



# Challenges of health programmes in slums

Steven van de Vijver, Samuel Oti, Clement Oduor, Alex Ezeh, Joep Lange\*, Charles Agyemang, Catherine Kyobutungi

## Introduction

The world is becoming increasingly urban. Of the projected increase of 1.1 billion in the world population between 2010 and 2025, virtually all will be urban dwellers.<sup>1</sup> Urbanisation is mostly happening in low-income regions, with Africa having the highest rate of all continents.<sup>2</sup> The population growth rate in urban areas is almost double the rural rate but, more importantly, the slum growth rate is higher than the overall urban rate.<sup>2</sup> In the next few decades, the proportion of the urban population living in slums in sub-Saharan Africa might therefore get even higher than the estimated 60% in 2010.<sup>2</sup> Overall, the number of slum dwellers in low-income and middle-income countries is projected to double from one to two billion during the next 30 years.<sup>3</sup>

The UN Human Settlements Programme has identified five characteristics that define a slum, namely inadequate access to safe water, inadequate access to sanitation and infrastructure, poor structural quality of housing, overcrowding, and insecure residential status.<sup>3</sup> Governments, development partners, civil society, and other stakeholders recognise the need to develop social programmes that respond effectively to the needs of slum dwellers. However, little evidence exists for how to best design and implement such programmes in these deprived, often unpredictable, and dynamic settings, and for what challenges one might encounter in the process.<sup>4-6</sup>

The African Population and Health Research Center, in collaboration with international partners, has been working for the past decade in slum settings in Nairobi, Kenya, doing research and intervention projects.<sup>7-11</sup> The aim of this Viewpoint is to share our experiences working in the centre and provide some insights into the complexities surrounding design and implementation of programmes aimed at improvement of health and wellbeing in such a dynamic setting.

## Key challenges for people working in slums

To implement a health programme in the slums, the complex and multifactorial effects of urban settings on health programming and outcomes need to be acknowledged. We describe the specific challenges facing people working in the slums, which can be placed within the conceptual framework for urban health<sup>12</sup> and relate to their effect on delivery and intended outcome of health programmes.

In the national and international political arena, a substantial gap exists between rising awareness of the growth and importance of slums and an absence of actual health-generating policies, structures, and interventions on the ground. This absence is not just in the area of health care, but also in areas and sectors that have a direct and indirect bearing on the health of slum dwellers.

These areas include urban planning and infrastructure, education and employment, law enforcement, and the environment. This list implies that health programmes have to contend with other factors that have an effect on health but might also disrupt the programme, hence curtailing its effect. From time to time, high-level politics at the level of national or municipal government might have a substantial effect on research and project work in the slums. For example, an attempt by the central government in collaboration with a UN agency to upgrade the road networks in a slum in Nairobi in the late 2000s led to demolition of housing structures and displacement of residents, some of whom had been recruited into various programmes and were thus lost to follow-up.<sup>13</sup>

With the near absence of public or state actors, the private sector dominates the market in health care and other social sectors in slums.<sup>14</sup> These actors range from local traditional healers and quacks to well established and structured local non-governmental, faith-based organisations or other actors within the civil society. Faith-based organisations are more likely to collaborate in research and health programmes. Public-private partnership initiatives for health service delivery have been introduced in the slums to increase access to and demand for quality health-care services.<sup>15</sup> Health research and programmes therefore have to engage with non-state actors for greater effect and reach. Within the physical environment of the slums, the main challenge for health programmes is the high amount of crime.<sup>6</sup> Insecurity is also seen by the population as the major concern in daily life,<sup>16</sup> and violence-related injuries contribute substantially to morbidity and mortality in the urban poor.<sup>17,18</sup> Early research in the slums of Nairobi<sup>6</sup> showed that injuries ranked second to HIV/AIDS as a cause of death in individuals aged 5 years and older. Depending on the location within the slum and the hour of the day, project workers are often exposed to a high risk of crime (panel 1). This risk is

Published Online

October 7, 2015

[http://dx.doi.org/10.1016/](http://dx.doi.org/10.1016/S0140-6736(15)00385-2)

[S0140-6736\(15\)00385-2](http://dx.doi.org/10.1016/S0140-6736(15)00385-2)

**African Population and Health Research Center, Nairobi, Kenya** (S van de Vijver MD, S Oti MD, C Oduor BA, A Ezeh PhD, C Kyobutungi PhD); **Department of Global Health, Academic Medical Centre, Amsterdam Institute for Global Health and Development, University of Amsterdam, Amsterdam, Netherlands** (S van de Vijver, S Oti MD, Prof J Lange PhD); and **Department of Public Health, Academic Medical Centre, University of Amsterdam, Netherlands** (C Agyemang PhD)

\*Prof Lange died in July, 2014

Correspondence to:

Steven van de Vijver, African Population and Health Research Center, PO Box 10787-00100, Nairobi, Kenya  
[svijver@aphrc.org](mailto:svijver@aphrc.org)

### Panel 1: One example of the many challenges

Isaac is a community health worker in one of our health programmes and is screening adults in the community for cardiovascular disease risk factors. Because he had difficulties finding people at home during the day, he visited the household for another try at night. With the streetlights not functioning, he had to wander in the dark when he was attacked by a criminal who snatched his blood pressure-monitoring machine, possibly destined for the black market. The residents in neighbouring structures did not respond to his cries for help because he was not recognised as a community member or health worker in this part of the slum.

