



#### Urban Agenda Platform

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# Nairobi Urban Health and Demographic Surveillance System (NUHDSS)

Region	Sub-Saharan Africa
Award Scheme	Dubai International Award
Start Year	2017
Sustainable Development Goals	Goal 11 - Make cities and human settlements inclusive, safe, resilient and sustainable

## Summary

The Nairobi Urban Health and Demographic Surveillance System (NUHDSS) is a pioneer urban HDSS in sub-Saharan Africa (SSA) that has been operational for the past 15 years. It was established in two slum communities in Nairobi (Korogocho and Viwandani) following the Nairobi Cross-sectional Slums Survey (NCSS) that was conducted by the African Population and Health Research Centre (APHRC) in 2000.

## Background and Objective

The NCSS 2000 revealed that the health and socio-economic inequities between slum residents and other population sub-groups in Kenya were blurred in national indicators, highlighting the need for focused surveillance of slum populations. The population under surveillance in Viwandani and Korogocho has grown from 49,000 (2002) to 81,000 (2016).

## Actions and Implementation

Before implementation of studies using the NUHDSS, researchers hold meetings with the CACs, which provide structured means for community engagement, to share research ideas and seek the community's insights. Data collection is conducted electronically using netbooks. From initial census in 2002 to mid-2015, data collection was a paper-based protocol. Findings from the research are shared with the community, policy makers and other stakeholders through CAC, dissemination events and publications. The Center strives to make its data publicly available both internally and externally through the Microdata portal and INDEPTH's iShare2 initiative in which enables the display of indicators on the web. However, the platform has not been without challenges. The slums are characterized by frequent internal movements, which makes tracking residents and linking them to their original residence difficult. NUHDSS recruits data collectors who understand the study context and holds community entry activities led by CAC. Additionally, the longitudinal nature of the platform has led to challenges in community acceptance among the residents who may not see immediate benefits of research in their lives, given their poor livelihood opportunities. Since 2012, the specialized studies have shifted from observation to intervention research, and NUHDSS' policy engagement has targeted service-delivery stakeholders in position to address the challenges identified through specialized research. Also, given the high mobility of the residents, the initial paper-based protocol did not easily accommodate tracking residents who moved within the slums or newcomers and it was not uncommon to lose individuals to follow-up. Electronic data collection has resolved those challenges because it is more appropriate for transient populations. As such, the data are now of higher quality and can better describe intra-slum migrations. In the MDG era, the NUHDSS provided useful evidence on the situation faced by slum residents, including monitoring interventions implemented in informal settlements and evaluating the efficacy of these interventions in achieving the eradication of poverty and hunger. From 2015, the platform aligned itself with the SDG agenda, particularly SDG 11 on cities (targets 1 and 5) by focusing its specialized studies to intervention studies that involve partnering with key stakeholders who are implementing/or planning to implement development programs that integrate slums in keeping with the new urban agenda. Additionally, because the platform is longitudinal in nature, it is well-placed to monitor the progress towards the achievement of SDG 11 going forward.

## Outcomes and Impacts

- Financial – The NUHDSS is APHRC's flagship project and is likely to continue to receive funding. The Center continues to make significant investments in sustaining the project and enhancing its utility as a data resource for improving living conditions in slum areas in Africa. Moreover, the Center has a well-established rapport with the community and other stakeholders.
- Social and economic - The NUHDSS specifically employs individuals who are residents of the community, from different gender, ethnic and religious backgrounds so as to be representative of the community and to provide employment opportunities for young graduates. Various capacity strengthening strategies are employed in order to empower these individuals. The



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platform supports the implementation of specialized intervention studies that focus on addressing the socio-economic mobility of women and young girls.

- **Cultural** – The voice of the community and the concerns of its residents are incorporated in the NUHDSS' community engagement approaches. In the daily field work practices, much attention and respect is given to the cultural norms of the prospective respondents by ensuring that the data collectors are able to communicate in various languages and that they are able to relate to the respondents' attitudes, behavioral patterns and heritage.
- **Institutional** – NUHDSS operations are guided by the clear institutional policies that are consistent with national and global agendas in particular SDG 11 (Targets 1 and 5). For example, the NUHDSS supports the formation of structures such as community based organizations that are then empowered to take up and maintain the interventions implemented by specialized studies.

## Gender and Social Inclusivity

- The NUHDSS shares its vast experience accumulated over the years in running the platform with other sister organizations such as the Institut Supérieur des Sciences de la Population (ISSP) that runs the recently launched Ouagadougou Urban HDSS in Burkina Faso, and recently the Respiratory and Meningeal Pathogens Research Unit that plans to establish an urban slum HDSS in Soweto, South Africa. The support was both financial and technical.
- Through the iSHARE2 initiative by the INDEPTH Network that the Center is part of, NUHDSS data will continue to be widely shared across sites, as well as made freely available for evidence generation and use by researchers and policy makers in the region.
- The Center is part of an initiative by various research institutions to develop a framework for generic training curriculum for health research fieldworkers across Africa.
- APHRC's Microdata portal enables the Center to share the data it collects both internally and externally
- NUHDSS convened a workshop in Accra, Ghana in 2010 to assess cost-effectiveness of various HDSS platforms of INDEPTH-member centers.

