NAIROBI Urban HDSS, KENYA

Site Map

Brief Description

Nairobi, which is the capital city of Kenya, is a typical sub-Saharan Africa urban centre, characterized by population explosion amidst growing and chronic urban poverty and declining livelihood opportunities in the city. In the past 50 years, the population of Nairobi grew almost twelve-fold, from around 293,000 inhabitants in 1960 to about 3.4 million in 2010. Yet, over the years, little has changed by way of infrastructure development, which led to the majority of residents—currently estimated at 60 to 70 per cent of the city’s population—to live in informal settlements or slum like conditions. Evidence from the first ever Nairobi Cross-sectional Slum Survey (NCSS) conducted in the city by APHRC in 2000 revealed that slum residents have the worst health outcomes of any group in Kenya (including rural residents); they have limited access to basic facilities such as water and sanitation, or opportunities for life such as education and employment, and that they endure the complete absence of the public sector and law enforcement agencies in their daily lives. These conditions not only expose slum residents to poor health outcomes but also foster violence and social unrest, which ultimately can easily spread beyond a single neighborhood to endanger most residents of the city.

It was against this background that APHRC established the Nairobi Urban Health and Demographic Surveillance System (NUHDSS) – the first urban-based surveillance system in Africa –in 2002 in two slum communities (Korogocho and Viwandi) in Nairobi city. The main goal of the NUHDSS was to provide a platform to investigate the long-term social, economic and health consequences of urban residence, and serve as a primary research tool for intervention and impact evaluation studies focusing on the needs of the urban poor in sub-Saharan Africa. The surveillance involves visits to all households in the study sites three times a year and continuously updating information on pregnancy and pregnancy outcomes, births, migration, episodes of morbidity, health-seeking behavior, mortality and causes of death. The surveillance system also collects data on livelihood sources, vaccination status for under five children, marital status, and
school attendance, but only on annual basis. Currently we are following over 70,000 individuals, residing in over 25,000 households.

In the past ten years, a number of innovative research activities nested on the NUHDSS have placed issues related to reproductive and general health conditions, access to education among the urban poor and the associated inequities in both the policy and program agenda of African governments, international organizations and non-governmental stakeholders. For example, in 2009, APHRC’s NUHDSS-nested a research on free primary education that led to the refinement of Kenya’s Free Primary Education (FPE) program. Specifically, it led to the inclusion of poor informal schools in the FPE capitation. Other NUHDSS-nested studies that continue to inform government and NGO agenda include the Menstrual Cups study, Non Communicable Diseases project, the Urbanization, Poverty and Health Dynamics project, and the Nairobi Urban Health and Poverty Partnership (NUHPP). The NUHDSS is a member of the INDEPTH Network.

