



*From Post-Doctoral  
Fellow to Executive  
Director*

***Meet Dr. Catherine Kyobutungi***

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# CONTENTS

## News

- 03** Introducing Our Next Executive Director
- 04** East African Countries Rally Behind RELI for Improved Learning Outcomes
- 06** Immunization: Positioning Civil Society at the Forefront of Progressive Development
- 07** Innovative Research Approaches to Inform Maternal and Child Health Policy in Uganda
- 09** Establishing Sustainable Approaches for Caring For Older Populations

## Opinion

- 10** Why It Is Important to Formalize Institutions That Offer Alternative Basic Education and Training

## Interview

- 12** Ann Starrs: Unmet Need for Contraception is the Most Urgent Issue Facing Women and Girls

## Feature

- 14** Invisible and Ignored: Household Air Pollution in Nairobi
- 16** Could Affordable Daycare Be the Key to Unlocking Women's Earning Power in Africa?

- 18** Highlights

- 20** Photostory

- 22** Publications

## INTRODUCING OUR NEXT EXECUTIVE DIRECTOR

The African Population and Health Research Center's Board of Directors selected Dr. Catherine Kyobutungi, distinguished epidemiologist and research leader, as the organization's next executive director. Dr. Kyobutungi was APHRC's director of research and has served APHRC in several leadership roles over the past decade. She assumes the role of executive director in October 2017.

"It is deeply satisfying to search the world for the best candidate to lead APHRC into its next chapter and to find her among the Center's most respected leaders. From its earliest days, APHRC has been dedicated to engaging exceptional African researchers and global leaders in using evidence to improve lives. Catherine is a stellar example of the Center's success in doing so," said Tamara Fox, the chair of the APHRC Board of Directors. "The board is very much looking forward to working with her in this new role."

Dr. Kyobutungi succeeds Dr. Alex Ezeh, who has led APHRC for 18 years. "Under Alex Ezeh's exceptional direction over the past 18 years, APHRC grew from an incredible idea to an institution that has earned the respect of everyone it touches. It feels woefully inadequate to say how deeply grateful the board is for Alex's dedication and tireless work to create a place where some of Africa's most esteemed and most promising researchers can thrive," said Tamara Fox.

"It is impossible to imagine a better person to take APHRC into its next phase than Catherine," said Dr. Ezeh. "Her skills as a researcher, a manager, a mentor, and a leader have been part of APHRC's culture and success for many years, and she will now have the chance to put her stamp on the Center's continuing successes."

Dr. Kyobutungi shared: "It is a great honor to be selected as APHRC's next executive director. Amplifying the voices of African scholars and building research capacity in the region have been my life's work, and this opportunity to guide APHRC is a chance to work with an exceptional group of colleagues and the board to continue bringing African voices and leadership to the fore."

Dr. Kyobutungi holds an MBChB from Makerere University in Uganda, and both a MSc in Community and Health Management and a PhD in Epidemiology from the University of Heidelberg in Germany. She served as a medical officer at Rushere Hospital in Mbarara District, Uganda, and Medical Officer in Charge of the Mbarara Municipality Health Sub-district. Dr. Kyobutungi has also held the positions of assistant lecturer and lecturer in the Department of Community Health at Mbarara University of Science and Technology in Uganda.

Dr. Kyobutungi has served on numerous boards, panels, and expert groups, including the INDEPTH Network Board of Directors and the Advisory Council of the Carnegie African Diaspora Program at the Institute of International Education. She was the inaugural chairperson of the Kenya Epidemiological Association. Her research interests include migrant health, community participation in health, and the epidemiology of non-communicable diseases.

Dr. Kyobutungi's appointment comes at an exciting time for APHRC, with a new strategic plan launched earlier this year. She will lead the organization into achieving its vision of transforming lives in Africa through research, and its mission of generating evidence, strengthening research capacity, and engaging policy to inform action on population health and wellbeing.



*Dr. Catherine Kyobutungi*

## EAST AFRICAN COUNTRIES RALLY BEHIND RELI FOR IMPROVED LEARNING OUTCOMES

By Fredrick Wamalwa



More than 40 organizations from Kenya, Tanzania, Uganda and Democratic Republic of Congo attended the launch of the Regional Education Learning Initiative, which promotes a collaborative approach to the persistent challenges that keep children from across East Africa from accessing quality primary education.

To ensure that children across East Africa are having the greatest possible opportunities to learn and access quality education, APHRC is coordinating a multi-stakeholder platform to consolidate lessons learnt from research and education programs with a view to address challenges that hold our young people back. The Regional Education Learning Initiative (RELI) represents actors from across the education sector including government agencies, civil society, teachers and parents in Kenya, Uganda, Tanzania and Democratic Republic of Congo.

The different partners will collectively develop solutions to address issues such as improving school curricula, access to education by disadvantaged groups of children and most importantly, quality of education. Research suggests that ineffective teaching approaches and low motivation among teachers affects quality of teaching leading to poor learning outcomes for children. RELI sees improving morale, in-service training on high order teaching styles, classroom-based support and more engagement by teachers in learning processes as vital to improving the quality of education.

APHRC's classroom studies in Uganda and Kenya show that about one in three primary school students are taught mathematics by teachers who are challenged in this subject. The impact is further felt in DRC where 60% of children who reach 6th grade fail to pass national exams. In rural Uganda, studies by the Center reveal that a primary school teacher teaches an average of 6.4 hours in a week - substantially less than the daily recommended 20.5 hours that are required to expose a child to active learning.