**Panel 2: Recommendations for navigation of the challenges in slums**

- Before the start of a project, engage in effective sensitisation that includes even those groups that might not directly benefit, but that have the potential to threaten implementation of the research or programme.
- Advertise jobs within the community, but use well structured competitive recruitment procedures because these processes should not be left to the whims of local leadership. Due diligence needs to be done before any individual is confirmed as part of the project team.
- Use of local community security groups is, in general, sufficient to address threats within the same community. However, if external partners, especially foreigners, are involved, use of formal and armed security personnel is strongly advised.
- Give priority to locals for staffing because this measure might benefit the project in several ways, such as access, acceptability, ownership, participation, and indirect financial support of the neighbourhood.
- Obtain as diverse staffing as possible to ensure that various interests within the community are represented. This diversity will ensure that cultural, religious, and language barriers are broken.
- Local politics might only be handled by constitution of a formal diverse team of community leaders that represent all of the various constituencies within the community. Depending on the duration of the programme, representatives might be rotated so as to avoid them developing a sense of self-importance that could work against the success of the project.
- Field staff need to be ready and committed to work outside of conventional working hours, including weekends and public holidays, to trace the highly mobile population in the slums.
- To improve appeal and acceptability, engage with the community about general development activities that might not necessarily be directly related to the programme that they are working on, such as supporting sports, education, or health activities.

especially pertinent if they are seen or thought to be carrying expensive equipment such as laptops or personal digital assistants. Insecurity also hinders residents from accessing services or limits the kind of services that they can access. The challenge of personal safety is not just due to crime, but also to the physical location of the slums. Slums are often situated in unsafe environments where flooding, landslides, industrial pollution, hazardous waste disposal, and fire outbreaks are common, partly due to poor housing quality.

Because most of the slums are unplanned settlements, the infrastructure in the area, such as good road networks and water and sanitation systems, is poor and sometimes non-existent, which might complicate project activities during flooding or other natural catastrophes. Furthermore, communication infrastructure is generally absent, leading to very poor connectivity and internet access, which further hinders project activities.

Another important challenge is to keep pace with the high mobility of slum residents. Besides people moving between the slum and their rural origins and sometimes staying there for extended periods of time, the residents are also highly mobile during the day. Many slum dwellers are informal daily labourers and have to look for an income, often outside of their community. To increase their livelihood opportunities, they usually leave their

household early in the morning and come back late in the evening. Because of this high level of urban–rural traffic, changing residences, and daily wanderings, people can be difficult to trace during household visits and reliable follow-up of appointments can be difficult to ensure.

Although unemployment is rampant in the slums, skilled staff can be difficult to find because of non-availability of the necessary skills and unwillingness to work in slum settings. People who do not live in these areas are rarely willing to work there (mostly for security reasons), and those with the right skills are constantly on the lookout for opportunities that will enable them to move out. Long-term projects thus usually suffer from high turnover rates and the need to constantly recruit and retrain staff.

One of the main barriers for slum dwellers to empowerment and capacity to participate is poverty. Most slum residents live on less than US\$1.5 per day and have no stable sources of income, which poses great difficulty in making ends meet.<sup>6</sup> Health and specifically prevention of disease is often not a priority because people have to balance meeting of day-to-day basic needs with investment in behaviour and practices that could generate long-term returns. Additionally, 90% of the population in Nairobi's slums, for example, do not have health insurance and have to rely on out-of-pocket payments for health care.<sup>16</sup> This factor has a huge effect on health-care seeking behaviour.

Because of the nature and origin of slums, social support networks are often fragile because the slum population is greatly heterogeneous.<sup>6</sup> People from different parts of the country move to the city to make a living, and in a small and densely populated area, many different major ethnic groups might coexist, with their own cultural norms and beliefs. Additionally, many have come to the slums with traumatic past experiences, which makes building of trust a challenge.<sup>17</sup> High levels of mobility, an absence of community spaces to socialise, and a predominance of casual jobs with odd hours of work lead directly and indirectly to an absence of social cohesion, and most residents do not feel a sense of ownership of or belonging to the community.

The local community and its leaders should be involved in every project that is taking place in the urban informal settlements (panel 2). However, community leaders and the community in general tend to be somewhat suspicious of any new project or research activities, and might even be reluctant to participate. On the other hand, community leaders, once they realise the important position that they occupy as custodians of the community interests, might exploit their positions and act as gatekeepers.