Completed Key Projects as of June 2013

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Funder</th>
<th>Grant Period</th>
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<tbody>
<tr>
<td>Nairobi Urban Health Equity Gauge</td>
<td>Rockefeller Foundation</td>
<td>2001 - 2003</td>
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<tr>
<td>Exploration of the Impact of HIV/AIDS on the Family and Economic Situation of the Elderly in Poor Urban Areas</td>
<td>National Institute for Aging through the University of Colorado</td>
<td>2002 - 2004</td>
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<tr>
<td>Migration Dynamics in Urban Slum Settlements</td>
<td>Andrew W. Mellon Foundation</td>
<td>2002 - 2004</td>
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<tr>
<td>Refining the Evidence base for program and policies on child health, food security and education among the urban poor in sub-Saharan Africa</td>
<td>Rockefeller Foundation</td>
<td>2004 - 2005</td>
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<tr>
<td>Strengthening intellectual foundations for research on sexuality and education in sub-Saharan Africa</td>
<td>Ford Foundation</td>
<td>2004 - 2006</td>
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<td>Identifying and Targeting the Poor for Waivers of Service Fees at District Hospitals in Kenya</td>
<td>World Bank</td>
<td>2005 - 2006</td>
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<td>Adolescent Safe Motherhood</td>
<td>WHO</td>
<td>2002 - 2003</td>
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<tr>
<td>The social, economic and health context of HIV/AIDS in informal urban settlements of Africa</td>
<td>Rockefeller Foundation</td>
<td>2005 - 2008</td>
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<tr>
<td>Project Name</td>
<td>Funder</td>
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<tr>
<td>Delays and barriers to the utilization of emergency obstetric care in urban poor areas of Nairobi city, Kenya</td>
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<td>Addressing the health of children in urban poor areas through improved home-based care, personal hygiene and environmental sanitation, and healthcare services</td>
<td>European Union</td>
<td>2005 - 2006</td>
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<tr>
<td>Assessing circumstances and reasons associated with primary school enrolment, retention, dropout, and progression among slum and non-slum residents in Nairobi</td>
<td>William and Flora Hewlett Foundation</td>
<td>2004 - 2007</td>
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<tr>
<td>Assessing different types of programs and targeting methods for interventions addressing orphans and vulnerable children: A case study using household data from Nairobi slums</td>
<td>The Rockefeller Foundation through the Small Grants Program of the World Bank</td>
<td>2006 - 2008</td>
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<tr>
<td>Study on Global Ageing and Adult Health</td>
<td>WHO/INDEPTH</td>
<td>2006 - 2007</td>
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<td>Migration dynamics and social economic status in rural and urban informal settlements in Africa</td>
<td>University of the Witwatersrand</td>
<td>Jun 2006 - Nov 2007</td>
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<td>Verbal Autopsy Symptom level data coding for determining cause of death</td>
<td>INDEPTH Network</td>
<td>2009</td>
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<td>Unwanted Pregnancy</td>
<td>IPAS</td>
<td>Jul 2009 - Jul 2010</td>
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<tr>
<td>Realizing rights: Improving sexual and reproductive health for poor and vulnerable populations</td>
<td>UK Government’s Department for International Development (DFID)</td>
<td>2005 - 2010</td>
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<tr>
<td>Build partnerships beyond the health sector to address urban health vulnerabilities in the slums of Nairobi, Kenya</td>
<td>Rockefeller Foundation</td>
<td>Oct 2008 - July 2010</td>
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<tr>
<td>Urbanization, poverty and health dynamics in sub-Saharan Africa</td>
<td>Wellcome Trust</td>
<td>Jan 2006 - Dec 2010</td>
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<td>Spatial analysis of contraceptive use in Kenya</td>
<td>University of North Carolina</td>
<td>Apr 2010 - Dec 2010</td>
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<td>Health Promoting Schools project</td>
<td>UN Habitat</td>
<td>Nov 2009 - Oct 2010</td>
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<td>Toilet construction pilot project in</td>
<td>World Toilet</td>
<td>Jan 2008 - Apr 2009</td>
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<tr>
<td>Viwandani</td>
<td>Association</td>
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<td>Expanded Education Research Program</td>
<td>Hewlett Foundation</td>
<td>Mar 2008-Dec 2011</td>
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<td>Assessment of the linkages between socioeconomic status, perceived personal risk, and risk factors for cardiovascular and related non-communicable diseases in a population of slum dwellers in Nairobi, Kenya</td>
<td>Wellcome Trust</td>
<td>October 2010 – September 2011</td>
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<tr>
<td>Improving the lives of diabetics in Nairobi’s slums through access to quality health care</td>
<td>World Diabetes Foundation</td>
<td>Mar 2009 – Feb 2012</td>
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<tr>
<td>Fertility, FP, Child Health and Survival and Economic Outcomes</td>
<td>INDEPTH Network</td>
<td>May 2010-July 2011</td>
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<tr>
<td>Masculinities and sexuality project</td>
<td>Ford Foundation</td>
<td>2009-2011</td>
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<tr>
<td>Prevalence, Perceptions, and Experiences of Unwanted Pregnancy among Women in Slum and Non-Slum Settlements of Nairobi, Kenya</td>
<td>IPAS</td>
<td>July 2010 to January 2011</td>
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<tr>
<td>Monitoring &amp; Assessing the impact of Vaccinations and other childhood intervention for both boys and girls</td>
<td>INDEPTH Network</td>
<td>January – December 2012</td>
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### Ongoing Key Projects

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<thead>
<tr>
<th>Project Name</th>
<th>Funder</th>
<th>Grant Period</th>
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<tbody>
<tr>
<td>Meeting the unmet need for FP and improving access to safe abortion services</td>
<td>DFID through Population Council</td>
<td>January 2011 to December 2016</td>
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<tr>
<td>Cross-Site data Sharing in Africa</td>
<td>INDEPTH Network</td>
<td>2011–14</td>
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<tr>
<td>Effectiveness of Personalized Home-Based Nutritional Counseling on infant Feeding Practices in urban Informal settlements, Nairobi Kenya</td>
<td>Wellcome Trust</td>
<td>March 2012 – February 2015</td>
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<tr>
<td>Project Name</td>
<td>Funder</td>
<td>Grant Period</td>
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<tr>
<td>Establishing Innovative Community Approaches in baby Friendly Community Initiatives</td>
<td>Wellcome Trust</td>
<td>July 2013-January 2015</td>
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<tr>
<td>Harnessing Public-Private Partnerships to improve Maternal, Newborn and Child Health (MNCH) Services and outcomes in Nairobi Slum Settlements</td>
<td>Comic Relief</td>
<td>July 2012-December 2015</td>
</tr>
<tr>
<td>Study on Emerging and Re-merging Zoonosis, Case of E. Coli</td>
<td>Medical Research Council (MRC)</td>
<td>February 2012 – January 2015</td>
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<tr>
<td>Consolidating Research on Population, family Planning and Reproductive Health among the Urban poor in sub-Saharan Africa</td>
<td>Bill and Melinda Gates Foundation</td>
<td>September 2011 – August 2014</td>
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**Funders**

