

# Building health system responsiveness to noncommunicable diseases for Gweru District adults, Zimbabwe: a case study

A case study on NCD cases in Zimbabwe

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## Abstract

**Purpose** – Gweru District, Zimbabwe faces a major challenge of noncommunicable diseases (NCDs). Globally, health systems have not responded successfully to problems in prevention and management of NCDs. Despite numerous initiatives, reorienting health services has been slow in many countries. Gweru District has similar challenges. The purpose of this paper is to explore what the health systems in Zimbabwe have done, and are doing to respond to increasing numbers of NCD cases in adults in the nation, especially in the district of Gweru  
**Design/methodology/approach** – The study employed a descriptive narrative review of the academic and grey literature, supplemented by semi-structured key informant interviews with 14 health care staff and 30 adults living with a disease or caring for an adult with a disease in Gweru District.

**Findings** – Respondents identified many limitations to the response in Gweru. Respondents said that screening and diagnosis cease to be helpful when it is difficult securing medications. Nearly all community respondents reported not understanding why they are not freed of the diseases, showing poor understanding of NCDs. The escalating costs and scarcity of medications have led people to lose trust in services. Government and NGO activities include diagnosis and screening, provision of health education and some medication. Health personnel mentioned gaps in transport, medication shortages, poor equipment and poor community engagement. Suggestions include: training of nurses for a greater role in screening and management of NCDs, greater resourcing, outreach activities/satellite clinics and better integration of diverse NCD policies.

**Originality/value** – This research offers an understanding of NCD strategies and their limitations from the bottom-up, lived experience perspective of local health care workers and community members.

**Keywords** Adults, Health system, Health system responsiveness, Noncommunicable diseases, Zimbabwe

**Paper type** Mini review

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## Introduction

Noncommunicable diseases (NCDs) are receiving increasing global attention as a public health epidemic [1]. NCDs are the leading cause of death globally with 38 million people (63%) dying each year [2]. NCDs have since been considered the dominant global public health challenge of the 21st century [3]. The current era is experiencing a dual burden of disease with NCDs being added to infectious diseases [4]. In past years, challenges to human health have mainly been communicable diseases such as HIV, AIDS and TB [5]. However recently, global health professionals are emphasizing NCDs in adults. In 2014, the number of people dying of NCDs globally was 17.7 million due to cardiovascular diseases (CVD), 8.8 million to cancer, 3.9 million to respiratory diseases and 1.6 million to diabetes [2]. A total of 48% of deaths each year due to NCDs fall in low- and middle-income countries (LMICs) with 28% in high-income countries and 24% in upper-middle-income countries [2]. NCDs lead to loss of development, disease burden and affects general well-being [5], with economic growth reduced by 0.5% for every 10% increase in NCD mortality [3].

Africa is highly affected by NCDs with 35 million deaths in 2015, which it was estimated would increase by 30% by 2019 [6]. Noncommunicable diseases are a major cause of morbidity and mortality in Zimbabwe [4]. Poverty and health system inequities have been implicated in limiting surveillance, prevention treatment and follow-up of NCDs in LMICs [7]. In 2015, it was predicted that by 2019, NCDs would make up 77% of the workload of health systems, as NCDs require long-term interaction with the health system [8].

Gweru District is a central district in the Midlands Province of Zimbabwe that faces a major challenge of NCDs. The district has one district hospital named the Gweru District Hospital which covers 21 clinics. Besides these facilities, the community in Gweru also makes use of two private hospitals and five city clinics run by the Gweru City Council.

This study aimed to investigate how responsive the system has been to the growing importance of NCDs and in what ways there is room for improvement. The study considered three different frameworks to guide the interviews and analysis: the WHO framework for health system responsiveness [9], the eight-factor model [10] developed by Prather (2012) which shows the key structural elements of a health system and the Wagner Chronic Care Model [11] which identifies the systems required to support a constructive partnership between health personnel and patients in NCD management. Table 1 summarizes the main focus and elements of each model and their significance for analyzing systems of NCD care.

