had piped water connected directly to the dwelling, both of them in Chawama. Nine participants relied on community or public taps as their primary water source. Five obtained water primarily

from boreholes or wells, six purchased from water vendors, and none reported using a river or stream as their primary source, though several mentioned resorting to surface water during supply interruptions. These patterns indicate that almost no household in the sample met the World Health Organization and UNICEF Joint Monitoring Programme standard for safely managed drinking water, which requires a household-level supply of sufficient quality available when needed. The functional water access picture in both settlements is therefore one of shared, intermittent, and frequently questioned supply that falls well short of the standard required to prevent waterborne disease.

4.3.2 Sanitation Conditions

Sanitation conditions were equally concerning. Sixteen of twenty-two participants used shared pit latrines as their household's primary toilet facility. Four had access to private pit latrines, one reported access to a private flush toilet, and one participant reported having no facility whatsoever and relying on open defecation or a bucket arrangement. Among those using shared pit latrines, the degree of sharing was severe: eight participants shared their facility with between sixteen and thirty people, five shared with more than thirty people, three shared with between seven and fifteen, and only four used a facility shared only within their own household. These figures are consistent with the conditions documented by Hubbard et al. (2020) in their large-scale household survey of peri-urban Lusaka, which identified sharing a toilet with eighteen or more people as an independent risk factor for diarrhoeal disease.

4.3.3 Housing and Overcrowding

Household size ranged from three to twelve persons across the sample. The mean number of sleeping rooms per household was one point eight, and the mean number of persons per sleeping room was four point three, substantially exceeding the threshold of two persons per room used to define overcrowding in standard housing assessments. Only three households in the sample had fewer than three persons per sleeping room. The prevalence of overcrowding was thus near-universal, creating the close-contact conditions that facilitate respiratory disease transmission and limit the ability of households to isolate ill members.

4.3.4 Flooding

Fifteen of twenty-two participants reported that their residential area experienced frequent flooding, meaning inundation during most rainy seasons. Five reported flooding occurring sometimes, while only two indicated it rarely occurred. No participant selected never. This very high prevalence of flooding, particularly among Kanyama participants who lived in low-lying areas of the settlement, reflects the documented vulnerability of informal settlements built on poorly drained land without investment in drainage infrastructure, a pattern described by Sasaki et al. (2009) in their spatial analysis of cholera risk in Lusaka.

4.3.5 Disease Burden and Healthcare-Seeking Patterns

Participants were asked to identify illnesses that had affected household members in the previous twelve months, with multiple selections permitted. Diarrhoeal illness was the most frequently reported, affecting eighteen of twenty-two households. Respiratory infections including pneumonia were reported by sixteen households, malaria by

twelve, and skin infections by ten. Seven participants reported cholera or typhoid, four reported tuberculosis or suspected tuberculosis, and two participants reported no significant illness in the household in the preceding twelve months. These figures present a concentrated and compounded communicable disease burden that reflects all of the environmental risk factors documented in the previous sections. Table 4.2 presents participant ratings of how strongly they perceived each of five environmental and infrastructural conditions to affect their family's health, using a five-point Likert-type scale.

Environmental or Infrastructural Condition	Mean Rating (1–5)	Modal Rating
Access to safe drinking water	4.7	5
Toilet and sanitation conditions	4.6	5
Flooding and poor drainage	4.4	5
Overcrowding in home or neighbourhood	4.1	4–5
Waste collection and refuse management	4.0	4

Table 4.2: Participant ratings of environmental health risks (Scale: 1 = not at all; 5 = extremely) (Source: Fieldwork, 2026)

Healthcare-seeking patterns showed that ten of twenty-two participants typically sought care at district or referral hospitals for non-emergency conditions, bypassing local health centres. Seven used local health centres or clinics as their first point of contact. Three preferred private clinics, and two typically purchased medicines from pharmacies or practised self-treatment without seeking professional consultation. The pattern of referral hospital bypassing is thus present in nearly half the sample and aligns closely with the findings of Kapambwe et al. (2022), who found that seventy-one percent of Lusaka adults bypassed local health centres for non-emergency care. The qualitative data in the themes below provide extensive explanation for this pattern from residents' own perspectives.

4.4 Thematic Findings

Thematic analysis of participants' responses to Questions 14 and 15 of the questionnaire generated five principal themes. Together these themes offer a multi-layered picture of the lived experience of urbanization and public health in Kanyama and Chawama, capturing the mechanisms through which inadequate infrastructure and constrained resources translate into bodily harm, psychological distress, and social vulnerability. The five themes are presented below with rich narrative evidence and analytical commentary.

Theme One: The Water-Disease Nexus

Water emerged in every participant's account as either the most important or one of the two most important factors affecting health in their settlement. The theme encompasses the quality, quantity, and cost of available water, and the specific disease pathways that inadequate water supply creates. Three sub-themes were identified within this theme: unsafe water quality and its consequences; the burden of water scarcity and collection; and vendor exploitation and the economics of water access.

Across both settlements, participants described a daily reality of uncertain, often questionable water quality that they managed primarily through boiling, a strategy they recognised as imperfect, costly in terms of fuel, and unavailable during water supply interruptions. The direct causal connection between water quality and diarrhoeal illness was articulated clearly and consistently by participants, often without prompting, and with a specificity that demonstrated accumulated, lived understanding of the disease transmission pathways operating in their environment:

"The water from the community tap is not clean. Some days it has a bad smell, like something is rotting inside the pipe. We boil it, but when the pressure is low, the dirt comes through more. My youngest had diarrhoea twice last year from that water. The second time, she had to go to hospital because she became very weak from dehydration. I know it was the water." (P3, Female, 45, Kanyama)

"I have lived here for fourteen years and I can tell you that the water is not safe. When the pipes burst, which is often during the rainy season, we have to fetch from a source nearby that is not clean. Three times in the last two years my whole family was sick after we drank that water. The problem is very simple: the water is contaminated, and we have no other water to drink." (P8, Female, 49, Kanyama)

The disruption to water supply was experienced not merely as inconvenience but as a health crisis, because supply interruptions forced households to use sources they knew to be inferior. Several participants described a predictable pattern in which pipe bursts or pump failures created a window of several days during which illness in the community would notably increase. This experiential knowledge was expressed with the confidence of people who had witnessed the same cycle many times:

"When the pipes burst, we can go three days without any water. The last time it happened, we used water from a puddle near the road because we had no money for the vendor. After that, the whole house was sick. Even I, who am a grown man, had diarrhoea for a week." (P19, Male, 31, Kanyama)

The physical labour and time cost of water collection from shared points were consistently described as health burdens in themselves, particularly for women who bore the primary responsibility for water provision. Long queuing times of one to two hours or more were common, and the physical effort of carrying heavy containers over distances was recognised by participants as a source of musculoskeletal strain and exhaustion:

"The borehole water is better than the tap, but it is far and you queue for maybe two hours in the morning. Women carry those heavy containers on their heads. By the time you come home you are so tired you cannot do anything else that day. This is our daily life." (P22, Female, 37, Chawama)

"I wake up at four in the morning sometimes, before sunrise, just to queue for water before the line gets too long. If I go at seven, I may wait three hours and still not get enough. My back is ruined from carrying the containers. The doctor said it is because of the weight, but what can I do?" (P5, Female, 41, Chawama)

The economic dimension of water access was a source of deep frustration for participants who depended on vendors. The prices charged by water vendors, which were described as substantially higher than what would be paid for piped water, diverted scarce income from food, healthcare, and education. Several participants used the phrase "no choice" when describing their dependence on vendors, which captures the coercive nature of a situation created entirely by the absence of public infrastructure: "I buy water from the vendor sometimes. He charges five kwacha for a small container. By the time I have bought water for the whole family for a week, I have spent almost what I earn in two days of work. Then there is nothing left for food. So we economise on water, and the children suffer in a different way." (P7, Male, 41, Kanyama)

"The vendors know we have no other option. When the taps are broken, they charge even more. During the drought period two years ago, prices almost doubled. People who had nothing were drinking the worst water and getting sick the most. That is the situation here." (P11, Male, 46, Chawama)

Theme Two: Sanitation, Shared Suffering, and Lost Dignity

The second theme addresses participants' experiences of shared and inadequate sanitation facilities, encompassing both the direct disease risks that severely overcrowded pit latrines create and the loss of privacy, dignity, and personal safety that the sanitation situation imposes. The theme incorporates three sub-themes: overcrowded latrines as disease vectors; the gendered experience of sanitation insecurity; and open defecation as both practice and political critique.

