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Demand and supply side barriers and opportunities to enhance access to healthcare for urban poor populations in Kenya: a qualitative study

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2
3 1 Title: **Demand and supply side barriers and opportunities to enhance access to healthcare**
4 2 **for urban poor populations in Kenya: a qualitative study**

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1
2
3 21 **Abstract (298)**
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5
6 22 **Objective:** To explore the current barriers and recommendations to improve access to quality
7
8 23 healthcare for the urban poor

9
10 24 **Design and participants:** Qualitative approach. In-depth interviews (n=12) and focus group
11
12 25 discussions with community members (n=12) and Key informant interviews with health
13
14 26 providers and policymakers (n= 25) were conducted between August 2019 and September
15
16 27 2020. Four feedback and validation workshops were held December 2019 and April-June
17
18 28 2021.

19 29 **Setting:** Korogocho and Viwandani urban slums in Nairobi, Kenya.

20
21 30 **Results:** The socioeconomic status of individuals and their families such as poverty and lack
22
23 31 of health insurance interact with community factors like poor infrastructure, limited
24
25 32 availability of health facilities and insecurity; and health system factors such as limited
26
27 33 facility opening hours and health providers' attitudes and skills and limited public health
28
29 34 resources to limit healthcare access and perpetuate health inequities. Limited involvement in
30
31 35 policy formulation processes by service providers and other key stakeholders was identified
32
33 36 as a major challenge with significant implications on how limited health system resources are
34
35 37 managed.

36 38 **Conclusion:** Despite many targeted interventions to improve the health and wellbeing of the
37
38 39 urban poor, slum residents are still unable to obtain quality healthcare because of persistent
39
40 40 and new barriers due to the Covid-19 pandemic. In a devolved health system, paying
41
42 41 attention to health managers' abilities to assess and respond to population health needs is
43
44 42 necessary. In addition, the barriers reported as regards the limited use of existing
45
46 43 accountability mechanisms need further attention to ensure that the mechanisms work for the
47
48 44 greater good of the urban slum residents. The identified challenges reinforce the need to
49
50 45 understand and respond to social determinants of health. Multi-sectoral strategies are needed
51
52 46 to address individual, community and system-level barriers to quality healthcare in this and
53
54 47 related settings to ensure health access for all.

55
56 48 **Keywords:** Healthcare, Access, Slums, Covid-19, Nairobi
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1
2
3 49 **Article Summary**
4

5 50 **Strengths and limitations of this study**
6
7

- 8 51 • This study is an analysis of the current barriers to healthcare access in urban poor
9 settings.
10 52
11 53 • In spite of decades of targeted investments to improve the health and wellbeing of the
12 urban poor many barriers persist and the Covid-19 pandemic has increased existing
13 54 inequities.
14 55
15 56 • Users and providers' perspectives on barriers in the study contexts is limited;
16 addressing barriers requires both demand and supply side responses.
17 57
18 58 • The focus on the urban poor settings means that the perspectives are applicable to the
19 study context and similar settings
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60 **Introduction (4192)**

61 In low- and middle income countries, common barriers to accessing quality healthcare
62 include geographical access, availability, affordability, and acceptability of services among
63 others (1-3). These barriers, especially those that limit access to affordable and quality health
64 services, result in high levels of health inequities in these countries, and are thus major
65 drivers of poor health outcomes and a significant challenge to health systems. The ongoing
66 Covid-19 pandemic has exacerbated existing health inequalities (4, 5). If these countries are
67 to 'build back better' and get their health systems goals back on track, renewed commitments
68 to reduce health inequalities especially for vulnerable populations are necessary.

69 Kenya has invested in several initiatives to reduce health inequalities and improve access to
70 adequate care for its population (7, 8). Furthermore, the Government of Kenya has identified
71 UHC as one of its pillars of investments in order to reduce health inequities. However, these
72 initiatives rarely benefit the urban poor who make up over two thirds of the Kenya's growing
73 urban population (9, 10). In spite of their physical proximity to the central government and
74 public and private services, slum areas are disadvantaged and expose residents to health,
75 social and financial vulnerabilities (11). Past research has shown that many slum residents of
76 Nairobi, Kenya's capital, experience poor health outcomes including higher maternal and
77 child morbidity and mortality compared to other urban and rural areas (10, 11).

78 Based on this evidence, the Government of Kenya and its partners made critical investments
79 such as the Slum Upgrading Programme (12), the Reproductive Health Voucher (RH-OBA)
80 (13) to respond to the needs of the urban poor. The RH-OBA and Free Maternity care policy
81 showed an increase in facility-based deliveries in public hospitals and highlighted the impact
82 of cost as a barrier to healthcare utilisation, particularly by women (14-16). However, audits
83 of these programmes identify many persistent challenges. For example, a review of the
84 Reproductive Health voucher programme in two slums revealed that 22% of the intended
85 beneficiaries did not use the vouchers (14). Similarly, recently data on the Free Maternity
86 Care programme showed that many disadvantaged groups are not benefitting from the
87 services (17). Some of the challenges are related to the way the programmes are implemented
88 while others are ingrained in wider societal and health system structures (18, 19). Solutions,
89 which enhance access to care, should be informed by an in-depth understanding of the
90 barriers to access, as these are often context specific and keep evolving.

1
2
3 91 As Kenya makes more investments towards UHC, it is important to understand and document
4
5 92 current, and if any, persistent barriers to access to quality healthcare by the most
6
7 93 disadvantaged population groups such urban slum residents in order to identify measures to
8
9 94 redress the inequities. Such an assessment needs to go beyond the current limitations by
10
11 95 many studies on barriers to healthcare access that in this setting that tend to focus on
12
13 96 healthcare users in their analyses (20, 21), to include both demand and supply side responses
14
15 97 (1, 22). Taking the unique context of urban slums in Kenya, this study explores persistent and
16
17 98 current demand and supply-side barriers to optimum delivery and access to quality healthcare
18
19 99 and identifies opportunities that can be harnessed to reduce these barriers for better health and
20
21 100 wellbeing of two urban slum communities in Nairobi, Kenya. The study draws on data
22
23 101 collected as part of a multi-country study to assess current healthcare services in seven
24
25 102 informal settlements in Africa and Asia in a bid to identify viable service delivery models
26
27 103 relevant to the slum setting (23).

28 104 With due consideration for the unique context of slums in Kenya (as elsewhere), this study
29
30 105 utilised the Andersen Behavioural Model (ABM) to conceptualise the barriers to access to
31
32 106 healthcare (24, 25). The model describes predisposing, enabling and need factors that interact
33
34 107 to influence people's decisions to utilise health care services. Predisposing factors are pre-
35
36 108 existing socio-cultural characteristics of an individual, enabling factors serve as a means to
37
38 109 accessing care while the need factors refer to the immediate reason why health care is sought.
39
40 110 The ABM has undergone several iterations as presented by Andersen that modifications
41
42 111 could be made to fit different purposes, without distorting the original framework.

43 112 **Methods**

44 113 **Design and participants**

45 114 The study used a qualitative approach. Healthcare users, providers and policy actors were
46
47 115 purposively selected. Data were collected through 12 Focus Group Discussions (FGDs) and
48
49 116 12 In-depth Interviews (IDIs) with healthcare users representing persons living with
50
51 117 disabilities (PLWD), younger (18-24 years old) and older (25+) women and men and 25 Key
52
53 118 Informant Interviews (KIIs) with healthcare providers (formal and informal), chemists and
54
55 119 policy actors. The FGDs and IDIs were conducted in-person to seek perspectives from
56
57 120 healthcare users on provision of healthcare services in the community (*Table 1*). While KIIs
58
59 121 were conducted (*Table 2*) remotely via telephone interviews (*Table 2*).

60 122 **Setting**

1
2
3 123 The study was conducted in two urban slums; Korogocho and Viwandani, in Nairobi County,
4 124 the capital city of Kenya. They are located 7 to 12 kilometres away from the Nairobi Central
5 125 Business District (CBD) and about 7 kilometres away from each other. Viwandani has an
6 126 ethnically diverse and migrant population mostly seeking economic opportunities in the
7 127 surrounding industries, whereas Korogocho has a more settled population that have lived
8 128 there over several generations (26).

14 129 **Data collection procedures**

16 130 Six research assistants collected data in August 2019 and four research assistants collected
17 131 data in September 2020. All research assistants had prior experience in conducting qualitative
18 132 interviews, familiarity with the slum communities, and fluency in English and Kiswahili. The
19 133 research assistants had no prior interactions with participants. The FGDs and IDIs were
20 134 conducted prior to the Covid-19 pandemic period in a central location within the community
21 135 that was convenient for all the participants. The selected locations also ensured privacy and
22 136 minimum disruptions. Data collection procedures for KII participants were adapted to include
23 137 remote telephone interviews during the Covid-19 period. Participants were contacted a few
24 138 days prior to the interviews to select a date and time that was most convenient for them to
25 139 participate in the interviews. Participants were also briefed and encouraged to position
26 140 themselves in a place that ensured privacy and minimal disruptions. Interviews were
27 141 conducted using a structured study guide and the duration of the interviews was between 30
28 142 to 60 minutes for IDIs and KIIs, and up to 90 minutes for FGDs. The FGDs consisted of eight
29 143 to ten participants. All interviews were audio-recorded and complemented by hand written
30 144 notes.

43 145 **Data management and analysis**

45 146 We utilised the Andersen Behavioural Model (ABM) (24, 25). Audio-recorded files were
46 147 transcribed verbatim and translated into English (FGDs and IDIs). NVivo software (QRS
47 148 International 2018) was used to code the data. The data were analysed using content analysis
48 149 method through the stages suggested by Graneheim and Lundman (2004) (27). We applied a
49 150 deductive component informed by the ABM and an inductive one allowing for identification
50 151 of new themes from the data (28). The ABM provided the main and guiding framework of
51 152 analysis enabling us to code and sort the data as well as identify the categories; predisposing,
52 153 enabling and need factors driving the barriers to access to quality healthcare services in the
53 154 urban slums. Because the ABM is flexible we were able to add factors that are specific to the

155 slum context as a new level of vulnerability while the inductive approach identified
 156 recommendations to improve access to quality healthcare. Two researchers identified themes
 157 from the coded data. Two other researchers independently reviewed the themes. All the
 158 authors agreed on the themes. Additional recommendations were identified during
 159 participatory workshops in December 2019, April and June 2021 convened by the research
 160 teams and attended by community representatives, health providers and policymakers. Data
 161 saturation was achieved during analysis.

162 **Ethical considerations**

163 Permission to conduct the study was obtained from Amref-Health Ethics and Scientific
 164 Review Committee (ESRC) under protocol number AMREF-ESRC P440/2018 and the
 165 National Commission for Science Technology and Innovation (NACOSTI). Additional
 166 clearance was obtained from Amref-ESRC to conduct telephone interviews following
 167 declaration of the Covid-19 pandemic and its restrictions in the country. Study participants
 168 gave written or verbal audio-recorded informed consent.

169 **Results**

170 **Participants**

171 The total number of participants for FGDs and IDIs were 127 (66 females and 61 males) for
 172 both Korogocho and Viwandani (*Table 1*). About half the participants had always lived in the
 173 slums. On average, the key informant participants had served in the communities for 11 years
 174 (*Table 2*). The majority of the healthcare providers had attained tertiary education while for
 175 alternative care givers, many had only attained primary level education.

176 *Table 1: Focus Group Discussion/In-depth Interview Participant Characteristics*

Site	Average age	Sex		Always lived (born) in the area	Needed healthcare in the month prior to the interview	Received healthcare in the 6 months prior to the interview
		Female	Male			
Korogocho	28	37	34	34	107	64
Viwandani	29	29	27	19	40	38
		66	61	53	147	102

Total		127	
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177

178 *Table 2: Key Informant Participant Characteristics*

Category	Highest level of education	Occupational Background	Years served in this capacity	Years worked in the community
Healthcare providers (public/private sector) (n=4)	Tertiary	Clinical, Nursing Public Health	3-14 years	3-7 years
Chemists/pharmacist (n=8)	Tertiary	Nursing, pharmaceutical (pharmtech/pharmacist)	5-15 years	5-15 years
Alternative/informal care providers (n=8)	Secondary (only 1) the rest had primary	Traditional healers, faith healers, herbalists	18-40 years	16-30 years
Policy actors (n=5)		Clinical, psychology, community development, medical	8-17 years	0.5-15 years

179

180 Barriers factors identified are grouped according to the thematic areas in the ABM and are
181 described. Anonymous quotes are included to support the findings in the sections below:

182 **Predisposing factors**

183 a. Cultural norms

184 Health seeking behaviours and beliefs informed by the cultural norms of some of the
185 community members were identified as a barrier to timely access to healthcare

186 *“The late medical seeking behaviours and some people from certain cultures that believe in
187 witchcraft are challenging. They wait and do other things until the last moment when they
188 come to us to seek medical services”*. **KII Healthcare Provider (Female) Viwandani**

189 b. Religious beliefs

1
2
3 190 Membership in some religious groups were flagged as deterrents to seeking services from
4
5 191 formal medical sources. In spite of the health promotion and sensitisation activities conducted
6
7 192 by community health volunteers and availability of free maternity health services, some of
8
9 193 the community members are not willing to take up any of the services driven by their
10
11 194 religious beliefs.

12
13 195 “*There was one incident that happened recently. There was a sick child who died because*
14
15 196 *their religion does not allow them to go to hospital. They thought that when a child is prayed*
16
17 197 *for they would heal*”. **R2 FGD Healthcare user (18-24) Viwandani**

18 198 **Enabling Factors**

19 199 a. Individual level

20
21 200 Poverty and unaffordable healthcare

22
23 201 Limited financial resources and the relatively high cost of care were highlighted as challenges
24
25 202 given that most community members earn very little money from their workplaces.

26
27 203 “*It’s no easy. People struggle to get that money when they are sick. Most people do casual*
28
29 204 *jobs or go to the industrial area to look for menial jobs. So the money in informal settlements*
30
31 205 *is limited, people cannot afford so many things*”. **KII Policy actor (Female) Viwandani**

32
33 206 Many residents do not have health insurance and/or are unable to make payments to cover
34
35 207 their premiums due to poverty. As a result, they have to make out of pocket payments when
36
37 208 they need to access healthcare services.

38
39 209 “*You see to pay for those services people pay out of their pockets because most people in this*
40
41 210 *area don’t have NHIF. Some people use NHIF but in this area most people don’t have it so*
42
43 211 *they have to use the money which they have got in order to be served*”. **R3 FGD healthcare**
44
45 212 **user Men (18-24) Korogocho**

46
47 213 ‘*Sometimes our clients especially those who come with emergency cases usually fail to pay*
48
49 214 *and then we just have to let them go because there is nothing much we can do about it so in a*
50
51 215 *way its reducing our income*’. **KII Healthcare Provider Korogocho**

52 216 b. Interpersonal level

53
54 217 Attitudes and skills of healthcare workers

218 Poor attitudes and skills of healthcare workers were reported as impediments to access to
219 quality healthcare by residents in both slums.

220 *I want also to say that not all of them treat people with respect and if they don't know how to*
221 *handle people with disability I am requesting the government to give them time to be trained*
222 *on how they should handle PLWD. R3 FGD PLWD (Female) Viwandani*

223 c. Organizational level

224 Services available

225 Although a number of health facilities are available, many are only able to provide basic
226 health services. In many instances, residents have to be referred to facilities outside the slums
227 for laboratory, imaging and specialist services.

228 *'The services we lack in this area of Korogocho and particularly at the public health facility*
229 *are X-ray and laboratory services. It is very important to have a lab because for a doctor to*
230 *know what a patient is suffering from they must go to a lab. So we have experienced health*
231 *workers but there are no tools. They should also stock drugs'. R9 FGD Men (25+)*

232 **Korogocho**

233 *'We offer medicine for free, the only challenge comes when we want to get lab tests. The lab*
234 *tests are a challenge because we don't have a lab within so we send our patients to Kenyatta*
235 *hospital so that they can be tested. We get the result after so this requires patients to come*
236 *back for diagnosis, something that can take hours or days'. KII Policy actor (Male)*

237 **Korogocho**

238 Availability of health workers

239 The limited availability of healthcare workers is a major concern especially in the public
240 health facilities. Due to the limited numbers of health workers, patients spend a lot of time in
241 the facilities. As a result, some opt to consult and buy drugs from chemists in the slums.

