

ANTIMICROBIAL RESISTANCE: A PHOTOVOICE STUDY ON MEDICINE USE IN INFORMAL SETTLEMENTS IN NAIROBI



2026





Photovoice is a participatory arts-based research methodology that empowers community members to capture and reflect on their experiences and environments in relation to a social or health issue through photography (Wang & Burris, 1997). The photos are used by the photographers to create narratives that provide context and personal insight into the issue.

This photovoice study was conducted by LVCT Health, as part of the GEAR Up project that sought to catalyse action on gender and equity in Antimicrobial Resistance (AMR), supporting stakeholders in low- and middle- income countries to understand how AMR affects different societal groups and formulate tailored action plans.

Over three weeks in March 2025, the study explored the behaviours, social norms and systemic factors shaping medicine use, including antimicrobials and AMR by the Raila Village community in Mugumoini Ward in Nairobi County.

A purposively selected cross-sectional sample of members of the community, including Community Health Promoters (CHPs), young (18-40 yrs) and older (40 and above) men and women, people living with disabilities, and caregivers of vulnerable populations, namely caregivers of children under five years and persons requiring constant medication, participated. Raila is a densely populated informal settlement in Western Kibera, where many residents face overcrowded housing, limited clean water, poor sanitation, and constrained access to formal healthcare.

The aim of the study was to generate actionable insights to inform the design of community-driven, gender- and equity-sensitive interventions and policy recommendations to enhance Kenya's National Action Plan on Antimicrobial Resistance (AMR) and serve as a model for other low- and middle-income settings.

This booklet presents a sample of photos with captions.



Henry Savai, a 71-year-old man



Eliakim Odado, a 60-year-old man living with disability



Titus Ndonga, 44-year-old male caregiver of a person requiring constant medication



Josina Achando, a 44-year-old woman living with disability



Fr. Samson Otieno, Community Research Assistant



Sheila Mueni, a 48-year-old female CHP



Irene Auma, a 41-year-old woman



Cyrus Mbeki, a 26-year-old young man



Benard Mutachi, 50-year-old male CHP



Roselyne Kavoshi, 33-year-old female caregiver of a child under five



Sinthia Ogada, a 29-year-old young woman



Patrick Mulwa, Community Research Assistant



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Where do people get medicine?

We first asked photovoice participants to take photos of where members of the community regularly get medicines. The reason for this was to understand access pathways to medicines, to evaluate prescribing and dispensing practices, to understand the social and economic drivers of medicine-seeking behaviour and to attempt to connect health-seeking behaviour with AMR risk.

- People access medicines in various ways in the community, including from kiosks, chemists, HPs, herbalists, and local health facilities.
- Chemists were the most accessible and preferred sources of medicine. They are convenient, keep flexible hours, maintain confidentiality, and are willing to extend credit.
- However, medicines from chemists or shops are usually obtained without a prescription, thus increasing the likelihood of unsafe use that can contribute to AMR.



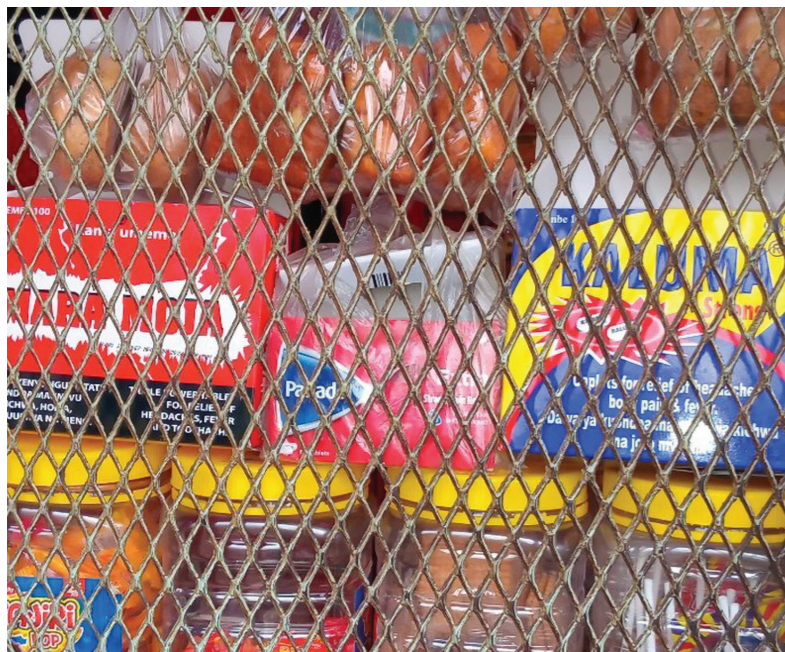
This is the public facility where people receive services. We are getting guided, trained and get information on how to take care of people we care for.