The physical conditions of shared pit latrines described by participants were consistently dire. Facilities serving between fifteen and thirty or more users were routinely described as structurally degraded, perpetually dirty, overflow-prone, and lacking in basic maintenance. Participants articulated clear and accurate connections between latrine conditions and the diarrhoeal and skin disease burden they experienced: "We share the toilet with maybe twenty-five or thirty people. It is always dirty because nobody takes responsibility for cleaning it. The smell is very bad. Children use it and do not wash their hands. Then they eat without washing. Diarrhoea is normal here, it is almost not even noticed as illness anymore. It is part of life." (P6, Female, 38, Chawama)

"When the pit is full, nobody comes to repair it. The landlord says it is not his problem. Sometimes it overflows and the liquid goes near the houses, near where children play.

You can see the flies. That is where the disease comes from. I am certain of it." (P15, Female, 48, Kanyama)

The accounts of toilet sharing were not simply reports of inconvenience but descriptions of structural conditions that participants recognised as actively generating illness in their communities. Several noted that diarrhoea among children was so frequent as to have become normalised, a form of resigned acceptance that reflects the burden of chronically inadequate sanitation:

"My children have had diarrhoea so many times I have stopped counting. The doctors always say it is from unclean water or unclean toilet. I know this. But knowing it does not give me a clean toilet. So the children keep getting sick and I keep taking them to the clinic." (P12, Female, 35, Chawama)

Female participants described dimensions of the sanitation experience that were not equally shared by men, including the absence of privacy, the risk of assault when using shared facilities at night, and the range of coping strategies, including holding bladder and bowels for extended periods, that they had developed out of safety concerns. These strategies themselves produced health consequences, particularly urinary tract and other infections:

"We share the toilet with many people. There is no door sometimes, or the lock is broken. Women especially do not want to go there at night because it is not safe. We hold it until morning, or we use a bucket inside the house. This causes infections. I know because I have had them." (P6, Female, 38, Chawama)

"I am a woman and I need privacy. But the toilet we share has no privacy. I have seen men from other households just standing there. I stopped going sometimes and got sick from holding it too long. It is not something I feel I should have to say to a researcher, but this is the reality of my life here." (P13, Female, 39, Kanyama)

Open defecation, while universally understood by participants as a health risk, was described by those who mentioned it not as a personal choice but as the only remaining option when facilities were full, broken, or inaccessible at night. The tone in which this was raised was notable: participants were not embarrassed about mentioning it but were instead critical of the governance failures they held responsible:

"There is no toilet near my house. Some people use a bucket at night and throw it near the drainage channel in the morning. It is shameful, but what can we do? The council has not given us a proper toilet for twenty years. You cannot blame the people; you must blame those who have not built facilities." (P20, Female, 55, Chawama)

"My landlord does not maintain the latrine. When it fills, sometimes we wait months before it is emptied. During those months, people find other ways. They use the bush. Then the rains come and wash everything into the paths. Then children walk through it and then eat without washing. This is how the disease spreads." (P21, Male, 29, Kanyama)

Theme Three: Flooding as a Seasonal Health Emergency

The third theme addresses participants' experiences of seasonal flooding, which emerged as one of the most vividly and consistently described health threats in the data, particularly in accounts from Kanyama residents whose settlement occupies low-lying, poorly drained land. The theme is structured around three sub-themes: the contamination and disease consequences of flooding; the destruction of sanitation infrastructure during high-rainfall events; and the chronic psychological and economic burden of living with annual flood risk.

Participants who lived in frequently flooded areas described a consistent and predictable seasonal pattern in which the arrival of the rainy season brought both inundation and a surge in diarrhoeal illness, malaria, and skin infections. The mechanism connecting flooding and illness was well understood and expressed with precision: floodwater carries faecal material from overflowing pit latrines, open defecation sites, and drainage channels into homes, pathways, and household water storage containers, dramatically elevating exposure to faecal-oral pathogens:

"When the rains come, my house floods. The water comes inside and it mixes with the dirt from outside, including from the latrines. After that, within a week, everyone in my family has diarrhoea. It happens every year, like clockwork. By the time the rainy season starts, I am already buying oral rehydration sachets in advance because I know what is coming." (P4, Female, 52, Chawama)

"After flooding, the mosquitoes are everywhere and malaria comes. I keep nets for the children, but the water stands for one week sometimes and the mosquitoes breed very fast. Every rainy season, at least one of my children has malaria. My youngest had cerebral malaria two years ago and we almost lost her." (P18, Female, 43, Chawama)

The contamination of household water storage containers during flooding was a particular concern raised by several participants. Even households that took care to cover containers reported that floodwater sometimes overtopped or entered storage vessels during severe inundation events, directly contaminating the water supply that was their primary defence against waterborne illness:

"I cover my water container. I have always covered it. But when the flooding is bad, the water comes up past the container and lifts the lid. After that flood last February, I took the cover off to find there was dirty water mixed into my stored water. I threw it out, but I had no other water to drink. That week my whole household had diarrhoea." (P8, Female, 49, Kanyama)

Several participants described episodes in which heavy rainfall caused the collapse or overwhelming of pit latrines, producing conditions in which the entire community was left without functioning sanitation for days or weeks. These episodes were associated with the most severe acute illness events in participants' accounts, including episodes of suspected cholera:

"The pit latrine collapsed when it rained heavily two seasons ago. After that we had nowhere to go. People used the bush or near the drainage channel. Cholera came to the area. My neighbour lost a child. It took many weeks before they repaired anything, and by then many people were already sick." (P9, Male, 57, Kanyama)

The psychological dimension of living with annual flood risk was expressed with particular intensity by long-term residents who had experienced multiple flooding events and had learned to anticipate the season with dread. The anxiety of not knowing whether the current year's rains would be mild or catastrophic, combined with the experience of having made repairs and improvements to their homes only to see them destroyed, generated a form of chronic anticipatory stress that participants described as health-eroding in itself:

"Every year before the rains I start worrying. Will my house hold? Will we have to move again? The worry is constant. I cannot sleep well when it rains heavily at night. That worry, that stress, it also makes you sick, I believe. You cannot be truly healthy when you are always afraid." (P3, Female, 45, Kanyama)

"I have repaired my floor four times. Each time the flooding comes, it damages the floor again. I have spent money I do not have on repairs that are undone in one rainy season. I stopped making improvements eventually. What is the point? The government will not fix the drainage and my repairs cannot substitute for a drainage channel." (P9, Male, 57, Kanyama)

The economic losses associated with flooding, including damage to property, household goods, stored food, and the productive assets needed for informal livelihoods such as tailoring equipment, produce for trading, and livestock, were mentioned by multiple participants as a compounding dimension of flood-related health impact. Economic loss from flooding translated directly into reduced food security, reduced healthcare-seeking capacity, and increased psychological stress in the weeks and months that followed:

"When the flood came in 2023, I lost everything I had stored for my business. I sell vegetables from a small stand. All my stock was ruined. I had no income for three weeks while I tried to recover. During that time, I could not buy medicine when my children were sick. I had to let them rest and hope they got better on their own." (P20, Female, 55, Chawama)

Theme Four: Overcrowded Homes and the Intimacy of Illness

The fourth theme addresses participants' experiences of household and neighbourhood overcrowding, and the ways in which extreme physical proximity within dwellings facilitated the rapid transmission of communicable diseases, particularly respiratory infections, tuberculosis, and febrile illnesses. Two sub-themes were identified: household crowding as a transmission environment; and indoor air pollution as a respiratory health threat.