## Background of Zimbabwe's health system

The health services in Zimbabwe are mostly provided by public health services, church organizations, company clinics, nonprofit and for-profit clinics and groups. There is also a strong traditional medical service [5]. All service delivery activities, from primary to quaternary services are centralized and administered through the Ministry of Health and Child Care (MOHCC) [12].

MOHCC officials manage the health system at provincial and district levels [5]. Provincial hospitals and district hospitals/health offices (DHOs) are managed by the Provincial Medical Directorate (PMD) which also allocates government funds to meet the MOHCC's aims and health policies [5, 12]. The DHOs directly manage rural clinics which are often staffed by only a nurse.

Access to services by patients is affected by the user fees. The health systems depend on user fees as part of their revenue [5]. Only 22% of health financing is contributed by the government, while 25% is out of pocket money expenditure, 28% from insurances and employers and 25% from donors (including result-based funds given to clinics based on key results areas) [13]. Many NCD cases go unrecorded as patients often find it more affordable and preferable to use traditional medicine services [14].

	Frameworks supporting health system responsiveness WHO responsiveness framework	Eight-factor model	Chronic care model
Focus and significance	The eight domains encompass attributes of health system encounters valued by people and measured from the user's perspective	The elements/foci are fundamental to considering the efficiency and effectiveness of a nation's health system. A lack of one of the elements will affect the effectiveness of a health system	Focuses on the quality of the ongoing interaction between health care providers and patients/community members, and the features of systems that support interactions that allow patients/community members to care for their health better
Structure	<i>Eight domains</i> (1) Confidentiality (2) Communication (3) Autonomy (4) Dignity (5) Prompt attention (6) Choice (7) Basic amenities (8) Social support	<i>Eight elements</i> (1) Historical (2) Structural (3) Financing (4) Interventional (5) Preventive (6) Resources (7) Major health issues (8) Disparities	<i>Six elements</i> (1) Community (2) Health System (3) Clinical information system (4) Delivery system design (5) Self-management (6) Decision support (1) and 5. The Community encompasses self-management support based on policies and resources (2) 3, 4 and 6. The organization of health care in a health system
Description Of domains/ elements	<i>Question handles</i> (1) Discretion of personal information (2) Listening, clear explanations, enough time for questions (3) Participation in decision-making (4) Polite treatment (5) Convenient travel and short waiting times (6) Seeing a provider you are comfortable with (7) Cleanliness, space and air (8) In hospital visits, having special foods, religious practice	<i>Focus</i> (1) Determine access and barriers (2) Infrastructure, policies, staff, needs, roles and responsibilities (3) Funding priorities and costing (4) Primary, acute and restorative care (5) Health promotion successes and preventing disease (6) Fiscal and human (7) Nation's top 10 killer diseases (8) Income-based, ethnicity and age	

**Table 1.**  
Summary description  
of frameworks

Gweru's challenges are like that of Zimbabwe as a whole. Patients from any of the district clinics are referred to the Gweru District hospital in cases of emergency or conditions that require special attention. Patients requiring more specialized care are referred to the Gweru/Midlands Provincial Hospital (GPH).

#### *Research question and objective*

The main research question was in what ways and to what extent has the health system in Gweru District adapted to meet the needs of noncommunicable diseases in adults in Gweru? And the primary objective was to explore what the health systems in Zimbabwe have done, and are doing to respond to increasing numbers of NCD cases in adults in the nation, especially in the district of Gweru.

## Methods

### *Research Design*

The study employed a descriptive narrative review of the published academic literature and grey literature (especially those that described policy development and implementation over time in Zimbabwe), supplemented by semi-structured key informant interviews.

### *Study area and population*

Key informant interviews (KIIs) were conducted face-to-face with a purposively selected, maximum variation sample of 30 adults from the community (age 18-64 years; 16 females and 14 males) including those living with a disease or taking care of someone with a disease. In addition, KIIs were conducted with 14 health personnel (five health service providers, six health managers and three health officials) in Gweru District. Health personnel were selected by characteristics such as their role in NCDs, while community adults were chosen depending on location, age range, where and how they got their services.