(Titus Ndonga, 44-year-old male caregiver of a person requiring constant medication)



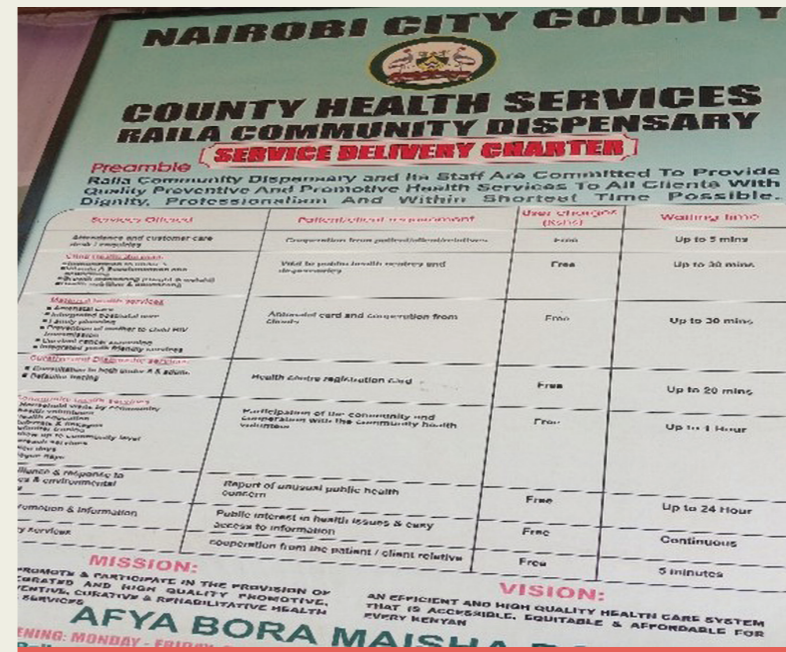
These are traditional medicines and herbs. When people trust these herbs, they can work. One patient I am nursing is using them, and they are effective.

(Titus Ndonga)



A photo of a local kiosk. Most medicines that relieve pain like Mara Moja, Kaluma and Panadol are sold at the local kiosks which are easily accessible even at night. The kiosks are always the first point where I buy pain-relieving medicines.

(Roselyne Kavoshi, 33-year-old female caregiver of a child under five)



A photo of Raika Community Dispensary. As a CHP I always get medicines like paracetamol, dewormers and Oral Rehydration Solution from this facility to distribute to the community whenever they are in need.

(Sheila Mueni, 48-year-old female CHP)



A photo of a chemist's shelf. A lot of people including me get our medicines from the chemists with or without prescriptions but mostly people just go buying medications with no prescriptions whenever they feel unwell. For instance, I can go to a chemist and the medicine costs six hundred shillings. After explaining it to him that I have no money or can't afford that much we come to an arrangement where I can pay in installments like for 150 but this is in small dose.

(Titus Ndonga)



I usually get medicines from this hospital, for now the doctors have gone for lunch that is why there is nobody at the waiting bay.

(Irene Auma, 41-year-old woman)



A CHP emergency kit bag...they usually are the forefront to help us with medicines when we need them.

