

## Profile

### Nelly Mugo—rolling out PrEP in Kenya

Nelly Mugo has happy memories of growing up in a large Kenyan family as one of eight children. They moved to Nairobi when she was a child and she recalls how an early high school interest in plant science and farming switched to medicine as she found herself thinking “what are the most important things I can know to take care of my family?” She began her medical degree at the University of Nairobi in 1981. One of just 16 women in a class of 120, she remembers that “gender became more important as we subspecialised. Women were encouraged not to do surgical specialties, but I broke the mould and went into obstetrics and gynaecology because I loved taking care of women”.

Although trained as an obstetrician and gynaecologist, Mugo currently works as a principal research scientist at the Kenya Medical Research Institute (KEMRI) in Nairobi. She is also head of KEMRI’s sexual reproductive adolescent child health research programme, coordinating activities for sexual health researchers and working with Kenya’s Ministry of Health to bring in research expertise. However, most of her current work is focused on scale-up and roll-out of HIV pre-exposure prophylaxis (PrEP).

Her early years as a doctor were spent working in rural hospitals and later at the hectic city Pumwani Maternity Hospital. It was as a medical officer in the early 1990s that she began to see the impact of HIV. “There was an avalanche of problems, medical and social. Women, some of them pregnant, and our own family members infected. It was so hard”, Mugo says. She realised then that her future would be in public health. “I wanted to be the one that fixes the hole in the roof, not the one who mops the floor”, she jokes.

Mugo has had a central role in building evidence for PrEP, as a co-author on the Partners PrEP study with Jared Baeten of the University of Washington, Seattle, WA, USA, whom she describes as a wonderful mentor. This study showed a 90% reduction in HIV transmission in serodiscordant couples who were regimen adherent. “Nelly brings deep passion to her work—not just for the science but more acutely for the lives of women affected by HIV”, says Baeten, who is Vice Chair of the Department of Global Health at the University of Washington. “She has been tireless and forthright in advocating for HIV prevention that will directly make a difference in the lives of women in Kenya and beyond.”

She has also led on other studies showing that PrEP does not cause fetal anomalies. Currently, Mugo is involved in projects that are piloting PrEP in vulnerable populations, including HIV serodiscordant couples and young women in Kenya. “The Partners PrEP Scale up Project is enrolling HIV serodiscordant couples in public health HIV care facilities, to evaluate delivery in health-care settings that will inform the feasibility of scaling up PrEP delivery in routine care”, Mugo

explains. “We hope that once the Kenyan Government sees PrEP succeeding in a real-world setting, it will fund roll out of PrEP across Kenya to all populations who need it”, she says. This will be crucial in areas with the highest HIV prevalence. “The problems we face are that no-one wants the stigma of carrying a bottle of pills around. Explaining to the community the benefits of PrEP is an essential part of overcoming this”, she explains.

Mugo is also part of the committee that during 2016 rewrote guidelines on PrEP for Kenya’s National AIDS and STI Control Programme (NASCO). “We really need national implementation of PrEP here in Kenya”, she says. “PrEP prevents HIV infections, but the community needs to understand and accept it. As one woman once put it to me, ‘getting PrEP right will mean our children won’t need to worry about HIV.’” Nduku Kilonzo, Director of the National AIDS Control Council in Nairobi, says that “Nelly is a remarkable scientist, and her team’s work on HIV prevention among couples has been trailblazing providing the primary evidence for the ongoing scale-up of PrEP in Kenya and beyond.” She adds: “She is a mentor who has developed skills among young scientists and, most of all, she still makes time for her family, despite her schedules.”

Like everyone in HIV research, Mugo dreams of the day the HIV vaccine will arrive. “But we can’t sit and wait for it”, she says. “If we do PrEP correctly, we can do a lot of groundwork before the vaccine arrives.” She points out that “we know which people are at risk, they are not anonymous, they are our siblings, children, and friends and we don’t want them to get infected. There is an age-related increased risk period for HIV infection, and we can wrap our youth with PrEP to protect them”. Regarding the funding issue, she adds: “The revolution in HIV treatment really showed me that in a world with plenty of corruption and negativity, there can be a tidal wave of pluralism. There is goodwill in the world—and when we are called upon, all that is good in us is awakened.”

Last year Mugo was invited to co-chair the HIV Research for Prevention (HIVR4P) conference in Chicago, IL, USA. “Chairing a meeting such as this, in which all the spheres of HIV prevention came together to share ideas and research, was definitely a career highlight”, she says. “It’s only by fighting the epidemic in these many different ways that we can defeat it.” Looking to the future, Mugo is confident that the HIV epidemic will be reversed in her lifetime. “I hope that soon HIV will no longer be the disease that worries people every day and affects so many of their decisions about life.”

Tony Kirby