242 *'As a facility the challenge we face is mostly the human resource. Sometimes we are*
243 *overwhelmed when giving the services'. KII Healthcare Provider (Female) Korogocho*

244 *'We have been having shortages of human resource, so most of time you would find that*
245 *patient would access quality services the challenges would be in long queues so someone*
246 *would come to the health facility and spend half the day before they actually get the service.*
247 *You should also imagine that if we have one clinician who works 8 am to 5 pm and is going*

248 *to see 120 patients; by the time they are seeing their 50th patient, the quality might not be the*
 249 *as the same as the first 10 patients that this clinician served'. **KII Policy actor (Female)***

250 **Viwandani**

251 *'You can go to that hospital and queue for a long time' **R1 FGD Women (25+) Korogocho***

252 Operating hours of health care facilities

253 Operating hours of facilities coupled with the limited number of public facilities were
 254 identified as barriers to regular access to care. The hours do not favour people who work
 255 during the day. Each of the slums has one public health facility.

256 *'Let say in public hospitals they operate from 8 AM to 4 or 5 PM but during the weekends*
 257 *they are not available. They close so you will have to go to private since they open every day'*

258 **R7 FGD Men (25+) Viwandani**

259 *'So let us say private facilities are okay because they operate twenty four hours but the public*
 260 *hospitals close at 4 PM while on weekends they don't open. They operate from Monday to*

261 *Friday' **R1 FGD Men (25+) Viwandani***

262 d. Community level

263 Poor infrastructure, insecurity and environmental hazards

264 The hazardous environment in the slums was highlighted as a challenge to accessing
 265 healthcare. Poor roads, insecurity and inadequate water and sanitation facilities are major
 266 concerns limiting access to care and exposing others to infections.

267 *'The roads are in bad state when it is raining. The other challenge is that the way houses are*
 268 *structured in this area are congested even sometimes it is very hard for ambulance to access*

269 *when you have a patient who is severely sick' **R3 FGD Men (25+) Korogocho***

270 *'The challenges we face when we are sick and need to go to hospital...you have to pass*
 271 *through those drainages and also at the same time you are afraid of thieves because the*

272 *security is not good' **R9 FGD Men PLWD Viwandani***

273 e. Policy level

274 Inadequate financial resources

275 Low budget allocations and erratic reimbursement of NHIF from the government is a barrier
 276 to health planning and service delivery.

1
2
3 277 *'We have the health service fund that comes through the county that is one of our main*
4 278 *funding and then the grants that come in from donors or through the government as well and*
5 279 *the NHIF reimbursement that is usually given to those facilities that are NHIF accredited.*
6
7 280 *But to be honest the funds have not been quite adequate. Also we have been having*
8 281 *challenges with NHIF reimbursements. They delay, so you find like now there are some*
9 282 *facilities that have not been paid for many months and they have been offering these services*
10 283 *so they are really struggling to see how to continue offering services'. KII Policy actor*

11
12
13
14
15 284 **(Female) Viwandani**

16
17 285 Limited involvement in decision making and political interference

18
19 286 The limited involvement of policy actors in decisions that directly affect the communities that
20 287 they serve is a critical challenge affecting health service delivery.

21
22 288 *'Of course sometimes what you would really want is not what comes on the ground.*
23 289 *Sometimes you can prioritise something, maybe finish up a block and then due to political*
24 290 *interference you find that some other work started alongside, yet those funds would have*
25 291 *gone to a more prioritized initiative'. KII Policy actor (Male) Korogocho*

26
27 292 *'Some of the decisions take long while we are not involved in other decisions, and when we*
28 293 *make decisions you find that whatever you have decided on has not been acted upon.'* KII
29 294 **Policy actor (Male) Viwandani**

30
31 295 Accountability mechanisms

32
33 296 Mechanisms to enable community members and health providers to contribute to decisions
34 297 that are related to their healthcare such as suggestion boxes, health facility committees and
35 298 other stakeholder forums exist. However, these are not adequately utilised. This was
36 299 highlighted by community members during the feedback sessions and confirmed by
37 300 policymakers.

38
39 301 *'We have barazas (community meetings) during which we share our experiences and*
40 302 *suggestions on health and other matters like security. But what we say does not matter. Those*
41 303 *private facilities are personal businesses. You cannot tell them what to do.'* **Male, FGD**
42 304 **(Feedback workshop) Viwandani**

43
44 305 *'The public is willing to give information but what we have noticed is that they give*
45 306 *information and it's not acted on. When you call them again, they tell you that you are*

1
2
3 307 *wasting our time as we gave you suggestions which have not been implemented.* **KII Policy**
4
5 308 **actor (Female) Viwandani**

6
7 309 *‘The contributions we make take a long time because they involve so many people after the*
8
9 310 *meeting. When we attend the meetings we have different stakeholders whom those who are*
10
11 311 *chairing the meeting need to discuss with about what have been shared by the participants.*
12
13 312 *That is the part that will take time before concrete decisions are reached’.* **KII Policy actor**
14 313 **(Male) Korogocho**

15 16 314 **Need factors**

17
18
19 315 Community members related that the main reasons for seeking primary healthcare were
20
21 316 respiratory conditions, injuries and care for pregnant women and children. This was
22
23 317 confirmed by the health providers who also added that chronic health conditions were reasons
24
25 318 for seeking care by slum residents.

26
27 319 *‘The common illnesses in Korogocho are diarrhoeal diseases, such as cholera and the rest.*
28
29 320 *We also have cases of pneumonia and other respiratory tract infections because of the dump*
30 321 *site that is just close to the hospital’.* **KII Healthcare Provider (Female) Korogocho**

31
32 322 *‘The common illnesses are diarrhoea, pneumonia, accidents, and we have TB nowadays. The*
33
34 323 *others one are diabetes and hypertension’.* **KII Healthcare Provider (Male) Viwandani**

35 36 324 **The Covid-19 pandemic**

37
38
39 325 Following the declaration of the global pandemic and the national restrictions to curb the
40
41 326 spread of the disease that followed, the challenges above were heightened (4, 29). In addition
42
43 327 to reduced access to care as a result of fear and curfews, community members lost means of
44
45 328 livelihood making it harder for them to pay for healthcare directly or keep up to date with
46
47 329 their health insurance premiums. Furthermore policy actors reported that the supply of
48
49 330 essential medicines was disrupted and available resources reallocated to respond to the
50
51 331 pandemic crisis.

52
53 332 *‘We have had to do a balance here and there especially since the Covid-19 pandemic started.*
54
55 333 *We didn’t have a budget allocated for it so we really had to pool the resources to procure*
56
57 334 *extra masks, gloves, sanitizers; things that were not required in large numbers before. So*
58
59 335 *that affected our finances.’* **KII Policy actor (Female), Viwandani**

60 336 **Recommendations to reduce healthcare access barriers**

337 Several suggestions were made to address the barriers and improve health service utilisation.

338 Recommendations included community, provider and system-level responses.

339 At community level calls for financial and risk protection including access to affordable
340 health insurance and more economic opportunities as well as health education to improving
341 health-seeking were made.

342 *For health services to be better government should consider reducing the amount of money
343 people pay for the NHIF card so that everybody can be able to afford to pay. There are those
344 people who are not employed and they need that card but because they have low income they
345 can't afford to get it.* **R3 FGD PLWD Korogocho**

346 Provider level suggestions included increasing the number of public health facilities, the
347 variety of health services and health workers' numbers and their skills, equipping facilities
348 with necessary equipment and regular drug supplies, among others.

349 *For us to have better health services a hospital should be constructed near us. The hospital
350 should have enough drug stocks of drugs, have qualified nurses and doctors and operate
351 twenty four hours because a person can get sick anytime.* **R8 FGD PLWD Viwandani**

352 While system level suggestions included regulating the health providers' work with more
353 regular quality checks, more funding for health initiatives and better and effective decision-
354 making processes.

355 *'I think building the policies from bottom-up would also be important rather than a top down
356 kind of an approach. Because we have some policies which have been cascaded from up and
357 implementing is challenging. The devising of these policies and involvement from bottom-up
358 would be important'.* **KII Policy actor (Male) Korogocho**

359 **Discussion**

360 We explored current barriers to access to quality healthcare in two urban slums, highlighting
361 several challenges that urban slum residents encounter in their pursuit of quality healthcare.
362 We identified the predisposing, enabling, and need factors that together negatively impact the
363 way residents of urban slums access healthcare. In addition, existing barriers were heightened
364 by the Covid-19 pandemic. The socioeconomic status of individuals and their families such
365 as poverty and lack of health insurance interact with community factors like poor
366 infrastructure, limited availability of health facilities and insecurity and health system factors

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2
3 367 such as limited facility opening hours and health providers' attitudes and skills and limited
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5 368 public health resources to limit healthcare access in this setting and perpetuate health
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7 369 inequities.

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9 370 Previous studies in the slums and other underserved areas in Kenya have identified similar
10
11 371 barriers at individual and community levels (20, 21, 30). In our study, context specific
12
13 372 barriers to quality healthcare in the slums included heightened insecurity, poor infrastructure
14
15 373 and poor sanitation and hygiene. These are in line with findings by other studies done in slum
16
17 374 settings (10, 11). In the 2000 (10) and 2012 (11) Nairobi Cross-Sectional Surveys the
18
19 375 hazardous environment in the slums characterised by the near absence of the public sector,
20
21 376 limited access to healthcare and water and sanitation services, among others. As such, these
22
23 377 challenges persist in spite of two decades of targeted investments in initiatives to reduce
24
25 378 inequalities in the slums.

26
27 379 An important challenge to tackling the barriers to access to quality healthcare in our context
28
29 380 is related to policy formulation and key stakeholder engagement in that process. Service
30
31 381 providers and other key stakeholders reported about their inability to respond to the needs of
32
33 382 the communities as most of the decisions about caregiving and services were made higher up,
34
35 383 with significant implications on how limited health system resources are managed. It appears
36
37 384 that devolution of health services through the 2010 constitution has not resulted in the much
38
39 385 needed empowering reforms at subnational level or translated into effective care delivery for
40
41 386 the most vulnerable, who are also the majority. Thus, bureaucracy and ineffective
42
43 387 accountability mechanisms persist and continues to entrench health inequalities that
44
45 388 devolving health was to help resolve (31, 32). In a devolved health system, paying attention
46
47 389 to health managers' abilities to assess population health needs and respond to them is
48
49 390 necessary. In addition, the barriers reported as regards the limited use of existing
50
51 391 accountability mechanisms need further attention to ensure that the mechanisms work for the
52
53 392 greater good of the urban slum residents. For example, a recent systematic review
54
55 393 demonstrated that inadequate human resources for health and limited funding of county
56
57 394 health initiatives is a persistent barrier dating from the pre-devolution era (32).

58
59 395 The identified challenges reinforce the need to understand and respond to social determinants
60
396 of health. As such, innovations to respond to existing health inequities need to be multi-
397 sectoral in nature. This is also in line with the recommendations made by study participants to
398 address existing gaps. Multi-sectoral strategies are needed to address individual, community

399 and system-level barriers to quality healthcare in this and related settings to ensure health
400 access for all.

401 Limitations

402 The nature of the study resulted in information from this setting and based on perspectives
403 thus might not necessarily be applicable in other settings. Interviews conducted in Kiswahili-
404 loss of meaning during translation. However, we triangulated information from different
405 sources (FGDs, IDIs, and KIIs) and sought feedback from different stakeholders who
406 validated the results. Furthermore, similar results have been demonstrated in other low
407 resource settings.

408 Conclusion

409 In spite of many targeted interventions to improve the health and wellbeing of the urban poor,
410 many slum residents are still unable to receive quality healthcare because of persistent and
411 new barriers due to the Covid-19 pandemic. Multi-sectoral innovations are needed to reduce
412 existing service delivery gaps.

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416 Collaborative is (in alphabetical order):

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21 437 Smith, Celia Taylor, Philip Ulbrich, Olalekan A Uthman, Ria Wilson, Godwin Yeboah

22
23 438 **Data sharing statement:** The data used in this study will be made available after two years
24 439 on the African Population and Health Research Centre (APHRC) microdata portal:

25
26 440 <http://microdataportal.aphrc.org/index.php/catalog>. Request can be obtained from Pauline
27 441 Bakibinga: pbakibinga@aphrc.org.

28
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30
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42 448 **Author Contributions**

43 449 PB conceptualised and designed the study, contributed to the analysis and interpretation of
44 450 the data and drafted the manuscript. LK and PK contributed to the design of the study,
45 451 coordinated the data collection, analysis and edited the manuscript. MA contributed to the
46 452 analysis and interpretation of the data, and reviewed drafts of the manuscript. CK and CKy
47 453 contributed to the design of the study and reviewed drafts of the manuscript. All authors read
48 454 and approved the final manuscript.

455 **References**

- 456 1. Jacobs B, Ir P, Bigdeli M, Annear PL, Van Damme W. Addressing access barriers to
457 health services: an analytical framework for selecting appropriate interventions in low-
458 income Asian countries. *Health Policy and Planning*. 2011;27(4):288-300.
- 459 2. Santalahti M, Sumit K, Perkiö M. Barriers to accessing health care services: a
460 qualitative study of migrant construction workers in a southwestern Indian city. *BMC Health
461 Services Research*. 2020;20(1):619.
- 462 3. Bakeera SK, Wamala SP, Galea S, State A, Peterson S, Pariyo GW. Community
463 perceptions and factors influencing utilization of health services in Uganda. *International
464 Journal for Equity in Health*. 2009;8(1):25.
- 465 4. Ahmed SAKS, Ajisola M, Azeem K, Bakibinga P, Chen Y-F, Choudhury NN, et al.
466 Impact of the societal response to COVID-19 on access to healthcare for non-COVID-19
467 health issues in slum communities of Bangladesh, Kenya, Nigeria and Pakistan: results of
468 pre-COVID and COVID-19 lockdown stakeholder engagements. *BMJ Global Health*.
469 2020;5(8):e003042.
- 470 5. Kumar J, Kumar P. COVID-19 pandemic and health-care disruptions: count the most
471 vulnerable. *The Lancet Global Health*. 2021;9(6):e722-e3.
- 472 6. Kenya Go. *The Constitution of Kenya, 2010*. Nairobi: Published by the National
473 Council for Law Reporting with the Authority of the Attorney-General; 2010.
- 474 7. Kenya Go. *National Hospital Insurance Fund Act No.9 of 1998*. In: General A, editor.
475 Nairobi: Published by the National Council for Law Reporting with the Authority of the
476 Attorney-General; 2014.
- 477 8. Kenya MoH. *Implementing free maternal health care in Kenya: challenges, strategies,
478 and recommendation*. Nairobi: Ministry of Health; 2015.
- 479 9. Statistics KNBo. *2019 Kenya Population and Housing Census (KPHC)*. Nairobi:
480 Kenya National Bureau of Statistics (KNBS); 2020.
- 481 10. APHRC. *Population and Health Dynamics in Nairobi's Informal Settlements*. .
482 Nairobi, Kenya: African Population and Health Research Center (APHRC); 2002.
- 483 11. APHRC. *Population and health dynamics in Nairobi's informal settlements*. Nairobi,
484 Kenya: African Population and Health Research Center (APHRC); 2014.
- 485 12. Muraguri L. Kenyan Government Initiatives in Slum Upgrading. *The East African
486 Review*. 2011;44:119-27.

