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Sharing Kenya's Devolution Solutions

## Enhancing Hypertensive/Diabetic Management Support through community pharmacy in Nairobi

<b>County:</b>	Nairobi City County		
<b>Sector:</b>	Health, Wellness, and Nutrition	<b>Sub-sector/Theme:</b>	Medical Services
<b>Keywords:</b>	Hypertensive/diabetic management, Ngaira diabetes/hypertension support welfare group, community pharmacy, E-pharmacy, Teleconferencing, Dnurse, non-communicable diseases, NCDs		
<b>Target Audience:</b>	Nairobi County Residents, other counties		
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<b>Context and Challenge</b>			

With 422 million people affected by diabetes<sup>1</sup> and 1.2 billion adults living with hypertension globally (as of 2023), mostly in low- and middle-income nations<sup>2</sup>, diabetes and hypertension are two major non-communicable diseases (NCDs) that pose a significant health challenge worldwide. Over time, the number of cases of the two illnesses has been rising gradually, which emphasises the need for efficient management techniques and strategies to enhance patient outcomes and reduce the disease's prevalence.

Global efforts to improve diabetes care and prevention are being made, for example, the World Health Organization's Global Diabetes Compact, which highlights the need for creative solutions to this health issue.

On the other hand, Sustainable Development Goal 3 (Good Health and Well-being) recognizes diabetes as a major non-communicable disease (NCD) and emphasises the need for comprehensive strategies to address its prevention and control.

In Kenya, hypertension and diabetes are significant health concerns, contributing to a substantial disease burden and posing challenges to the healthcare system. According to a major study done in 2015 — Kenya STEPwise Survey 2015 — which continues to be referenced by many institutions, including WHO, approximately 35% of adults aged 18-69 years have hypertension, while 6.5% have diabetes. These figures indicate a high prevalence of these conditions, underscoring the need for effective prevention and management strategies.

The management of diabetes and hypertension can be financially challenging for Nairobians. This is due to polypharmacy, where patients have to use multiple drugs to manage the condition, which contributes to the high cost of management, low quality of care and inconveniences. The cost of managing diabetes ranges from KES 5,000 to KES 20,000 per month, while the cost of managing hypertension ranges from KES 3,000 to KES 15,000 per month. These costs include medication, doctor's visits, laboratory tests, and other related expenses.

According to a survey carried out by the African Population and Health Research Centre (APHRC) to determine the prevalence of diabetes and hypertension in Korogocho and Viwandani wards in Nairobi City County, over 15% of the respondents were hypertensive, 8% were pre-diabetic while 4% were diabetic. This is a clear indication that diabetes and hypertension are a threat to the urban population and measures should be put in place to deal with the situation.

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<sup>1</sup> [https://www.who.int/health-topics/diabetes#tab=tab\\_1](https://www.who.int/health-topics/diabetes#tab=tab_1)

<sup>2</sup> <https://www.who.int/news-room/fact-sheets/detail/hypertension>

Although NCDs affect people from different social and economic backgrounds, those from informal settlements are the most affected due to their inability to access quality care and treatment.

### **Response and Actions (Solution Path)**

The Ngaira Health Centre, located in Nairobi CBD, Kenya, has gained recognition for its innovative approach to providing quality diabetic and hypertensive care. The centre was strategically selected due to its accessibility, enabling it to effectively address the challenges faced by individuals with these chronic conditions.

To tackle the multifaceted challenges in diabetic and hypertensive care, the centre implemented a comprehensive range of interventions. These interventions targeted four key factors: availing diverse treatment options, enhancing access to treatment services, reducing medication costs, and improving drug quality.

#### *Key Interventions:*

Ngaira Diabetes/Hypertension Support Welfare Group was formed and registered, establishing a community pharmacy where members pool resources together and access drugs at a subsidised price. In this case, a member of the welfare group contributes KSh 1,000 every month, out of which KSh 750 goes to drugs and KSh 250 goes to a revolving fund which acts as an emergency kitty.

The facility also initiated a process where patients can test themselves using the *Dnurse* app, communicate with the doctor through teleconferencing, and access drugs in the comfort of their homes through E-pharmacy, which is now utilising *boda boda* (motorbike) riders to deliver drugs, a process that reduces the travel time and expenses of patients and creates employment.

#### *How the e-pharmacy works*

To enhance access to diabetes and hypertension drugs, Ngaira Clinic has applied for a Code and link for E-pharmacy for its patients. In the meantime, before finishing their drugs, each diabetes patient pays KSh 1,000 into the Ngaira Diabetes Support Group bank account for the next month's supply and the payment alert is received by the Doctor In-charge, Nursing Officer In-charge and a community representative, for transparency. The patient then collects the drugs from the clinic. For patients who want the drugs delivered to their homes, they pay KSh 1,200 inclusive of a delivery fee. Upon confirmation of the payment, the officers in charge retrieve the patient's location information and/or nearest landmark and send them the drugs through a *boda boda* rider up to their doorstep. Thus, the E-Pharmacy is a subunit of the

community pharmacy for stable patients who only need a refill of drugs for the next month and don't need to see a doctor.

To increase the quality of drugs taken, the hospital moved patients from polypharmacy to simple high-quality fixed doses. The multiple drugs that diabetic/hypertensive patients were taking, were reduced to three (3) quality drugs. This has reduced the drugs taken by patients, hence lowering the cost and improving their health.