(Josina Achando, 44-year-old woman living with disability)

A local shop dispensing medicines through a window from his house... the owner of the shop cannot expose you outside, its confidential.

(Eliakim Odado, 60-year-old man living with disability)

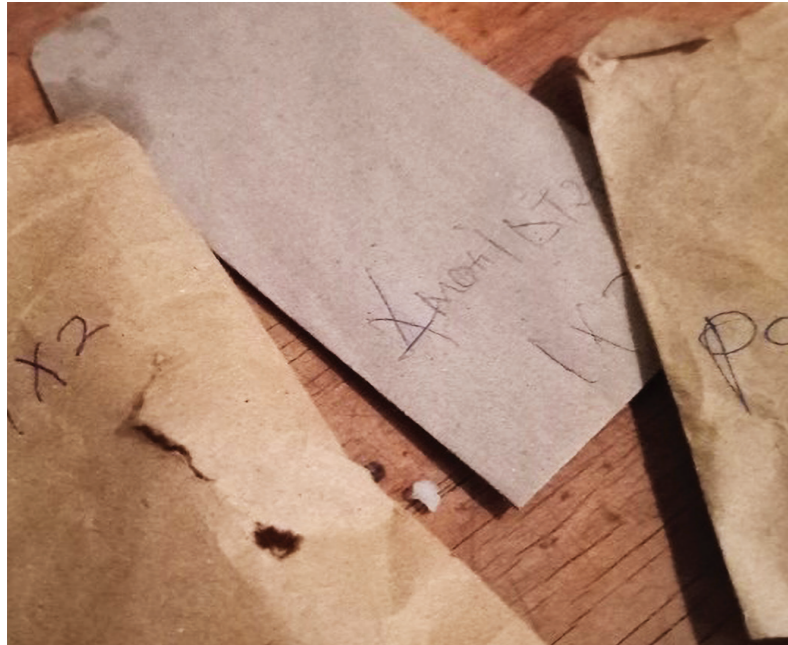


SECTION 2

What medicines are used in the community?

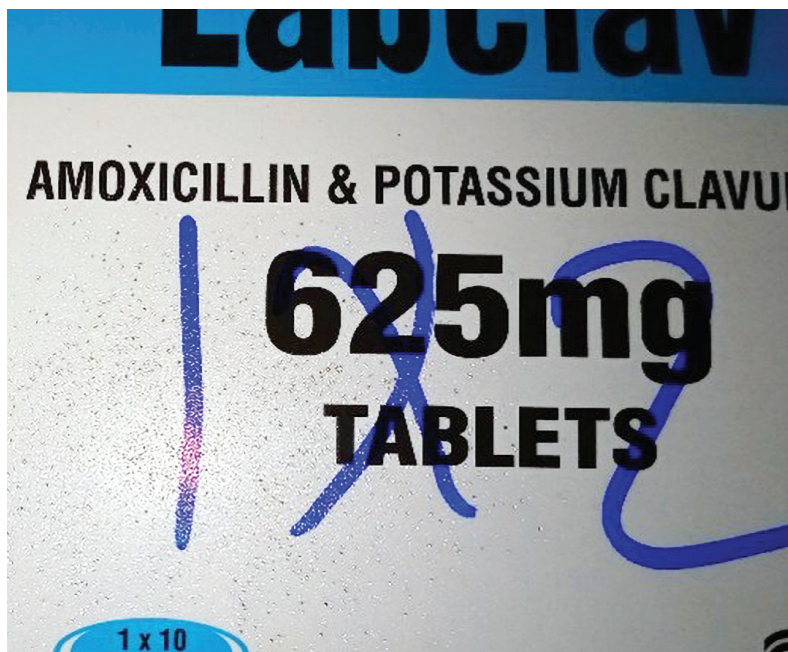
We asked photovoice participants to take photos of medicines that are regularly used in the community. The essence of this theme was that understanding the medicines that are most frequently consumed, allows us to assess the potential risk of resistance. A wide range of medicines are frequently consumed in the community, including painkillers, antibiotics, anti-inflammatories, antipyretics, hypertension medicines, and herbal medicines.

