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Evaluating Availability of Fixed-Dose Combinations (FDCs) for Hypertension Management in Kiambu County, Kenya

ISSUE BRIEF

Background

Hypertension, often referred to as the "silent killer," is a leading risk factor for cardiovascular diseases (CVDs) and mortality worldwide (2). Low-and middle-income countries (LMICs) disproportionately bear the burden of hypertension, with the majority of CVD-related deaths occurring in these regions (2). A recent study in Kenya revealed that 24.5% of individuals aged 16-69 have hypertension. Among them, only 15.6% were diagnosed, of whom just 26.9% were receiving treatment, and only 51.7% of those on treatment had their blood pressure under control (3). These statistics reveal significant gaps in the detection, treatment, and management of hypertension in Kenya.

To address these gaps, it is crucial to identify individuals at the highest risk of cardiovascular diseases and ensure they receive appropriate treatment to prevent premature mortality. One promising yet underutilized strategy in the treatment of hypertension is the use of fixed-dose combinations (FDCs), which combine two or more antihypertensive agents into a single pill. Evidence supports that FDCs can enhance treatment adherence and improve blood pressure control, thereby potentially easing burdens on patients, healthcare providers, and supply chains (4).

In Kenya, nine FDCs are included in the Kenyan National Essential Medicines List (amlodipine + hydrochlorothiazide, amlodipine + indapamide, perindopril + amlodipine, perindopril + amlodipine + indapamide, losartan + hydrochlorothiazide, lisinopril + hydrochlorothiazide, telmisartan + amlodipine, telmisartan + hydrochlorothiazide and telmisartan + amlodipine + hydrochlorothiazide) (5) and are recommended in the treatment guidelines (6). However, their use still remains dismal.

This policy brief presents findings from small survey conducted alongside a qualitative study examining acceptability of FDCs for patients, caregivers, and health-care workers in Kenya and inform strategies to improve implementation of FDCs. The survey aimed to evaluate the availability and cost of FDCs in Kiambu county.

Key Messages

- FDCs remain underutilized in the management of hypertension in public health facilities - only 1 of the 9 FDCs listed in Kenya's EML was available across the public facilities surveyed in Kiambu county.
- The combination of losartan + hydrochlorothiazide was available across all the public health facilities in Kiambu county.
- Counties should increase procurement of a wider range of affordable FDCs in line with the Kenyan EML and cardiovascular treatment guidelines.
- Priority in procurement can be given to combinations of calcium channel blockers and angiotensin II receptor blockers (.e.g. amlodipine + losartan), which have been shown to be more effective in black populations from a recent study (1).

Methods

Using the World Health Organization Country Assessment Platform (WHO CAP) (7) data collection platform, we surveyed 7 purposively selected public health facilities (1 level 5 hospital, 2 level 4 hospital, 3 health centres and 1 dispensary) as well as 7 conveniently selected community pharmacies adjacent to these public health facilities. We collected data on the facility type, FDCs available in stock (Class name, full medicine name, brand name, drug manufacturer) as well as pricing per pill.

Key findings

Availability of FDCs in Kiambu County

In public health facilities, only combinations of telmisartan (ARB) + hydrochlorothiazide (diuretic), and losartan (ARB) + hydrochlorothiazide (diuretic) were available, with the most common brand being Carditan H, which is locally produced. Community pharmacies had more FDCs available, with the majority being dual combinations of ARBs and thiazide diuretics (telmisartan+ hydrochlorothiazide, losartan + hydrochlorothiazide and Ibersartan + hydrochlorothiazide), as well as triple combinations of a calcium channel blocker (amlodipine) angiotensin II receptor blocker (losartan) and a thiazide diuretic (hydrochlorothiazide).

Six (combinations of amlodipine + hydrochlorothiazide, amlodipine + indapamide, perindopril + amlodipine, perindopril + amlodipine + indapamide, lisinopril + hydrochlorothiazide, telmisartan + amlodipine) out of the 9 FDCs included in Kenya's EML were not available in any of the public health facilities and community pharmacies we surveyed (Figure 1).