Participants described domestic arrangements in which five, eight, ten, or even twelve people shared one or two rooms, with sleeping, cooking, and social life all occurring in the same space. Within these arrangements, the exposure of all household members to

any infectious illness introduced by one person was essentially guaranteed. The rapid spread of respiratory illness through crowded households was the most commonly described form of within-household disease transmission:

"Seven of us sleep in one room. When one person coughs at night, by the following week everyone is coughing. I have had a cough myself that has not fully gone for three months now. My chest pains me sometimes. I think it might be TB but I am afraid to go and find out because then what do I do? Who will take care of my children while I am treated?" (P17, Male, 36, Kanyama)

"My neighbour was found to have TB last year. When I heard that, I was very worried because we share a wall, we share a toilet, we greet each other every morning face to face. How can you not catch something in those conditions? The rooms are small, we keep windows closed at night because of mosquitoes and cold, and so the air is never fresh." (P16, Female, 26, Chawama)

"I share this house with two other families. There are twelve of us in total, using two rooms. When someone has fever or a cold, it spreads to everyone within a few days. There is no space to isolate a sick person. The child of my neighbour had measles last year and within a week three more children in the house had it." (P19, Male, 31, Kanyama)

The fear of tuberculosis was a recurring undercurrent across accounts from both settlements, expressed with a mixture of dread and practical constraint. The reluctance to test, evident in P17's account above, reflects the economic reality that a tuberculosis diagnosis carries with it a months-long treatment regimen that is incompatible with the informal daily labour on which household survival depends. Several participants mentioned knowing of neighbours or relatives who had been diagnosed and noting the disruption this caused, which reinforced hesitancy about pursuing testing themselves:

"Three people in this compound have had TB that I know of. Maybe more who have not gone to test. I know I should test because I cough, but testing opens a problem. If you are positive, you must take medicine for six months, you cannot work some days when you are not feeling well from the medicine, and people in the community know and they look at you differently. It is better sometimes not to know." (P2, Male, 28, Chawama)

Indoor air pollution from charcoal and biomass cooking fuels was identified by multiple female participants as a significant and chronic respiratory health risk, particularly for women and young children who spend the most time in proximity to cooking areas. The accounts were consistent in describing smoke-filled interiors as a daily reality that participants recognised as harmful but could not afford to change given the cost of cleaner fuel alternatives:

"The cooking smoke is the worst thing. I cook on charcoal inside the house because there is no space outside and the wind makes the fire go out if I cook near the door. My eyes are always red. I cough every morning when I wake up. My youngest child started

having chest problems last year and the clinic said it is from the smoke. But I cannot stop cooking, and I cannot afford gas." (P13, Female, 39, Kanyama)

"I cook inside, everyone here cooks inside. The house fills with smoke and the children sit in it. My eyes water every day. When I was pregnant with my last child, I was very worried about what the smoke was doing to the baby. I know it is bad, but there is no other way to cook and I cannot afford a different fuel." (P1, Female, 34, Kanyama)

"The smoke from cooking causes my children to cough in the evening. The young one, she is two years old, she already has a chest problem and the clinic gave her an inhaler. At two years old. I believe it is from the smoke in our home because I cook near where she sleeps." (P14, Female, 32, Chawama)

Theme Five: Healthcare Access: Proximity Without Quality

The final theme captures the paradox that pervades participants' experiences of healthcare in Kanyama and Chawama: health facilities existed in or near both settlements, yet the quality of care available at those facilities was so consistently poor that accessing them offered limited health benefit while imposing significant time and financial costs. Three sub-themes were identified: financial barriers to healthcare access; poor quality and disrespectful treatment at facilities; and the rational bypassing of local health centres.

The cost of healthcare, including not only consultation fees but transport, medicines prescribed but not available at facilities, and the opportunity cost of lost working time, was the barrier mentioned most frequently and most urgently by participants across both settlements. For households operating on the margins of subsistence, these costs were not merely inconvenient but health-threatening in their own right, since the inability to afford care when needed allowed conditions to progress to greater severity: "I cannot afford to see a doctor every time someone is sick. Sometimes I buy panadol and some antibiotics from the shop. I have learned over the years what to buy for common things. But when it is truly serious, I go to hospital. The journey costs money I do not always have." (P22, Female, 37, Chawama)

"When my husband had a severe cough, we waited two weeks before going because of the transport money and because he was afraid to lose income from his work. By the time we went, he needed to be admitted. If we had gone earlier it might have been managed more simply. The delay made it worse and more expensive in the end." (P4, Female, 52, Chawama)

"I have a child with asthma. She needs her inhaler regularly and sometimes she needs the nebuliser at the clinic. But the clinic charges for each visit and the transport is additional. Some months I cannot afford to take her as often as she needs. During those times I manage with what I have at home and I pray she does not have a serious attack." (P10, Female, 33, Kanyama)

Poor service quality at local health centres was described with a candour that suggested accumulated and legitimately earned frustration rather than mere complaint. Participants described medicine shortages that were chronic and predictable, waiting

times of three to four hours for straightforward consultations, inadequate diagnostic equipment that made accurate clinical assessment impossible, and interactions with health workers that left patients feeling disrespected, dismissed, or inadequately informed about their conditions:

"The health centre is close, maybe fifteen minutes walking. But when you go there, you wait for three or four hours. The nurses shout at you, they treat you like you are wasting their time. Sometimes there are no medicines, they tell you to go and buy from the pharmacy outside. Then what was the point of coming? I would rather go to the referral hospital even though it is far." (P2, Male, 28, Chawama)

"I stopped going to the health centre near here because every time I go, they send me away. Either there is no doctor, or there are no medicines, or they say come back tomorrow. How can a sick person come back tomorrow? You are sick today. My child needed treatment and I was told to come back the next morning. I did not go back there." (P10, Female, 33, Kanyama)

"The last time I went to the health centre, the nurse did not examine my child properly. She looked from a distance and wrote something on paper. Then she told me to buy medicine from outside because they had run out. I spent the transport money to come here, and then more money to buy medicine they were supposed to have. I paid twice and the nurse did not even touch my child." (P12, Female, 35, Chawama)

The bypassing of local health centres in favour of more distant district or referral hospitals was described by almost half the participants not as irrational or uninformed behaviour but as a learned, deliberate strategy that reflected accumulated negative experience with local facilities. The investment of additional transport money to reach a hospital with better staffing, consistent medicine supplies, and functional equipment was understood as a rational trade-off, even when it imposed significant additional cost: "There is a health centre here but it has nothing. No drip, no proper equipment, no doctor some days. When my daughter had a very high fever, they told me to go to Chipata or UTH. That means transport money, a whole day away, and leaving my other children at home. But I had to go. What else would I do? At least at the hospital they have what they need." (P1, Female, 34, Kanyama)

"People here know that the health centre cannot help for anything serious. So we bypass it. We know it costs more to go to the big hospital, but at least when you arrive you are not turned away. The clinic here is just a building. It is not really providing health." (P17, Male, 36, Kanyama)

4.5 Participants' Recommendations: What Would Most Improve Health Here?

Responses to Question 15, which asked participants to describe what specific changes would most improve health and wellbeing in their settlements, generated a consistent and detailed set of community-driven recommendations that complement and contextualise the thematic findings. The priorities most frequently cited were the extension of piped water connections to residential areas rather than community taps alone; construction of adequate, properly maintained communal sanitation facilities with locks and lighting for safety; construction of flood drainage channels and

embankments to prevent seasonal inundation; improvement in the quality of health centre services, particularly consistent medicine supply, qualified staff, and respectful patient treatment; clearance of wider pathways to allow refuse collection vehicles to reach all parts of the settlements; and investment in community health education and environmental sanitation programmes.

Several long-term residents expressed a deep frustration that their communities had been consulted before, their problems had been documented by researchers and councillors, and the conditions had nonetheless remained unchanged or worsened. This frustration was expressed with a clarity and force that should be taken seriously by any reader of this study:

"We have told our problems to researchers before. We have told councillors. We have told everyone who comes with a notebook. Still the water is bad, still the toilets are shared and broken, still we flood every year. What we need is not more questions. We need someone to act on the answers that have already been given many times." (P9, Male, 57, Kanyama)

"I have been living here for twenty years. In that time, many people have come to ask questions about our health. I have answered those questions many times. Nothing has changed. Every rainy season the cholera comes. Every year we bury someone. I will answer your questions again, but I want you to know that I have no expectation that things will be different." (P15, Female, 48, Kanyama)

These statements carry particular weight in the context of this study's dissemination and utilisation. They represent not simply community frustration but a form of evidence about the failure of previous research to translate into policy action, and a clear mandate for the findings of this study to be used differently.

4.6 Chapter Summary

This chapter has presented the findings of the study through a participant demographic profile, a summary of quantitative background data on living conditions and disease burden, and a detailed thematic analysis generating five principal themes: the water-disease nexus; sanitation, shared suffering, and lost dignity; flooding as a seasonal health emergency; overcrowded homes and the intimacy of illness; and healthcare access: proximity without quality. Each theme was developed through multiple sub-themes supported by rich participant excerpts that illuminate the lived experience of urbanization and health in Kanyama and Chawama. An additional section presented participants' own recommendations for change, grounded in detailed experiential knowledge. These findings form the foundation for the discussion presented in Chapter Five, which places them in dialogue with existing scholarly literature and the study's theoretical frameworks.

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V. Chapter Five: Discussion Of Findings

5.1 Introduction

This chapter engages in critical dialogue between the findings presented in Chapter Four and the empirical literature reviewed in Chapter Two, guided throughout by the Social Determinants of Health Framework articulated by the World Health Organization Commission on Social Determinants of Health (2008) and the Urban Health Penalty Theory established by Van de Poel et al. (2007). The discussion follows the five thematic areas identified in the analysis, exploring how findings from Kanyama and Chawama confirm, extend, or nuance existing knowledge, and drawing out the theoretical and practical implications of what participants described. The chapter concludes with reflections on what the findings collectively reveal about the structural production of health inequity in Lusaka's informal settlements and the kinds of responses that evidence suggests are necessary.