- 1
2
3 487 13. Bellows N. Vouchers for reproductive health care services in Kenya and Uganda
4 488 Frankfurt: KfW Bankengruppe 2012 [
5
6 489 14. Amendah DD, Mutua MK, Kyobutungi C, Buliva E, Bellows B. Reproductive health
7 490 voucher program and facility based delivery in informal settlements in Nairobi: a longitudinal
8 491 analysis. *PloS one*. 2013;8(11):e80582-e.
9
10 492 15. Njuki R, Abuya T, Kimani J, Kanya L, Korongo A, Mukanya C, et al. Does a voucher
11 493 program improve reproductive health service delivery and access in Kenya? *BMC Health
12 494 Services Research*. 2015;15(1):206.
13
14 495 16. Lang'at E, Mwanri L, Temmerman M. Effects of implementing free maternity service
15 496 policy in Kenya: an interrupted time series analysis. *BMC Health Services Research*.
16 497 2019;19(1):645.
17
18 498 17. Masaba BB, Mmusi-Phetoe RM. Free Maternal Health Care Policy in Kenya; Level
19 499 of Utilization and Barriers. *International Journal of Africa Nursing Sciences*.
20 500 2020;13:100234.
21
22 501 18. Njuki R, Obare F, Warren C, Abuya T, Okal J, Mukuna W, et al. Community
23 502 experiences and perceptions of reproductive health vouchers in Kenya. *BMC Public Health*.
24 503 2013;13(1):660.
25
26 504 19. Wamalwa E. Implementation challenges of free maternity services policy in Kenya:
27 505 the health workers' perspective. *Pan African Medical Journal*. 2015;22.
28
29 506 20. Otieno PO, Wambiya EOA, Mohamed SM, Mutua MK, Kibe PM, Mwangi B, et al.
30 507 Access to primary healthcare services and associated factors in urban slums in Nairobi-
31 508 Kenya. *BMC Public Health*. 2020;20(1):981.
32
33 509 21. Fotso JC, Mukiira C. Perceived quality of and access to care among poor urban
34 510 women in Kenya and their utilization of delivery care: harnessing the potential of private
35 511 clinics? *Health Policy and Planning*. 2011;27(6):505-15.
36
37 512 22. Jacobs B, Ir P, Bigdeli M, Annear PL, Van Damme W. Addressing access barriers to
38 513 health services: an analytical framework for selecting appropriate interventions in low-
39 514 income Asian countries. *Health Policy Plan*. 2012;27(4):288-300.
40
41 515 23. Bakibinga P, Kabaria C, Kyobutungi C, Manyara A, Mbaya N, Mohammed S, et al. A
42 516 protocol for a multi-site, spatially-referenced household survey in slum settings: methods for
43 517 access, sampling frame construction, sampling, and field data collection. *BMC Medical
44 518 Research Methodology*. 2019;19(1):109.
45
46 519 24. Andersen RM. Revisiting the behavioral model and access to medical care: does it
47 520 matter? *J Health Soc Behav*. 1995;36(1):1-10.

- 1
2
3 521 25. Andersen R, Newman JF. Societal and Individual Determinants of Medical Care
4 522 Utilization in the United States. *Milbank Q.* 2005;83(4):10.1111/j.468-0009.2005.00428.x.
5
6 523 26. Wamukoya M, Kadengye DT, Iddi S, Chikozho C. The Nairobi Urban Health and
7 524 Demographic Surveillance of slum dwellers, 2002–2019: Value, processes, and challenges.
8 525 *Global Epidemiology.* 2020;2:100024.
9
10 526 27. Graneheim U, Lundman B. Qualitative Content Analysis in Nursing Research:
11 527 Concepts, Procedures and Measures to Achieve Trustworthiness. *Nurse education today.*
12 528 2004;24:105-12.
13
14 529 28. Graneheim UH, Lindgren B-M, Lundman B. Methodological challenges in qualitative
15 530 content analysis: A discussion paper. *Nurse Education Today.* 2017;56:29-34.
16
17 531 29. Kibe PM, Kisia L, Bakibinga P. COVID-19 and community healthcare: perspectives
18 532 from Nairobi's informal settlements. *Pan Afr Med J.* 2020;35(Suppl 2):106-
19
20 533 30. Alsheimer Q. Surveying Access to Healthcare in Kisumu and Siaya Counties, Kenya.
21 534 https://digitalcollections.sit.edu/isp_collection/2816: University of South Carolina; 2018.
22
23 535 31. Kimathi L. Challenges of the Devolved Health Sector in Kenya: teething Problems or
24 536 Systemic Contradictions? *Africa Development / Afrique et Développement.* 2017;42(1):55-
25 537 77.
26
27 538 32. Masaba BB, Moturi JK, Taiswa J, Mmusi-Phetoe RM. Devolution of healthcare
28 539 system in Kenya: progress and challenges. *Public Health.* 2020;189:135-40.
29
30
31
32
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Standards for Reporting Qualitative Research (SRQR)*

<http://www.equator-network.org/reporting-guidelines/srqr/>

Page/line no(s).

Title and abstract

<p>Title - Concise description of the nature and topic of the study Identifying the study as qualitative or indicating the approach (e.g., ethnography, grounded theory) or data collection methods (e.g., interview, focus group) is recommended</p>	1/1-2
<p>Abstract - Summary of key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results, and conclusions</p>	2/21-48

Introduction

<p>Problem formulation - Description and significance of the problem/phenomenon studied; review of relevant theory and empirical work; problem statement</p>	4-6/60-111
<p>Purpose or research question - Purpose of the study and specific objectives or questions</p>	5/91-103

Methods

<p>Qualitative approach and research paradigm - Qualitative approach (e.g., ethnography, grounded theory, case study, phenomenology, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g., postpositivist, constructivist/ interpretivist) is also recommended; rationale**</p>	5/114-121
<p>Researcher characteristics and reflexivity - Researchers' characteristics that may influence the research, including personal attributes, qualifications/experience, relationship with participants, assumptions, and/or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results, and/or transferability</p>	6/134
<p>Context - Setting/site and salient contextual factors; rationale**</p>	6/123-129
<p>Sampling strategy - How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g., sampling saturation); rationale**</p>	5/114-121 & 7/162
<p>Ethical issues pertaining to human subjects - Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues</p>	7/163-169
<p>Data collection methods - Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources/methods, and modification of procedures in response to evolving study findings; rationale**</p>	6/130-145

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2	Data collection instruments and technologies - Description of instruments (e.g.,	
3	interview guides, questionnaires) and devices (e.g., audio recorders) used for data	
4	collection; if/how the instrument(s) changed over the course of the study	6/141-145
5		
6	Units of study - Number and relevant characteristics of participants, documents,	
7	or events included in the study; level of participation (could be reported in results)	7-8/171-179
8		
9	Data processing - Methods for processing data prior to and during analysis,	
10	including transcription, data entry, data management and security, verification of	
11	data integrity, data coding, and anonymization/de-identification of excerpts	6/147-148
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13	Data analysis - Process by which inferences, themes, etc., were identified and	
14	developed, including the researchers involved in data analysis; usually references a	
15	specific paradigm or approach; rationale**	6-7/147-162
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17	Techniques to enhance trustworthiness - Techniques to enhance trustworthiness	
18	and credibility of data analysis (e.g., member checking, audit trail, triangulation);	
19	rationale**	7/157-161
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Results/findings

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23	Synthesis and interpretation - Main findings (e.g., interpretations, inferences, and	
24	themes); might include development of a theory or model, or integration with	
25	prior research or theory	7-14/170-359
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27	Links to empirical data - Evidence (e.g., quotes, field notes, text excerpts,	
28	photographs) to substantiate analytic findings	7-14/170-359
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Discussion

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32	Integration with prior work, implications, transferability, and contribution(s) to	
33	the field - Short summary of main findings; explanation of how findings and	
34	conclusions connect to, support, elaborate on, or challenge conclusions of earlier	
35	scholarship; discussion of scope of application/generalizability; identification of	
36	unique contribution(s) to scholarship in a discipline or field	14-16/360-413
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38	Limitations - Trustworthiness and limitations of findings	16/402-407
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Other

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42	Conflicts of interest - Potential sources of influence or perceived influence on	
43	study conduct and conclusions; how these were managed	17/443
44		
45	Funding - Sources of funding and other support; role of funders in data collection,	
46	interpretation, and reporting	187/444-448
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*The authors created the SRQR by searching the literature to identify guidelines, reporting standards, and critical appraisal criteria for qualitative research; reviewing the reference lists of retrieved sources; and contacting experts to gain feedback. The SRQR aims to improve the transparency of all aspects of qualitative research by providing clear standards for reporting qualitative research.

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**The rationale should briefly discuss the justification for choosing that theory, approach, method, or technique rather than other options available, the assumptions and limitations implicit in those choices, and how those choices influence study conclusions and transferability. As appropriate, the rationale for several items might be discussed together.

Reference:

O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. **Standards for reporting qualitative research: a synthesis of recommendations.** *Academic Medicine*, Vol. 89, No. 9 / Sept 2014
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Demand and supply side barriers and opportunities to enhance access to healthcare for urban poor populations in Kenya: a qualitative study

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3 1 Title: **Demand and supply side barriers and opportunities to enhance access to healthcare**
4 2 **for urban poor populations in Kenya: a qualitative study**

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3 **22 Abstract (298)**
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5 **23 Objective:** To explore the current barriers and recommendations to improve access to quality
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7 **24** healthcare for the urban poor

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9 **25 Design and participants:** Qualitative approach. In-depth interviews (n=12) and focus group
10
11 **26** discussions with community members (n=12) and Key informant interviews with health
12
13 **27** providers and policymakers (n= 25) were conducted between August 2019 and September
14
15 **28** 2020. Four feedback and validation workshops were held December 2019 and April-June
16
17 **29** 2021.

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19 **30 Setting:** Korogocho and Viwandani urban slums in Nairobi, Kenya.

20
21 **31 Results:** The socioeconomic status of individuals and their families such as poverty and lack
22
23 **32** of health insurance interact with community factors like poor infrastructure, limited
24
25 **33** availability of health facilities and insecurity; and health system factors such as limited
26
27 **34** facility opening hours and health providers' attitudes and skills and limited public health
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29 **35** resources to limit healthcare access and perpetuate health inequities. Limited involvement in
30
31 **36** policy formulation processes by service providers and other key stakeholders was identified
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33 **37** as a major challenge with significant implications on how limited health system resources are
34
35 **38** managed.

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37 **39 Conclusion:** Despite many targeted interventions to improve the health and wellbeing of the
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39 **40** urban poor, slum residents are still unable to obtain quality healthcare because of persistent
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41 **41** and new barriers due to the Covid-19 pandemic. In a devolved health system, paying
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42 **42** attention to health managers' abilities to assess and respond to population health needs is
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43 **43** necessary. In addition, the barriers reported as regards the limited use of existing
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44 **44** accountability mechanisms need further attention to ensure that the mechanisms work for the
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45 **45** greater good of the urban slum residents. The identified challenges reinforce the need to
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46 **46** understand and respond to social determinants of health. Multi-sectoral strategies are needed
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47 **47** to address individual, community and system-level barriers to quality healthcare in this and
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48 **48** related settings to ensure health access for all.

49 **49 Keywords:** Healthcare, Access, Slums, Covid-19, Nairobi
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3 50 **Article Summary**
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6 51 **Strengths and limitations of this study**
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- 8 52 • The study triangulated information from different sources (FGDs, IDIs, and KIIs) to
9 heighten the validity of the results.
10 53
11 54 • The study involved a series of participatory workshops that sought feedback from
12 different stakeholders who validated the findings.
13 55
14 56 • Most of the themes mentioned by the participants correspond very well with those
15 found in literature.
16 57
17 58 • The study was conducted in urban informal settlements thus study findings cannot be
18 extrapolated to other settings.
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61 **Introduction (4650)**

62 In low- and middle income countries, common barriers to accessing quality healthcare
63 include geographical access, availability, affordability, and acceptability of services among
64 others (1-3). These barriers, especially those that limit access to affordable and quality health
65 services, result in high levels of health inequities in these countries, and are thus major
66 drivers of poor health outcomes and a significant challenge to health systems. The ongoing
67 Covid-19 pandemic has exacerbated existing health inequalities (4, 5). If these countries are
68 to ‘build back better’ and get their health systems goals back on track, renewed commitments
69 to reduce health inequalities especially for vulnerable populations are necessary.

70 Kenya has invested in several initiatives to reduce health inequalities and improve access to
71 adequate care for its population(6, 7). Furthermore, the Government of Kenya has identified
72 UHC as one of its pillars of investments in order to reduce health inequities. However, these
73 initiatives rarely benefit the urban poor who make up over two thirds of the Kenya’s growing
74 urban population (8, 9). In spite of their physical proximity to the central government and
75 public and private services, slum areas are disadvantaged and expose residents to health,
76 social and financial vulnerabilities (10). Past research has shown that many slum residents of
77 Nairobi, Kenya’s capital, experience poor health outcomes including higher maternal and
78 child morbidity and mortality compared to other urban and rural areas (9, 10).

79 Based on this evidence, the Government of Kenya and its partners made critical investments
80 such as the Slum Upgrading Programme (11), the Reproductive Health Voucher (RH-OBA)
81 (12) to respond to the needs of the urban poor. The RH-OBA and Free Maternity care policy
82 showed an increase in facility-based deliveries in public hospitals and highlighted the impact
83 of cost as a barrier to healthcare utilisation, particularly by women (13-15). However, audits
84 of these programmes identify many persistent challenges. For example, a review of the
85 Reproductive Health voucher programme in two slums revealed that 22% of the intended
86 beneficiaries did not use the vouchers (13). Similarly, recently data on the Free Maternity
87 Care programme showed that many disadvantaged groups are not benefitting from the
88 services (16). Some of the challenges are related to the way the programmes are implemented
89 while others are ingrained in wider societal and health system structures (17, 18). Solutions,
90 which enhance access to care, should be informed by an in-depth understanding of the
91 barriers to access, as these are often context specific and keep evolving.

1
2
3 92 As Kenya makes more investments towards UHC, it is important to understand and document
4
5 93 current, and if any, persistent barriers to access to quality healthcare by the most
6
7 94 disadvantaged population groups such urban slum residents in order to identify measures to
8
9 95 redress the inequities. Such an assessment needs to go beyond the current limitations by
10
11 96 many studies on barriers to healthcare access that in this setting that tend to focus on
12
13 97 healthcare users in their analyses (19, 20), to include both demand and supply side responses
14
15 98 (1, 21). Taking the unique context of urban slums in Kenya, this study explores persistent and
16
17 99 current demand and supply-side barriers to optimum delivery and access to quality healthcare
18
19 100 and identifies opportunities that can be harnessed to reduce these barriers for better health and
20
21 101 wellbeing of two urban slum communities in Nairobi, Kenya. The study draws on data
22
23 102 collected as part of a multi-country study to assess current healthcare services in seven
24
25 103 informal settlements in Africa and Asia in a bid to identify viable service delivery models
26
27 104 relevant to the slum setting (22). Services explored included preventive and curative
28
29 105 healthcare for all population groups (22).

30
31 106 With due consideration for the unique context of slums in Kenya (as elsewhere), this study
32
33 107 utilised the Andersen Behavioural Model (ABM) to conceptualise the barriers to access to
34
35 108 healthcare (23, 24). The model describes predisposing, enabling and need factors that interact
36
37 109 to influence people's decisions to utilise health care services. Predisposing factors are pre-
38
39 110 existing socio-cultural characteristics of an individual, enabling factors serve as a means to
40
41 111 accessing care while the need factors refer to the immediate reason why health care is sought.
42
43 112 The ABM has undergone several iterations as presented by Andersen that modifications
44
45 113 could be made to fit different purposes, without distorting the original framework.

46 114 **Methods**

47 115 **Design and participants**

48
49 116 The study used a qualitative approach. Healthcare users, providers and policy actors were
50
51 117 purposively selected. Data were collected through 12 Focus Group Discussions (FGDs) and
52
53 118 12 In-depth Interviews (IDIs) with healthcare users representing persons living with physical
54
55 119 disabilities (PLWD), younger (18-24 years old) and older (25+) women and men and 25 Key
56
57 120 Informant Interviews (KIIs) with healthcare providers (formal and informal), chemists and
58
59 121 policy actors. The FGDs and IDIs were conducted in-person to seek perspectives from
60
122 healthcare users on provision of healthcare services in the community (*Table 1*). While KIIs
123 were conducted remotely via telephone interviews (*Table 2*).