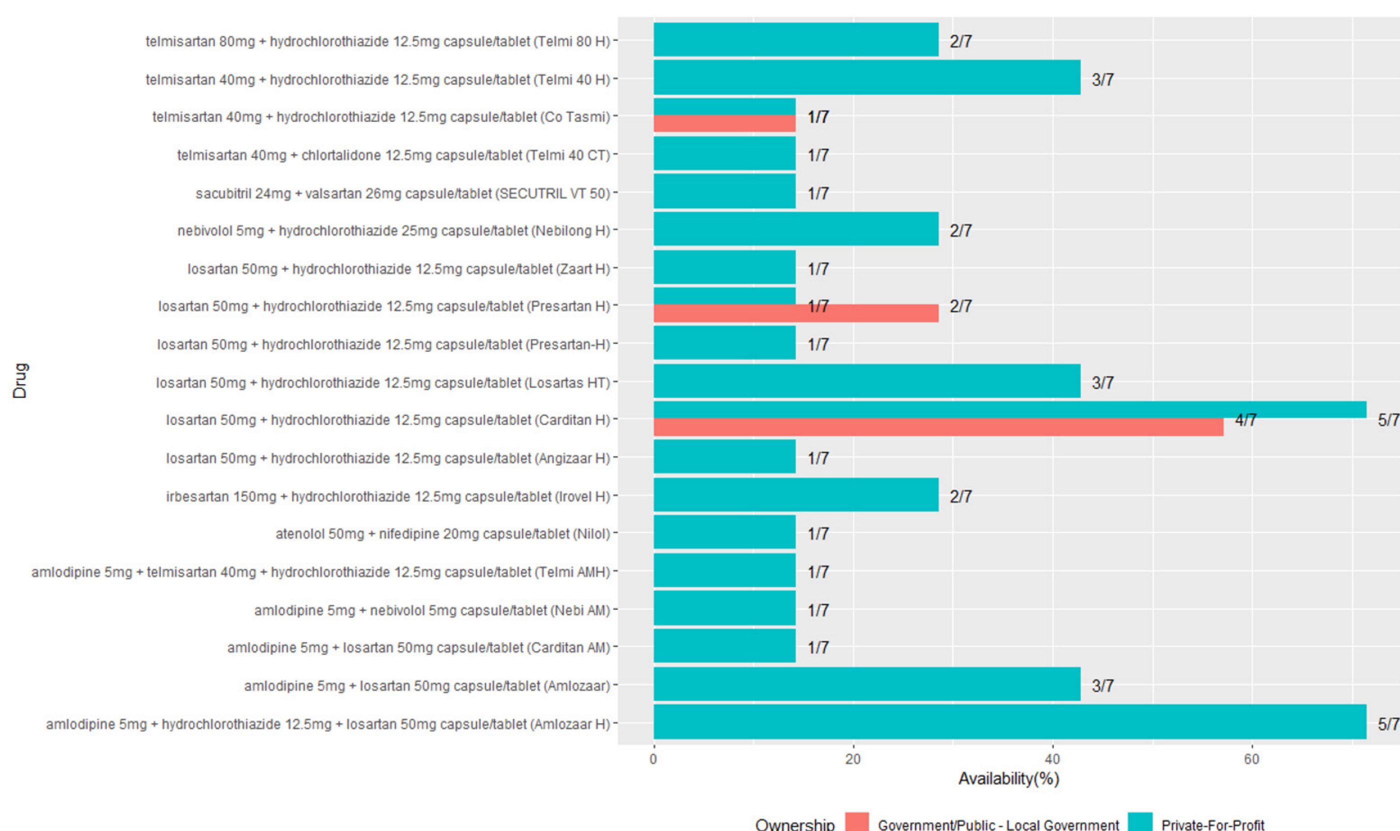

Figure 1: Availability of FDCs in Kiambu county

Direct medication (FDCs) costs to patients

FDCs available in level 3 health facilities (health centres) were provided to patients free of charge. These were mainly combinations of losartan + hydrochlorothiazide.

Some combinations of ARBs and diuretics tended to be cheaper, ranging from Ksh.7 (losartan + hydrochlorothiazide) to Ksh. 30 per pill (Telmisartan + hydrochlorothiazide) and therefore more available in public health facilities. Similar class of drugs in private community pharmacies ranged from Ksh. 10 per pill (losartan + hydrochlorothiazide) to Ksh. 72 per pill (telmisartan + hydrochlorothiazide). Further, our findings show that within the same class of drugs (ARBs + diuretics), FDCs with losartan tended to be cheaper compared to those with telmisartan.

Private community pharmacies had a wider range of medication and wide range of retail prices, from Ksh. 10 per pill (losartan + hydrochlorothiazide) to Ksh. 105 per pill (sacubitril + valsartan) as shown in figure 2. This suggests that the private sector may cater to a wider market segments, providing both cheaper options that may be similarly priced in government health facilities (i.e. combinations of losartan+hydrochlorothiazide).

Within the community pharmacies, some FDCs like Amlozar H (Amlodipine+hydrochlorothiazide+losartan) and Telmi 40 H (Telmisartan+hydrochlorothiazide) had multiple pricing points indicating variability even within the same drug provided by different private entities.

With the minimum monthly wage in Kenya being Ksh. 15,201, the wide variability in prices may mean that patients living with hypertension may spend anywhere between 1.4% to 20.7% of their income on medication.