Free primary education policies and increased spending on education in East Africa has resulted in higher rates of enrolment and retention. Kenya, Tanzania and Uganda, for example, records net enrollment rates of over 85%. However, increased enrolment has not translated into improved education outcomes and accessibility to educational institutions, especially for children with disabilities.

"While strides have been made in terms of access to schooling opportunities in developing countries, quality of education is compromised and now is the time to act," said one of the development partners.



*The RELI inception meeting provided integrated teams of stakeholders with the chance to work in small groups to understand the priorities, opportunities and possible approaches to ensuring improved quality of learning for primary students in four East African countries*

In Uganda, the rate of children dropping out of primary school is as high as 47% with one in three of those who complete primary school failing to transition to secondary school. Research conducted by APHRC also reveals that over 60 % of children from urban informal settlements in Nairobi, Kenya have limited access to free public schools and are forced to enroll at 'low cost' private schools, where they could potentially drop out due to financial limitations.

In addition to working directly with teachers, RELI will also work to engage with government officials and education advocates in civil society to develop a holistic approach to improving both quality of education and learning outcomes across participating countries.

Speaking during RELI's launch in Nairobi on 3 July, Dr. Alex Ezeh, APHRC's executive director said, "APHRC endeavors to use this platform to facilitate this engagement and collectively, we have to make it work. As a center, we have solid experience in supporting individuals and institutional capacity strengthening and the success of RELI will also depend on the effort of the member institutions."

Over 40 institutions will drive activities according to their areas of focus which are divided into four clusters namely (1) teacher development and support, (2) flexible and adaptable learning and teaching, (3) life skills and youth leadership, and (4) inclusions and accountability in education. Over the next three years the teams will focus on documenting and sharing experiences and lessons and advocating for stronger education policies.

Each of the member institutions will develop a monitoring, evaluation and learning framework to strengthen tracking of the program's outcomes with the support of mentors who will work closely with these institutions.

Dr. Benta Abuya, a research scientist at APHRC says: "The regional convening in Nairobi will be followed by in-country meetings in Kenya, Uganda and Tanzania in November. During that time, we shall engage policy and decision-makers in these countries. In the meantime, there are ongoing activities at the country and cluster levels."

*Fredrick Wamalwa is a learning coordinator at APHRC*

## IMMUNIZATION: POSITIONING CIVIL SOCIETY AT THE FOREFRONT OF PROGRESSIVE DEVELOPMENT

By Gaye Agesa

Although governments are largely responsible for ensuring that every child has access to immunization services, they seldom are able to do so. This is mainly due to inadequate financing available for infrastructure development, purchasing of vaccine commodities, as well as recruiting an adequate number of health workers to support the immunization program.

To meet the targets stipulated in the Global Vaccine Action Plan (GVAP) - a framework meant to prevent millions of deaths by 2020 through equitable access for all to routine immunization services - a shift in approach is needed that provides civil society support to government action. Sub-Saharan Africa has made notable progress in routine immunization and there is need for greater funding commitments and accelerated efforts if the region is to meet all of the GVAP targets by 2020.

APHRC was among the programmatic and technical health specialists who met on 6-8 June in Brazzaville, Congo for the first of two meetings in 2017 of the regional immunization technical advisory group (ritag), and the annual Regional Stakeholders' Meeting (RSM) convened by World Health Organization. The RITAG is the principal advisory group that provides strategic guidance for sub-Saharan Africa on vaccines and immunization. It also plays an integral role in providing counsel on regional policies and strategies towards improving immunization delivery processes: from research and development to delivery of immunization services, and linkages with other health interventions.

The meeting provided APHRC with an opportunity to present to representatives from more than 40 countries a new, five-year, four-country initiative to drive greater commitments for sustainable financing for immunization in countries that will soon no longer be eligible for financial assistance from Gavi, the Vaccine Alliance. The initiative seeks to strengthen advocacy capacity among civil society organizations working at national level in order to push countries to meet their spending targets for immunization as a cornerstone of stronger health systems.

“**At least let the government take the financing role bit by bit because funding partners will one day leave but the people are still ours**”

Evidence suggest that Africa is on the right path to reducing deaths resulting from vaccine-preventable diseases such as diarrhea, measles, yellow fever, and polio but is also faced with rapidly emerging threats including ebola and zika virus. To be able to effectively contain and manage outbreaks, countries must have in place sustainable plans and strategies and also set aside adequate funds to protect their populations.

Key among the challenges discussed during the meeting was how to ensure that nearly eliminated diseases such as polio remained a threat of the past, even as financial and human resources devoted to maintaining high levels of vaccine adherence have waned. Where countries can continue their fight against yellow fever, even in the face of large scale population movements was also on the agenda.

From the discussions, it was evident that civil society support to government needs scaling up and opportunities emanating from the Addis Declaration on Immunization (ADI) explored. The declaraton was signed by health ministers in 2016 and adopted by all African heads of state in January 2017. It is heralded as an ideal platform for engaging with policy-makers, as it includes unanimously adopted commitments to increase domestic financing for immunization.

“At least let the government take the financing role bit by bit because funding partners will one day leave but the people are still ours,” said Dr. Felistas Zawaira, the Africa regional director of family and reproductive health for WHO.

This statement has been reiterated by different stakeholders to encourage governments to plan for and set aside adequate funds in their national budgets for health and immunization, in light of diminishing resources from donors.

Why the call to increased domestic financing? Domestic public resources are often more equitable, predictable, efficient and sustainable than other revenue sources. Given that immunization is central to universal health coverage and brings along with it immeasurable economic benefits, increased investment by governments is not just the right thing to do, but the smart thing to do.