124 **Setting**

125 The study was conducted in two urban slums; Korogocho and Viwandani, in Nairobi County,
126 the capital city of Kenya. They are located 7 to 12 kilometres away from the Nairobi Central
127 Business District (CBD) and about 7 kilometres away from each other. Viwandani has an
128 ethnically diverse and migrant population mostly seeking economic opportunities in the
129 surrounding industries, whereas Korogocho has a more settled population that have lived
130 there over several generations (25). The slum areas in Nairobi are characterized by polluted
131 environment, overcrowding, poor infrastructure, poor sanitation, marked absence of public
132 sector and debilitating poverty (26-28). These conditions, which exacerbate morbidity and
133 mortality, disproportionately affect vulnerable groups such as children and the elderly (26,
134 29).

135 **Data collection procedures**

136 Six research assistants collected data in August 2019 and four research assistants collected
137 data in September 2020. All research assistants had prior experience in conducting qualitative
138 interviews, familiarity with the slum communities, and fluency in English and Kiswahili. The
139 research assistants had no prior interactions with participants. The FGDs and IDIs were
140 conducted prior to the Covid-19 pandemic period in a central location within the community
141 that was convenient for all the participants. The selected locations also ensured privacy and
142 minimum disruptions. Data collection procedures for KII participants were adapted to include
143 remote telephone interviews during the Covid-19 period. Participants were contacted a few
144 days prior to the interviews to select a date and time that was most convenient for them to
145 participate in the interviews. Participants were also briefed and encouraged to position
146 themselves in a place that ensured privacy and minimal disruptions. Interviews were
147 conducted using a structured study guide and the duration of the interviews was between 30
148 to 60 minutes for IDIs and KIIs, and up to 90 minutes for FGDs. The FGDs consisted of eight
149 to ten participants. All interviews were audio-recorded and complemented by hand written
150 notes.

151 **Data management and analysis**

152 We utilised the Andersen Behavioural Model (ABM) (23, 24). Audio-recorded files were
153 transcribed verbatim and translated into English (FGDs and IDIs). NVivo software (QRS
154 International 2018) was used to code the data. The data were analysed using content analysis
155 method through the stages suggested by Graneheim and Lundman (2004) (30). We applied a

1
2
3 156 deductive component informed by the ABM and an inductive one allowing for identification
4
5 157 of new themes from the data (31). The ABM provided the main and guiding framework of
6
7 158 analysis enabling us to code and sort the data as well as identify the categories; predisposing,
8
9 159 enabling and need factors driving the barriers to access to quality healthcare services in the
10
11 160 urban slums. Because the ABM is flexible we were able to add factors that are specific to the
12
13 161 slum context as a new level of vulnerability while the inductive approach identified
14
15 162 recommendations to improve access to quality healthcare. Two researchers identified themes
16
17 163 from the coded data. Two other researchers independently reviewed the themes. All the
18
19 164 authors agreed on the themes. Additional recommendations were identified during
20
21 165 participatory workshops in December 2019, April and June 2021 convened by the research
22
23 166 teams and attended by community representatives, health providers and policymakers. Data
24
25 167 saturation was achieved during analysis.

168 **Ethical considerations**

169 This study involves human participants and was approved by an Ethics Committee(s).
170 Approval was granted by AMREF Health Africa's Ethics and Scientific Review Committee
171 (ESRC) under protocol ID number AMREF-ESRC P440/2018. The research permit received
172 from the National Commission for Science Technology and Innovation (NACOSTI).
173 Additional clearance was obtained from AMREF Health Africa's ESRC to conduct telephone
174 interviews following declaration of the Covid-19 pandemic and its restrictions in the country.
175 Study participants gave written informed consent for interviews that were conducted face-to-
176 face, or verbal audio-recorded informed consent for interviews conducted remotely via
177 telephone interviews. The study did not involve animal subjects.

178 **Patient and public Involvement**

179 Participants were involved in the reporting and dissemination of our research.
180 Recommendations were identified during participatory workshops in December 2019, April
181 and June 2021 convened by the research teams and attended by community representatives,
182 health providers and policymakers.

183 **Results**

184 **Participants**

185 The total number of participants for FGDs and IDIs were 127 (66 females and 61 males) for
186 both Korogocho and Viwandani (*Table 1*). About half the participants had always lived in the

187 slums and majority had received some sort of healthcare service in the six month prior to the
 188 interview. On average, the key informant participants had served in the communities for 11
 189 years (*Table 2*). The majority of the healthcare providers had attained tertiary education while
 190 for alternative care givers, many had only attained primary level education.

191 *Table 1: Focus Group Discussion/In-depth Interview Participant Characteristics*

Site	Average age	Sex		Always lived (born) in the area	Needed healthcare in the month prior to the interview	Received healthcare in the 6 months prior to the interview
		Female	Male			
Korogocho	28	37	34	34	62	60
Viwandani	29	29	27	19	44	42
Total		66	61	53	106	102
		127				

193 *Table 2: Key Informant Participant Characteristics*

Category	Highest level of education	Occupational Background	Years served in this capacity	Years worked in the community
Healthcare providers (public/private sector) (n=4)	Tertiary	Clinical, Nursing Public Health	3-14 years	3-7 years
Chemists/pharmacist (n=8)	Tertiary	Nursing, pharmaceutical (pharmtech/pharmacist)	5-15 years	5-15 years
Alternative/informal care providers (n=8)	Secondary (only 1) the rest had primary	Traditional healers, faith healers, herbalists	18-40 years	16-30 years
Policy actors (n=5)		Clinical, psychology, community development, medical	8-17 years	0.5-15 years

1
2
3 194 Barriers factors identified are grouped according to the thematic areas in the ABM and are
4
5 195 described. As part of the analysis and reporting we identified appropriate quotes to respond to
6
7 196 questions on what the major barriers to healthcare access are. These were obtained during the
8
9 197 data collection exercise. We did not include quotes from the feedback sessions. Anonymous
10
11 198 quotes are included to support the findings in the sections below:

12 199 **Predisposing factors**

14 200 a. Cultural norms

17 201 Health seeking behaviours and beliefs informed by the cultural norms of some of the
18
19 202 community members were identified as a barrier to timely access to healthcare

21 203 *“The late medical seeking behaviours and some people from certain cultures that believe in
22
23 204 witchcraft are challenging. They wait and do other things until the last moment when they
24
25 205 come to us to seek medical services”*. **KII Healthcare Provider (Female) Viwandani**

27 206 b. Religious beliefs

29 207 Membership in some religious groups were flagged as deterrents to seeking services from
30
31 208 formal medical sources. In spite of the health promotion and sensitisation activities conducted
32
33 209 by community health volunteers and availability of free maternity health services, some of
34
35 210 the community members are not willing to take up any of the services driven by their
36
37 211 religious beliefs.

39 212 *“There was one incident that happened recently. There was a sick child who died because
40
41 213 their religion does not allow them to go to hospital. They thought that when a child is prayed
42
43 214 for they would heal”*. **R2 FGD Healthcare user (18-24) Viwandani**

45 215 **Enabling Factors**

47 216 a. Individual level

49 217 Poverty and unaffordable healthcare

52 218 Limited financial resources and the relatively high cost of care were highlighted as challenges
53
54 219 given that most community members earn very little money from their workplaces.

56 220 *“It’s no easy. People struggle to get that money when they are sick. Most people do casual
57
58 221 jobs or go to the industrial area to look for menial jobs. So the money in informal settlements
59
60 222 is limited, people cannot afford so many things”*. **KII Policy actor (Female) Viwandani**

1
2
3 223 Many residents do not have health insurance and/or are unable to make payments to cover
4 224 their premiums due to poverty. As a result, they have to make out of pocket payments when
5 225 they need to access healthcare services.

6
7
8
9 226 *“You see to pay for those services people pay out of their pockets because most people in this*
10 227 *area don't have NHIF. Some people use NHIF but in this area most people don't have it so*
11 228 *they have to use the money which they have got in order to be served”*. **R3 FGD healthcare**
12 229 **user Men (18-24) Korogocho**

13
14
15
16 230 *‘Sometimes our clients especially those who come with emergency cases usually fail to pay*
17 231 *and then we just have to let them go because there is nothing much we can do about it so in a*
18 232 *way its reducing our income’*. **KII Healthcare Provider Korogocho**

19
20
21
22 233 b. Interpersonal level

23
24 234 Attitudes and skills of healthcare workers

25
26
27 235 Poor attitudes and skills of healthcare workers were reported as impediments to access to
28 236 quality healthcare by residents in both slums.

29
30
31 237 *I want also to say that not all of them treat people with respect and if they don't know how to*
32 238 *handle people with disability I am requesting the government to give them time to be trained*
33 239 *on how they should handle PLWD*. **R3 FGD PLWD (Female) Viwandani**

34
35
36
37 240 c. Organizational level

38
39 241 Services available

40
41
42 242 Although a number of health facilities are available, many are only able to provide basic
43 243 health services. In many instances, residents have to be referred to facilities outside the slums
44 244 for laboratory, imaging and specialist services.

45
46
47
48 245 *‘The services we lack in this area of Korogocho and particularly at the public health facility*
49 246 *are X-ray and laboratory services. It is very important to have a lab because for a doctor to*
50 247 *know what a patient is suffering from they must go to a lab. So we have experienced health*
51 248 *workers but there are no tools. They should also stock drugs’*. **R9 FGD Men (25+)**
52 249 **Korogocho**

53
54
55
56
57 250 *‘We offer medicine for free, the only challenge comes when we want to get lab tests. The lab*
58 251 *tests are a challenge because we don't have a lab within so we send our patients to Kenyatta*

252 *hospital so that they can be tested. We get the result after so this requires patients to come*
 253 *back for diagnosis, something that can take hours or days'. KII Policy actor (Male)*

254 **Korogocho**

255 Availability of health workers

256 The limited availability of healthcare workers is a major concern especially in the public
 257 health facilities. Due to the limited numbers of health workers, patients spend a lot of time in
 258 the facilities. As a result, some opt to consult and buy drugs from chemists in the slums.

259 *'As a facility the challenge we face is mostly the human resource. Sometimes we are*
 260 *overwhelmed when giving the services'. KII Healthcare Provider (Female) Korogocho*

261 *'We have been having shortages of human resource, so most of time you would find that*
 262 *patient would access quality services the challenges would be in long queues so someone*
 263 *would come to the health facility and spend half the day before they actually get the service.*
 264 *You should also imagine that if we have one clinician who works 8 am to 5 pm and is going*
 265 *to see 120 patients; by the time they are seeing their 50th patient, the quality might not be the*
 266 *as the same as the first 10 patients that this clinician served'. KII Policy actor (Female)*

267 **Viwandani**

268 *'You can go to that hospital and queue for a long time' R1 FGD Women (25+) Korogocho*

269 Operating hours of health care facilities

270 Operating hours of facilities coupled with the limited number of public facilities were
 271 identified as barriers to regular access to care. The hours do not favour people who work
 272 during the day. Each of the slums has one public health facility.

273 *'Let say in public hospitals they operate from 8 AM to 4 or 5 PM but during the weekends*
 274 *they are not available. They close so you will have to go to private since they open every day'*

275 **R7 FGD Men (25+) Viwandani**

276 *'So let us say private facilities are okay because they operate twenty four hours but the public*
 277 *hospitals close at 4 PM while on weekends they don't open. They operate from Monday to*
 278 *Friday' R1 FGD Men (25+) Viwandani*

279 d. Community level

280 Poor infrastructure, insecurity and environmental hazards

1
2
3 281 The hazardous environment in the slums was highlighted as a challenge to accessing
4
5 282 healthcare. Poor roads, insecurity and inadequate water and sanitation facilities are major
6
7 283 concerns limiting access to care and exposing others to infections.

8
9 284 *'The roads are in bad state when it is raining. The other challenge is that the way houses are*
10
11 285 *structured in this area are congested even sometimes it is very hard for ambulance to access*
12
13 286 *when you have a patient who is severely sick'* **R3 FGD Men (25+) Korogocho**

14
15 287 *'The challenges we face when we are sick and need to go to hospital...you have to pass*
16
17 288 *through those drainages and also at the same time you are afraid of thieves because the*
18
19 289 *security is not good'* **R9 FGD Men PLWD Viwandani**

20
21 290 e. Policy level

22
23 291 Inadequate financial resources

24
25 292 Low budget allocations and erratic reimbursement of NHIF from the government is a barrier
26
27 293 to health planning and service delivery.

28
29 294 *'We have the health service fund that comes through the county that is one of our main*
30
31 295 *funding and then the grants that come in from donors or through the government as well and*
32
33 296 *the NHIF reimbursement that is usually given to those facilities that are NHIF accredited.*
34
35 297 *But to be honest the funds have not been quite adequate. Also we have been having*
36
37 298 *challenges with NHIF reimbursements. They delay, so you find like now there are some*
38
39 299 *facilities that have not been paid for many months and they have been offering these services*
40
41 300 *so they are really struggling to see how to continue offering services'.* **KII Policy actor**

42 301 **(Female) Viwandani**

43
44 302 Limited involvement in decision making and political interference

45
46 303 The limited involvement of policy actors in decisions that directly affect the communities that
47
48 304 they serve is a critical challenge affecting health service delivery.

49
50 305 *'Of course sometimes what you would really want is not what comes on the ground.*
51
52 306 *Sometimes you can prioritise something, maybe finish up a block and then due to political*
53
54 307 *interference you find that some other work started alongside, yet those funds would have*
55
56 308 *gone to a more prioritized initiative'.* **KII Policy actor (Male) Korogocho**

1
2
3 309 *‘Some of the decisions take long while we are not involved in other decisions, and when we*
4 *make decisions you find that whatever you have decided on has not been acted upon.’ KII*

5
6 311 **Policy actor (Male) Viwandani**

7
8
9 312 Accountability mechanisms

10
11 313 Mechanisms to enable community members and health providers to contribute to decisions
12 that are related to their healthcare such as suggestion boxes, health facility committees and
13 314 other stakeholder forums exist. However, these are not adequately utilised. This was
14 315 highlighted by community members during the feedback sessions and confirmed by
15 316 policymakers.
16 317

17
18 318 *‘We have barazas (community meetings) during which we share our experiences and*
19 *suggestions on health and other matters like security. But what we say does not matter. Those*
20 *private facilities are personal businesses. You cannot tell them what to do.’ Male, FGD*

21 320
22 321 **(Feedback workshop) Viwandani**

23
24 322 *‘The public is willing to give information but what we have noticed is that they give*
25 *information and it’s not acted on. When you call them again, they tell you that you are*
26 323 *wasting our time as we gave you suggestions which have not been implemented.’ KII Policy*
27 324 **actor (Female) Viwandani**

28
29 325
30 326 *‘The contributions we make take a long time because they involve so many people after the*
31 *meeting. When we attend the meetings we have different stakeholders whom those who are*
32 327 *chairing the meeting need to discuss with about what have been shared by the participants.*
33 328 *That is the part that will take time before concrete decisions are reached’. KII Policy actor*
34 329 **(Male) Korogocho**

35 330
36 331 **Need factors**

37
38 332 Community members related that the main reasons for seeking primary healthcare were
39 333 respiratory conditions, injuries and care for pregnant women and children. This was
40 334 confirmed by the health providers who also added that chronic health conditions were reasons
41 335 for seeking care by slum residents. Korogocho and Viwandani differ in some of their
42 336 characteristics with Korogocho being home to the largest dumpsite in Nairobi City County
43 337 (Dandora) hence more prone to infectious diseases related to poor hygiene
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3 338 *'The common illnesses in Korogocho are diarrhoeal diseases, such as cholera and the rest.*
4
5 339 *We also have cases of pneumonia and other respiratory tract infections because of the dump*
6
7 340 *site that is just close to the hospital'. KII Healthcare Provider (Female) Korogocho*
8

9 341 *'The common illnesses are diarrhoea, pneumonia, accidents, and we have TB nowadays. The*
10
11 342 *others one are diabetes and hypertension'. KII Healthcare Provider (Male) Viwandani*
12

13 343 **The Covid-19 pandemic**

14
15 344 Following the declaration of the global pandemic and the national restrictions to curb the
16
17 345 spread of the disease that followed, the challenges above were heightened. Detailed analyses
18
19 346 of the impact of the pandemic on healthcare access have been reported and published
20
21 347 elsewhere (4, 32). In addition to reduced access to care as a result of fear and curfews,
22
23 348 community members lost means of livelihood making it harder for them to pay for healthcare
24
25 349 directly or keep up to date with their health insurance premiums. Furthermore policy actors
26
27 350 reported that the supply of essential medicines was disrupted and available resources
28
29 351 reallocated to respond to the pandemic crisis.