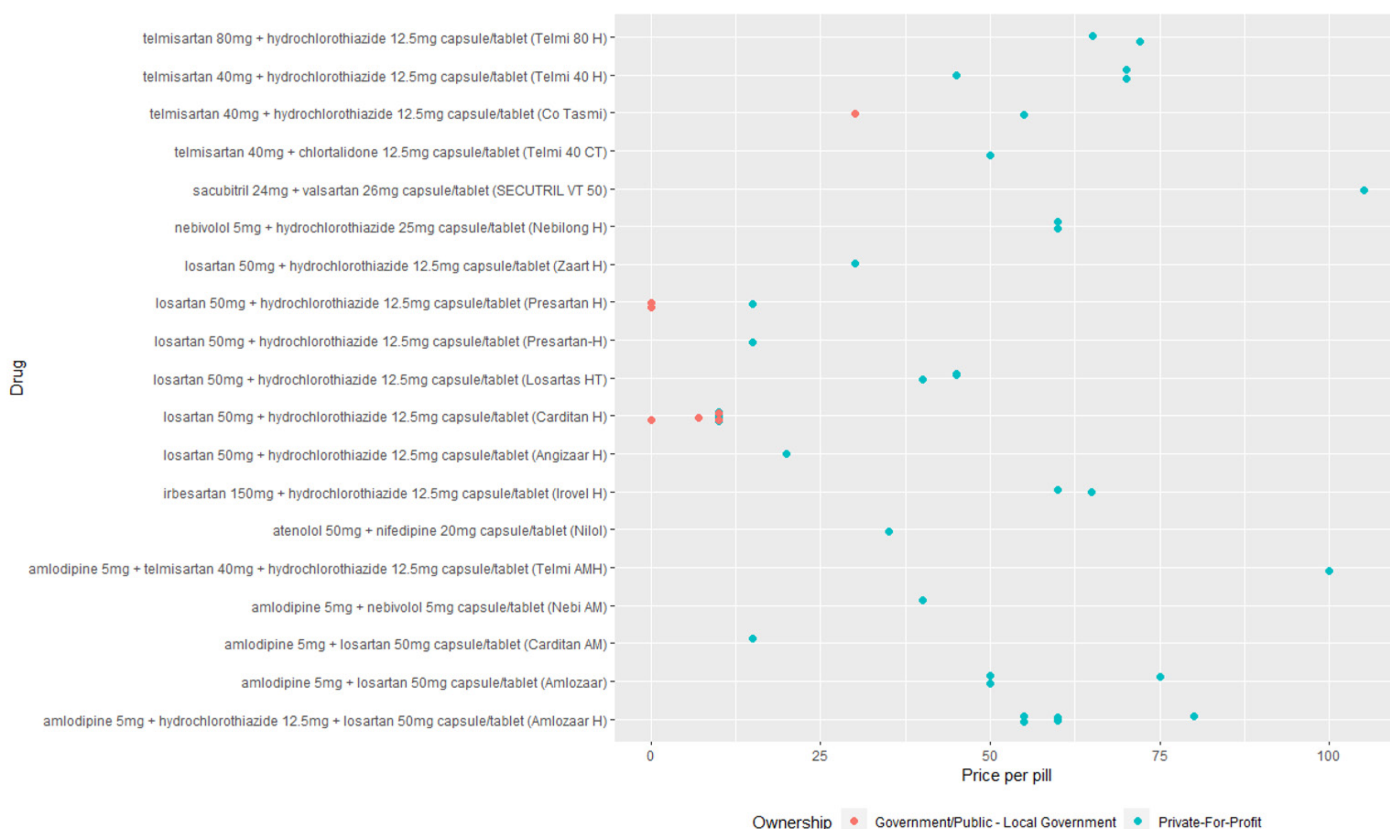

Figure 2: Price per pill of FDCs in Kiambu county

Priority actions

- Increased budget allocation at the county level for NCD medication to ensure consistent availability of a broader range of antihypertensive medication.
- Procurement of a wider range of FDCs in line with Kenyan EML and treatment guidelines, prioritizing locally manufactured FDCs and those containing ARBs and calcium channel blockers.
- Inclusion of more affordable FDCs in Kenya Medical Supplies Agency (KEMSA) facility ordering list.
- Capacity-strengthening of healthcare providers on the latest treatment guidelines and the use of FDCs in hypertension management to improve their uptake.

References

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This policy brief was developed by Daniel Mbuthia, Adrianna Murphy, Ruth Willis and Jasmine Hine
For more information, contact dwaweru@kemri-wellcome.org or Adrianna.Murphy@lshtm.ac.uk