*Gaye Agesa is the immunization advocacy project manager at APHRC*

## INNOVATIVE RESEARCH APPROACHES TO INFORM MATERNAL AND CHILD HEALTH POLICY IN UGANDA

By Lynette Kamau

The number of women who die from pregnancy and childbirth-related complications in Uganda has declined in the last five years -- from 430 to 336 per 100,000 live births. To ensure that progress is sustained, members of the Eastern Africa Health Policy Research Organization consortium are undertaking research on the value and cost effectiveness of social enterprise models and incentives for community health workers (CHWs).

Efforts to enrich the body of evidence for human resources for health has spurred interest among high-profile government officials as was confirmed during a stakeholders' meeting co-hosted by APHRC and BRAC Uganda in Kampala on 1 June. Uganda's Minister of State for Health (Primary Health Care) Hon. Joyce Kaducu, who was the guest of honor, said: "We can reduce maternal mortality by eliminating the inequalities that lead to disparities in access and quality of care." Existing Maternal, Newborn and Child Health (MNCH) policies either need to be strengthened or enforced to ensure that all women access quality maternal services. This formed the heart of the discussions that brought together nearly 50 participants representing the ministry of health, members of parliament, academia and non-state actors.

Commitment and endorsement from the high-level government officials provided a well-deserved boost for the researchers who, through the relationships built will be able to utilize their research to inform policy. Urging all participants to reflect on how research could inform and improve interventions in the community as well as MNCH decisions and policies across the country, Hon. Kaducu added: "Credible evidence is necessary in policy-making and we encourage research professionals to lead on this issue."

Echoing Hon. Kaducu's commitment to advance evidence-informed policy-making, Dr. Henry Mwesaba, the director of health services, pledged that researchers would be included in key MNCH committees such as the national maternal and child health technical working group. This will provide an important platform for the two research teams working in Uganda as part of the Innovative Maternal and Child Health (IMCHA) initiative to disseminate their findings and share recommendations for how they can inform decision-making.



From left, Hon. Dr. Joyce Kaducu, Uganda's Minister of State for Health (Primary Health Care), Dr Henry Mwebesa, Director of Health Services and Ms. Hasina Akhter, BRAC Uganda's Country Representative.

## Relevance of IMCHA supported research projects

The World Policy Institute estimates that in Uganda, there is one doctor for every 24,000 citizens, fewer than WHO's recommended ratio of 1:1000. This signifies chronic shortage of trained medical personnel to respond to health needs of its population resulting to 16 women losing their lives every day from childbirth related complications.

Low levels of trained professionals mean that the roles played by community health workers in raising awareness about the importance of antenatal care and skilled assistance during delivery are vital to a community's overall health and wellbeing. However, many programs that engage CHWs are piecemeal and ad hoc, which ultimately compromises quality of care. Uganda, like many other countries in sub-Saharan Africa, needs a more structured, systematic approach to effectively and sustainably engage CHWs, ensuring that they are adequately incentivized and trained to provide the highest quality of care possible.

Together with partners from Cape Breton University in Canada, BRAC Uganda is running a three-year investigation of different interventions and models of management for CHWs. The aim of the research is to assess the value and cost effectiveness of models that can be used to motivate community health workers while also improving performance.

This research is particularly timely, as Uganda seeks to implement a new Community Health Extension Workers (CHEW) strategy, which seeks to balance the need for a system to guide CHW compensation against the reality of a fragmented approach to their work in communities, particularly rural and remote ones.

Uganda's health ministry developed the CHEW strategy in 2016 and has been successively introducing components of it as resources allow. Costs for implementation of the entire strategy are estimated to exceed \$100 million: a hefty price tag for a country that spends an average \$17 per person on publicly funded health care.

"The estimated cost for rolling out the CHEW strategy is not just for incentives but also training. The CHEWs will work with village health teams who are working on voluntary basis and we welcome suggestions on how best to motivate them," said Dr. Paul Kagwa, a commissioner in the Ministry of Health.

BRAC researchers hope that their evidence will be able to help guide a smarter and more equitable implementation of the CHEW strategy, while also ensuring improved monitoring and evaluation of CHW performance and impact. "Since the stakeholders' meeting, we have strengthened our relationship with the Ministry of Health and gained more contacts. We now get invited to participate in technical working groups for maternal and child health. We hope to deliver a presentation about our IMCHA supported research project this September at the Maternal and Child Health Cluster meeting," said Jenipher Twebaze, the lead researcher for the IMCHA-supported project by BRAC Uganda.

The other project supported by the IMCHA program in Uganda addresses the complex healthcare needs of women and children in conflict-affected areas such as northern Uganda, and South Sudan, both of which are regularly strafed by violence. To address this, researchers from St. Mary's Hospital Lacor in Gulu, northern Uganda, are working with South Sudan's Torit State Hospital and Ministry of Health to link communities from affected regions to health services. The team is engaging communities to identify their challenges in accessing maternal services and how these can be addressed. They are also strengthening the capacity of midwives to provide better services at the community level.

Researchers also used the high-profile meeting to identify where they would bring evidence to inform in future decision-making.



Participants at the stakeholders' meeting in Kampala.

## ESTABLISHING SUSTAINABLE APPROACHES FOR CARING FOR OLDER POPULATIONS

By Hilda Akinyi Owii



*Providing quality and appropriate care for older people is essential in ensuring their well-being*

Close to 63 million people across Africa are over age 60, and that population is growing more rapidly than in any other region in the world. How to meet the challenge of providing them with long-term care in the face of greater incidence of chronic disease and functional impairment requires firm direction and commitment to action.

