

Enhancing Healthcare Accessibility in Nairobi County

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Project: Healthcare Infrastructure Gap Analysis

The problem

Table 1:Household Access Gaps for Key Services

Service	Service_Description	Coverage_%	Households_Without_Access
C-IMCI	Child Health Services	7.6	1,392,365
ART	HIV Treatment	11.6	1,332,089
HBC	Home-Based Care	26.5	1,107,563

The Problem:

Severe service gaps are leaving millions without access to essential healthcare

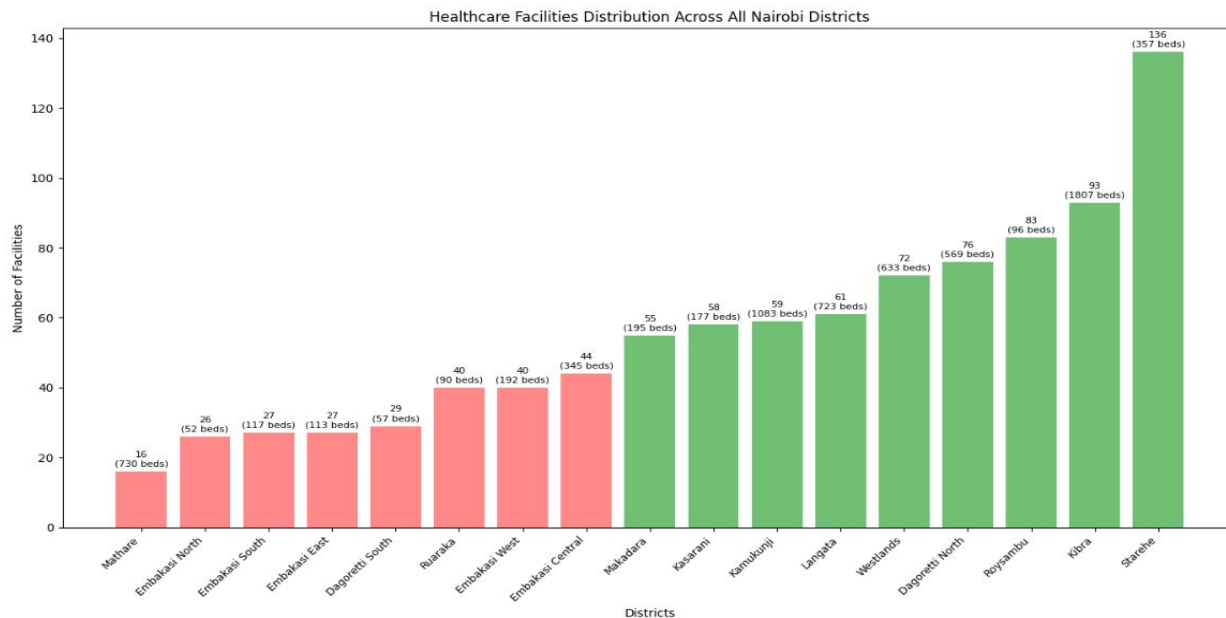
Most Critical Gaps:

- Child Health Services: Only 7.6% of facilities equipped , 1.4M households affected
- HIV Treatment: Only 11.6% coverage , 1.3M households affected

Table 2:Healthcare Infrastructure Summary

Metric	Current_Value
Total Healthcare Facilities	942
Total Hospital Beds	7,336
Population Served	4,337,080
Number of Households	1,506,888
Average Household Size	29.0
Facilities per 100K Population	21.7
Beds per 1,000 Population	1.69
Households per Facility	1600
People per Facility	4604

Geographical Analysis



Key Insight:

- 50+ facilities per district appears to be the threshold for adequate coverage.
- 8 districts fall critically below this level.