KIIs were conducted in four clinics (Somabula, Chiwundura, Maboleni and Lower Gweru) and the Gweru District hospital. The KII questions were constructed using the domains from the frameworks/models (refer to [Table 1](#)). The clinic nurses assisted the researcher to select a range of adults meeting the criteria above. Interview dates were set for each clinic and community adults invited to attend for an interview. The interviews were conducted in a private room at each clinic. Written consent was obtained before the interview. Interview notes were as close to verbatim as possible. Themes related to the description of activities, problems experienced, barriers and enablers were identified for each question and in overall summaries of each person's interview.

### *Secondary data sources and search strategy*

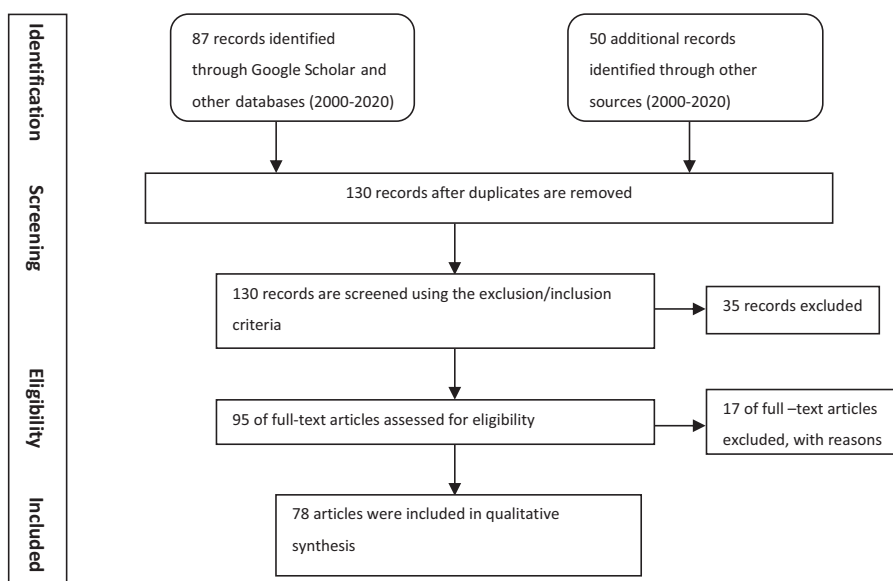
The researcher sourced data in publications from academic journals, international agencies such as World Health Organization and official Zimbabwe Government sources. The literature was reviewed using a descriptive narrative review.

Search engines used included – Google Scholar, Mendeley, Elsevier, Lancet, Pub Med, and Science Direct. A Boolean search strategy (see [Figure 1](#)) was employed using the search terms, that is “adults”, “health system”, “health system responsiveness”, “noncommunicable diseases” and “Zimbabwe”, in various combinations. Electronic documents published in the English language from the year 2000 onwards and relevant to the Zimbabwe health system responsiveness to NCDs in adults were included. The researcher also looked for examples of excellent practice, frameworks and guidelines for health system development for NCDs from around the world, LMICs, Africa and Zimbabwe.

### *Data analysis*

The detailed interview notes were transferred to Microsoft Excel for coding (identifying and naming categories and themes). Before coding, summaries were prepared for responses to each question as well as for the responses of each respondent. This was to ensure that big picture views and relevant context were kept in mind during detailed coding. Coding proceeded through a number of stages guided by the main research question and objective and by the categories in the three responsiveness frameworks summarized in [Table 1](#).

The first stage of analysis focused on establishing a chronology of what occurred when, and in what sequence in Zimbabwe's action on NCDs. Data were then coded according to how the local services implemented national policy and the responsiveness frameworks. Summary tables were constructed to capture data related to the objectives of the research or the first and second part of the research question as well as to give insight on the conclusion and recommendations of the study.