30 352 *'We have had to do a balance here and there especially since the Covid-19 pandemic started.*
31
32 353 *We didn't have a budget allocated for it so we really had to pool the resources to procure*
33
34 354 *extra masks, gloves, sanitizers; things that were not required in large numbers before. So*
35
36 355 *that affected our finances.'* **KII Policy actor (Female), Viwandani**

37 356 **Recommendations to reduce healthcare access barriers**

38
39
40 357 Several suggestions were made to address the barriers and improve health service utilisation
41
42 358 at different levels and by different stakeholders.

43
44 359 Recommendations included community, provider and system-level responses to address the
45
46 360 identified barriers. The recommendations are cross-cutting and applicable to different levels.

47
48 361 At community level, members and their leaders strongly called for financial and risk
49
50 362 protection including access to affordable health insurance and more economic opportunities
51
52 363 as well as health education to improving health-seeking were made.

53
54 364 *For health services to be better government should consider reducing the amount of money*
55
56 365 *people pay for the NHIF card so that everybody can be able to afford to pay. There are those*
57
58 366 *people who are not employed and they need that card but because they have low income they*
59
60 367 *can't afford to get it. R3 FGD PLWD Korogocho*

368 Provider level suggestions included increasing the number of public health facilities, the
369 variety of health services and health workers' numbers and their skills, equipping facilities
370 with necessary equipment and regular drug supplies, among others.

371 *For us to have better health services a hospital should be constructed near us. The hospital*
372 *should have enough drug stocks of drugs, have qualified nurses and doctors and operate*
373 *twenty four hours because a person can get sick anytime. R8 FGD PLWD Viwandani*

374 While system level suggestions included regulating the health providers' work with more
375 regular quality checks, more funding for health initiatives and better and effective decision-
376 making processes.

377 *'I think building the policies from bottom-up would also be important rather than a top down*
378 *kind of an approach. Because we have some policies which have been cascaded from up and*
379 *implementing is challenging. The devising of these policies and involvement from bottom-up*
380 *would be important'. KII Policy actor (Male) Korogocho*

381 Discussion

382 We explored current barriers to access to quality healthcare in two urban slums, highlighting
383 several challenges that urban slum residents encounter in their pursuit of quality healthcare.
384 We identified the predisposing, enabling, and need factors that together negatively impact the
385 way residents of urban slums access healthcare. In addition, existing barriers were heightened
386 by the Covid-19 pandemic. Across different population and stakeholder groups there was
387 agreement that the socioeconomic status of individuals and their families such as poverty and
388 lack of health insurance interact with community factors like poor infrastructure, limited
389 availability of health facilities and insecurity and health system factors such as limited facility
390 opening hours and health providers' attitudes and skills and limited public health resources to
391 limit healthcare access in this setting and perpetuate health inequities. It is also important to
392 note that the factors are interrelated, as for instance, high levels of prevailing poverty
393 contribute to high crime rates seen in the environment that in turn prevent community
394 members from moving to health facilities and health providers shunning employment in the
395 areas.

396 Previous studies in the slums and other underserved areas in Kenya have identified similar
397 barriers at individual and community levels (19, 20, 33). In our study, context specific
398 barriers to quality healthcare in the slums included heightened insecurity, poor infrastructure

1
2
3 399 and poor sanitation and hygiene. These are in line with findings by other studies done in slum
4 400 settings (9, 10). In the 2000 (9) and 2012 (10) Nairobi Cross-Sectional Slum Surveys (NCSS)
5 401 the hazardous environment in the slums characterised by the near absence of the public
6 402 sector, limited access to healthcare and water and sanitation services, among others. As such,
7 403 these challenges persist in spite of two decades of targeted investments in initiatives to reduce
8 404 inequalities in the slums.

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13
14 405 An important challenge to tackling the barriers to access to quality healthcare in our context
15 406 is related to policy formulation and key stakeholder engagement in that process. Service
16 407 providers and other key stakeholders reported about their inability to respond to the needs of
17 408 the communities as most of the decisions about caregiving and services were made higher up,
18 409 with significant implications on how limited health system resources are managed. It appears
19 410 that devolution of health services through the 2010 constitution has not resulted in the much
20 411 needed empowering reforms at subnational level or translated into effective care delivery for
21 412 the most vulnerable, who are also the majority. Thus, bureaucracy and ineffective
22 413 accountability mechanisms persist and continues to entrench health inequalities that
23 414 devolving health was to help resolve (34, 35). In a devolved health system, paying attention
24 415 to health managers' abilities to assess population health needs and respond to them is
25 416 necessary. In addition, the barriers reported as regard to the limited use of existing
26 417 accountability mechanisms need further attention to ensure that the mechanisms work for the
27 418 greater good of the urban slum residents. For example, a recent systematic review
28 419 demonstrated that inadequate human resources for health and limited funding of county
29 420 health initiatives is a persistent barrier dating from the pre-devolution era (35).

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42 421 The identified challenges reinforce the need to understand and respond to social determinants
43 422 of health. As such, innovations to respond to existing health inequities need to be multi-
44 423 sectoral in nature. This is also in line with the recommendations made by study participants to
45 424 address existing gaps. Multi-sectoral strategies are needed to address individual, community
46 425 and system-level barriers to quality healthcare in this slum settings to ensure health access for
47 426 all.

427 Limitations

428 The nature of the study resulted in information from this setting and based on perspectives
429 thus might not necessarily be applicable in other settings. Interviews conducted in Kiswahili-
430 loss of meaning during translation. However, we triangulated information from different

1
2
3 431 sources (FGDs, IDIs, and KIIs) and sought feedback from different stakeholders who
4
5 432 validated the results. Furthermore, similar results have been demonstrated in other low
6
7 433 resource settings.

9 434 **Conclusion**

11 435 In spite of many targeted interventions to improve the health and wellbeing of the urban poor,
12
13 436 many slum residents are still unable to receive quality healthcare because of persistent and
14
15 437 new barriers due to the Covid-19 pandemic. Multi-sectoral innovations are needed to reduce
16
17 438 existing service delivery gaps.

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9 463 Smith, Celia Taylor, Philip Ulbrich, Olalekan A Uthman, Ria Wilson, Godwin Yeboah

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11 464 **Data sharing statement:** The data used in this study will be made available after two years
12
13 465 on the African Population and Health Research Centre (APHRC) microdata portal:
14
15 466 <http://microdataportal.aphrc.org/index.php/catalog>. Request can be obtained from Pauline
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30
31 474 **Author Contributions**

32
33 475 PB conceptualised and designed the study, contributed to the analysis and interpretation of
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35 476 the data and drafted the manuscript. LK and PK contributed to the design of the study,
36
37 477 coordinated the data collection, analysis and edited the manuscript. MA and IK contributed to
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39 478 the analysis and interpretation of the data, and reviewed drafts of the manuscript. CK and
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41 479 CKy contributed to the design of the study and reviewed drafts of the manuscript. All authors
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43 480 read and approved the final manuscript.

481 **References**

- 482 1. Jacobs B, Ir P, Bigdeli M, Annear PL, Van Damme W. Addressing access barriers to
483 health services: an analytical framework for selecting appropriate interventions in low-
484 income Asian countries. *Health Policy and Planning*. 2011;27(4):288-300.
- 485 2. Santalahti M, Sumit K, Perkiö M. Barriers to accessing health care services: a
486 qualitative study of migrant construction workers in a southwestern Indian city. *BMC Health
487 Services Research*. 2020;20(1):619.
- 488 3. Bakeera SK, Wamala SP, Galea S, State A, Peterson S, Pariyo GW. Community
489 perceptions and factors influencing utilization of health services in Uganda. *International
490 Journal for Equity in Health*. 2009;8(1):25.
- 491 4. Ahmed SAKS, Ajisola M, Azeem K, Bakibinga P, Chen Y-F, Choudhury NN, et al.
492 Impact of the societal response to COVID-19 on access to healthcare for non-COVID-19
493 health issues in slum communities of Bangladesh, Kenya, Nigeria and Pakistan: results of
494 pre-COVID and COVID-19 lockdown stakeholder engagements. *BMJ Global Health*.
495 2020;5(8):e003042.
- 496 5. Kumar J, Kumar P. COVID-19 pandemic and health-care disruptions: count the most
497 vulnerable. *The Lancet Global Health*. 2021;9(6):e722-e3.
- 498 6. Kenya Go. National Hospital Insurance Fund Act No.9 of 1998. In: General A, editor.
499 Nairobi: Published by the National Council for Law Reporting with the Authority of the
500 Attorney-General; 2014.
- 501 7. Kenya MoH. Implementing free maternal health care in Kenya: challenges, strategies,
502 and recommendation. Nairobi: Ministry of Health; 2015.
- 503 8. Statistics KNBo. 2019 Kenya Population and Housing Census (KPHC). Nairobi:
504 Kenya National Bureau of Statistics (KNBS); 2020.
- 505 9. APHRC. Population and Health Dynamics in Nairobi's Informal Settlements. .
506 Nairobi, Kenya: African Population and Health Research Center (APHRC); 2002.
- 507 10. APHRC. Population and health dynamics in Nairobi's informal settlements. Nairobi,
508 Kenya: African Population and Health Research Center (APHRC); 2014.
- 509 11. Muraguri L. Kenyan Government Initiatives in Slum Upgrading. *The East African
510 Review*. 2011;44:119-27.
- 511 12. Bellows N. Vouchers for reproductive health care services in Kenya and Uganda
512 Frankfurt: KfW Bankengruppe 2012 [
- 513 13. Amendah DD, Mutua MK, Kyobutungi C, Buliva E, Bellows B. Reproductive health
514 voucher program and facility based delivery in informal settlements in Nairobi: a longitudinal
515 analysis. *PloS one*. 2013;8(11):e80582-e.
- 516 14. Njuki R, Abuya T, Kimani J, Kanya L, Korongo A, Mukanya C, et al. Does a voucher
517 program improve reproductive health service delivery and access in Kenya? *BMC Health
518 Services Research*. 2015;15(1):206.
- 519 15. Lang'at E, Mwanri L, Temmerman M. Effects of implementing free maternity service
520 policy in Kenya: an interrupted time series analysis. *BMC Health Services Research*.
521 2019;19(1):645.
- 522 16. Masaba BB, Mmusi-Phetoe RM. Free Maternal Health Care Policy in Kenya; Level
523 of Utilization and Barriers. *International Journal of Africa Nursing Sciences*.
524 2020;13:100234.
- 525 17. Njuki R, Obare F, Warren C, Abuya T, Okal J, Mukuna W, et al. Community
526 experiences and perceptions of reproductive health vouchers in Kenya. *BMC Public Health*.
527 2013;13(1):660.
- 528 18. Wamalwa E. Implementation challenges of free maternity services policy in Kenya:
529 the health workers' perspective. *Pan African Medical Journal*. 2015;22.

- 1
2
3 530 19. Otieno PO, Wambiya EOA, Mohamed SM, Mutua MK, Kibe PM, Mwangi B, et al.
4 531 Access to primary healthcare services and associated factors in urban slums in Nairobi-
5 532 Kenya. *BMC Public Health*. 2020;20(1):981.
- 6 533 20. Fotso JC, Mukiira C. Perceived quality of and access to care among poor urban
7 534 women in Kenya and their utilization of delivery care: harnessing the potential of private
8 535 clinics? *Health Policy and Planning*. 2011;27(6):505-15.
- 9 536 21. Jacobs B, Ir P, Bigdeli M, Annear PL, Van Damme W. Addressing access barriers to
10 537 health services: an analytical framework for selecting appropriate interventions in low-
11 538 income Asian countries. *Health Policy Plan*. 2012;27(4):288-300.
- 12 539 22. Bakibinga P, Kabaria C, Kyobutungi C, Manyara A, Mbaya N, Mohammed S, et al. A
13 540 protocol for a multi-site, spatially-referenced household survey in slum settings: methods for
14 541 access, sampling frame construction, sampling, and field data collection. *BMC Medical*
15 542 *Research Methodology*. 2019;19(1):109.
- 16 543 23. Andersen RM. Revisiting the behavioral model and access to medical care: does it
17 544 matter? *J Health Soc Behav*. 1995;36(1):1-10.
- 18 545 24. Andersen R, Newman JF. Societal and Individual Determinants of Medical Care
19 546 Utilization in the United States. *Milbank Q*. 2005;83(4):10.1111/j.468-0009.2005.00428.x.
- 20 547 25. Wamukoya M, Kadengye DT, Iddi S, Chikozho C. The Nairobi Urban Health and
21 548 Demographic Surveillance of slum dwellers, 2002–2019: Value, processes, and challenges.
22 549 *Global Epidemiology*. 2020;2:100024.
- 23 550 26. Kyobutungi C, Ziraba AK, Ezech A, Yé Y. The burden of disease profile of residents
24 551 of Nairobi's slums: results from a demographic surveillance system. *Popul Health Metr*.
25 552 2008;6:1.
- 26 553 27. Zulu EM, Beguy D, Ezech AC, Bocquier P, Madise NJ, Cleland J, et al. Overview of
27 554 migration, poverty and health dynamics in Nairobi City's slum settlements. *Journal of urban*
28 555 *health : bulletin of the New York Academy of Medicine*. 2011;88 Suppl 2(Suppl 2):S185-
29 556 S99.
- 30 557 28. Mudege NN, Zulu EM. Discourses of illegality and exclusion: when water access
31 558 matters. *Glob Public Health*. 2011;6(3):221-33.
- 32 559 29. Ezech. AC, Chepngeno., G, Kasiira., A. Z, et al. The Situation of Older People in Poor
33 560 Urban Settings: The Case of Nairobi, Kenya. In: Cohen. B, & Menken., J, editor. *Aging in*
34 561 *Sub-Saharan Africa: Recommendation for Furthering Research*. 6. Washington (DC):
35 562 National Academies Press (US); 2006.
- 36 563 30. Graneheim U, Lundman B. Qualitative Content Analysis in Nursing Research:
37 564 Concepts, Procedures and Measures to Achieve Trustworthiness. *Nurse education today*.
38 565 2004;24:105-12.
- 39 566 31. Graneheim UH, Lindgren B-M, Lundman B. Methodological challenges in qualitative
40 567 content analysis: A discussion paper. *Nurse Education Today*. 2017;56:29-34.
- 41 568 32. Kibe PM, Kisia L, Bakibinga P. COVID-19 and community healthcare: perspectives
42 569 from Nairobi's informal settlements. *Pan Afr Med J*. 2020;35(Suppl 2):106-.
- 43 570 33. Alsheimer Q. Surveying Access to Healthcare in Kisumu and Siaya Counties, Kenya.
44 571 https://digitalcollections.sit.edu/isp_collection/2816: University of South Carolina; 2018.
- 45 572 34. Kimathi L. Challenges of the Devolved Health Sector in Kenya
46 573 Teething Problems or Systemic Contradictions? *Africa Development / Afrique et*
47 574 *Développement*. 2017;42(1):55-77.
- 48 575 35. Masaba BB, Moturi JK, Taiswa J, Mmusi-Phetoe RM. Devolution of healthcare
49 576 system in Kenya: progress and challenges. *Public Health*. 2020;189:135-40.
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Standards for Reporting Qualitative Research (SRQR)*

<http://www.equator-network.org/reporting-guidelines/srqr/>

Page/line no(s).