5.2 The Water-Disease Nexus: Structural Failure and Its Health Consequences

The findings on water access and quality are strikingly consistent with the established evidence base for informal settlements in Lusaka and across sub-Saharan Africa. Participants' accounts of contaminated community tap water, prolonged queuing times, disrupted supply, and dependence on vendors at exploitative prices align directly with the large-scale quantitative evidence generated by Hubbard et al. (2020) in their household survey of 12,500 peri-urban Lusaka households, which identified uncovered water storage, absence of soap for handwashing, and use of heavily shared or unimproved sanitation as independently significant risk factors for diarrheal disease. The present study adds the qualitative dimension that Hubbard et al. (2020) could not provide: the daily experiential reality behind those statistical associations. Mothers describing how they boil water as a matter of survival, only to watch their children develop diarrhea when supply interruptions force recourse to contaminated sources, are giving voice to the human substance of what risk factor surveys measure at scale.

Tseole and Mindu (2022), whose scoping review of barriers and facilitators to WASH practice across Southern Africa identified governance failure, inadequate infrastructure investment, and limited community engagement as the dominant structural barriers to WASH improvement, provide the explanatory framework within which the water challenges described by this study's participants must be understood. The problem documented in Kanyama and Chawama is not primarily one of knowledge or behaviour: participants demonstrated detailed, accurate understanding of the disease pathways through which contaminated water causes illness. The problem is structural, a failure of government to invest in the infrastructure that would make safe water reliably available regardless of individual behaviour. This conclusion is directly consistent with the Social Determinants of Health Framework's insistence that structural determinants, in this case governance and fiscal policy, produce the material living conditions that more directly shape health (Commission on Social Determinants of Health, 2008).

The economic dimension of water access described by participants, in which vendor dependency consumes a disproportionate share of household income and forces trade-offs between water and food, constitutes what has been described elsewhere in the

literature as a poverty premium of inadequate infrastructure. Research in Nairobi's informal settlements established that residents dependent on water vendors paid many times more per litre than wealthier residents with household piped connections (Njuguna et al., 2013). The present study confirms that this dynamic operates in Lusaka and that its consequences extend beyond inconvenience: when water expenditure competes with food expenditure in households at the margin of subsistence, the health consequences include not only waterborne disease but malnutrition, reduced immune function, and the economic fragility that prevents timely healthcare seeking. These intersecting consequences are precisely what the Social Determinants of Health Framework means by the interaction between structural and intermediary determinants in producing health outcomes for those most disadvantaged (Solar and Irwin, 2010).

It is worth noting that the World Health Organization and UNICEF (2017) had already documented that only forty-three percent of urban sub-Saharan Africans had access to safely managed drinking water services, a figure that substantially overstates the situation in Lusaka's informal settlements. The present study's finding that only two of twenty-two participants had piped water at the household level is consistent with what UN-Habitat (2020) estimates for Lusaka, where approximately seventy percent of the population lives in unplanned settlements with inadequate water infrastructure. The persistence of this deficit despite decades of documented need, repeated policy commitments, and international development support reflects precisely the governance failure and institutional incapacity that the Social Determinants of Health Framework identifies as the root cause of structural health disadvantage.

5.3 Sanitation Conditions: Severity, Gender, and the Production of Disease

The sanitation findings build directly on the quantitative risk factor evidence established by Hubbard et al. (2020), who found that toilet sharing with eighteen or more people was an independent predictor of diarrhoeal disease in peri-urban Lusaka. The present study's participants described toilet sharing at even greater density, with some facilities serving thirty or more people, and articulated clearly the mechanisms through which this produces illness: chronic structural degradation of overcrowded facilities, flies attracted by overflow and waste, the impossibility of maintaining hygiene, and the consequent transmission of faecal-oral pathogens that cause the diarrhoeal and skin diseases that constitute such a large share of the disease burden participants described. The finding that diarrhoea had become so normalised as to be barely noticed as illness by some households reflects what Ezeh et al. (2017) identify as the characteristic state of health in informal settlements where the burden of common infectious diseases is so pervasive that it is experienced as a background condition of life rather than a medical event.

The gendered dimensions of sanitation insecurity documented in this study add an important layer to the existing evidence base. Tseole and Mindu (2022) note that inadequate sanitation affects women and girls disproportionately through threats to safety, dignity, and educational continuity, but empirical documentation of these mechanisms in the Lusaka context was limited prior to this study. The accounts provided by female participants of holding urine overnight to avoid unlit, unlocked shared latrines, developing urinary tract infections as a consequence, and experiencing the profound indignity of using facilities without privacy, constitute a form of gender-

differentiated health impact that is invisible in epidemiological datasets but is central to the lived experience of the sanitation situation in these settlements. This finding has direct implications for how sanitation interventions should be designed: facilities that do not incorporate adequate privacy, lighting, and security features, and that are maintained only by community arrangements without reliable accountability, will fail to address the specific dimensions of the problem that affect women most acutely.

Pessoa Colombo et al. (2023), in their spatial analysis of diarrheal disease in relation to housing conditions in informal settlements in Abidjan, demonstrated that the spatial distribution of diarrheal disease tracks very closely with the spatial distribution of housing deprivation and WASH service absence, confirming that health outcomes in informal settlements are substantially determined by the structural conditions of the built environment rather than by individual behaviour. The present study's qualitative findings from Lusaka are consistent with this pattern, and the framing by participants of open defecation as a consequence of governance failure rather than personal failing reflects the same insight at the level of lived experience. Understanding the sanitation situation as a structural problem rather than a behavioral one is not merely an academic distinction; it has fundamental consequences for whether interventions are designed to change infrastructure or to change people, and the evidence strongly supports the former.

5.4 Flooding, Environmental Contamination, and Recurrent Health Crises

The study's findings on flooding extend and give human specificity to the systematic review evidence compiled by Suhr and Steinert (2022), who analysed health outcomes of flood exposure across sub-Saharan Africa and found consistent associations between flooding and increased incidence of cholera, diarrhoeal diseases, malaria, and other waterborne and vector-borne illnesses. Participants in this study did not merely confirm these statistical associations; they described the mechanisms in detail, including the carrying of faecal material from overflowing latrines and open defecation sites into household environments and water storage containers, the creation of stagnant water bodies that serve as Anopheles mosquito breeding sites, and the consequent surge in illness that followed predictably within days to weeks of major flooding events. This experiential and mechanistic understanding, accumulated through years of living with annual flooding, is itself a form of knowledge that is highly relevant to the design of public health responses and that should be engaged with rather than overlooked by planners and health authorities.

Suhr and Steinert (2022) emphasise that flood vulnerability in sub-Saharan Africa is profoundly structured by poverty and spatial inequality, with poor populations disproportionately located on flood-prone land because it is cheaper, less desirable, and the only land available to those excluded from legal and planned housing markets. Participants' accounts in this study confirmed this structural explanation: several described having settled in flood-prone areas of Kanyama because they could not afford housing on higher ground and had no other option. The futility of individual household-level flood mitigation, expressed in the account of a participant who had repaired his floor four times and eventually given up because the underlying drainage problem was not addressed, illustrates the Social Determinants of Health Framework's argument that structural determinants set the conditions within which individuals operate and that

health improvements cannot be achieved through individual behaviour change alone in the absence of enabling structural conditions (Commission on Social Determinants of Health, 2008).

The destruction of sanitation infrastructure during flooding episodes, described by participants as a direct precipitant of community-wide illness and the mechanism through which cholera outbreaks have recurred, is directly consistent with the epidemiological analysis of Sasaki et al. (2009), who identified drainage network inadequacy and proximity to flooding as key spatial predictors of cholera incidence in Lusaka. The study's findings thus provide the qualitative evidence that complements Sasaki et al.'s spatial analysis: the relationship between drainage failure, latrine collapse, open defecation, and cholera transmission is not an abstract statistical association but a lived, experienced, and clearly understood causal chain that residents have navigated at personal and familial cost across many years and multiple outbreak cycles. The persistence of these outbreaks despite documentation of the underlying causes since at least 2009 constitutes a serious governance failure that warrants naming clearly in any policy discussion of urban health in Zambia.