## Conclusion

The combination of high population density and poor living circumstances, such as poor hygiene and restricted health-care access, makes slums an important risk for general public health. Therefore, the post-2015

UN Development Agenda<sup>19</sup> should address this issue under the priority to “leave no one behind”. Although important challenges exist for implementation of health interventions in slum settings, these populations need to be monitored and served. With concerted efforts, poor living conditions and their effect on the health of slum dwellers can be improved.

By sharing these insights and experiences, we hope to inform other actors in and potential newcomers to this largely untapped discipline. Consequently, organisations can adapt and prepare their approach and activities, which could lead to increased success and improved health and social outcomes in slums.

#### Declaration of interests

SvdV, SO, CA, CK, and JL received funding from the Academic Medical Center Foundation for medical research in the slums. SvdV, SO, CO, AE, and CK receive core funding from the William and Flora Hewlett Foundation and Swedish International Development Agency. The funders had no role in writing or submission of this report.

#### Acknowledgments

We wish to acknowledge the fieldworkers of the African Population and Health Research Center who have been working for the past 10 years in these challenging surroundings, and Martin Njaga for his advice on and editing of this report.

#### References

- UN Department of Economic and Social Affairs Population Division. World urbanization prospects: the 2011 revision. New York: United Nations Department of Economic and Social Affairs Population Division, 2012.
- UN Human Settlements Programme. The state of African cities 2010: governance, inequalities and urban land markets. Nairobi: United Nations Human Settlements Programme, 2010.
- UN Human Settlements Programme. Slums of the world: the face of urban poverty in the new millennium? Nairobi: United Nations Human Settlements Programme, 2010.
- Agarwal S, Bhanot A, Goindi G. Understanding and addressing childhood immunization coverage in urban slums. *Indian Pediatr* 2005; **42**: 653–63.
- Snyder VN, Friel S, Fotso JC, et al. Social conditions and urban health inequities: realities, challenges and opportunities to transform the urban landscape through research and action. *J Urban Health* 2011; **88**: 1183–93.
- Agarwal S, Sangar K. Need for dedicated focus on urban health within National Rural Health Mission. *Indian J Public Health* 2005; **49**: 141–51.
- Kyobutungi C, Ziraba AK, Ezeh A, Ye Y. The burden of disease profile of residents of Nairobi's slums: results from a demographic surveillance system. *Popul Health Metr* 2008; **6**: 1.
- Kyobutungi C, Ezeh AC, Zulu E, Falkingham J. HIV/AIDS and the health of older people in the slums of Nairobi, Kenya: results from a cross sectional survey. *BMC Public Health* 2009; **9**: 153.
- Mutua MK, Kimani-Murage E, Ettarh RR. Childhood vaccination in informal urban settlements in Nairobi, Kenya: who gets vaccinated? *BMC Public Health* 2011; **11**: 6.
- Ye Y, Zulu E, Mutisya M, Orindi B, Emina J, Kyobutungi C. Seasonal pattern of pneumonia mortality among under-five children in Nairobi's informal settlements. *Am J Trop Med Hyg* 2009; **81**: 770–75.
- Kimani JK, Ettarh R, Kyobutungi C, Mberu B, Muindi K. Determinants for participation in a public health insurance program among residents of urban slums in Nairobi, Kenya: results from a cross-sectional survey. *BMC Health Serv Res* 2012; **12**: 66.
- Vlahov D, Freudenberg N, Proietti F, et al. Urban as a determinant of health. *J Urban Health* 2007; **84** (suppl 1): 16–26.
- UN Human Settlements Programme. UN-Habitat and the Kenya slum upgrading programme: strategy document. Nairobi: United Nations Human Settlements Programme, 2008.
- Bazant ES, Koenig MA, Fotso JC, Mills S. Women's use of private and government health facilities for childbirth in Nairobi's informal settlements. *Stud Fam Plann* 2009; **40**: 39–50.
- Bakibinga P, Ettarh R, Ziraba AK, 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**: e006608.
- African Population and Health Research Center. Population and health dynamics in Nairobi's informal settlements: report of the Nairobi cross-sectional slums survey (NCSS) 2012. Nairobi: African Population and Health Research Center, 2014.
- Oti SO, van de Vijver S, Kyobutungi C. Trends in non-communicable disease mortality among adult residents in Nairobi's slums, 2003–2011: applying InterVA-4 to verbal autopsy data. *Glob Health Action* 2014; published online Oct 29. DOI:10.3402/gha.v725533.
- Ziraba AK, Kyobutungi C, Zulu EM. Fatal injuries in the slums of Nairobi and their risk factors: results from a matched case-control study. *J Urban Health* 2011; **88** (suppl 2): S256–S65.
- UN Development Programme. Post-2015 Sustainable Development Agenda. <http://www.undp.org/content/undp/en/home/mdgoverview/post-2015-development-agenda.html> (accessed Aug 21, 2015).