In two instances participants erroneously claim that some medicines treat conditions they are not meant to. One claims that amoxicillin/potassium clavulanate, an antibiotic, is used to manage high blood pressure, while the other says Cardace to treat ulcers, yet it is used to treat high blood pressure heart failure, and reduce the risk of heart attack and stroke. These are cases of wrong drug use with high AMR risk.



Envelopes with medicine prescriptions like 1x2. These are the instructions that one is supposed to take when handling drugs for patients. Most care givers lack knowledge of prescription when dispensing drugs to patients.

(Titus Ndonga)



This is medicine used for high blood pressure, which is common in elderly people. Elderly people need money for their drugs since they are expensive and they have little resources.

(Titus Ndonga)

These are children's paracetamol syrups found at the clinic. There are a lot, that shows you that there are a lot of fever cases in children around here.

(Sheila Mueni)





Sunscreen used by people who have a skin like mine...it helps in maintaining skin.

(Josina Achando)



Most aged people with a disability like me use it to apply in their joint for pain relief.

(Eliakim Odado)



Medicine used for ulcers and it's very effective.

(Eliakim Odado)



These are antibiotic drugs that I captured at the pharmacy. They are the common antibiotics dispensed at the clinic for the community's consumption.

(Sheila Mueni)



Looking at the young men, you will find that for a whole day they are in the river looking for metals, nails or plastics. In the process they get into contact with dirty water, lots of dirty things since this is their daily routine in the process they get skin rashes. Such like drugs help solve the allergy and skin problems.

(Cyrus Mbeki, 26-year-old man)

SECTION 3

What happens when medicine doesn't work anymore?

Photovoice participants focused on what happened when medicine did not work anymore. The photos under this theme were meant to help us understand participants' treatment decision pathways, including alternative care-seeking pathways, to explore their recognition of treatment failure, and to gauge their awareness of AMR.

- The photos show switching treatments by turning to hospitals, herbalists, traditional healers, prayers, or substance consumption like alcohol and cannabis, or resigned acceptance of treatment failure. The photos thus reveal a pluralistic medical landscape in the community, where biomedical epistemology co-exists with the religious, traditional, and herbalist conception of healing.
- Furthermore, photos show that hospitals are not always the first resort when people get ill. Self-medication is common in the community.
- Photos also show that participants do not attribute resistance to microbes, but “weak drugs,” “drugs resisting,” and “everything.” This suggests that community members have limited biomedical understanding, particularly regarding microbes and how medicines are classified based on the specific micro-organisms they target.

The leaf symbolizes bhang [cannabis] which is used to cure diseases like measles in children. When a child is sick you blow a bhang smoke puff on their face and they will get cured of measles.

(Roselyne Kavoshi)



A photo of a church. In my community, when medicine doesn't work, we always seek divine healing from our churches.

(Roselyne Kavoshi)





As a young man could be I headache and was given three varieties of medicine to take and the prescription is one times three. When this doesn't work then I do self-prescription whereby I overdose and double the drugs to get relieved. Or I choose to take all the drugs at once in the morning contrary to the prescription, thinking that I shall have increased the strength.

(Cyrus Mbeki)



When faced with drug resistance the first thing we rush into is drug abuse like alcohol. We feel such may help us when the drugs become resistant.

(Cyrus Mbeki)

A photo of a car on the driver's side symbolizing transport used during referrals. When medicine doesn't work, we are always referred to big hospitals like Mbagathi or Kenyatta Hospitals and since there are no ambulances in my community, we always hire private cars to take the sick to the hospital.

(Sinthia Ogada, 29-year-old woman)



SECTION 4

Where do you get advice for medicine?

The fourth theme aimed to determine where community members sought medical advice when they needed it. From this theme, we hoped to understand the trusted sources of health guidance and whether clinicians and trained providers are involved in guiding antimicrobial use.