5.5 Overcrowding, Indoor Air Pollution, and the Respiratory Disease Burden

The findings on overcrowding and respiratory disease connect directly to a well-established international evidence base while also documenting patterns that are poorly quantified in the Zambian literature. Harling et al. (2008) found strong associations between household crowding and tuberculosis incidence in South African cities, where informal settlement residents experienced tuberculosis rates many times higher than national averages. Holtgrewe et al. (2024), in their systematic review of tuberculosis burden in underserved populations in South Africa, found that people in informal settlements without HIV had an almost fourfold elevated risk of active tuberculosis compared to the general population. While these estimates are drawn from the South African context, the housing conditions and crowding levels described by participants in this study are directly comparable to those in which these risk estimates were derived, providing a reasonable basis for inferring that similar risk amplification operates in Lusaka.

Participants' accounts of fear and practical constraint around tuberculosis testing illuminate a dimension of the tuberculosis burden that epidemiological studies cannot easily measure: the gap between true disease prevalence and documented prevalence that results from rational individual decisions not to test, driven by the economic and social consequences of a positive diagnosis. When testing, seeking treatment, and completing a six-month treatment regimen would require extended absence from informal economic activity on which household survival depends, and when a diagnosis carries social stigma that can damage relationships and community standing, the decision not to test is understandable even if it is epidemiologically harmful. Addressing this gap requires not only improving tuberculosis diagnostic and treatment services but also understanding and addressing the social and economic conditions that make testing a burden rather than a benefit for those most at risk, which is precisely the orientation of the Social Determinants of Health Framework.

The indoor air pollution findings are consistent with the evidence synthesised by Bruce et al. (2000), who documented that household use of solid biomass fuels for cooking in poorly ventilated spaces causes chronic respiratory disease, increases susceptibility to acute respiratory infections, and contributes to adverse pregnancy outcomes, with women and young children most heavily exposed. The presence of these risks in Kanyama and Chawama more than two decades after Bruce et al. (2000) documented them as a global public health challenge reflects the slow pace of clean cooking fuel transition among poor urban populations when cost barriers are not addressed through subsidies or alternative provision. Participants were aware of the harm they were experiencing but were trapped by the economics of fuel access: cleaner alternatives existed but were unaffordable, and the structural conditions that made charcoal the only practical option had not changed. Again, this dynamic illustrates the Social Determinants of Health Framework's insight that health-harming behaviours in resource-constrained settings are often not freely chosen but are the products of structural constraints that limit the available options to those that are hazardous.

5.6 Healthcare Access: Rational Bypassing and the Primary Care Paradox

The healthcare access findings resonate deeply with the Lusaka-specific evidence generated by Kapambwe et al. (2022), who found that seventy-one percent of Lusaka adults bypassed local health centres for non-emergency care, with poor service quality as the primary driver. The present study's qualitative findings provide the experiential texture that explains and justifies this pattern from patients' perspectives: participants did not bypass local facilities out of ignorance, misguided health beliefs, or preference for a higher level of care as a status matter. They bypassed because sustained contact with local facilities had produced reliable negative experiences, including chronic medicine shortages, unacceptably long waiting times, inadequate diagnostic capacity, and interactions with health workers that left them feeling dismissed and disrespected. Given these experiences, the decision to invest additional transport money in reaching a better-equipped facility was not irrational but was, under the circumstances, a rational health investment.

Wambiya et al. (2021), in their study of healthcare utilisation patterns in a Nairobi informal settlement, found that satisfaction with the quality of care at primary facilities was a significant independent predictor of utilisation, and that patients with negative quality experiences were substantially less likely to return to those facilities. The present study suggests that the same dynamic operates in Lusaka, and that the bypassing behaviour documented by Kapambwe et al. (2022) reflects accumulated negative experience at the population level rather than individual idiosyncrasy. This has important implications for the design of primary healthcare improvement efforts: quality improvements must be deep and genuine, verified through patient experience rather than through input metrics like staffing ratios and drug supply reports, because the populations that have most to gain from improved primary care are those who have already learned through experience not to rely on it.

Safougne Djomekui et al. (2025), examining health inequities in the informal settlements of Douala, Cameroon, found that poor public health centre quality forced informal settlement residents into either costly private sector care or distant referral hospitals, perpetuating the cycle of health expenditure-driven poverty. The parallel with

findings from Kanyama and Chawama is striking: when public primary care is not functional, the economic burden of healthcare falls disproportionately on those least able to bear it, as they must either pay out of pocket for private care or spend scarce resources on transport to public hospitals. This mechanism operates as a driver of the poverty-illness-poverty cycle that the Urban Health Penalty Theory identifies as characteristic of informal settlement populations (Van de Poel et al., 2007).

The financial barriers to healthcare described by participants, including the inability to afford transport when a family member is ill, the need to purchase medicines externally because facilities lack supply, and the income loss from days spent seeking care at distant hospitals, collectively constitute what economists call the effective price of healthcare, which in informal settlements is substantially higher than any nominal fee schedule suggests. For a household where a day's income is the margin between eating and not eating, the effective price of healthcare is often prohibitive, producing the treatment-delaying and condition-worsening behaviour documented in participants' accounts. Addressing this dimension of healthcare access requires financial protection mechanisms, including genuinely functional community health funds, waiver systems for the very poor, and the elimination of informal payments, in addition to the physical infrastructure and human resource improvements that would make local facilities worth attending.

5.7 Theoretical Reflections: Structural Production of Health Inequity

Considered as a whole, the five thematic findings from this study offer powerful and specific support for both theoretical frameworks that guided the inquiry. The Social Determinants of Health Framework (Commission on Social Determinants of Health, 2008; Solar and Irwin, 2010) holds that health and health equity are shaped by the circumstances in which people live, and that those circumstances are produced by the distribution of power, money, and resources. Every theme in this study illustrates a specific pathway through which structural conditions produce harmful health circumstances for informal settlement residents. Water infrastructure investment decisions made at the level of national budgeting and municipal governance produce the contaminated and insufficient water supply that causes diarrhoeal illness in individual households. Urban land tenure policies that exclude the poor from legal land access produce the settlement of flood-prone lowlands that generates seasonal disease surges. Economic policies that have failed to create sufficient formal employment at livable wages produce the reliance on charcoal cooking fuels that generates indoor air pollution and respiratory disease. Healthcare financing and workforce deployment decisions produce the medicine shortages and staff attitudes that make local health centres inadequate and generate costly bypassing behaviour. In each case, the health outcome is not a natural or inevitable consequence of individual circumstance but the product of specific, identifiable, and potentially alterable policy decisions and governance arrangements.

The Urban Health Penalty Theory (Van de Poel et al., 2007) is equally powerfully illustrated by these findings. The theory challenges the assumption that urban location confers health advantages, demonstrating instead that informal settlement residents often experience worse health outcomes than both rural residents and wealthier urban neighbours. Participants in this study described health conditions and challenges that

compare unfavourably not only with wealthier Lusaka residents but, in many respects, with what rural Zambian households would experience. The diarrhoeal disease burden, sustained by severely overcrowded shared latrines and contaminated water, is more intense than what rural households with individual pit latrines and access to borehole water typically face. The respiratory disease burden is amplified by urban overcrowding in ways that rural households, with more space and better natural ventilation, do not experience to the same degree. And the healthcare access problems documented in this study are paradoxically worse in some respects than what rural residents experience, because urban facility bypassing generates costs that rural residents, who do not have a nominally nearby but non-functional facility to bypass, do not incur in the same way.

The theoretical contribution of this study lies in providing qualitative evidence that gives lived-experience substance to the abstract mechanisms that these frameworks describe. Theories of structural health determinants and urban health penalties are most persuasive when they can be illustrated with the specific, embodied experiences of actual people living the conditions the theories describe. The twenty-two participants in this study provide that illustration with force and clarity, and their accounts serve as a reminder that behind every epidemiological statistic, every risk factor association, and every policy metric are the daily lives of people who experience the health consequences of structural decisions that were made without adequate reference to their needs, their knowledge, or their rights.

5.8 Chapter Summary

This chapter has discussed the five thematic findings in relation to existing literature and the study's theoretical frameworks, demonstrating that health challenges in Kanyama and Chawama are consistent with, and emblematic of, the patterns documented in the broader African urban health literature. The discussion has shown that findings can be understood as products of structural determinants of health and as manifestations of the Urban Health Penalty characteristic of informal settlements in developing cities. The chapter has also highlighted the qualitative contribution of this study in giving texture, voice, and human specificity to patterns that epidemiological research measures but cannot fully explain or communicate. The following chapter draws on these discussions to formulate conclusions and recommendations.