Research reveals that older adults across the continent face an acute problem of access to quality care. To ensure that these populations are well cared-for, it is essential to develop and implement equitable and sustainable long-term care models. This can only be achieved with political will, rigorous evidence, funding and most of all, sustained advocacy for making long-term care a policy priority.

In March 2017, a team of APHRC experts joined colleagues from the Kenya Association of Gerontology and Geriatrics (KAGG), North West University (NWU), and HelpAge International Africa regional office in a 'write-shop' at APHRC headquarters in Nairobi. Their goal: to strengthen efforts to establish appropriate long-term care systems for older African populations.

The two-day session culminated in the development of a draft outcome document, 'The Common African Position (CAP) for Long Term Care Systems in Africa' that was thereafter reviewed by relevant experts from HelpAge and the World Health Organization (WHO) Department of Ageing and Life Course. The final draft was submitted to the African Union Commission (AUC) on 15 March and adopted without amendments at the 2nd session of the AU Specialized Technical Committee on Social development Labor and Employment (STC-SDLE -2), 24-28 April in Algiers.

The CAP establishes a rationale for the need to consider and act on issues of long-term care, and offers concrete recommendations for the AUC, member states, and international development partners.

The CAP provides a foundation for strategic policy engagement and research on long-term care. Strong evidence will make a case for the need to protect older Africans' rights to care.

Advocates and researchers must collaborate to achieve the goal of quality care and extract commitments from AU member states to develop an enabling policy environment that ensures equitable access to long-term care for all older populations.

The CAP is a promising start; its success, however, will depend on the degree to which member states take decisive action on behalf of current -- and future -- elders.

*Hilda Akinyi Owii is a research officer at APHRC*

## WHY IT IS IMPORTANT TO FORMALIZE INSTITUTIONS THAT OFFER ALTERNATIVE BASIC EDUCATION AND TRAINING

By Catherine Asego and Maurice Mutisya



*Children in public schools benefit from government-supported initiatives and programs unlike their counterparts in APBET schools*

Kenya's Basic Education Act 2013 seeks to reinforce the right to free and compulsory basic education for all children as enshrined in the 2010 constitution. However, almost half of the children living in urban slums are unable to access free primary education because there are not enough public schools to reach them all. A lack of public schools has led to a profusion of for-profit, low-cost private schools in informal settlements, which are now attended by almost half of the children in these areas across the nation and around two-thirds of Nairobi's slum-dwelling youngsters.

These schools, known as Alternative Provision to Basic Education and Training (APBET) institutions, fill a needed gap by providing essential education services. Yet they operate without oversight or registration -- or even official recognition by the Ministry of Education (MoE). As a result, students are not captured in the National Education Management Information System (NEMIS) and do not benefit from government-supported initiatives and programs.

Additionally, the MoE is not able to protect guardians of students from exploitation by owners of the institutions who may be more motivated by maximizing profits than committed to providing quality education.

Registering APBET institutions is a first critical step toward securing fundamental rights for students and their families related to access to education. This also includes access to government support including free primary education capitation grants, provision of sanitary towels and other similar initiatives enjoyed by public educational institutions.

The process needs to go further by harmonizing registration criteria of APBET institutions through a one-stop-shop where services are accessed to enhance efficiency. The one-stop-shop should address issues regarding the learning environment, public health, county and national government interests.



Children at daycare center

The regulations also need to incorporate minimum health standards for these schools. Most schools in urban slums, including public schools do not meet minimum health requirements. The situation is worse in APBET institutions, many of which lack proper public health services such as water, sanitation and hygiene facilities. Students attending these schools may already have been exposed to diarrheal disease-causing pathogens from unsanitary home environments and lack of these facilities in schools only heightens risk of illness. One of the benefits of having proper sanitation facilities is increased attendance -- as revealed by a study conducted by APHRC.

Obstacles such as limited awareness and clarity of guidelines need to be addressed to facilitate smooth registration processes. Some school directors claim to have insufficient knowledge of the existence of these guidelines, while others argue that the registration process is not transparent and frustrates their efforts to register their institutions.

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**The Urban Education Project aims at improving access to quality education among the urban poor through evidence based advocacy in Kenya, Uganda and Tanzania.**

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This implies an information gap between MoE and the management of these institutions, and requires increased efforts in managing information flow between these institutions.

APHRC is coordinating different partners together in a network of engaged stakeholders to ensure that marginalized and vulnerable children enjoy services irrespective of the type of schools they attend. The Urban Education Group (UEG) has so far had a series of engagements with the Parliamentary Committee on Education, directors of education, and country and regional education departments for Nairobi, and made recommendations to increase registration of APBET institutions. UEG is currently supporting and closely working with the regional coordinator in charge of education in Nairobi, Mr. John Oloituaa, to facilitate registration processes to support access to basic education.

The initiative is carrying out similar work in Tanzania and Uganda, with a focus on country-specific issues related to enhancing access to education for marginalized children.

*Catherine Asego is the education working group coordinator at APHRC  
Maurice Mutisya is a data analyst at APHRC*

# Interview

## ANN STARRS: UNMET NEED FOR CONTRACEPTION IS THE MOST URGENT ISSUE FACING WOMEN AND GIRLS

By Danielle Doughman

Ann M. Starrs is president and CEO of the Guttmacher Institute, a US-based research and policy organization committed to globally advancing sexual and reproductive health and rights. Starrs is an expert on maternal health policy and an influential advocate for the health and rights of women and adolescent girls worldwide. Together with APHRC's Dr. Alex Ezeh, she co-chairs the Guttmacher-Lancet Commission on Sexual and Reproductive Health and Rights. The Commission is developing an evidence-based agenda for key sexual reproductive and health rights (SRHR) priorities worldwide, coinciding with the Sustainable Development Goals time frame that extends to 2030. Its report is expected in mid-2018.