**Figure 1.** Study flow diagram through the different phases of literature review

### *Validity and reliability*

The interview schedule was tested with five people prior to the actual data collection. A constant comparative method was used involving constant comparison of staff and consumers' perceptions, including where they matched and where they differed. A workshop was held by the researcher to discuss key findings with local stakeholders, community members, a Gweru District Executive and other stakeholders.

### *Ethics approval*

Ethics approval was obtained from the Ethical Review Sub-Committee Board for Human Research Involving Sciences at Thammasat University and subsequently endorsed and permission to conduct the research granted by the Medical Research Council of Zimbabwe. Approval from Thammasat was granted on [18/06/2019] with approval number [193/2561]. Approval from MRCZ was granted on [09/08/2019] with approval number [MRCZ/B/1768].

## Results

Figure 1 summarizes the results of the search process described above which led to the inclusion of 78 articles and documents.

### *Historical activities and influences on NCD services*

The system is largely dependent on donor funds (e.g. UN, EU, USAID and DFID) to support health programs. During the 1990s and 2000s, Zimbabwe depended less on donor funds [5]. After a period of growth and stabilization in the health system of Zimbabwe, the 2007-2008 recession led to skills migration, low investments and limited resource allocation to health, while the burden of both communicable and noncommunicable diseases increased [13, 15].

The decline in economic growth between 2013 and 2017 crippled the health system, reducing its effort to rise during the late 2009-2012 economic recovery [15]. In 2016, food shortages due to drought led to communities surviving on imported processed foods. These

kinds of foods together with physical inactivity can lead to NCDs, thus escalating the burden of the disease in Zimbabwe [16].

Two main factors affecting the health care workforce in Zimbabwe have been limited financing and an exodus of trained personnel to other countries [17–19]. The Zimbabwe health system is largely dependent on nurses with doctors usually only seeing patients in the inpatient hospital [20]. In 2016, the country was operating at 57% staffing capacity with over 6,940 vacancies [16]. The health costs and the effects of hyperinflation have become a barrier to those seeking access to services and increased the financial burden of seeking care [12].

More needs to be done on policy formulation and implementation of NCD services. Zimbabwe has an operational NCD branch within its Ministry of Health and Child Care. Nevertheless, there is a need for a national comprehensive health care policy that integrates approaches for different NCDs as well as risk factor prevention [4]. There is no accurate morbidity data on the burden imposed by NCDs [21]. Zimbabwe has achieved substantial health advances; however, the country's successes are unclear due to the lack of morbidity data [15].

#### *Results from key informant interviews (KIIs)*

From the interviews with community adults and service providers, two sets of issues predominated:

- (1) Issues relating to the communities' understanding of NCDs and
- (2) Barriers affecting the consistency and responsiveness of service delivery.

In regard to point a), respondents said that screening and diagnosis cease to be helpful when it's difficult securing medications. For example:

Nurses and doctors would try to be polite while delivering the saddest news of no medications although it is the string that holds these patients' lives. (Community adult, CAC6)

At one point I took my friends' advice to alternate my medications with traditional herbs because I could no longer afford to buy the meds. (CAM4)

On the paper, it says that people are getting medications and universal treatment, nevertheless, on the ground it is derailing health services because the government cannot supply. (Health professional, HPS1)

Change and the ability for Gweru District to make any changes depends on the economic environment in the whole nation. At the moment pharmaceuticals are selling medications in USD and this can only be resolved by government policies, (HPGD1)

Nearly all community adults reported not understanding why they are not freed of the diseases, showing a misconception of NCDs. For example:

Why am I supposed to spend my entire life taking medication for hypertension and diabetes? Why can't I be freed from the diseases? (CAL3)

Most health personnel stated that the misconceptions have been largely due to traditional beliefs and beliefs about family history which leads to people not recognizing the importance of behavioral change. *"The knowledge gap needs to be bridged because even those on treatment have difficulties sticking to the regime given on the prescription. A person can only understand after being tested but before that, it is impossible especially when they feel okay,"* (HPGD4)