To achieve all these, Nairobi City County worked with various stakeholders like Highridge Pharmaceuticals Limited which contributed over 15 million worth of drugs, and Afya Pap which introduced the D-nurse gadget.

For posterity, the county partnered with Highridge Pharmaceuticals to supply drugs to the patients at a subsidised price for one and a half years. Ngaira has also been onboarded to Mission for Essential Drug Supply (MED) which allows for subsidised drugs. The county is also in the process of linking Ngaira Health Centre with the NHIF for reimbursement. However, with NHIF transitioning to SHIF, the efforts will be boosted since every person will easily access healthcare at Ngaira without any financial worries.

### **Outcomes and Results**

The facility has since May 2023 registered 1,378 people in the community welfare group who are now accessing quality health care and drugs at a lower price. As a result of the established revolving fund, any diabetic/hypertensive patient visiting the facility and has no funds to acquire drugs, can access free medication for 10 days.

A comprehensive diabetic/hypertensive clinic was established, providing access to quality diabetic and hypertensive care. The clinic has the following units: Change Diabetes in Children Programme (CDIC) with over 220 children receiving comprehensive diabetic care, Diabetes/Hypertension Clinic with over 1,000 clients, Diabetic Foot Care Clinic with 228 patients with essential diagnostic kit and wound management commodities, and Geriatric Clinics for the elderly. This helps with early diagnosis of diabetes and hypertension, reducing health complications and financial burden, hence improving the quality of life of Nairobians.

With the improved Diabetes/Hypertension care at Ngaira, the number of patients has been on the rise as seen in the above statistics. Some have travelled even from outside Nairobi City County to receive the care. This has been effective through a raft of measures in place including:

1. Sensitization through various media platforms, especially *Inooro TV*.
2. Spreading the information through word of mouth by the patients in the programme.
3. The Nairobi City County reaching out to other affected people through a raft of platforms, including through the Community Health Volunteers (CHVs).

The major outcomes of the Diabetes and Hypertension care patient programme are as follows:

1. Patients can now get high-quality drugs at a subsidised price; instead of spending KSh 5,000 per month on medication, they pay only KSh 1,000.
2. There is an increase in survivors, for instance, patients who have escaped amputation.
3. The partner pharmaceuticals have extended the drug supply period for the patients from 6 months to one and a half years.
4. The facility has also been registered with MEDS (Mission for Essential Drug Supplies) service for sustainable drug supplies. MEDS supplies drugs mostly to Mission hospitals but this partnership has seen them extend the service to the clinic's patients.
5. The clinic has managed to link its patients with other clinics for advanced medical attention. For instance, every last Thursday of the month, they get free eye and foot screening at the Mbagathi Hospital, Nairobi.

### **Lessons Learned**

There is a high burden of morbidity on non-communicable diseases and their treatment is very expensive. Hence, county governments should focus on helping people deal with NCDs, which have a very high financial burden on patients. Community pharmacies, self-help support groups and other social networks can be used to reduce the burden of the disease and prevent complications.

The high cost of effective NCD medications presents a major challenge. Negotiations with pharmaceutical companies to subsidize drugs can alleviate this burden and ensure wider access to essential treatments.

Managing a cohort group is cheaper because of their known needs hence, easy to budget and bargain large discounts during procurement for them. From the success of the project, it is evident that Public Private Partnership (PPP) is very critical in service

delivery. Engaging both internal and external stakeholders has a great impact on serving the public.

### **Recommendations**

To improve NCD management, counties should establish model diabetic/hypertensive centres and implement digital green book registers for all affected patients. This will enhance commodity consumption budgeting and planning for diabetes and hypertension cases. Collaboration with patients and stakeholders is crucial to reduce the financial burden of NCD care.

Establishing a consumption register will improve medical supply management and enable negotiations for larger discounts from pharmaceutical companies. Additionally, well-structured data collection is necessary to support research on NCD burden and drug efficacy.

### **Further reading:**

1. Dnurse  
<https://play.google.com/store/apps/details?id=com.dnurse&hl=en&gl=US&pli=1>
2. Kenya National Bureau of Statistics. World health organisation, Ministry of Health (2015). *Kenya STEPwise survey for non-communicable diseases risk factors 2015 report*. Nairobi: Kenya National Bureau of Statistics; 2015.  
<https://statistics.knbs.or.ke/nada/index.php/catalog/24>
3. Mwaleso Kishindo, Kamano, J. H., Mwangi, A., Andale, T., Grace Wandia Mwaura, Limo, O., Too, K., Mugo, R., Maree, E., & Aruasa, W. (2023). "Are Outpatient Costs for Hypertension and Diabetes Care Affordable? Evidence from Western Kenya." *African Journal of Primary Health Care & Family Medicine*, vol. 15(1). Published online on 29 Sept. 2023,  
<https://doi.org/10.4102/phcfm.v15i1.3889>

## Pictorial evidence



Deteriorating condition of patients due to poor quality care



L. Multiple drug intake before (Polypharmacy) vs R. Simple high-quality dosage currently administered



L. Patients waiting to receive hypertensive/diabetic care. R. Improving condition of a patient after shifting from polypharmacy to 3 quality drugs



The In-charge at the Ngaira Diabetic Clinic engaging with external stakeholders





*The In-charge of the facility receiving drugs and other medical supplies*