APHRC is a long-time partner of the Guttmacher Institute, most recently collaborating on a study, *From Paper to Practice: Sexuality Education Policies and Their Implementation in Kenya* published in April 2017. Led by APHRC's Dr. Estelle Sidze, the study, which surveyed students and teachers in 78 secondary schools, found that only 2% of students say they are receiving sexuality education content that is comprehensive – that is, content that covers the full range of topics of a comprehensive sexuality education curriculum as defined by the United Nations and other international organizations.

APHRC had an opportunity to speak with Starrs when she visited APHRC as part of the Guttmacher-Lancet Commission discussions earlier this year.



Ann Starrs

### What is the most urgent issue facing women and girls in sub-Saharan Africa?

There are two parts to my answer, though they are interlinked.

First, there is a need to understand the reasons behind unmet need for contraception [women who wish to delay or stop childbearing, but who are not using a modern method of contraception, such as condoms, the pill, or implants].

While we see high rates of unmet need among women and girls in many countries, unmet need for contraception is particularly high across much of sub-Saharan Africa. Guttmacher research shows that in this region, approximately one in two women who do not want to become pregnant are not using a modern contraceptive method. However, only an estimated 5% of women with unmet need for **any** method of contraception say their reason for non-use is that they don't have access to contraception.

Among married women in Africa, the most commonly cited reason for not using any method of contraception is concern about side effects or health concerns. The second most common reason is opposition (either by the woman herself, or by others), and the third most common reason is breastfeeding/postpartum amenorrhea [according to a 2016 Guttmacher analysis of Demographic and Health Surveys (DHS)].

The second urgent issue --and a major reason for unmet need--is sub-par quality of care. Many women aren't getting full and accurate information and counseling about contraceptive methods when they visit a healthcare provider. Non-use of modern contraception for those who want to delay or stop childbearing, use of less effective traditional methods [such as periodic abstinence/withdrawal] and discontinuation of contraception all point to women's concerns about, or poor experience with, modern methods; qualitative research indicates that thorough, accurate and supportive counseling and interpersonal communication between a patient and a healthcare provider could help reduce unmet need.

### What does “opposition to using contraception” mean, exactly?

We had the same question, since the survey question in the DHS just ticks a box for opposition generally. Guttmacher piloted a study in Ghana last year to learn more about what women mean when they cite opposition as a reason for not using contraception. We learned that it was most often a woman's **own** opposition rather than a husband's or other family member's, and most often the “opposition” was linked to health concerns.

We also learned that when women cited health concerns as their top reason for non-use, 76% of the time it was based on someone else's experience [a sister, a friend, for example] not her own. We need to disentangle these reasons in order to fully understand why women who don't want to have a child aren't using a modern contraceptive method, and how to help these women most effectively. However, this information is only based on one country, so we don't know how generalizable it is.

### How can men be better allies to women?

The data are mixed around the role of men and contraceptive use: whether involving men in the decision helps or hinders women from accessing and using family planning services can vary by country and/or culture.

It comes back to the type and quality of engagement with men on family planning, and their level of knowledge about its benefits. Research shows that when men understand the health, social and economic benefits [of contraception], they generally are supportive of contraceptive use. Often men are the family decision-makers, including on issues related to family planning. It is critical that they make these decisions from an informed perspective.

*Danielle Doughman is the policy outreach manager at APhRC*

## INVISIBLE AND IGNORED: HOUSEHOLD AIR POLLUTION IN NAIROBI

By Mwangi Chege and Kanyiva Muindi

Nairobi's poor air quality is evident in its congested streets, where matatus [mini-vans], trucks and boda-bodas [commercial motorcycles] jostle for space while belching clouds of smoke. The city's construction boom and practices like the burning of garbage only add to the levels of outdoor air pollutants. The World Health Organization (WHO) reports that the level of fine particulate matter in the city's outdoor air is 17 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ), which is 70% above the recommended maximum level. This figure could even be higher given the absence of a robust monitoring system.

Outdoor (ambient) air pollution causes more than 3 million premature deaths globally and increases the risk of respiratory diseases and cardiovascular conditions especially among the most vulnerable – the youngest, oldest and poorest. Indoor air pollution is not as visible, yet it is estimated to result in 4.3 million premature deaths globally.

Indoor air pollution is primarily driven by the burning of fuels used for cooking and lighting. While it has always been associated with rural communities, household air pollution is increasingly an urban issue.

Residents of informal settlements have limited access to electricity or liquefied petroleum gas (LPG) and so primarily burn firewood, charcoal and kerosene. Burning of these fuels releases pollutants such as carbon monoxide (CO), sulphur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), and polyaromatic hydrocarbons (PAHs), as well as particulate matter of varying sizes.

Indeed, wood smoke has been shown to contain pollutants comparable to those in cigarette smoke, but at higher concentrations, signifying serious health implications for firewood users. Poor ventilation in slum dwellings due to concerns about security exacerbates levels of these pollutants, which are associated with respiratory diseases, cancers and adverse child and maternal outcomes. Women, who are primarily involved in cooking and household work, are more exposed to these pollutants. However, estimates of indoor air pollution levels are hard to obtain, in part because of just how hard it is to set up monitoring devices within people's residences.