Regarding the barriers to service delivery, some activities identified were diagnosis and screening of NCDs, as well as the provision of health education and medication. Many people in both groups mentioned gaps such as lack of transport to health facilities, shortages of medications, poor equipment and community engagement. *"I desire to visit the health facilities . . . however, it becomes impossible with out of pocket payments and traveling costs with no guarantee to find the required medicines,"* (CAC3)

Suggestions on what Gweru District can do to improve care relating to NCDs include but are not limited to: training of nurses in the NCD department, provision of adequate resources (medication, IEC material and transport), outreach activities/satellite clinics, task shifting to ensure that nurses can also screen and check for NCDs and review of policies particularly those limiting nurses' participation. For example:

Let us have a comprehensive national NCD policy, ensure that all laboratories are equipped and all equipment is repaired. (HPGD1)

Task shifting . . . to ensure that nurses can also screen and diagnose for NCDs and not to wait for doctors who are already few in the field. The way forward is an integrated approach to NCDs. (HPGD2)

. . .bring together a holistic approach to the preventative side, the lifestyle modification, the nutrition side, dietary policies that inform patients and staff, and knowledge of what policies are in place. (HPGD1)

Table 2 gives a connected summary of both community adults and health personnel perspectives on NCD activities in Gweru District including, gaps encountered and suggestions.

HP/CA's knowledge on activities currently conducted	HP/CA's knowledge on gaps/challenges	HP/CA's opinions/suggestions on what needs to be done
(1) Sensitization meetings (2) Awareness campaigns (3) Outreach activities/satellite clinics (4) Diet counseling (5) Food demonstrations	(1) Nurses' training on NCDs are still limited (2) Limited human resources to track and handle NCD issues (3) No doctors at rural clinics (4) Outreach activities are dependent on the availability of fuel and vehicles (5) Long distances traveled to health facilities	(1) Decentralization of NCD programs to clinics (2) Job training of nurses who deal with the target group to help in early diagnosis (3) Medical nurses (task shifting to allow nurses to screen and check for NCD conditions [20] (4) Policies need to be reviewed especially (5) Enablers for example transport to health institutions and deployment of more doctors (6) Home testing should be encouraged
(1) Results-based funds (RBFs) to help in areas of financial need (2) Donor funds from the Midlands Diabetic Interest Group and Church of God	(1) Limited health financing on NCDs (2) Governance – limited political will on NCD issues	(1) The government should have an NCD fund and also a source for donors that can fund NCD programs (2) Equitable distribution of RBF to all NCDs (3) There is a need for organizations working on NCDs to have a feedback mechanism to indicate how stakeholders are looking at NCDs
(1) Screening and diagnosis (2) Provision of health education (3) NCD management (4) Supply of available medications	(1) Limited resources (medication, funds, equipment and infrastructure) (2) Failure to replenish stock (3) Clinics only have Outpatient departments	(1) Program to source affordable medication for patients (2) Equipment servicing and upgrading (3) Extension of clinics so that patients can also be admitted

**Table 2.** Summary of adults and health personnel' opinions/perspectives in Gweru District

## Discussion

The main purpose of the study was to address the question – “*In what ways and to what extent has the health system in Gweru District adapted to meet the needs of non-communicable diseases in adults in Gweru?*”

Numerous activities were mentioned including the provision of health education; provision of medications, if available; screening and diagnosis of NCDs; diet counseling and awareness campaigns. Zimbabwe has been focusing on tertiary level health care [4]; nevertheless, there is a lack of a comprehensive health care policy to boost the whole health system [13]. Development efforts have often been limited by corruption and irregularities [5]. Several respondents felt that the government needs to take more responsibility and leadership, rather than depending on other agencies. “*It is better to have an NCD fund and people are made to contribute a certain amount toward the fund as what is done with the HIV fund,*” (HPM5). “*The government if possible, should run its NCD programs and not depend on donors that can pull out at any minute*” (HPGD4).

Community adults interviewed were generally grateful, but were not fully satisfied with health services. While helpful, services were impeded by a lack of adequate medication availability. Respondents also reported a lack of long-term planning on human resources, procurement management and, importantly, accountability, transparency and good governance (including robust monitoring and evaluation) [22].