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VI. Chapter Six: Conclusion And Recommendations

6.1 Introduction

This chapter presents the conclusions drawn from the study, formulates recommendations for policy, practice, and future research, acknowledges the limitations of the work, and suggests directions for subsequent inquiry. It is organised to move from a concise summary of key findings through overarching conclusions to specific, stakeholder-targeted recommendations. Throughout this chapter, the intention is to honour the voices and experiences of the twenty-two participants who contributed to this study by ensuring that the conclusions drawn and the recommendations made are firmly grounded in what they described and requested, rather than being imposed from abstract theoretical principles or generic development prescriptions.

6.2 Summary of Key Findings

This study set out to examine the impacts of urbanization on public health in the informal settlements of Kanyama and Chawama, Lusaka District, Zambia, through a qualitative phenomenological inquiry that centred the lived experiences and perceptions of adult residents. Three specific objectives guided the inquiry: to explore how urbanization factors affect residents' health and wellbeing; to examine how WASH service access influences household health; and to understand how population density and housing conditions are perceived to contribute to communicable and respiratory disease.

In relation to the first objective, the findings demonstrate that residents experience the health impacts of urbanization through a complex, simultaneous combination of water insecurity, sanitation inadequacy, seasonal flooding, overcrowded and smoke-filled housing, and constrained healthcare access. These impacts are not experienced sequentially or in isolation but accumulate and interact, producing a compounded health burden that no single-sector intervention could address. Residents understand very clearly the mechanisms through which their living conditions generate illness, and they articulate this understanding with the precision that comes from years of direct experience.

In relation to the second objective, the study found that WASH service access in both settlements falls far short of the standards required to prevent waterborne and sanitation-related disease. The majority of households rely on shared, intermittent, or vendor-supplied water of uncertain quality, and nearly all rely on severely shared pit latrines that are inadequately maintained and associated with consistently elevated diarrhoeal disease risk. The economic cost of inadequate WASH access, through vendor prices and healthcare expenditure for preventable illness, compounds the health impact by diverting resources from other health-relevant expenditures including food and medicines.

In relation to the third objective, the findings clearly establish that overcrowded housing creates conditions highly conducive to respiratory disease transmission, including tuberculosis, and that indoor air pollution from charcoal cooking fuels imposes a documented respiratory health burden on women and young children who are most

exposed. Participants perceived both overcrowding and indoor smoke as significant health threats and described their consequences through accounts of chronic cough, chest illness, and childhood respiratory disease that were consistent across both settlements.

6.3 Principal Conclusions

Six overarching conclusions emerge from the evidence.

The health impacts of urbanization on residents of Kanyama and Chawama are severe, multidimensional, and structurally produced. They are not caused by residents' ignorance or carelessness but are generated by decades of inadequate infrastructure investment, governance failure, land tenure exclusion, and economic marginalisation. Responses that target individual behaviour change without addressing these structural conditions will have limited and unsustained impact.

The Urban Health Penalty is clearly and powerfully present in these settlements. Residents experience health outcomes that are worse than would be expected given their proximity to Lusaka's urban health facilities and services, confirming that location within the informal settlement rather than simple urban or rural location is the critical determinant of health disadvantage. This finding reinforces the urgency of informal settlement upgrading as a health intervention in its own right, not merely as a housing or urban development initiative.

Women bear a disproportionate share of the health burdens generated by inadequate infrastructure, through the physical labour of water collection, daily exposure to indoor cooking smoke, safety risks associated with shared sanitation at night, the management of household illness, and the economic consequences when illness interrupts their informal livelihoods. Gender-responsive design is not an optional feature of urban health interventions in these settings but an essential requirement if they are to address the full scope of the problem.

The pattern of bypassing local health facilities is not irrational behaviour that health education can correct; it is a rational response to genuinely inadequate service quality that requires the genuine improvement of primary healthcare to reverse. Investment in health facility buildings and equipment without corresponding investment in medicine supply, workforce capacity, and patient experience will not change the healthcare-seeking patterns that currently impose costs on both poor households and an overstretched referral system.

Residents possess detailed, accurate, and actionable knowledge about the health risks they face and what interventions would most benefit their communities, and this knowledge has been consistently expressed in consultations that have produced no visible policy response. The frustration expressed by long-term residents who have answered the same questions from researchers and councillors over many years without witnessing change is itself an important finding, indicating that the bottleneck is not evidence but political will and implementation capacity. Future research should not simply add more documentation of the problem but must address the accountability and implementation gaps that prevent documented evidence from translating into policy action.

Finally, the Social Determinants of Health Framework and the Urban Health Penalty Theory together provide a robust and empirically well-supported explanation of the health inequities observed in Kanyama and Chawama. Both frameworks point toward structural change as the necessary response: improvements in governance, increased infrastructure investment, stronger accountability mechanisms, and greater representation of informal settlement residents in planning and resource allocation decisions. These conclusions are not novel in the global literature, but their specific grounding in the lived experiences of residents of these two settlements gives them local authority and urgency that international frameworks alone cannot supply.

6.4 Recommendations

6.4.1 Recommendations for National Government and Policy Makers

The Ministry of Water Development and Sanitation, in partnership with the Lusaka City Council and supported by development partners, should declare the extension of reliable piped water connections to compound or household level in Kanyama, Chawama, and comparable informal settlements across Lusaka a national priority with a defined, publicly monitored delivery timeline. Interim measures including the installation of additional community standpipes with reliable supply and maintenance arrangements are necessary but should be understood as transitional measures pending household connection, not permanent solutions. The persistent reliance of hundreds of thousands of Lusaka residents on shared, intermittent, and vendor-supplied water of uncertain quality is incompatible with Zambia's constitutional commitments, Sustainable Development Goal 6, and the New Urban Agenda, and should be framed and resourced accordingly.

The Ministry of Local Government and Lusaka City Council should develop and fund a programme for the construction, governance, and ongoing maintenance of communal sanitation facilities in informal settlements, designed to meet the density levels present and the safety and privacy needs of women and girls. Governance arrangements including community management committees, ring-fenced maintenance budgets, and regular inspection schedules should be established from the outset rather than added after degradation has occurred. The programme should be implemented alongside hygiene promotion and handwashing station provision to maximise health impact per unit of investment. The evidence from this study, combined with the quantitative risk factor data of Hubbard et al. (2020), provides a strong basis for prioritising toilets serving fewer than ten households as the target standard.

Flood risk reduction in Kanyama and Chawama must be treated as a public health emergency rather than a disaster management routine. The Ministry of Infrastructure and Urban Development should commission and fund drainage masterplans for both settlements that identify the minimum drainage infrastructure needed to prevent residential inundation in a design storm of realistic magnitude, and should commit to implementing those masterplans on a defined schedule. Flood risk mapping should guide spatial planning to prevent further settlement of the highest-risk areas, and residents currently living in zones where flood risk cannot be cost-effectively mitigated should be engaged in genuine, participatory dialogue about long-term relocation

options that do not require them to sacrifice community, livelihoods, and social networks for physical safety.

The Ministry of Health should designate the quality improvement of primary healthcare facilities in Lusaka's informal settlements as a measurable performance objective of the national health strategy, with specific indicators for medicine availability, waiting times, diagnostic capacity, and patient experience. Monitoring against these indicators should be public and community-facing, not merely reported upward through administrative chains. Performance-based financing mechanisms that link facility budgets to patient-reported quality outcomes should be explored as tools for accelerating quality improvement, alongside investment in human resource deployment, staff support, and the management of unprofessional conduct. The bypassing pattern documented in this study and by Kapambwe et al. (2022) will not improve until the quality of what is available at local facilities genuinely merits the trust of communities that have learned not to rely on it.

6.4.2 Recommendations for Health Practitioners and Facility Managers

All healthcare providers working in facilities that serve informal settlements should receive training that equips them to understand the social and environmental determinants of the health problems they encounter, to communicate about those determinants in non-stigmatising ways, and to make appropriate referrals to social services and community resources when clinical care alone cannot address underlying drivers of illness. Understanding that diarrhoeal disease in a child is more likely to reflect a contaminated shared latrine serving thirty households than a failure of parental hygiene practice changes both the clinical advice given and the advocacy posture of health workers toward the environmental conditions around them.

Environmental health technicians and community health workers in Kanyama and Chawama should design and implement structured seasonal health outreach programmes timed to precede the onset of the rainy season, addressing flood preparedness, safe water storage during supply disruptions, latrine maintenance before the flooding period begins, and early recognition of cholera symptoms. The predictable seasonal nature of the health deterioration documented in this study means that preventive action can be planned in advance, and that community health workers with established trust in their communities are the most credible and accessible channel for delivering that preparation. Culturally appropriate communication materials in Nyanja and Bemba should be developed and made available through community-based organisations, schools, and faith communities in addition to health facilities.