Title and abstract

<p>Title - Concise description of the nature and topic of the study Identifying the study as qualitative or indicating the approach (e.g., ethnography, grounded theory) or data collection methods (e.g., interview, focus group) is recommended</p>	1/1-2
<p>Abstract - Summary of key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results, and conclusions</p>	2/21-48

Introduction

<p>Problem formulation - Description and significance of the problem/phenomenon studied; review of relevant theory and empirical work; problem statement</p>	4-6/60-111
<p>Purpose or research question - Purpose of the study and specific objectives or questions</p>	5/91-103

Methods

<p>Qualitative approach and research paradigm - Qualitative approach (e.g., ethnography, grounded theory, case study, phenomenology, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g., postpositivist, constructivist/ interpretivist) is also recommended; rationale**</p>	5/114-121
<p>Researcher characteristics and reflexivity - Researchers' characteristics that may influence the research, including personal attributes, qualifications/experience, relationship with participants, assumptions, and/or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results, and/or transferability</p>	6/134
<p>Context - Setting/site and salient contextual factors; rationale**</p>	6/123-129
<p>Sampling strategy - How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g., sampling saturation); rationale**</p>	5/114-121 & 7/162
<p>Ethical issues pertaining to human subjects - Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues</p>	7/163-169
<p>Data collection methods - Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources/methods, and modification of procedures in response to evolving study findings; rationale**</p>	6/130-145

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2	Data collection instruments and technologies - Description of instruments (e.g.,	
3	interview guides, questionnaires) and devices (e.g., audio recorders) used for data	
4	collection; if/how the instrument(s) changed over the course of the study	6/141-145
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6	Units of study - Number and relevant characteristics of participants, documents,	
7	or events included in the study; level of participation (could be reported in results)	7-8/171-179
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9	Data processing - Methods for processing data prior to and during analysis,	
10	including transcription, data entry, data management and security, verification of	
11	data integrity, data coding, and anonymization/de-identification of excerpts	6/147-148
12		
13	Data analysis - Process by which inferences, themes, etc., were identified and	
14	developed, including the researchers involved in data analysis; usually references a	
15	specific paradigm or approach; rationale**	6-7/147-162
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17	Techniques to enhance trustworthiness - Techniques to enhance trustworthiness	
18	and credibility of data analysis (e.g., member checking, audit trail, triangulation);	
19	rationale**	7/157-161
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Results/findings

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23	Synthesis and interpretation - Main findings (e.g., interpretations, inferences, and	
24	themes); might include development of a theory or model, or integration with	
25	prior research or theory	7-14/170-359
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27	Links to empirical data - Evidence (e.g., quotes, field notes, text excerpts,	
28	photographs) to substantiate analytic findings	7-14/170-359
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Discussion

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32	Integration with prior work, implications, transferability, and contribution(s) to	
33	the field - Short summary of main findings; explanation of how findings and	
34	conclusions connect to, support, elaborate on, or challenge conclusions of earlier	
35	scholarship; discussion of scope of application/generalizability; identification of	
36	unique contribution(s) to scholarship in a discipline or field	14-16/360-413
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38	Limitations - Trustworthiness and limitations of findings	16/402-407
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Other

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42	Conflicts of interest - Potential sources of influence or perceived influence on	
43	study conduct and conclusions; how these were managed	17/443
44		
45	Funding - Sources of funding and other support; role of funders in data collection,	
46	interpretation, and reporting	187/444-448
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*The authors created the SRQR by searching the literature to identify guidelines, reporting standards, and critical appraisal criteria for qualitative research; reviewing the reference lists of retrieved sources; and contacting experts to gain feedback. The SRQR aims to improve the transparency of all aspects of qualitative research by providing clear standards for reporting qualitative research.

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**The rationale should briefly discuss the justification for choosing that theory, approach, method, or technique rather than other options available, the assumptions and limitations implicit in those choices, and how those choices influence study conclusions and transferability. As appropriate, the rationale for several items might be discussed together.

Reference:

O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. **Standards for reporting qualitative research: a synthesis of recommendations.** *Academic Medicine*, Vol. 89, No. 9 / Sept 2014
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BMJ Open

Demand and supply side barriers and opportunities to enhance access to healthcare for urban poor populations in Kenya: a qualitative study

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1 Title: **Demand and supply-side barriers and opportunities to enhance access to healthcare**
2 **for urban poor populations in Kenya: a qualitative study**

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1
2
3 **23 Abstract (298)**
4

5 **24 Objective:** To explore the barriers to and options for improving access to quality healthcare
6
7 **25** for the urban poor in Nairobi, Kenya.
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10 **26 Design and participants:** Qualitative approach. In-depth interviews (n=12), focus group
11
12 **27** discussions with community members (n=12), and Key informant interviews with health
13
14 **28** providers and policymakers (n= 25) were conducted between August 2019 and September
15
16 **29** 2020. Four feedback and validation workshops were held in December 2019 and April-June
17
18 **30** 2021.
19

20 **31 Setting:** Korogocho and Viwandani urban slums in Nairobi, Kenya.
21

22 **32 Results:** The socioeconomic status of individuals and their families, such as poverty and lack
23
24 **33** of health insurance, interact with community-level factors like poor infrastructure, limited
25
26 **34** availability of health facilities and insecurity; and health system factors such as limited
27
28 **35** facility opening hours, health providers' attitudes and skills, and limited public health
29
30 **36** resources to limit healthcare access and perpetuate health inequities. Limited involvement in
31
32 **37** decision-making processes by service providers and other key stakeholders was identified as
33
34 **38** a major challenge with significant implications on how limited health system resources are
35
36 **39** managed.
37

38
39 **40 Conclusion:** Despite many targeted interventions to improve the health and wellbeing of the
40
41 **41** urban poor, slum residents are still unable to obtain quality healthcare because of persistent
42
43 **42** and new barriers due to the Covid-19 pandemic. In a devolved health system, paying
44
45 **43** attention to health services managers' abilities to assess and respond to population health
46
47 **44** needs is vital. The limited use of existing accountability mechanisms requires attention to
48
49 **45** ensure that the mechanisms enhance, rather than limit, access to health services for the urban
50
51 **46** slum residents. The uniqueness of poor urban settings also requires in-depth and focussed
52
53 **47** attention to social determinants of health within these contexts. To address individual,
54
55 **48** community, and system-level barriers to quality healthcare in this and related settings and
56
57 **49** expand access to health services for all, multi-sectoral strategies tailored to each population
58
59 **50** group are needed.
60

60 **51 Keywords:** Healthcare, Access, Urban Slums, Covid-19, Nairobi

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2
3 52 **Strengths and limitations of this study**
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5

- 6 53 • The study triangulated information from different sources (FGDs, IDIs, and KIIs) to
7 54 enhance the validity of the results.
8
9 55 • Structured and urban poor participatory approaches were used to obtain feedback
10 56 from different stakeholders and validate the findings.
11
12 57 • Most of the themes mentioned by the participants correspond very well with those
13 58 found in the literature.
14
15 59 • The study was conducted in urban poor settlements, limiting the applicability of the
16 60 results to the study area or similar settings.
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62 **Introduction (4701)**

63 In many low- and middle-income countries, common barriers to accessing quality healthcare
64 include geographical access, availability, affordability, and acceptability of services (1-3).

65 These barriers result in high levels of health inequities in countries and are thus major drivers
66 of poor health outcomes and a significant challenge to health systems. The ongoing Covid-19
67 pandemic has exacerbated health inequalities (4, 5). If these countries are to 'build back
68 better' and get their health systems goals back on track, renewed commitments to reduce
69 health inequalities, especially for vulnerable populations, are necessary.

70 Kenya has invested in several initiatives to reduce health inequalities and improve access to
71 adequate care for its population (6, 7). Key among these initiatives is Universal Health
72 Coverage (UHC), meant to anchor government health investment efforts to reduce health
73 inequities. However, these initiatives rarely benefit the urban poor, who make up over two-
74 thirds of Kenya's growing urban population (8, 9). Despite their physical proximity to the
75 national government and public and private services, slum areas are disadvantaged and
76 expose residents to health, social and financial vulnerabilities (10). Past research has shown
77 that many slum residents of Nairobi, Kenya's capital, experience poor health outcomes,
78 including higher maternal and child morbidity and mortality compared to other urban and
79 rural areas (9, 10).

80 Based on this evidence, the Government of Kenya and its partners made critical investments
81 such as the Slum Upgrading Programme (11) the Reproductive Health Voucher (RH-OBA)
82 (12) to respond to the needs of the urban poor. The RH-OBA and Free Maternity care policy
83 showed an increase in facility-based deliveries in public hospitals and highlighted the impact
84 of cost as a barrier to healthcare utilisation, particularly by women (13-15). However, audits
85 of these programmes identify many persistent challenges. For example, a review of the
86 Reproductive Health voucher programme in two slums revealed that 22% of the intended
87 beneficiaries did not use the vouchers (13). Similarly, recent data on the Free Maternity Care
88 programme showed that many disadvantaged groups are not benefitting from the services
89 (16). Some of the challenges are related to how the programmes are implemented, while
90 others are ingrained in broader societal and health system structural challenges (17, 18).
91 Solutions, which enhance access to care, should be informed by an in-depth understanding of
92 the barriers to access, as these are often context and population-specific and keep evolving.

1
2
3 93 As Kenya makes more investments towards UHC, it is essential to understand and document
4 94 current, and if any, persistent barriers to access to quality healthcare by the most
5 95 disadvantaged population groups such as urban slum residents to identify measures to redress
6 96 the inequities. Such an assessment needs to go beyond the current limitations in many studies
7 97 on barriers to healthcare access that tend to focus on demand-side barriers (19, 20). Instead,
8 98 an integrated approach, bringing together demand and supply-side analyses, is likely to yield
9 99 a holistic understanding of healthcare access challenges (1, 21). Taking the unique context of
10 100 urban slums in Kenya, this study explores persistent and current demand and supply-side
11 101 barriers to optimum delivery and access to quality healthcare. The findings are used to
12 102 identify opportunities that can be harnessed to reduce these barriers for better health and
13 103 wellbeing in two urban slum communities in Nairobi, Kenya. The study draws on data
14 104 collected as part of a multi-country study to assess current healthcare services in seven
15 105 informal settlements in Africa and Asia to identify viable service delivery models relevant to
16 106 the slum setting (22). The study explored preventive and curative healthcare services for all
17 107 population groups in the urban slums (22).

18
19 108 With due consideration for the unique context of slums in Kenya (as elsewhere), this study
20 109 utilised the Andersen Behavioural Model (ABM) to conceptualise the barriers to access to
21 110 healthcare (23, 24). The model describes predisposing, enabling and need factors that
22 111 influence people's decisions to utilise health care services. Predisposing factors are pre-
23 112 existing socio-cultural characteristics of an individual; enabling factors serve as a means to
24 113 accessing care, while the need factors refer to the immediate reason why health care is
25 114 sought. The ABM has undergone several iterations, as presented by Andersen that
26 115 modifications could be made to fit different purposes without distorting the original
27 116 framework.

117 **Methods**

118 **Design and participants**

119 The study used a qualitative approach. Healthcare users, providers and policy actors were
120 purposively selected. Data were collected through 12 Focus Group Discussions (FGDs) and
121 12 In-depth Interviews (IDIs) with healthcare users representing persons living with physical
122 disabilities (PLWD), younger (18-24 years old) and older (25+) women and men and 25 Key
123 Informant Interviews (KIIs) with healthcare providers (formal and informal), chemists and
124 policy actors. The FGDs and IDIs were conducted in-person to seek perspectives from

1
2
3 125 healthcare users on the provision of healthcare services in the community (*Table 1*). While
4
5 126 KIIs were conducted remotely via telephone interviews (*Table 2*).
6

7 **Setting**

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10 128 The study was conducted in two urban slums, Korogocho and Viwandani, in Nairobi County,
11
12 129 the capital city of Kenya. They are located 7 to 12 kilometres away from the Nairobi Central
13
14 130 Business District (CBD) and about 7 kilometres away from each other. Viwandani has an
15
16 131 ethnically diverse migrant population mainly seeking economic opportunities in the
17
18 132 surrounding industries, whereas Korogocho has a more settled population that has lived there
19
20 133 over several generations (25). The slum areas in Nairobi are characterised by a polluted
21
22 134 environment, overcrowding, poor infrastructure, poor sanitation, a marked absence of the
23
24 135 public services and debilitating poverty (26-28). These conditions, which exacerbate
25
26 136 morbidity and mortality, disproportionately affect vulnerable groups such as children and the
27
28 137 elderly (26, 29).

29 **Data collection procedures**

30 139 Trained research assistants collected data in August 2019 and September 2020. The research
31
32 140 assistants had prior experience conducting qualitative interviews, were familiar with the slum
33
34 141 communities and were fluent in English and Kiswahili, the two most common languages
35
36 142 spoken in the study areas. The research assistants had no prior interactions with participants.
37
38 143 The FGDs and IDIs were conducted before the Covid-19 pandemic in a central location
39
40 144 within the community convenient for all the participants. The selected locations also ensured
41
42 145 privacy and minimum disruptions. Data collection procedures for KII participants were
43
44 146 adapted to include remote telephone interviews during the Covid-19 period. Participants were
45
46 147 contacted a few days before the interviews to select a date and time that was most convenient
47
48 148 for them to participate in the interviews. Participants were also briefed and encouraged to
49
50 149 position themselves in a place that ensured privacy and minimal disruptions. Interviews were
51
52 150 conducted using a structured study guide. The interviews lasted between 30 to 60 minutes for
53
54 151 IDIs and KIIs, and up to 90 minutes for FGDs. The FGDs consisted of eight to ten
55
56 152 participants. All interviews were audio-recorded and complemented by handwritten notes.

57 **Data management and analysis**

58 154 Audio-recorded files were transcribed verbatim and translated into English (FGDs and IDIs).
59
60 155 NVivo software (QRS International 2018) was used to code the data. The data were analysed

1
2
3 156 using content analysis method through the stages suggested by Graneheim and Lundman
4 157 (2004) (30). We applied a deductive component informed by the Andersen Behavioural
5 158 Model (ABM) (23, 24) approach and an inductive one allowing for the identification of new
6 159 themes from the data (31). The ABM provided the main guiding framework of analysis,
7 160 enabling us to code and sort the data and identify the categories, predisposing, enabling and
8 161 need factors driving the barriers to access to quality healthcare services in the urban slums.
9 162 Because the ABM is flexible, we were able to add factors specific to the slum context as a
10 163 new level of vulnerability. At the same time, the inductive approach identified
11 164 recommendations to improve access to quality healthcare. Two researchers identified themes
12 165 from the coded data. Two other researchers independently reviewed the themes. All the
13 166 authors agreed on the themes. Additional recommendations were identified during
14 167 participatory workshops in December 2019, April and June 2021 convened by the research
15 168 teams and attended by community representatives, health providers and policymakers. Data
16 169 saturation was achieved during the analysis.

170 **Ethical considerations**

171 This study involved human participants and was approved by an Ethics Committee(s).
172 Approval was granted by AMREF Health Africa's Ethics and Scientific Review Committee
173 (ESRC) under protocol ID number AMREF-ESRC P440/2018. The research permit was
174 received from the National Commission for Science Technology and Innovation
175 (NACOSTI). Additional clearance was obtained from AMREF Health Africa's ESRC to
176 conduct telephone interviews following the declaration of the Covid-19 pandemic and its
177 restrictions in the country. Study participants gave written informed consent for interviews
178 that were conducted face-to-face or verbal audio-recorded informed consent for interviews
179 conducted remotely via telephone interviews. The study did not involve animal subjects.

180 **Patient and Public Involvement**

181 Participants were involved in the reporting and dissemination of our research.
182 Recommendations were identified during participatory workshops in December 2019, April
183 and June 2021 convened by the research teams and attended by community representatives,
184 health providers and policymakers.

1
2
3 **185 Results**

4
5 **186 Participants**

6
7
8 187 The total number of participants for FGDs and IDIs were 127 (66 females and 61 males) for
9
10 188 both Korogocho and Viwandani (*Table 1*). About half the participants had always lived in the
11
12 189 slums. The majority had received some healthcare service in the six months before the
13
14 190 interview. On average, the key informant participants had served in the communities for 11
15
16 191 years (*Table 2*). Most of the healthcare providers had attained tertiary education. On the other
17
18 192 hand, most alternative caregivers had only attained primary level education.