## Innovative Initiative

The involvement of the community is critical in running the NUHDSS. This has been accomplished through three main pathways; first, recruiting data collectors and security teams from the communities, second, establishing the CAC to ensure that the study participants are involved in research activities from inception to dissemination, and third, organizing annual, free health camps in the two slums to 'give back'. One of the challenges of community involvement is ensuring that the community is well represented in community engagement activities in terms of gender, age group, religion, etc. The implementation of electronic data capture (EDC) in 2015 streamlined the data collection processes in several ways. It enables near real-time data quality checks. It also provides in-built prompts for internal movements for timely reconciliation of these movements. Additionally, it significantly reduces the costs associated with paper data collection, including printing and logistics and data entry of paper questionnaires. Some challenges of implementing EDC include ensuring the security of the data collectors, the electronic gadgets and the data itself as well as the transmission of the data to central databases. However, the use of local data collectors and security teams may help guarantee security.

## Resources devoted to delivery

No.	Title	Source	Author	Publication Title	Volume	Number	Date	Page	Number
1	Slum health is not urban health: why we must distinguish between the two	<a href="https://www.africanewshub.com/news/6083708-slum-health-is-not-urban-health-why-we-must-distinguish-between-the-two">https://www.africanewshub.com/news/6083708-slum-health-is-not-urban-health-why-we-must-distinguish-between-the-two</a>	The Conversation Africa News Hub	December 18, 2016	Edit 2	Girls should be in school – not forced into marriage by powerful men	<a href="https://theconversation.com/girls-should-be-in-school-not-forced-into-marriage-by-powerful-men-61876">https://theconversation.com/girls-should-be-in-school-not-forced-into-marriage-by-powerful-men-61876</a>	Moses Ngware	The Conversation
2	Teach the teachers	<a href="https://www.the-star.co.ke/news/2016/06/14/teach-the-teachers_c1368187">https://www.the-star.co.ke/news/2016/06/14/teach-the-teachers_c1368187</a>	Alex Awiti	The Star	June 14, 2016	Edit 4	Impact evaluation of a community-based intervention for prevention of cardiovascular diseases in the slums of Nairobi: the SCALE-UP study	<a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4808680/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4808680/</a>	van de Vijver, S., Oti, S.O., Gomez, G.B., Agyemang, C., Egondi, T., Moll van Charante, E., Brewster, L.M., Hankins, C., Tanovic, Z., Ezeh, A., Kyobutungi, C., Stronks, K.
3	Global Health Action	9(1)	2016	30922	Edit 5	HDSS Profile: The Nairobi Urban Health and Demographic Surveillance System (NUHDSS)	<a href="http://www.indepth-network.org/sites/indepth.mrmdev.co.uk/files/content/centres/files/Nairobi%20Urban%20profile.pdf">http://www.indepth-network.org/sites/indepth.mrmdev.co.uk/files/content/centres/files/Nairobi%20Urban%20profile.pdf</a>	Beguy, D., Elungata, P., Mberu, B., Oduor C., Wamukoya M., Nganyi B., and Ezeh, A	
4	International Journal of epidemiology	44(2)	2015	462-71	Edit 6	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	<a href="http://bmjopen.bmj.com/content/4/10/e006608">http://bmjopen.bmj.com/content/4/10/e006608</a>	Bakibinga, P., Ettarh, R., Ziraba, A. K., Kyobutungi, C., Kamande, E., Ngomi, N., & Osindo, J.	
5	BMJ Open	4(10)	2014	Edit 7	Population and Health Dynamics in Nairobi's Informal Settlements: Report of the Nairobi Cross-sectional Slums Survey (NCSS)	2012	<a href="http://aphrc.org/wp-content/uploads/2014/08/NCSS2-FINAL-Report.pdf">http://aphrc.org/wp-content/uploads/2014/08/NCSS2-FINAL-Report.pdf</a>	African Population and Health Research Center	
6	Reproductive Health Voucher Program and Facility Based Delivery in Informal Settlements in Nairobi: A Longitudinal Analysis	<a href="http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0080582">http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0080582</a>	Amendah, D., Kavao, M., Bellows, B., Buliva, E., & Kyobutungi, C.	PLOS One	8(11)	2013	e80582	Edit 9	
7	Why are there proportionately more poor pupils enrolled in non-state schools in urban Kenya in spite of FPE policy?	Oketch, M., Mutisya, M., Ngware, M. & Ezeh, A	International Journal of Education Development	30(1)	2010	23-32	Edit 10	Population and Health Dynamics in Nairobi's Informal Settlements: Report of the Nairobi Cross-sectional Slums Survey (NCSS)	2000
8	African Population and Health Research Center	2002							



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## Conclusion

- The Output Based Approach (OBA) Voucher scheme to fund safe deliveries, family planning services, and gender-based violence recovery services in the two slum communities was influenced by findings from maternal health research were instrumental in the government's decision to pilot the
- The CCN prioritized CVD management in its primary health care facilities as a result of findings from the CVD study. To date, there are at least six active CVD clinics in CCN health facilities.
- NASCO put in place new policy on testing and counselling minors (under 18 years old) without parental and guardian approval if the minor is expectant, married, sexually active or already a parent as a result of findings on young people's early sexual debut.
- Under the government's free primary education program, funded, non-formal schools are provided in slums because of results from specialized studies on education and health promotion in schools.
- APHRC has contributed to and participated in various government panels including the comprehensive evaluation of the current Kenya National Health Policy in preparation for a new one.