Health facility managers should establish systematic, simple, and genuinely responsive patient feedback mechanisms, including community representation on health centre management committees and regular public reporting of facility performance data. The evidence from this study suggests that poor patient experience has been allowed to persist and accumulate because feedback channels either did not exist or did not produce visible change. Making patient experience data visible and acting on it publicly would not only improve care but signal to communities that their accounts of mistreatment are taken seriously, beginning the process of rebuilding the trust that is essential for effective use of primary healthcare.

6.4.3 Recommendations for Urban Planners and Development Practitioners

Urban planning in Lusaka must engage seriously and systematically with the informal settlements that house the majority of the city's population. Every major planning decision, including road networks, drainage infrastructure, open space designation, and service facility placement, should be assessed against its health implications for informal settlement residents, using evidence from studies such as this one to inform the assessment. Health impact assessment should be institutionalised as a standard element of urban planning approval processes in Zambia, aligned with the World Health Organization's guidelines on urban health planning.

Settlement upgrading projects implemented by government, non-governmental organisations, or development partners should adopt community health improvement as a primary and measurable project objective, with specific health outcome indicators, baseline data, and follow-up monitoring built into project design from the outset. The evidence from this study and from the broader literature strongly suggests that physical infrastructure upgrading generates significant health benefits when it addresses water, sanitation, drainage, and housing simultaneously, and that those benefits are substantially reduced when interventions are single-sector or when community participation in design is superficial rather than genuine. Participatory planning processes that begin with residents' own health-informed priorities, as documented in this study's Question 15 findings, are more likely to produce outcomes that are valued, used, maintained, and sustained than projects designed through top-down technical assessment alone.

Private sector actors, including property developers and telecommunications companies operating in informal settlements, should be engaged through corporate social responsibility frameworks and regulatory requirements to contribute to community infrastructure improvement, including in the areas of water access, waste management, and drainage. The scale of the infrastructure deficit in Lusaka's informal settlements is beyond what public budgets alone can address, and the private sector's presence and interests in these communities create both an opportunity and a responsibility for contribution.

6.4.4 Recommendations for International Organisations and Development Partners

International organisations including United Nations agencies, the World Bank, bilateral development partners, and international non-governmental organisations should use the findings of this and comparable studies to advocate with the Government of Zambia for increased and sustained investment in urban infrastructure for informal settlements, treating this investment as a health intervention with measurable and documentable health returns rather than merely a development expenditure. The Sustainable Development Goals, and specifically SDG 3 (Good Health and Wellbeing), SDG 6 (Clean Water and Sanitation), and SDG 11 (Sustainable Cities and Communities), provide international normative frameworks for this advocacy. The lived experience of residents of Kanyama and Chawama as documented in this study provides the human evidence that gives those frameworks moral urgency.

Development partners should evaluate and reorient their programming in Lusaka's informal settlements toward integrated, multi-sector approaches that address the interacting structural determinants of health simultaneously, rather than funding single-sector projects that achieve marginal improvements in one domain while leaving the others unchanged. The evidence reviewed and generated in this study demonstrates that water, sanitation, drainage, housing quality, air pollution, and healthcare access interact in complex ways to produce the cumulative disease burden of informal settlement life; approaches that address one dimension in isolation will produce limited and often unsustained results. Funding modalities that enable government counterparts and community organisations to take an integrated approach, including budget support, programme-based financing, and pooled funding mechanisms, should be preferred over project-based support that imposes sectoral silos from outside.

International organisations should invest in strengthening the capacity of Zambia's urban research and monitoring institutions to generate the regular, localised evidence on urban health conditions and trends that is needed to guide policy and track the impact of interventions. The current dependence on sporadic, externally funded research projects to document conditions that are well-known to residents and should be tracked by government creates delays and gaps in the evidence base that slow policy response. Support for Lusaka City Council's data management and urban health monitoring functions would generate ongoing dividends for evidence-based urban governance.

6.5 Limitations of the Study

Several limitations should be acknowledged when interpreting and applying this study's findings. The geographic focus on two settlements in Lusaka District necessarily limits the direct applicability of findings to other informal settlements in Zambia or sub-Saharan Africa, though the thick description provided of the study settings enables readers to assess transferability to comparable contexts. The study's qualitative design means that findings are interpretive and context-specific rather than statistically representative, which reflects a deliberate methodological choice aligned with the study's objectives rather than a weakness, but which means that the numbers and proportions presented in the background data should be understood as contextual descriptors within a small, purposively selected sample rather than as population estimates.

The use of questionnaires as the primary data collection instrument, while appropriate for the study context and consistent with the methodology described in Chapter Three, meant that the depth of individual narrative responses was constrained by the written format. Some participants produced brief responses to the open-ended questions that limited the richness of analysis, a limitation that could be addressed in future work through extended individual interviews or focus group discussions allowing greater elaboration and dialogue. The cross-sectional nature of the study provides a snapshot at one point in time and cannot capture how conditions and health experiences have changed, are changing, or might change in response to interventions, a limitation that future longitudinal designs should address.

Social desirability bias may have influenced some responses, with participants potentially understating problems that they felt might reflect poorly on their

communities or overstating support for specific interventions that they believed the research was intended to promote. The study minimised this risk through assured confidentiality, neutral questioning, and the building of rapport through research assistants familiar with the communities, but some residual bias cannot be entirely excluded. Finally, the data collection period coincided with the dry season, which means that the flooding-related health impacts described by participants were reported retrospectively rather than during active flooding conditions. This may have affected the precision of detail in some accounts, though the salience and consistency of flooding as a theme across the data suggest that its health significance was fully registered by participants irrespective of the timing of data collection.

6.6 Suggestions for Future Research

This study opens several important directions for future inquiry. First, longitudinal qualitative research tracking a cohort of informal settlement residents across multiple rainy seasons would provide the dynamic evidence that this cross-sectional study cannot, documenting how health conditions change in relation to seasonal cycles, infrastructure interventions, and the absence of interventions. Such research would be particularly valuable for evaluating the health impact of specific upgrading projects and for identifying the conditions under which initial health improvements are sustained or reversed.

A comparative qualitative study across multiple informal settlements in Lusaka, and ideally across other Zambian cities including Ndola, Kitwe, and Livingstone, would enable identification of the settlement-level and city-level factors that explain variation in health outcomes across contexts that share the broad characteristics of rapid urbanization and infrastructure inadequacy. Understanding what makes some settlements healthier than others, despite similar resource constraints, could reveal practical, implementable lessons for health improvement that are not visible from single-site studies.

The mental health burden of informal settlement life was identified in this study as an important but under examined dimension of urban health impact, with participants describing chronic anxiety, anticipatory dread around flooding, and the psychological weight of sustained economic precocity. Dedicated mental health research in Lusaka's informal settlements, including epidemiological studies of common mental disorder prevalence and qualitative research into the social and structural determinants of mental health, would fill a significant gap in the current evidence base and support the integration of mental health into urban health programming.

Research examining the perspectives and experiences of health workers serving informal settlements would complement the community-facing evidence generated here by documenting the institutional constraints, resource limitations, and working conditions that health workers navigate, illuminating the system-level factors that produce the service quality problems documented in this study. Understanding what health workers need to deliver good quality care, and what prevents them from doing so, is essential for the design of supply-side health system improvements.

Action research approaches that involve community members as co-investigators in identifying, designing, implementing, and evaluating health improvements would model the participatory principles that this study's evidence strongly supports and would build local research capacity alongside the generation of evidence. The deep, practical knowledge that long-term residents of Kanyama and Chawama possess about the health dynamics of their communities is a research asset that conventional extractive research designs have systematically underutilised.

6.7 Chapter Summary and Closing Reflections

This chapter has drawn together the study's principal conclusions, formulated detailed recommendations for government, health practitioners, urban planners, and international organisations, acknowledged the study's limitations, and proposed directions for future research. The conclusions confirm that health challenges in Kanyama and Chawama are severe, structural, gender-differentiated, and amenable to policy change. The recommendations are grounded in the evidence generated by the study, informed by the comparative literature, and oriented toward the structural interventions that both the evidence and the theoretical frameworks indicate are necessary.

This study was conducted because the people of Kanyama and Chawama have lived for too long with health conditions that are preventable, in a city and a country where the resources and the knowledge to prevent them exist but have not been directed toward this purpose with the consistency and scale that the need requires. The twenty-two participants who gave their time and shared their experiences did so in the reasonable hope that their voices would reach those with the power to act on what they described. Fulfilling that hope requires not only reading these findings but acting on them, and holding accountable those institutions whose choices have shaped and continue to shape the health of the hundreds of thousands of people who call Kanyama and Chawama home.