19 *Table 1: Focus Group Discussion/In-depth Interview Participant Characteristics*

Site	Average age	Sex		Always lived (born) in the area	Needed healthcare in the month before the interview	Received healthcare in the six months before the interview
		Female	Male			
Korogocho	28	37	34	34	62	60
Viwandani	29	29	27	19	44	42
Total		66	61	53	106	102
		127				

194 *Table 2: Key Informant Participant Characteristics*

Category	Highest level of education	Occupational Background	Years served in this capacity	Years worked in the community
Healthcare providers (public/private sector) (n=4)	Tertiary	Clinical, Nursing Public Health	3-14 years	3-7 years
Chemists/pharmacist (n=8)	Tertiary	Nursing, pharmaceutical (pharmtech/pharmacist)	5-15 years	5-15 years
Alternative/informal care providers (n=8)	Secondary (only 1) the rest had primary	Traditional healers, faith healers, herbalists	18-40 years	16-30 years
Policy actors (n=5)		Clinical, psychology, community development, medical	8-17 years	0.5-15 years

1
2
3 195 Barriers identified are grouped according to the thematic areas in the ABM and are described
4
5 196 below:

6
7 197 **Predisposing factors**

8
9
10 198 a. Cultural norms

11
12 199 Health seeking behaviours and beliefs informed by the cultural norms of some of the
13
14 200 community members were identified as a barrier to timely access to healthcare

15
16 201 *“The late medical seeking behaviours and some people from certain cultures that believe in*
17
18 202 *witchcraft are challenging. They wait and do other things until the last moment when they*
19
20 203 *come to us to seek medical services”*. **KII Healthcare Provider (Female) Viwandani**

21
22 204 b. Religious beliefs

23
24 205 Membership in some religious groups were flagged as a deterrent to seeking services from
25
26 206 formal medical sources. Despite the health promotion and sensitisation activities conducted
27
28 207 by community health volunteers and the availability of free maternity health services, some
29
30 208 community members are not willing to take up any of the services driven by their religious
31
32 209 beliefs.

33
34 210 *“There was one incident that happened recently. A sick child died because their religion*
35
36 211 *does not allow them to go to the hospital. They thought that when a child is prayed for, they*
37
38 212 *would heal”*. **R2 FGD Healthcare user Women (18-24) Viwandani**

39
40 213 **Enabling Factors**

41
42 214 a. Individual level

43
44 215 Poverty and unaffordable healthcare

45
46 216 Limited financial resources and the relatively high cost of care were highlighted as
47
48 217 challenges, given that most community members earn very little money from their
49
50 218 workplaces.

51
52 219 *“It’s no easy. People struggle to get that money when they are sick. Most people do casual*
53
54 220 *jobs or go to the industrial area to look for menial jobs. So the money in informal settlements*
55
56 221 *is limited, people cannot afford so many things”*. **KII Policy actor (Female) Viwandani**

1
2
3 222 Many residents do not have health insurance and/or are unable to make payments to cover
4 223 their premiums due to poverty. As a result, they have to make out of pocket payments when
5 224 they need to access healthcare services.

6
7
8
9 225 “You see, to pay for those services, people pay out of their pockets because most people in
10 226 this area don’t have NHIF [referring to the National Health Insurance Fund]. In this area,
11 227 most people don’t NHIF to be served, so they pay out of their pockets”. **R3 FGD healthcare**
12 228 **user Men (18-24) Korogocho**

13
14
15
16 229 ‘Sometimes our clients, especially those who come with emergency cases, usually fail to pay
17 230 and then we just have to let them go because there is nothing much we can do about it so in a
18 231 way it is reducing our income’. **KII Healthcare Provider (Male) Korogocho**

19
20
21
22 232 b. Interpersonal level

23
24
25 233 Attitudes and skills of healthcare workers

26
27 234 Poor attitudes and skills of healthcare workers were reported as impediments to access to
28 235 quality healthcare by residents in both slums.

29
30
31 236 *I also want to say that not all of them [health workers] treat people with respect and if they*
32 237 *don’t know how to handle people with disability, I am requesting the government to give them*
33 238 *time to be trained on how they should handle PLWD*. **R3 FGD PLWD (Female) Viwandani**

34
35
36
37 239 c. Organizational level

38
39
40 240 Services available

41
42 241 Although several health facilities are available, many can only provide basic health services.
43 242 In many instances, residents have to be referred to facilities outside the slums for laboratory,
44 243 imaging and specialist services.

45
46
47
48 244 ‘The services we lack in this area of Korogocho and particularly at the public health facility
49 245 are X-ray and laboratory services. It is imperative to have a lab because for a doctor to
50 246 know what a patient is suffering from, they must go to a lab. So we have experienced health
51 247 workers, but there are no tools. They should also stock drugs’. **R9 FGD Men (25+)**
52 248 **Korogocho**

53
54
55
56
57 249 ‘We offer medicine for free; the only challenge comes when we want to get lab tests. The lab
58 250 tests are a challenge because we don’t have a lab within, so we send our patients to Kenyatta

251 *hospital to be tested. We get the result after, so this requires patients to come back for*
 252 *diagnosis, something that can take hours or days*'. **KII Policy actor (Male) Korogocho**

253 Availability of health workers

254 The limited availability of healthcare workers is a major concern, especially in public health
 255 facilities. Due to the limited number of health workers, patients spend a lot of time in the
 256 facilities. As a result, some opt to consult and buy drugs from chemists in the slums.

257 *'As a facility, the challenge we face is mostly the human resource. Sometimes we are*
 258 *overwhelmed when giving the services*'. **KII Healthcare Provider (Female) Korogocho**

259 *'We have been having shortages of human resources, so most of the time you would find that*
 260 *patient would access quality services the challenges would be in long queues so someone*
 261 *would come to the health facility and spend half the day before they get the service. You*
 262 *should also imagine that if we have one clinician who works 8 am to 5 pm and is going to see*
 263 *120 patients, by the time they are seeing their 50th patient, the quality might not be the same*
 264 *as the first ten patients this clinician served*'. **KII Policy actor (Female) Viwandani**

265 *'You can go to that hospital and queue for a long time*' **R1 FGD Women (25+) Korogocho.**

266 Operating hours of health care facilities

267 Operating hours of facilities coupled with the limited number of public facilities were
 268 identified as barriers to regular access to care. The hours do not favour people who work
 269 during the day. Each of the slums has one public health facility.

270 *'Let's say in public hospitals they operate from 8 AM to 4 or 5 PM, but they are not available*
 271 *during the weekends. They close, so you will have to go to private since they open every day*'

272 **R7 FGD Men (25+) Viwandani**

273 *'So let us say private facilities are okay because they operate twenty-four hours, but the*
 274 *public hospitals close at 4 PM and don't open on weekends. They operate from Monday to*
 275 *Friday*' **R1 FGD Men (25+) Viwandani**

276 d. Community-level

277 Poor infrastructure, insecurity and environmental hazards

1
2
3 278 The hazardous environment in the slums was highlighted as a challenge to accessing
4
5 279 healthcare. Poor roads, insecurity and inadequate water and sanitation facilities are major
6
7 280 concerns limiting access to care and exposing others to infections.

8
9 281 *'The roads are in a bad state when it is raining. The other challenge is that the way houses*
10
11 282 *are structured in this area are congested even sometimes it is very hard for an ambulance to*
12
13 283 *access when you have a patient who is severely sick'* **R3 FGD Men (25+) Korogocho**

14
15 284 *'The challenges we face when we are sick and need to go to hospital...you have to pass*
16
17 285 *through those drainages and also at the same time you are afraid of thieves because the*
18
19 286 *security is not good'* **R9 FGD Men PLWD Viwandani**

20
21 287 As regards insecurity, healthcare users noted that women were more at risk of being mugged
22
23 288 *The challenge with insecurity in this place is that the two health facilities we have are located*
24
25 289 *in dangerous spots. Young boys hide in alleys and snatch your phone and bag. They usually*
26
27 290 *target women. In addition, my home is far from those hospitals.* **IDI Female Healthcare**
28
29 291 **user Korogocho**

30
31 292 e. Policy level

32
33 293 Inadequate financial resources

34
35 294 The governments low budget allocations and erratic reimbursement of the countries National
36
37 295 Health Insurance Scheme - NHIF is a barrier to health planning and service delivery.

38
39 296 *'We have the health service fund that comes through the county that is one of our main*
40
41 297 *funding and then the grants that come in from donors or through the government as well and*
42
43 298 *the NHIF reimbursement that is usually given to those facilities that are NHIF accredited.*
44
45 299 *But to be honest, the funds have not been quite adequate. Also, we have been having*
46
47 300 *challenges with NHIF reimbursements. They delay, so you find like now there are some*
48
49 301 *facilities that have not been paid for many months and they have been offering these services,*
50
51 302 *so they are really struggling to see how to continue offering services'.* **KII Policy actor**
52
53 303 **(Female) Viwandani**

54 304 Limited involvement in decision making and political interference

55
56 305 The limited involvement of policy actors in decisions that directly affect the communities
57
58 306 they serve is a critical challenge affecting health service delivery.

1
2
3 307 *'Of course, sometimes what you would really want is not what comes on the ground.*
4
5 308 *Sometimes you can prioritise something, maybe finish up a block, and then, due to political*
6
7 309 *interference, you find some other work started alongside. Yet, those funds would have gone to*
8
9 310 *a more prioritised initiative'. KII Policy actor (Male) Korogocho*

10
11 311 *'Some of the decisions take long while we are not involved in other decisions, and when we*
12
13 312 *make decisions, you find that whatever you have decided on has not been acted upon.'* **KII**
14
15 313 **Policy actor (Male) Viwandani**

16 314 **Accountability mechanisms**

17
18
19 315 **Mechanisms to enable community members and health providers to contribute to decisions**
20
21 316 **related to their healthcare, such as suggestion boxes, health facility committees and other**
22
23 317 **stakeholder forums, exist. However, these are not adequately utilised. This was highlighted**
24
25 318 **by community members during the feedback sessions and confirmed by policymakers.**

26
27 319 *'We have barazas (community meetings) during which we share our experiences and*
28
29 320 *suggestions on health and other matters like security. But what we say does not matter. Those*
30
31 321 *private facilities are personal businesses. You cannot tell them what to do.'* **Male, FGD**
32
33 322 **(Feedback workshop) Viwandani**

34
35 323 *'The public is willing to give information, but what we have noticed is that they give*
36
37 324 *information, and it's not acted on. When you call them again, they tell you that you are*
38
39 325 *wasting our time as we gave you suggestions which have not been implemented.'* **KII Policy**
40
41 326 **actor (Female) Viwandani**

42
43 327 *'The contributions we make take a long time because they involve many people after the*
44
45 328 *meeting. When we attend the meetings, we have different stakeholders whom those chairing*
46
47 329 *the meeting need to discuss what has been shared by the participants. That is the part that*
48
49 330 *will take time before concrete decisions are reached'. KII Policy actor (Male) Korogocho*

50 331 **Need factors**

51
52 332 **Community members related that the main reasons for seeking primary healthcare were**
53
54 333 **respiratory conditions, injuries and care for pregnant women and children. This was**
55
56 334 **confirmed by the health providers, who also added that chronic health conditions were**
57
58 335 **reasons for seeking care by slum residents. Korogocho and Viwandani differ in some of their**
59
60

1
2
3 336 characteristics. Korogocho is home to the largest dumpsite in Nairobi City County (Dandora),
4
5 337 hence more prone to infectious diseases related to poor hygiene.

6
7 338 *‘The common illnesses in Korogocho are diarrhoeal diseases, such as cholera and the rest.*

8
9 339 *We also have cases of pneumonia and other respiratory tract infections because of the*

10
11 340 *dumpsite that is just close to the hospital’.* **KII Healthcare Provider (Female) Korogocho**

12
13 341 *‘The common illnesses are diarrhoea, pneumonia, accidents, and TB nowadays. The others*

14
15 342 *are diabetes and hypertension’.* **KII Healthcare Provider (Male) Viwandani**

16 17 343 **The Covid-19 pandemic**

18
19
20 344 Following the declaration of the global pandemic and the national restrictions to curb the

21
22 345 spread of the disease that followed, the challenges above were heightened. Detailed analyses

23
24 346 of the impact of the pandemic on healthcare access have been reported and published

25
26 347 elsewhere (4, 32). In addition to reduced access to care due to fear and curfews, community

27
28 348 members lost their means of livelihood, making it harder for them to pay for healthcare

29
30 349 directly or keep up to date with their health insurance premiums. Furthermore, policy actors

31
32 350 reported that the supply of essential medicines was disrupted and available resources

33
34 351 reallocated to respond to the pandemic crisis.

35
36 352 *‘We have had to balance here and there, especially since the Covid-19 pandemic started. We*

37
38 353 *didn’t have a budget allocated for it, so we had to pool the resources to procure extra masks,*

39
40 354 *gloves, sanitisers, things that were not required in large numbers before. So that affected our*

41
42 355 *finances.’* **KII Policy actor (Female), Viwandani**

43 44 356 **Recommendations to reduce healthcare access barriers**

45
46 357 Several suggestions were made to address the barriers and improve health service utilisation

47
48 358 at different levels and by different stakeholders. Recommendations included community,

49
50 359 provider and system-level responses to address the identified barriers. The recommendations

51
52 360 are cross-cutting and applicable to different levels. At the community level, members and

53
54 361 their leaders strongly called for financial and risk protection, including access to affordable

55
56 362 health insurance and more economic opportunities and health education to improve health-

57
58 363 seeking were made.

59
60 364 *For health services to be better, the government should consider reducing the amount of*

money people pay for the NHIF card so that everybody can afford to pay. There are those

1
2
3 366 *people who are not employed, and they need that card, but because they have a low income,*
4 *they can't afford it. R3 FGD PLWD Korogocho*

5
6
7 368 Provider level suggestions included increasing the number of public health facilities, the
8
9 369 variety of health services and health workers' numbers and their skills, and equipping
10
11 370 facilities with the necessary equipment and regular drug supplies.

12
13 371 *For us to have better health services, a hospital should be constructed near us. The hospital*
14
15 372 *should have enough drug stocks, have qualified nurses and doctors and operate twenty-four*
16
17 373 *hours because a person can get sick anytime. R8 FGD PLWD Viwandani*

18
19 374 While system-level suggestions included regulating the health providers' work with more
20
21 375 regular quality checks, more funding for health initiatives and better and effective decision-
22
23 376 making processes.

24
25 377 *'I think building the policies from the bottom-up would also be important rather than a top-*
26
27 378 *down kind of an approach. Because we have some policies cascaded from up and*
28
29 379 *implementing is challenging. The devising of these policies and involvement from bottom-up*
30
31 380 *would be important'. KII Policy actor (Male) Korogocho*

32 **Discussion**

33
34
35 382 We explored current barriers to access to quality healthcare in two urban slums, highlighting
36
37 383 several challenges that urban slum residents encounter in their pursuit of quality healthcare.
38
39 384 We identified the predisposing, enabling, and need factors that negatively impact the way
40
41 385 residents of urban slums access healthcare. In addition to these, we noted that existing
42
43 386 barriers were worsened by the Covid-19 pandemic. Across different population and
44
45 387 stakeholder groups there was agreement that a combination of factors perpetuated health
46
47 388 inequalities and limited access to healthcare. This was shown through the interaction of
48
49 389 individual and family socioeconomic status (such as poverty and lack of health insurance),
50
51 390 with community factors (such as poor infrastructure, limited availability of health facilities
52
53 391 and insecurity), and health system factors (such as limited facility opening hours and health
54
55 392 providers' attitudes and skills, limited public health resources). It is also important to note
56
57 393 that high levels of prevailing poverty contribute to high crime rates seen in the environment.
58
59 394 This in turn prevents community members from going to health facilities and health providers
60
395 shunning employment in these areas. The role of gender in limiting access to healthcare was
396 evident under the nature of the environment, where insecurity played a role in preventing

1
2
3 397 women from accessing health services. Insecurity has been reported in previous studies in the
4
5 398 study sites as a major barrier to access and utilisation of maternal and child health services in
6
7 399 the slums (33). The mentioning of non-communicable diseases such as hypertension and
8
9 400 diabetes in one of the sites, Viwandani, reiterates the growing evidence on the burden of
10
11 401 chronic conditions among the urban poor in this setting and similar settings (34, 35).