A trader sells charcoal in one of Nairobi's informal settlements. Charcoal is one of the most commonly used sources of fuel for cooking in rural areas as well as in urban informal settlements.

APHRC has been conducting research in Korogocho and Viwandani to understand the levels and burden of household air pollution in Nairobi's informal settlements. This research indicated that average levels of fine particulate matter within households are approximately 76µg/m<sup>3</sup>: more than three times the WHO-recommended maximum level of 25µg/m<sup>3</sup>, meaning that residents are exposed to dangerously high levels of toxins.

APHRC and its partners convened a series of three workshops between September 2016 and May 2017 to explore low-cost and innovative solutions to this problem. The workshops used a collaborative approach to obtain the input of all participants present on their views about the issue, as well as possible solutions. Policy-makers from Nairobi and Kisumu counties, parastatal officials, academics, researchers, NGO representatives as well as residents of Korogocho and Viwandani together developed a basket of potential policy interventions.



**Wood smoke has been shown to contain pollutants comparable to those in cigarette smoke, but at higher concentrations, signifying serious health implications for fire-wood users.**



The first scenario involved changing the fuel mix used in cooking and lighting by increasing the price of kerosene and lowering prices for gas and clean cooking stoves. This was shown to marginally reduce levels of household air pollutants.

In the second scenario, price control measures were combined with stronger enforcement of pollution regulations, and yielded reduced level of air pollutants up to three times more than the previous scenario.

The third scenario added increased health impact assessments and air quality monitoring to scenario two, which led to an even further drop in air pollutant levels. The final scenario combined all the policy measures mentioned above with a reduction in outdoor air pollutants and improved ventilation, which led to the greatest decrease in indoor air pollutant levels.

The modeling demonstrated that while price controls may be effective initially, sustaining the gains made in air quality and health outcomes will require a combined approach. Further, the results show that just targeting indoor air pollution is not enough. Because indoor and outdoor air pollutants constantly interact with each other as air moves in and out of a dwelling, the greatest gains in pollutant reduction and health outcomes will only be realized when outdoor air pollution is effectively addressed.

Globally, there is rising awareness about poor air quality and its attendant health impacts. This growing awareness needs to be matched by increased investment in air quality monitoring systems, to better understand the problem and implement possible solutions. However, it is easy to focus on ambient air pollution, which is more visible and ignore the problem within households. Policy-makers therefore need to ensure that both indoor and outdoor air pollution are effectively monitored and addressed to improve the health outcomes of residents of urban Africa's informal settlements.

*Kanyiva Muindi is a research officer at APHRC  
Mwangi Chege is the policy engagement manager at APHRC*

## COULD AFFORDABLE DAYCARE BE THE KEY TO UNLOCKING WOMEN'S EARNING POWER IN AFRICA?

By Tommy Trenchard

Juliet Nyambura remembers the day she lost her job as though it were yesterday. She remembers the fear over what would happen to her family without her income, and she remembers the shame she felt at not being able to provide for her children.

“When your child is counting on you and there’s nothing you can do to help, that feeling is very hard for a mother,” said the 34-year-old, whose husband earned not nearly enough money from part-time work to support the family. “We had no money for medicine. I was always afraid.”

Losing her job washing clothes in the Korogocho slum in Kenya’s capital, Nairobi, had nothing to do with Nyambura’s competency. The problem was that after the birth of her fourth child, Joy, she simply couldn’t find enough time to take care of the infant and keep pace at work.



Juliet and her daughter at her home in Korogocho

Balancing childcare and income generation is a problem faced by mothers around the world, but in a community like Korogocho, where some 100,000 people eke out a precarious living in a one-square-kilometer sprawl of iron sheet and mud shacks in the shadow of a smoldering rubbish heap, there are few safety nets, and the loss of an income can easily push a family into debt and crippling poverty.

At first, Nyambura tried to juggle both commitments, rushing home every two hours to breastfeed her baby. But eventually, her employer lost patience. For the next two years she was unemployed, surviving off the generosity of friends. But in January 2016, Nyambura’s fortunes changed dramatically. That is when she became one of more than 1,200 Korogocho mothers to participate in a research project carried out by APHRC in collaboration with McGill University in Montreal, Canada.

By issuing vouchers for free daycare services to mothers, and by investing in the capacity and resources of a selection of daycare centers by retraining caregivers and offering material support in these centers, the project aimed to explore the relationship between affordable, quality daycare services, and women’s ability to earn a living.

The Korogocho project is part of a wider initiative known as the Growth and Economic Opportunities for Women program (GrOW), a partnership between the UK’s Department for International Development, The William and Flora Hewlett Foundation, and the International Development Research Center (IDRC), that seeks to identify solutions that can address the barriers that hold women back from participating fully in the economy.

Martha Melesse, a senior program specialist for IDRC, outlined the underlying problem. “We know from statistics available that on average, women work longer hours than men in any given day,” she said. “The GrOW program is testing whether access to affordable and quality daycare is one of the missing links that can unlock the full potential of women at work, particularly in sub-Saharan Africa and in South Asia where women spend a significant amount of time caring for children,” she added. The Nairobi-based manager of the Korogocho project, APHRC’s Dr. Stella Muthuri, reported that within one year, subsidized access to daycare had already increased women’s economic participation.

The percentage of working mothers increased from 48.9% among those without free daycare to 57.4% among mothers with subsidized daycare. The 8.5% increase brings the mothers closer to the levels of male participation in the labor force, in an environment where jobs and income-generating activities are hard to come by.