References

1. Anastasi, E., Ekirapa-Kiracho, E., Makanga, P., Pariyo, G., Ssewankambo, N., Wanduru, P., & Waiswa, P. (2024). Trends and inequalities in maternal and newborn health services for unplanned settlements of Lusaka City, Zambia. Journal of Urban Health. https://doi.org/10.1007/s11524-024-00837-z
2. Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101. https://doi.org/10.1191/1478088706qp063oa
3. Bruce, N., Perez-Padilla, R., & Albalak, R. (2000). Indoor air pollution in developing countries: A major environmental and public health challenge. Bulletin of the World Health Organization, 78(9), 1078–1092.
4. Campbell, C., & Jovchelovitch, S. (2000). Health, community and development: Towards a social psychology of participation. Journal of Community and Applied Social Psychology, 10(4), 255–270.
5. Central Statistical Office. (2020). 2020 Zambia population and housing census: Preliminary report. Government of the Republic of Zambia.

6. Commission on Social Determinants of Health. (2008). Closing the gap in a generation: Health equity through action on the social determinants of health. World Health Organization. https://www.who.int/publications/i/item/WHO-IER-CSDH-08.1
7. Creswell, J. W., & Poth, C. N. (2018). Qualitative inquiry and research design: Choosing among five approaches (4th ed.). SAGE Publications.
8. Ezeh, A., Oyebode, O., Satterthwaite, D., Chen, Y. F., Ndugwa, R., Sartori, J., & Lilford, R. J. (2017). The history, geography, and sociology of slums and the health problems of people who live in slums. The Lancet, 389(10068), 547–558. https://doi.org/10.1016/S0140-6736(16)31650-6
9. Friel, S., Hancock, T., Kjellstrom, T., McGranahan, G., Monge, P., & Roy, J. (2011). Urban health inequities and the added pressure of climate change: An action-oriented research agenda. Journal of Urban Health, 88(5), 886–895.
10. Galea, S., Freudenberg, N., & Vlahov, D. (2007). A framework for the study of urban populations and health. Journal of Urban Health, 84(1), 16–26.
11. Gould, W. T. S., & Winters, A. M. (2007). An atlas of HIV/AIDS in Africa. University of Liverpool.
12. Hampwaye, G. (2008). The limits of decentralisation in urban Zambia. Urban Forum, 19(4), 347–361.
13. Harling, G., Ehrlich, R., & Myer, L. (2008). The social epidemiology of tuberculosis in South Africa: A multilevel analysis. Social Science and Medicine, 66(2), 492–505.
14. Holtgrewe, L. M. L., Johnson, A., Nyhan, K., Boffa, J., Shenoi, S. V., Karat, A. S., Davis, J. L., & Charalambous, S. (2024). Burden of tuberculosis in underserved populations in South Africa: A systematic review and meta-analysis. PLOS Global Public Health, 4(10), e0003753. https://doi.org/10.1371/journal.pgph.0003753
15. Hubbard, S. C., Meltzer, M. I., Shankar, M. B., Adhikari, B. B., Thornton, A. T., Bampoe, V. D., & Brunkard, J. M. (2020). Household illness and associated water and sanitation factors in peri-urban Lusaka, Zambia, 2016–2017. npj Clean Water, 3, Article 26. https://doi.org/10.1038/s41545-020-0076-4
16. Kapambwe, S., Bond, V., Mwamba, C., Yekeye, I., Moono, P., Simuyaba, M., & Hoddinott, G. (2022). Health care seeking in modern urban LMIC settings: Evidence from Lusaka, Zambia. BMC Public Health, 22, Article 1195.
17. Lincoln, Y. S., & Guba, E. G. (1985). Naturalistic inquiry. SAGE Publications.
18. Medecins Sans Frontieres. (2024). MSF in Zambia in 2024: Cholera response. https://www.msf.org/zambia
19. Millennium Challenge Corporation. (2015). Set up for success: Zambia Compact closeout. https://www.mcc.gov/news-and-events/feature/zambia-compact-closeout/
20. Mulenga, C. L., Olawuni, P. O., & Mwanza, A. M. (2015). Political ecology of slum development: The case of Kanyama, Zambia. International Institute of Social Studies, The Hague.
21. Mukomba, B. (2015). Creating a model in community-based disaster risk management for informal settlements: A case of Kanyama Settlement, Lusaka, Zambia [Doctoral dissertation]. North-West University.
22. Njuguna, H. N., Cosmas, L., Williamson, J., Nyachieo, D., Olack, B., Ochieng, J. B., & Breiman, R. F. (2013). Use of population-based surveillance to define the

high incidence of shigellosis in an urban slum in Nairobi, Kenya. PLOS ONE, 8(3), e58437.
23. Oni, T., Yudkin, J. S., Fonn, S., Adongo, P. B., Longo-Mbenza, B., Goma, F., & Naidoo, N. (2019). Urban health in Africa: A critical global public health priority. BMC Public Health, 19, Article 340.
24. Pessoa Colombo, V., Chenal, J., Koé, B., Koffi, J. D'Arc, & Utzinger, J. (2023). Spatial distributions of diarrheal cases in relation to housing conditions in informal settlements: A cross-sectional study in Abidjan, Côte d'Ivoire. Journal of Urban Health, 100(5), 1074–1086. https://doi.org/10.1007/s11524-023-00786-z
25. Safougne Djomekui, B. L., Ngouanet, C., & Smit, W. (2025). Urbanization and health inequity in Sub-Saharan Africa: Examining public health and environmental crises in Douala, Cameroon. International Journal of Environmental Research and Public Health, 22(8), 1172. https://doi.org/10.3390/ijerph22081172
26. Sasaki, S., Suzuki, H., Fujino, Y., Kimura, Y., & Cheelo, M. (2009). Impact of drainage networks on cholera outbreaks in Lusaka, Zambia. American Journal of Public Health, 99(11), 1982–1987.
27. Solar, O., & Irwin, A. (2010). A conceptual framework for action on the social determinants of health. Social Determinants of Health Discussion Paper 2. World Health Organization.
28. Suhr, F., & Steinert, J. I. (2022). Epidemiology of floods in sub-Saharan Africa: A systematic review of health outcomes. BMC Public Health, 22, 268. https://doi.org/10.1186/s12889-022-12584-4
29. Tseole, N. P., & Mindu, T. (2022). Barriers and facilitators to Water, Sanitation and Hygiene (WaSH) practices in Southern Africa: A scoping review. PLOS ONE, 17(8), e0271726. https://doi.org/10.1371/journal.pone.0271726
30. Turok, I., & McGranahan, G. (2013). Urbanization and economic growth: The arguments and evidence for Africa and Asia. Environment and Urbanization, 25(2), 465–482.
31. UN-Habitat. (2020). Urbanization in Zambia: Building inclusive and sustainable cities. https://unhabitat.org/zambia
32. United Nations. (2019). World urbanization prospects: The 2018 revision. Department of Economic and Social Affairs. https://population.un.org/wup/
33. United Nations Department of Economic and Social Affairs. (2018). World urbanization prospects: The 2018 revision. https://population.un.org/wup/Publications/
34. United Nations Human Settlements Programme. (2016). Urbanization and development: Emerging futures. World Cities Report 2016. UN-Habitat.
35. Van de Poel, E., O'Donnell, O., & Van Doorslaer, E. (2007). Are urban children really healthier? Evidence from 47 developing countries. Social Science and Medicine, 65(10), 1986–2003.
36. Vlahov, D., Freudenberg, N., Proietti, F., Ompad, D., Quinn, A., Nandi, V., & Galea, S. (2007). Urban as a determinant of health. Journal of Urban Health, 84(Suppl 1), 16–26.
37. Wambiya, E. O. A., Otieno, P. O., Mutua, M. K., Donfouet, H. P. P., & Mohamed, S. F. (2021). Patterns and predictors of private and public health care utilization among residents of an informal settlement in Nairobi, Kenya: A cross-sectional study. BMC Public Health, 21, 850. https://doi.org/10.1186/s12889-021-10836-3

38. World Health Organization. (2018). WHO housing and health guidelines. https://www.who.int/publications/i/item/9789241550376
39. World Health Organization. (2019). Sanitation. https://www.who.int/news-room/fact-sheets/detail/sanitation
40. World Health Organization and UNICEF. (2017). Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines. https://www.who.int/publications/i/item/9789241512893
41. World Health Organization Commission on Social Determinants of Health. (2008). Closing the gap in a generation: Health equity through action on the social determinants of health. WHO.
42. World Health Organization Regional Office for Africa. (2018). Tackling health, growth and inclusivity in Africa's booming cities. https://www.afro.who.int/