Over the years, funding for the NUHDSS came from various organizations including the Rockefeller Foundation, USA, the Wellcome Trust, UK, and the William and Flora Hewlett Foundation, USA. Currently the surveillance work is fully funded by the Centre and the Bill and Melinda Gates Foundation. Work on nested studies were supported by the following organizations: Wellcome Trust; Rockefeller Foundation; William and Flora Hewlett Foundation; European Commission; Ford Foundation; Department for International Development (DFID), UK; Government of Kenya; World Health Organization (WHO); Bill and Melinda Gates Foundation; Doris Duke Charitable Foundation; Ford Foundation; Global Fund; Google.Org; International Union for the Scientific Study of Population (IUSSP); International Development Research Centre (IDRC), Canada; USAID; World Diabetes Foundation; World Toilet Association; IPAS; National Institute of Health; Packard Foundation; Carnegie Corporation; International Society for Urban Health (ICUH); INDEPTH Network; Institute of Development Studies (IDS), Sussex, UK; Institute of International Education (IIE); International Planned Parenthood Federation (IPPF); MacArthur Foundation; National Institute of Drug Abuse (NIDA); the United Nations agencies; Comic Relief, Medical Research Council (MRC), and Amsterdam Institute for Global Health and Development (AIGHD).

**Collaborators**

The following institutions have collaborated (or continue to collaborate) with staff working on the NUHDSS or studies nested in the NUHDSS: London School of Hygiene and Tropical Medicine; Jhpiego; London School of Economics (LSE); City Council of Nairobi; Guttmacher Institute, New...
York; University of Southampton, UK; African Development Bank (ADB); Agincourt Health and Population Unit, SA; Canadian Coalition for Global Health Research; EU; Finnish Embassy in Nairobi; Government of Kenya (ministries of Health and Education); Ifakara Health Institute, Tanzania; Kenya Medical Research Institute (KEMRI); National Council for Population and Development (NCPD), Kenya; Panos London; Swiss Tropical Institute, Switzerland; the UN bodies; ICF International; University of Colorado at Boulder, USA; Concern Worldwide; Population Council; AMREF-Kenya; University of Loughborough, UK.; Kenya National Bureau of Statistics (KNBS); Aga Khan University Hospital. The Center has also collaborated with various community based organizations including: Provide International; U-Tena; Miss Koch; MAKWAK, among others.

Key 2012-13 Publications


maturation, abstinence and unintended pregnancy: experiences from an informal settlement in


of Sexual Behaviour, 41*(6), 1-8. doi: 10.1007/s10508-012-9928-4

analysis of prospective data from the Nairobi urban health and demographic surveillance system.

Adolescent Resilience in Two Informal Settlements (Slums) in Nairobi, Kenya, *Child and Youth
Services*, 33, 12-32.

in Kenya: What are the correlates of and motivations for HIV testing? *BMC Public
Health, 11*(1).685.

Mwau, M. (2012). Are slum dwellers at heightened risk of HIV infection than other urban
residents? Evidence from population-based HIV prevalence surveys in Kenya. *Health and Place,
18*(15), 1144-1152.

surveillance systems: a step towards full civil registration and vital statistics system in sub-Sahara

rural linkages among older migrants in Nairobi informal settlements. *Population, Space and Place,
Wiley Online Library (wileyonlinelibrary.com) DOI: 10.1002/psp.1711.

of free primary education using retrospective and prospective data: lessons from the Nairobi case
study. *International Journal of Research & Method in Education, 35*(1), 71-92. doi:
10.1080/1743727X.2012.666717


23. Oketch, M, Mutisya, M., & Sagwe, J. (2012). Do poverty dynamics explain the shift to an informal
private schooling system in the wake of free public primary education in Nairobi slums? *London

**Key Previous Publications**

doi:10.1007/s10995-010-0670-z


Policy Briefs

1. Assessing the impact of the Health Promoting Schools initiative in Nairobi’s informal settlements No: 24, 2010
2. Creating Healthy Schools. Implementing a Health Promoting Schools initiative in Nairobi’s informal settlements No: 23, 2010
3. Use of menstrual cup by adolescent girls and women. Potential benefits and key challenges No: 22, 2010
4. Attitudes towards and acceptability of, menstrual cups as a method for managing menstruation. Experiences of women and schoolgirls in Nairobi, Kenya No: 21, 2010
5. Experiences and problems with menstruation among poor women and schoolgirls in Nairobi, Kenya No: 20, 2010
8. Low and High Performing Schools in Kenya: Do Teaching Styles Make a Difference? No: 17, 2010
13. Attendance, Attitude towards Schooling, and Grade for Age in the Slums of Nairobi: Does Orphan Type matter more than Orphanhood? No: 10, 2009
14. Factors associated with Low Achievement among Students in Nairobi’s Informal Neighborhoods. November 2008
22. African countries must slow population growth to realize meaningful development. September 2008
23. Inventory of Interventions to enhance Transition from Primary to Secondary School for Children Living in Poor Urban Settings. November 2007
Nairobi urban HDSS holds medical camps in Korogocho and Viwandani—the Centre's sites in Nairobi providing free health services to the residents of these informal settlements.
Nairobi urban HDSS engages with policy makers during a health conference organised by the centre in 2009.