The escalating costs of medications at private pharmacies and its scarcity at the hospitals and clinics are a well-known problem. People now view the Gweru District health services as a struggling entity, largely dependent on help from other providers. Respondents suggested basing local pharmacies at different clinics to facilitate easy access to medications at cheaper costs. Results-based funding (RBF) has to be a great way to boost health financing. But mainly ends up assisting people over 65 [13]. A total of 13% of poorer families sustained catastrophic health expenditures in 2015 [22]. All of these are treatment-based services, while investment in preventive services remains low.

The economic and political situation in Zimbabwe has pushed people to the limit, with many seeking someone to blame. The economic and political structures continue to limit the health system’s functionality, [20] limiting the ability to develop responsive systems according to the criteria presented in Table 1 [2]. Community members are often not aware of systemic problems and think that health personnel are not doing enough.

Building community understanding of NCDs is critical. The lack of understanding about the nature and causes of NCDs in the community often affects their compliance in taking medications as well as preventive and behavioral advice. Lack of funds often leaves people resorting to alternative forms of treatment. Accurate data on prevalence and service use are often lacking due to the high use of traditional health care providers where data are not captured [14]. One option is for the government to have separate funds, specifically for NCDs to reduce the burden on the community and the health workers.

The respondents suggested many activities that need increased government funding. These included training of nurses in the NCD department, enactment of a national NCD policy, provision of adequate resources to health facilities, medical nurses trained in NCD screening to help the diabetes nurses, the extension of the hospital, provision of information education communication material. Given the high dependence on nurses [23], the health system should be flexible enough to give nurses advanced training and responsibilities. A supportive, responsive environment in health systems, supported by policies that emphasize prevention and self-care, is critical to address the growing challenges due to NCD in Zimbabwe [24].

The second part of the research question focused on the extent to which the Gweru District was and still is adapting to meet the needs of NCDs. The findings indicate significant remaining gaps. As in other countries, the situation with NCDs in Zimbabwe has taken many

by surprise [25]. Many Zimbabweans cannot afford medical care, especially for NCDs such as heart diseases, which are not as widespread as infectious diseases [5]. There are clear limits to what district health services can achieve and a clear need for strengthening of national health systems [26].

While NCDs are an important concern for both the government and the community, the level of focus and sustained investment has been low. Community education is critical and there is a need for more health workers who are properly trained to provide this. The health providers interviewed reinforced this need and indicated the need for more coordination and funding for prevention and health education.

The government should sponsor more campaigns to inform people that there are such kinds of illnesses/diseases. (HPL2)

### *Limitations*

Most documents reviewed are related to international practice in NCD care, rather than the actual situation in Zimbabwe. The political and economic situation in Zimbabwe had a major impact on responses meaning that responses reflected short-term crisis situations, rather than long-term trends.

### **Conclusion**

NCDs are a major and increasing cause of morbidity and mortality in all countries including Zimbabwe and the Sub-Saharan African region.

There is a need for an emphasis on the integration of existing policies and programs effectively, rather than developing numerous new programs. Interviewees indicated that many programs and teams have been initiated, but collapsed because no framework/model could guide their working together.

The way forward is to have an integrated approach to NCDs. (HPS1)

That is to say bring together a holistic approach to the preventative side, the lifestyle modification, the nutrition side, dietary policies that inform patients and staff and knowledge of what policies are in place. (HPGD1)

Let us have a comprehensive national NCD policy, ensure that all laboratories are equipped and all equipment is repaired, (HPGD2)

Each of the three responsiveness frameworks considered has something to offer, but they need to be adapted for realities in Zimbabwe. Overall, there is a need for an integrated national policy on NCDs, rather than numerous disconnected policies.

For a health system to be strong, there is a need for community participation and the recognition of policymakers to advocate for unprecedented resources, necessary policy formulation and encouragement of community intermittent engagement, (HPGD4)

Conflict of Interest: None

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