“It doesn’t take a lot of investment in each mother to achieve significant social and economic impact,” Dr. Muthuri said. “We found that women [who received vouchers] were less tied down and more mobile. They were mentally and physically released. Even women who had been working before told us that they were now less stressed and conflicted over what was happening at home.”

Nyambura’s story is a case in point. Once Joy was enrolled at the Bestan Child Care Center, a locally-run facility with brightly painted walls and a friendly atmosphere, she was able to learn a new trade: bag making. Recycling old flour sacks into convenient shopping bags and selling them across the capital, the mother of four now earns enough income to support her family and even indulges in a few treats.

On a good day, she can bring in 500 Kenyan shillings (around US\$5), which goes a long way in a place like Korogocho. “My children now have food every day and I can pay school fees for my older children,” she said with a smile, sitting with her daughter on a low wooden bench at the daycare center. “My rent is paid and I even bought a TV. My children are happier now. They smile and laugh more than they used to... Even when they’re fighting over the TV remote,” she added, chuckling.

The project also found that access to daycare may promote children’s social and cognitive development. For Pastor Charles Mathenge, the owner of the Bestan Child Care Center, subsidizing daycare services is a win-win situation. “Once the kids are here, the mothers have time to get a job and keep supporting their families. But it is also important for the children themselves. This is a dangerous neighborhood. [If the children weren’t here] most of them would go to work with their mothers on the dumpsite — even the three-year-olds. It’s a terrible life for them. But here we can teach them to avoid bad choices.”

Nyambura knows it all too well. “When I bring Joy here each morning I know that I am free to work, and that makes me proud. I have no words,” she said.

The project will now focus on sharing its findings through community dissemination events, policy conferences in Nairobi and Montreal, and to a wider audience of stakeholders as opportunities arise. The larger goal is to contribute to conversations on potential sustainable funding options with government and private sector partners to expand the scope and quality of child care services. “We’ve seen a lot of interest in improving child care services,” said APHRC’s Dr. Caroline Kabiru. “Now we want to make sure that interest is sustained.”



Juliet working on her sewing machine

*Tommy Trenchard is a freelance journalist. The work was supported under the Growth and Economic Opportunities for Women (GrOW) initiative. GrOW is a multi-funder partnership with the UK Government’s Department for International Development, the William and Flora Hewlett Foundation, and the International Development Research Center, Canada.*

# Highlights

## CARTA Convenes Vice Chancellors of African Universities' Meeting in Nairobi

Prof. Peter Mbithi, the vice chancellor of the University of Nairobi, hosted the Consortium for Advanced Research Training in Africa (CARTA) 2nd Vice Chancellors' meeting on 10-11 July in Nairobi.

The conference provided an opportunity for representatives from eight participating universities to reinforce their commitment to advancing Africa's research and graduate training capacity, while also sorting through the most appropriate ways to invest in developing research capacity. One idea was to take the investment case right to heads of state and government, to urge more direct domestic investment for research and multi-university collaboration.

Partnership and collaboration have been at the heart of the University of Nairobi's own efforts to improve graduate training and research, according to Prof. Mbithi. This has seen the institution work with private sector firms or other institutions, collaborative ventures such as patent protection and licensing, or formal mentorship programs with industry, which have in turn increased UoN's capacity for research and doctoral training.

CARTA was ably represented by its co-directors, Prof. Sharon Fonn and Dr. Alex Ezeh, as well as the CARTA secretariat. Also in attendance were representatives from the University of Nairobi senate, three heads of CARTA's partner research institutions and two representatives from CARTA's northern partner institutions.



*Vice Chancellors from eight African Universities at the University of Nairobi Towers during the 2nd Vice Chancellors meeting on July 10, 2017*

## Discussions About Multi-Sectoral Approach to Tackling Non-Communicable Diseases Held at APHRC

APHRC welcomed the Board of Governors from the International Development Research Center (IDRC) to its campus on 4 July for a roundtable discussion on the value of a multi-sectoral approach to drive the response to the emerging epidemic of non-communicable diseases (NCDs) across sub-Saharan Africa.

The team was presented with findings and recommendations that emerged from the Analysis for Non-communicable Disease Prevention Policies in Africa project. How individuals confront the daily challenges of managing NCD was depicted in a short film that was screened for the first time during the discussion.

Centered around Robert, a so-called 'expert patient' who lives in Lunga Lungu, an informal settlement in Nairobi, the film explained the value of awareness about disease management as well as the importance of a more holistic approach that involves other sectors beyond health to both prevent and manage NCDs.

In closing remarks, APHRC's director of research Dr. Catherine Kyobutungi emphasized the need, going forward, for patients to be at the center of policy-making to respond to NCDs. "In so doing, policy-makers will be able to take into account the different issues affecting a patient with an NCD and effectively find solutions that are practical and sustainable."



*The IDRC Board of Governors visited APHRC in early July to learn about our multi-sectoral work in responding to the growing threat of non-communicable disease in sub-Saharan Africa*

## APHRC Receives Accreditation From UN Environment

In July 2017, APHRC was awarded accreditation by UN Environment (formerly known as UNEP), which would enable the Center to participate in the global institution's governing bodies including the UN Environment Assembly (UNEA) and the Committee of Permanent Representatives.

APHRC will now be among the participants in these global policy discussions and contribute recommendations that are circulated to national governments. APHRC takes its place among 350 organizations globally that have been granted observer status by the UN Environment.

The next meeting of the UN Environment Assembly is scheduled for December 2017, with the theme, 'Towards a pollution-free planet.' APHRC is looking forward to sharing research findings and policy recommendations on a global stage, from our work in air pollution, solid waste management and fecal waste management in urban Africa.