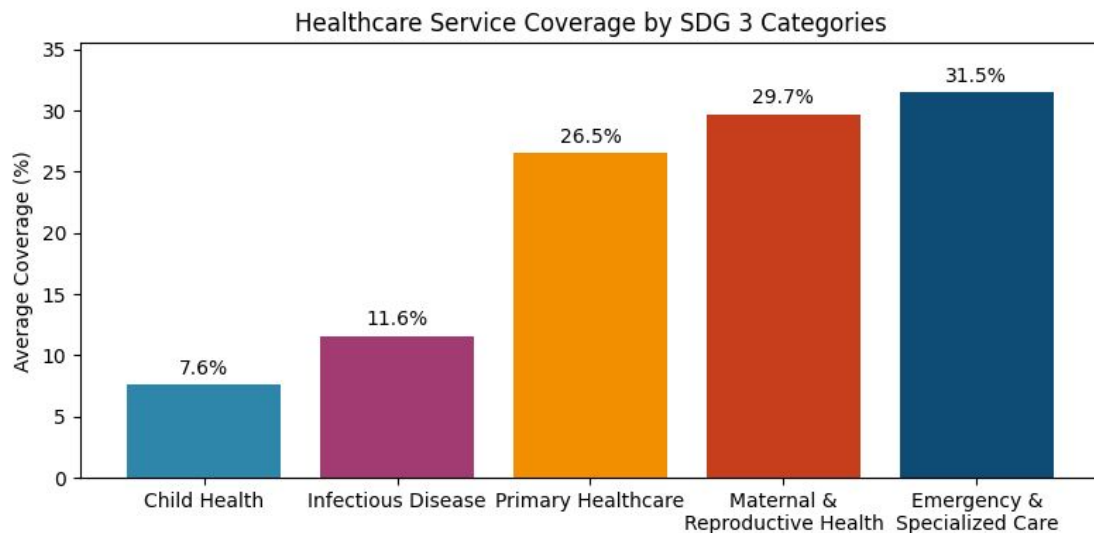
Priority Investment Districts:

- Mathare, Embakasi North, Embakasi South, Embakasi East, Dagoretti South, Ruaraka, Embakasi West, Embakasi Central

Well-Served Districts:

- Starehe, Kibra, Roysambu show adequate coverage but need service enhancement

Service Analysis



Key Insight:

- No healthcare category meets minimum service standards.
- The root cause maybe most existing facilities lack essential equipment, trained staff, or resources.

Critical Priority Services (Under 30% coverage):

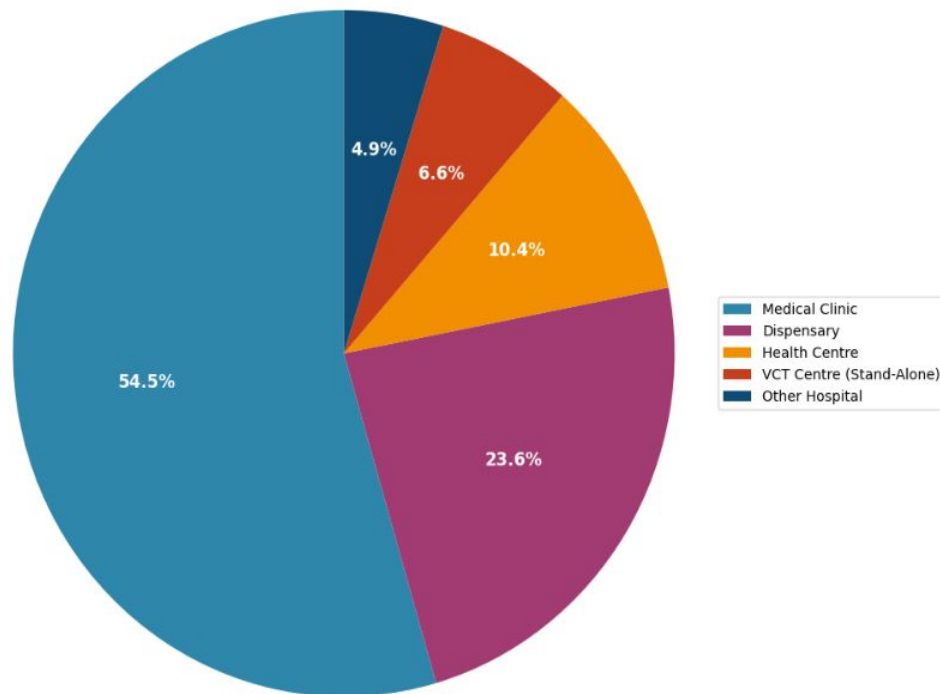
- Child Health Services: Only 7.6% coverage across facilities
- Infectious Disease Control: Only 11.6% coverage including HIV/TB services

High Priority Services (Under 35% coverage):

