ILLUSTRATION: SHUTTERSTOCK/SPARKSTUDIO

GOOD INCENTIVES

Family planning research connects Vermont and Uganda

In a rural hospital in Nakaseke, a district in central Uganda, two pieces of paper are tacked to the waiting room wall. One tells patients to bring their own toilet paper—the low-budget hospital can't afford to provide any. The second lists the limited services the hospital offers, and the fee for each. A pregnancy test costs the equivalent of $1.32; a "normal" delivery $6.32; and a cesarean section followed by a tubal ligation comes to just shy of $20. It seems inexpensive, but for the fact that most local women average monthly take-home pay of less than $100.

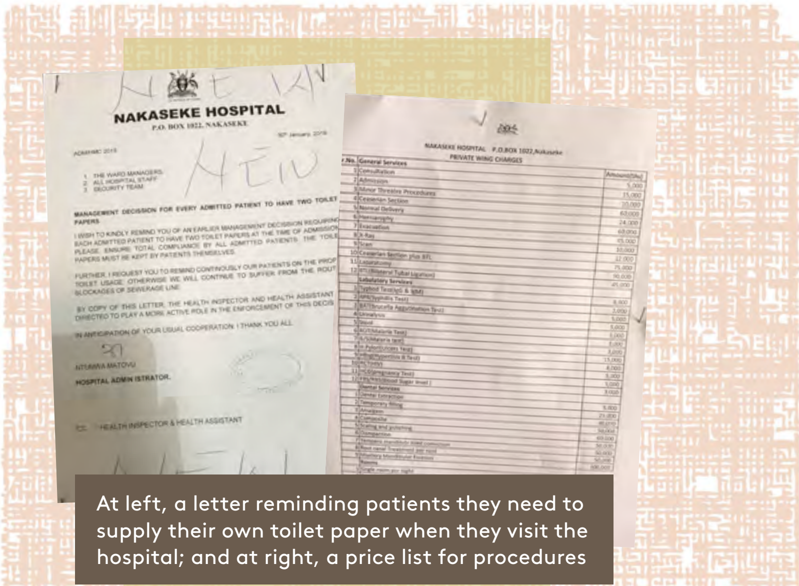
In Uganda and other low-income countries, rapid-repeat pregnancies—defined by the World Health Organization as spaced less than 24 months between delivery and the start of another pregnancy—are a significant issue. Two years isn't long enough for a woman's body to get back to the peak nutritional status needed to support a pregnancy; her infant's nutritional status is likewise at risk, given the possibility she will stop breastfeeding once she's pregnant again. However, it's a treatable issue.

"Getting family planning into the hands of postpartum women is an international target," says UVM Associate Professor of Obstetrics, Gynecology, and Reproductive Medicine Anne Dougherty, M.D. But how to successfully address the challenge, specifically in Nakaseke, the region of Uganda where Dougherty focuses most of her research?

The answer: by using financial incentives. It's a method UVM Professor of Psychiatry and Psychological Science Sarah Heil, Ph.D., successfully used with a different population, Vermont women receiving treatment for opioid use disorders [see page 28]. Together, Dougherty and Heil, along with a team of Ugandans, adapted the intervention to understand how women in Nakaseke and elsewhere might reduce unintended pregnancies.

BY SARAH ZOBEL

Anne Dougherty, M.D.


NAKASEKE HOSPITAL

At left, a letter reminding patients they need to supply their own toilet paper when they visit the hospital; and at right, a price list for procedures

Sarah Heil, Ph.D.

African Community Center for Social Sustainability (ACCESS)

Dougherty came to UVM in 2013 in part to start a global women's health program within the Department of Obstetrics, Gynecology, and Reproductive Sciences. She developed medical student and resident education curricula that have since allowed many medical trainees to learn firsthand what it's like to practice medicine at UVM partner sites around the world, particularly East Africa. In doing so, Dougherty cultivated relationships with local healthcare providers and others so fully that she now calls Uganda her home away from home, traveling there three or four times a year. In Nakaseke, about 40 miles from the capital, Kampala, she often collaborates with the African Community Center for Social Sustainability (ACCESS). In fact, it was in a meeting with ACCESS founder Robert Kalyesubula, M.D., a Yale-trained nephrologist, and others that Dougherty first considered a novel route to addressing the question of rapid-repeat pregnancy.

"We were talking about family planning and I thought, I've never seen behavioral economics, which is generally the use of incentives, used to increase health-seeking behavior around family planning in Uganda. They've used it in other ways, to incentivize hospital birth or childhood immunizations, but I haven't seen it done in family planning," says Dougherty. She turned to Heil, with whom she'd worked on a few smaller, unrelated projects, for the solution.

But finding a study approach was one thing; translating it across cultures was another. For that, they relied on ADAPT-ITT, an evidence-based process to alter an intervention for a new population or location—the first time it was used with family planning research.

"We had to understand, was the community receptive to research? Were there people there who would be able to administer a study? Really simple things: What does the consent process look like?" says Dougherty. She met with ACCESS stakeholders, as well as with providers at the nearby district hospital, including John Mundaka, M.D., an obstetrician/gynecologist at Makerere University in Kampala. The team conducted surveys and organized focus groups to gauge local attitudes to both contraception and incentives, and used theater testing, relying on Ugandans who would be conducting the intervention, along with observers, to point out anything that might not translate culturally, inappropriate wording, and even whether the use of incentives would be welcomed and appropriate. There was pushback initially, with some saying financial incentives might be viewed as coercive, or that a woman might be given money, only to have her husband take it from her.