12
13 402 Previous studies in the slums and other underserved areas in Kenya have identified similar
14
15 403 barriers at individual and community levels (19, 20, 36). In our study, context-specific
16
17 404 barriers to quality healthcare in the slums included heightened insecurity, poor infrastructure
18
19 405 and poor sanitation and hygiene. These are in line with findings by other studies done in slum
20
21 406 settings (9, 10). In the 2000 (9) and 2012 (10) Nairobi Cross-Sectional Slum Surveys (NCSS)
22
23 407 the hazardous environment in the slums characterised by the near absence of the public
24
25 408 sector, limited access to healthcare and water and sanitation services, among others. As such,
26
27 409 these challenges persist despite two decades of targeted investments in initiatives to reduce
28
29 410 inequalities in the slums.

30
31 411 An important challenge to tackling the barriers to access to quality healthcare in our context
32
33 412 is policy formulation and key stakeholder engagement in that process. Service providers and
34
35 413 other key stakeholders reported their inability to respond to the needs of the communities as
36
37 414 most of the decisions about caregiving and services were made higher up, with significant
38
39 415 implications on how limited health system resources are managed. It appears that devolution
40
41 416 of health services through the 2010 constitution has not resulted in the much-needed
42
43 417 empowering reforms at the subnational level or translated into effective care delivery for the
44
45 418 most vulnerable, who are also the majority. Thus, bureaucracy and ineffective accountability
46
47 419 mechanisms continue to entrench health inequalities that devolving health was to help resolve
48
49 420 (37, 38). In a devolved health system, it is necessary to pay attention to health managers'
50
51 421 abilities to assess population health needs and respond to them. In addition, the barriers
52
53 422 reported regarding the limited use of existing accountability mechanisms need further
54
55 423 attention to ensure that the mechanisms work for the greater good of the urban slum residents.
56
57 424 For example, a recent systematic review demonstrated that inadequate human resources for
58
59 425 health and limited funding of county health initiatives are a persistent barrier dating from the
60
61 426 pre-devolution era (38).

57 427 The identified challenges reinforce the need to understand and respond to social determinants
58
59 428 of health. Tackling these challenges requires multisectoral innovations, rather than the current
60

1
2
3 429 siloed approach. This is also in line with the recommendations made by study participants to
4
5 430 address existing gaps. Multi-sectoral strategies are needed to address individual, community,
6
7 431 and system-level barriers to quality healthcare in this slum settings to ensure health access for
8
9 432 all.

10 433 Limitations

11
12
13 434 The nature of the study resulted in information from this setting and based on perspectives
14
15 435 thus might not necessarily be applicable in other settings. Interviews conducted in Kiswahili
16
17 436 may have resulted in loss of meaning during translation. However, we triangulated
18
19 437 information from different sources (FGDs, IDIs, and KIIs) and sought feedback from various
20
21 438 stakeholders who validated the results. Furthermore, our results resonate with findings from
22
23 439 other low resource settings.

24 440 Conclusion

25
26 441 Despite many targeted interventions to improve the health and wellbeing of the urban poor,
27
28 442 many slum residents are still unable to receive quality healthcare because of persistent and
29
30 443 new barriers due to the Covid-19 pandemic. Multi-sectoral innovations are needed to reduce
31
32 444 existing service delivery gaps.

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24
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26
27 471 on the African Population and Health Research Centre (APHRC) microdata portal:

28
29 472 <http://microdataportal.aphrc.org/index.php/catalog>. Request can be obtained from Pauline

30
31 473 Bakibinga: pbakibinga@aphrc.org.

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40
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44
45 480 **Author Contributions**

46
47 481 PB conceptualised and designed the study, contributed to the analysis and interpretation of

48
49 482 the data and drafted the manuscript. LK and PK contributed to the design of the study,

50
51 483 coordinated the data collection, analysis and edited the manuscript. MA and IK contributed to

52
53 484 the analysis and interpretation of the data, and reviewed drafts of the manuscript. CK and

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55 485 CKy contributed to the design of the study and reviewed drafts of the manuscript. All authors

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57 486 read and approved the final manuscript.

487 **References**

- 488 1. Jacobs B, Ir P, Bigdeli M, Annear PL, Van Damme W. Addressing access barriers to
489 health services: an analytical framework for selecting appropriate interventions in low-
490 income Asian countries. *Health Policy and Planning*. 2011;27(4):288-300.
- 491 2. Santalahti M, Sumit K, Perkiö M. Barriers to accessing health care services: a
492 qualitative study of migrant construction workers in a southwestern Indian city. *BMC Health
493 Services Research*. 2020;20(1):619.
- 494 3. Bakeera SK, Wamala SP, Galea S, State A, Peterson S, Pariyo GW. Community
495 perceptions and factors influencing utilization of health services in Uganda. *International
496 Journal for Equity in Health*. 2009;8(1):25.
- 497 4. Ahmed SAKS, Ajisola M, Azeem K, Bakibinga P, Chen Y-F, Choudhury NN, et al.
498 Impact of the societal response to COVID-19 on access to healthcare for non-COVID-19
499 health issues in slum communities of Bangladesh, Kenya, Nigeria and Pakistan: results of
500 pre-COVID and COVID-19 lockdown stakeholder engagements. *BMJ Global Health*.
501 2020;5(8):e003042.
- 502 5. Kumar J, Kumar P. COVID-19 pandemic and health-care disruptions: count the most
503 vulnerable. *The Lancet Global Health*. 2021;9(6):e722-e3.
- 504 6. Kenya Go. National Hospital Insurance Fund Act No.9 of 1998. In: General A, editor.
505 Nairobi: Published by the National Council for Law Reporting with the Authority of the
506 Attorney-General; 2014.
- 507 7. Kenya MoH. Implementing free maternal health care in Kenya: challenges, strategies,
508 and recommendation. Nairobi: Ministry of Health; 2015.
- 509 8. Statistics KNBo. 2019 Kenya Population and Housing Census (KPHC). Nairobi:
510 Kenya National Bureau of Statistics (KNBS); 2020.
- 511 9. APHRC. Population and Health Dynamics in Nairobi's Informal Settlements. .
512 Nairobi, Kenya: African Population and Health Research Center (APHRC); 2002.
- 513 10. APHRC. Population and health dynamics in Nairobi's informal settlements. Nairobi,
514 Kenya: African Population and Health Research Center (APHRC); 2014.
- 515 11. Muraguri L. Kenyan Government Initiatives in Slum Upgrading. *The East African
516 Review*. 2011;44:119-27.
- 517 12. Bellows N. Vouchers for reproductive health care services in Kenya and Uganda
518 Frankfurt: KfW Bankengruppe 2012 [
- 519 13. Amendah DD, Mutua MK, Kyobutungi C, Buliva E, Bellows B. Reproductive health
520 voucher program and facility based delivery in informal settlements in Nairobi: a longitudinal
521 analysis. *PloS one*. 2013;8(11):e80582-e.
- 522 14. Njuki R, Abuya T, Kimani J, Kanya L, Korongo A, Mukanya C, et al. Does a voucher
523 program improve reproductive health service delivery and access in Kenya? *BMC Health
524 Services Research*. 2015;15(1):206.
- 525 15. Lang'at E, Mwanri L, Temmerman M. Effects of implementing free maternity service
526 policy in Kenya: an interrupted time series analysis. *BMC Health Services Research*.
527 2019;19(1):645.
- 528 16. Masaba BB, Mmusi-Phetoe RM. Free Maternal Health Care Policy in Kenya; Level
529 of Utilization and Barriers. *International Journal of Africa Nursing Sciences*.
530 2020;13:100234.
- 531 17. Njuki R, Obare F, Warren C, Abuya T, Okal J, Mukuna W, et al. Community
532 experiences and perceptions of reproductive health vouchers in Kenya. *BMC Public Health*.
533 2013;13(1):660.
- 534 18. Wamalwa E. Implementation challenges of free maternity services policy in Kenya:
535 the health workers' perspective. *Pan African Medical Journal*. 2015;22.

19. Otieno PO, Wambiya EOA, Mohamed SM, Mutua MK, Kibe PM, Mwangi B, et al. Access to primary healthcare services and associated factors in urban slums in Nairobi-Kenya. *BMC Public Health*. 2020;20(1):981.
20. Fotso JC, Mukiira C. Perceived quality of and access to care among poor urban women in Kenya and their utilization of delivery care: harnessing the potential of private clinics? *Health Policy and Planning*. 2011;27(6):505-15.
21. Jacobs B, Ir P, Bigdeli M, Annear PL, Van Damme W. Addressing access barriers to health services: an analytical framework for selecting appropriate interventions in low-income Asian countries. *Health Policy Plan*. 2012;27(4):288-300.
22. Bakibinga P, Kabaria C, Kyobutungi C, Manyara A, Mbaya N, Mohammed S, et al. A protocol for a multi-site, spatially-referenced household survey in slum settings: methods for access, sampling frame construction, sampling, and field data collection. *BMC Medical Research Methodology*. 2019;19(1):109.
23. Andersen RM. Revisiting the behavioral model and access to medical care: does it matter? *J Health Soc Behav*. 1995;36(1):1-10.
24. Andersen R, Newman JF. Societal and Individual Determinants of Medical Care Utilization in the United States. *Milbank Q*. 2005;83(4):10.1111/j.468-0009.2005.00428.x.
25. Wamukoya M, Kadengye DT, Iddi S, Chikozho C. The Nairobi Urban Health and Demographic Surveillance of slum dwellers, 2002–2019: Value, processes, and challenges. *Global Epidemiology*. 2020;2:100024.
26. Kyobutungi C, Ziraba AK, Ezech A, Yé Y. The burden of disease profile of residents of Nairobi's slums: results from a demographic surveillance system. *Popul Health Metr*. 2008;6:1.
27. Zulu EM, Beguy D, Ezech AC, Bocquier P, Madise NJ, Cleland J, et al. Overview of migration, poverty and health dynamics in Nairobi City's slum settlements. *Journal of urban health : bulletin of the New York Academy of Medicine*. 2011;88 Suppl 2(Suppl 2):S185-S99.
28. Mudege NN, Zulu EM. Discourses of illegality and exclusion: when water access matters. *Glob Public Health*. 2011;6(3):221-33.
29. Ezech. AC, Chepngeno., G, Kasiira., A. Z, et al. The Situation of Older People in Poor Urban Settings: The Case of Nairobi, Kenya. In: Cohen. B, & Menken., J, editor. *Aging in Sub-Saharan Africa: Recommendation for Furthering Research*. 6. Washington (DC): National Academies Press (US); 2006.
30. Graneheim U, Lundman B. Qualitative Content Analysis in Nursing Research: Concepts, Procedures and Measures to Achieve Trustworthiness. *Nurse education today*. 2004;24:105-12.
31. Graneheim UH, Lindgren B-M, Lundman B. Methodological challenges in qualitative content analysis: A discussion paper. *Nurse Education Today*. 2017;56:29-34.
32. Kibe PM, Kisia L, Bakibinga P. COVID-19 and community healthcare: perspectives from Nairobi's informal settlements. *Pan Afr Med J*. 2020;35(Suppl 2):106-.
33. Bakibinga P, Ettarh R, Ziraba AK, Kyobutungi C, Kamande E, Ngomi N, et al. The effect of enhanced public–private partnerships on Maternal, Newborn and child Health Services and outcomes in Nairobi–Kenya: the PAMANECH quasi-experimental research protocol. *BMJ Open*. 2014;4(10):e006608.
34. Oti SO, van de Vijver SJM, Agyemang C, Kyobutungi C. The magnitude of diabetes and its association with obesity in the slums of Nairobi, Kenya: results from a cross-sectional survey. *Tropical Medicine & International Health*. 2013;18(12):1520-30.
35. Werner ME, van de Vijver S, Adhiambo M, Egondi T, Oti SO, Kyobutungi C. Results of a hypertension and diabetes treatment program in the slums of Nairobi: a retrospective cohort study. *BMC health services research*. 2015;15:512-.

- 1
2
3 586 36. Alsheimer Q. Surveying Access to Healthcare in Kisumu and Siaya Counties, Kenya.
4 587 https://digitalcollections.sit.edu/isp_collection/2816: University of South Carolina; 2018.
5 588 37. Kimathi L. Challenges of the Devolved Health Sector in Kenya
6
7 589 Teething Problems or Systemic Contradictions? Africa Development / Afrique et
8 590 Développement. 2017;42(1):55-77.
9 591 38. Masaba BB, Moturi JK, Taiswa J, Mmusi-Phetoe RM. Devolution of healthcare
10 592 system in Kenya: progress and challenges. Public Health. 2020;189:135-40.
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Standards for Reporting Qualitative Research (SRQR)*

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Page/line no(s).

Title and abstract

<p>Title - Concise description of the nature and topic of the study Identifying the study as qualitative or indicating the approach (e.g., ethnography, grounded theory) or data collection methods (e.g., interview, focus group) is recommended</p>	1/1-2
<p>Abstract - Summary of key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results, and conclusions</p>	2/21-48

Introduction

<p>Problem formulation - Description and significance of the problem/phenomenon studied; review of relevant theory and empirical work; problem statement</p>	4-6/60-111
<p>Purpose or research question - Purpose of the study and specific objectives or questions</p>	5/91-103

Methods

<p>Qualitative approach and research paradigm - Qualitative approach (e.g., ethnography, grounded theory, case study, phenomenology, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g., postpositivist, constructivist/ interpretivist) is also recommended; rationale**</p>	5/114-121
<p>Researcher characteristics and reflexivity - Researchers' characteristics that may influence the research, including personal attributes, qualifications/experience, relationship with participants, assumptions, and/or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results, and/or transferability</p>	6/134
<p>Context - Setting/site and salient contextual factors; rationale**</p>	6/123-129
<p>Sampling strategy - How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g., sampling saturation); rationale**</p>	5/114-121 & 7/162
<p>Ethical issues pertaining to human subjects - Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues</p>	7/163-169
<p>Data collection methods - Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources/methods, and modification of procedures in response to evolving study findings; rationale**</p>	6/130-145

1 2 3 4 5	Data collection instruments and technologies - Description of instruments (e.g., interview guides, questionnaires) and devices (e.g., audio recorders) used for data collection; if/how the instrument(s) changed over the course of the study	6/141-145
6 7 8	Units of study - Number and relevant characteristics of participants, documents, or events included in the study; level of participation (could be reported in results)	7-8/171-179
9 10 11 12	Data processing - Methods for processing data prior to and during analysis, including transcription, data entry, data management and security, verification of data integrity, data coding, and anonymization/de-identification of excerpts	6/147-148
13 14 15 16	Data analysis - Process by which inferences, themes, etc., were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach; rationale**	6-7/147-162
17 18 19 20	Techniques to enhance trustworthiness - Techniques to enhance trustworthiness and credibility of data analysis (e.g., member checking, audit trail, triangulation); rationale**	7/157-161

Results/findings

23 24 25 26	Synthesis and interpretation - Main findings (e.g., interpretations, inferences, and themes); might include development of a theory or model, or integration with prior research or theory	7-14/170-359
27 28 29	Links to empirical data - Evidence (e.g., quotes, field notes, text excerpts, photographs) to substantiate analytic findings	7-14/170-359

Discussion

32 33 34 35 36 37	Integration with prior work, implications, transferability, and contribution(s) to the field - Short summary of main findings; explanation of how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of application/generalizability; identification of unique contribution(s) to scholarship in a discipline or field	14-16/360-413
38 39	Limitations - Trustworthiness and limitations of findings	16/402-407

Other

42 43 44	Conflicts of interest - Potential sources of influence or perceived influence on study conduct and conclusions; how these were managed	17/443
45 46	Funding - Sources of funding and other support; role of funders in data collection, interpretation, and reporting	187/444-448

*The authors created the SRQR by searching the literature to identify guidelines, reporting standards, and critical appraisal criteria for qualitative research; reviewing the reference lists of retrieved sources; and contacting experts to gain feedback. The SRQR aims to improve the transparency of all aspects of qualitative research by providing clear standards for reporting qualitative research.

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**The rationale should briefly discuss the justification for choosing that theory, approach, method, or technique rather than other options available, the assumptions and limitations implicit in those choices, and how those choices influence study conclusions and transferability. As appropriate, the rationale for several items might be discussed together.

Reference:

O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. **Standards for reporting qualitative research: a synthesis of recommendations.** *Academic Medicine*, Vol. 89, No. 9 / Sept 2014
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