- Primary Healthcare: 26.5% coverage (basic outpatient services)
- Maternal & Reproductive Health: 29.7% coverage (family planning, antenatal care)
- Emergency & Specialized Care: 31.5% coverage (inpatient, emergency services)

Infrastructure Assessment

Healthcare Facility Distribution by Type



Primary Care Dominance (78.1% of all facilities):

- Medical Clinics: 54.5% (513 facilities) Primary care backbone
- Dispensaries: 23.6% (222 facilities) Community-level access points

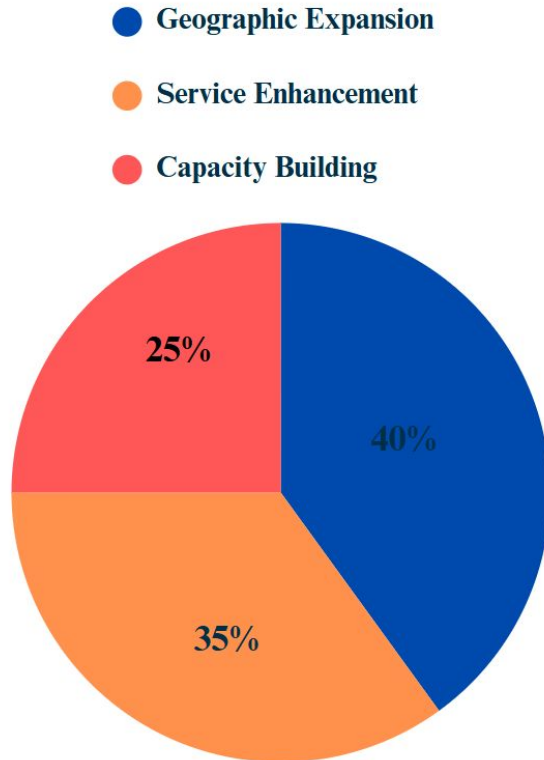
Intermediate and Specialized Care (21.9% of facilities):

- Health Centres: 10.4% (98 facilities) - Enhanced primary care
- VCT Centres: 6.6% (62 facilities) - HIV testing and counseling
- Other Hospitals: 4.9% (46 facilities) - Secondary/tertiary care

Key Insight:

- Nearly 4 out of 5 facilities provide primary healthcare services - excellent foundation for service expansion

Solution (Investment Strategy)



PILLAR 1: Geographic Expansion (40% of budget)

- Build 15-20 new facilities in Embakasi East, Dagoretti South, Ruaraka
- Target: Minimum 50 facilities per district

PILLAR 2: Service Enhancement(35% of budget)

- Equip 200+ existing facilities with C-IMCI (child health) capabilities
- Establish ART services in 50 high-capacity facilities
- Expand family planning to all medical clinics and health centers

PILLAR 3: Capacity Building (25% of budget)

- Add 500+ hospital beds in high-demand districts
- Upgrade 30 dispensaries to health center level
- Train 300+ healthcare workers in priority services

Data and Assumptions

Data Sources Used

- Health Facilities Dataset - 942 facilities across Nairobi with service and capacity data
- Kenya Population and Housing Census 2019 - 4.3M population, 1.5M households

Key Assumptions Made

- Current dataset assumed to reflect 2025 healthcare landscape conditions.
- County average household size of 2.9 people applied uniformly across all districts.

Analytical Limitations

- District-level population data unavailable, preventing precise calculation of population-to-facility ratios by district.
- Service quality data not available, limiting analysis to service availability rather than quality assessment.

References

[1] United Nations, "SDG 3: Ensure healthy lives and promote well-being for all at all ages," *Sustainable Development Goals*, 2023. [Online]. Available: <https://sdgs.un.org/goals/goal3>

[2] Kenya National Bureau of Statistics, "2019 Kenya Population and Housing Census," *Open Africa*, 2019. [Online]. Available: <https://open.africa/dataset/2019-kenya-population-and-housing-census/resource/111a3d9d-c676-4d5a-9600-d5acb1250b87>

[3] Kenya Ministry of Health, "Health Facilities in Kenya," *Open Africa*, 2023. [Online]. Available: <https://open.africa/dataset/health-facilities-in-kenya/resource/0257f153-7228-49ef-b330-8e8ed3c7c7e8>