## CARTA Fellow Wins Award



Nomfundo Moroe, PhD student at the University of Witwatersrand, with her award from DELTAS Africa in Accra, Ghana on 5 July

CARTA fellow Nomfundo Moroe won the award for 'Best Abstract' during the Developing Excellence in Leadership, Training and Science (DELTAS) Africa Annual Meeting in Accra, Ghana. The meeting which took place on 3-5 July brought together health researchers from 31 African countries and India to showcase some of the research being done on the continent to address Africa's health challenges. To demonstrate why her abstract was the best of 14 other contestants', the CARTA cohort 6 fellow made an engaging rapid-fire presentation about management of noise and hearing loss in the mines of South Africa.

Ms Moroe, from the University of Witwatersrand, was one of five CARTA fellows at the meeting who showcased their research topics. Other topics of focus for poster presentations included those on childhood immunization, maternal health and occupational hearing loss.

## Improving Breastfeeding Practices

From 2014 to 2016, APHRC in collaboration with Kenyatta University, the Kenyan Ministry of Health, and Koibatek sub-county in Baringo County conducted a study on the Baby Friendly Community Initiative (BFCI). This is a global initiative that is recommended by the World Health Organization to promote better feeding practices for infants and young children to improve their health outcomes. The study in Koibatek, Baringo, assessed the feasibility and effectiveness of BFCI with a focus on exclusive breastfeeding during the first six months after delivery.

In April 2017, the team from APHRC and Kenyatta University shared study findings with sub-county and county health management units as well as with community members and study participants. This was followed by a dissemination meeting with officials from the Ministry of Health and relevant stakeholders drawn from multilateral and non-governmental organizations. During this series of meetings, community leaders and members discussed the positive impacts of the study on their lives. For instance, a group of traditional herbalists shared that they had stopped giving herbal mixtures to newborn babies as this went against the WHO recommendation on exclusive breastfeeding. At the national-level meeting, the head of Nutrition and Dietetics Unit highlighted the importance of using the community health strategy to strengthen health outcomes in rural settings. She further assured those present of the ministries-commitment to promoting breastfeeding to improve nutrition indicators countrywide.

(See photo story on page 20)

# Photo Story



*A trained community health volunteer conducts a counseling session for mothers in the community on appropriate breastfeeding and infant feeding practices. Mothers were taught how to prepare a variety of nutritious foods for complementary feeding on a low budget, how and when to wean and proper hygiene practices among other skills necessary for proper growth of a child. They then formed peer support groups with the help of community health volunteers to allow them share experiences, challenges as well as encourage each other.*



*Community health volunteers and community health committee members engaged in income generating activities such as beekeeping, horticulture and animal husbandry. Farming has been used as a means of securing basic necessities for members of the community units.*



*A mother demonstrates appropriate breastfeeding practices. Women who participated in the study stated that the counseling they received from community health volunteers and the information shared in support groups helped them improve their baby feeding practices.*



*“The Baby Friendly Community Initiative will help sustain and improve our national nutrition indicators,” said Gladys Mugambi, head of the Nutrition and Dietetics Unit in the Ministry of Health. She thanked APHRC and Kenyatta University for championing improved health and nutrition outcomes for mothers and infants.*

# Publications

## 2017 Published Peer Reviewed Journal Articles APHRC

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12. Hungi, N. and Ngware, M. (2017). Investigating the effects of community-based interventions on mathematics achievement of girls from low-income households in Kenya. *Cogent Education*.
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14. Hungi, N., Njagi, J. W., Kitsao-Wekulo, P. and Ngware, M. (2017). Effects of language of instruction on learning of literacy skills among pre-primary school children from low-income urban communities in Kenya. *Early Childhood Education Journal*.
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2. Big Win Philanthropy, Council of Governors and African Population and Health Research Center (2017). *Making Data Systems Work for Counties: An Assessment of Data Systems to Support Investments in Children and Youth in Counties in Kenya*.
3. Mberu, B., Kabaria, C., Amugsi, D. and Muindi, K. (2017). *Solid Waste Management and Risks to Health in Urban Africa – A Study of Dakar City, Senegal*.
4. Mberu, B., Kabaria, C., Amugsi, D., and Muindi, K. (2017). *Solid Waste Management and Risks to Health in Urban Africa – A Study of Nairobi and Mombasa Cities in Kenya*.
5. Murage, E.W.K., Wainaina, C.W., Wekesah, F.M., et al (2017). *Voices for Action: A report of public engagement on vulnerability and solutions to food and nutrition insecurity in the Maasai Community, Kajiado, Kenya*.
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## 2017 Book Chapters

1. Doughman D. (2017). Using knowledge brokerage to strengthen African voices in global decision-making on HIV and AIDS. The Social Realities of Knowledge for Development Brighton: IDS/Impact Initiative.
2. Juma, P., (2017). Evidence-informed decision making: experience from the design and implementation of community health strategy in Kenya. The Social Realities of Knowledge for Development Brighton: IDS/Impact Initiative.

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1. Abuya, B. (2017). Beyond the classroom: Integrating family and community into life skills education for young people.
2. Abuya, B., Chege, M., Kitsao-Wekulo, P. (2017). Advancing Learning Outcomes and Leadership Skills among Children in Nairobi's Informal Settlements through Community Participation.
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5. Doughman, D., Muthuri, S., Kabiru, C., et al (2017). Subsidized Daycare as a Pathway to Increasing Women's Economic Empowerment. African Population and Health Research Center, Nairobi, Kenya and McGill University, Montreal, Canada.
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