- The photos taken show that health decisions around medicines in Raila village are highly social, where community members seek advice on medicine from significant others such as mothers, neighbours, spouses, and Community Health Promoters.
- Likewise, women seem to play an important part in offering advice on medicine.
- The highly social nature of health decisions around medicine appears to contradict the dominant framing of medicine use and AMR as emerging from individual choices and moral responsibility that results in “misuse.”
- The highly social nature of health-seeking behaviour in informal communities suggests the importance of community solidarity and networks.



A selfie of me. Anytime I am not feeling well I always think to myself I should visit the chemist or hospital to get checked.

(Roselyne Kavoshi)



A photo of a pair of boots. The boots symbolize my husband because they are his. Whenever anybody in our home is sick, we always seek advice from my husband because I know he has our best interests at heart.

(Roselyne Kavoshi)

A photo of a woven mat. It symbolizes my mother, personally when I get sick before I seek medical advice, I always call my mother for help because she has a passion for good health and her advice is always on point.

(Sheila Mueni)





A photo of a man and a woman holding hands going to hospital. Men find it difficult to go to the hospital, when they fall sick at home, they just take painkillers. When our wives see our condition getting worse, they advise and take us to hospital.

(Henry Savai, 71-year-old man)



This is my neighbor...she usually advises me when I am sick on which hospital to go to.

(Irene Auma)

I usually advise myself first when my child is sick and show love to my children by making the right decision on medicine use with my children.

(Josina Achando)



A photo of Community Health Promoters' bag. CHP's always walk door-to-door educating us on matters of health, so sometimes when they find you not feeling well, they always encourage you to visit the hospital.

(Henry Savai)



Mum is very loving, confidential... it is good to have a mum who can advise you on the type of medicine to use before going to the hospital it is good to have a mum than a father... a mother always takes full responsibility when a child is sick.

(Eliakim Odado)



In this photo, I can see the Kenyan government symbol and some writing at the local chief's office during a baraza. It shows how chiefs and the government guide people in the village on how to use medicine. Personally, I get most of my advice about medicines and information on nearby government health facilities from these community barazas.

(Cyrus Mbeki)



What happens to leftover medicine?

The theme about what happens to leftover medicine, was intended to understand the disposal, storage, adherence, and reuse practices of medicines by community members, and how these may contribute to unsafe use, distribution, risk of AMR and environmental contamination.

- Participants' photos illustrate that medicines, including antibiotics, are stored for future use. This may result in medicine re-use without diagnosis, wrong use, or incorrect dosing, which can create AMR.
- Common disposal sites depicted in the photos include latrines, sewers, garbage pits, rivers, and community bins.
- Disposing of medicines in garbage bins and community bins runs the risk of children and animals accessing and consuming the medicines. Waste pickers can also access, retrieve, and resell the medicines.
- The medicines, as well as those disposed of in sewers and rivers, can result in soil and water contamination, resulting in AMR.



A photo of leftover medicine in a drawer. Personally, when medicine is left over, I always store it for future use because, as a caregiver with a small child, I cannot afford not to have Panadol or Piriton syrup in my house.

(Roselyne Kavoshi)

The latrine is a safe way of disposing of leftover drugs. It also shows our hygiene when disposing of drugs.

(Titus Ndonga)



Leftover drugs being burnt. It's the best way of disposing of drugs.

(Titus Ndonga)





A photo of a garbage pit where people throw leftover medicines. In the community we have open garbage areas where people throw leftover medicines, and this is not a safe practice.

(Sheila Mueni)



Leftover medicines should be thrown in the river for them to flow to the dam.

(Irene Auma)



Young man who works mostly collects garbage within the community; the gunny bag he is carrying is meant for garbage the same bag also carries the drugs that have been used. He is going to dispose of them in the community bin. As young men back in the community, it is us who are doing garbage collection. It is us who help in the disposal of the leftover drugs.

So, this is how disposal of leftover drugs occurs.

(Cyrus Mbeki)



A picture of “mtaro” (sewage) where most of the people dispose of the leftover drugs in the community.

(Sinthia Ogada)



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