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"We had to get them comfortable with [the idea] because they were going to be the ones doing the work," says Heil. "If you do incentives wrong, they don't work and it's a waste of everyone's time and effort and money." Even Mundaka, whose training included a fellowship at McMaster University in Ontario, says the idea of paying people to come to the clinic seemed questionable at first. Eventually, however, with support from Uganda's Institutional Review Board (IRB) and an understanding that incentives would be commensurate per capita with those offered in the United States, everyone was on board.

"[Women] would get a 10,000 Ugandan shilling voucher and then they could go to the local shop and buy flour or sugar or soap or diapers if that's what they needed," says Dougherty. "It gave them choice about what they could select. And it also gave the women the ability to have some more control over how it got spent." The incentives had nothing to do with the actual use of contraception, but rather, were related to each woman's attendance at information sessions. The education was provided one-on-one, as research showed Ugandan women preferred this format over group settings.

"The program is based on the assumption that if people have fact-based education and individualized counseling around family planning with multiple meetings—multiple points of contact—they are more likely to accept family planning. What's incentivized is coming for visits where you can talk about family planning and ask questions, and if you're using family planning, someone can help you troubleshoot if you're having side effects," says Dougherty. Women could technically come to all three of the visits in the pilot trial, take the vouchers, and ignore everything related to family planning. "But as it turns out, when you do this kind of education and you address the locally held myths about family planning, you have an increased uptake in family planning use," she says.

Another cross-cultural component that needed to be considered was traditional gender roles in Uganda, where two-thirds of married women report decisions around contraception are made either with their male partner or by the latter alone. Yet women have a greater knowledge base on the subject than men, who rarely get information from a healthcare worker. While men may understand some of the side effects of various methods of contraception, many are resentful, as when an injectable method causing bleeding, for example, necessitates additional trips to the hospital. In addition to not wanting to pay for those visits, a man may be upset by the interference to the couple's sex life. Many men in Uganda also incorrectly fear contraceptives will lead to cancer.

The researchers hosted a couple of special local soccer matches, with a goat the trophy for one and soccer jerseys going to the winner of the other. At half-time, nurses shared family-planning information.

Those beliefs were enumerated in a study Dougherty, Heil, and Mundaka published in 2018. Although the sample size of 178 was small, nearly all the men had heard of family planning. However, most did not get information from healthcare workers, but from radio ads and community events where religious leaders routinely speak about the use of contraception. For many men, long-acting reversible methods such as IUDs and implants were unfamiliar; they were most accustomed to male condoms, though some knew about birth control pills and injectables.

For the current study, outreach was geared toward encouraging the men to take an active role. The researchers hosted a couple of special local soccer matches, with a goat the trophy for one and soccer jerseys going to the winner of the other. At half-time, nurses shared family-planning information and took questions from the men in attendance. Throughout the study, men were encouraged to join their partners on their family-planning visits. Women whose partners opted not to come with them were provided with pictorial handouts describing different contraception methods and myth-busting information to bring home.

An early surprise finding was that even those women whose partners stayed away were able to make contraception decisions alone at their first visit. After that, the majority used some form of reversible and effective contraception: pills, injectables (the most commonly used form of contraception), implants in the upper arm, or IUDs. Given the relatively high rate of HIV in the area, condoms were offered at every visit, as was emergency contraception, which is not in widespread use.

Mundaka, who served as study site director, says family planning has not historically been a focus of Ugandans' research, especially in rural areas like Nakaseke, where more than 75 percent of the population lives. He's effusive in his praise of Dougherty and Heil: "They're amazing people. The love and interest they have in having these key measures being improved in our country is quite amazing." And for Mundaka, working with the UVM researchers has helped him understand how to better meet the needs of his own patients.

"When we gave [study participants] a one-on-one based approach, giving them details of each of the methods and highlighting both the side effects and what can be done for all those side effects, they [were] convinced," he says. Having time to ask questions helped even more, "an eye opener that we might go in a more focused, detailed manner in offering family-planning education—as opposed to a general approach of mass education awareness, which is failing us and failing the uptake and continuity" of contraceptive use. Because most ob/gyns are in urban settings, they don't always grasp the reality of life

BUILDING RAPPORT AND EARNING TRUST

While running a multi-site treatment trial for pregnant women with opioid use disorder in 2016, Sarah Heil, Ph.D., asked what she thought was a throwaway question: Was the pregnancy planned or unplanned? The trial was one of the largest ever done with that cohort—Heil and her team screened close to 1,000 women across eight sites. Looking back over the responses, she was stunned to see that 85 percent of those pregnancies were not intended. A third of the women said they'd wanted to conceive, just not at that time; another third had no interest in getting pregnant at all; and the final third say they didn't know.

"I thought, this is crazy. This is the 2000s—we've got more contraceptive methods available than ever before, more effective methods than ever before. That really surprised me in a very significant way," says Heil. It piqued her interest in helping women bring their family-planning activities in line with their intentions. Yet she could find little in the literature of helping women with substance use disorders prevent unintended pregnancies.

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"I said what if we could just use incentives, not making it contingent on them using a method but on them coming back for visits where we could find out how it's going—'Are you having side effects? Are you having problems adhering to the method?'—with the idea that a lot of side effects can be treated or worked through. Sometimes it's just a matter of encouraging the woman to stick with it because a lot of side effects will also resolve on their own if the woman stays on the method long enough," says Heil.

Basing the intervention on recommendations from the World Health Organization for minimizing barriers to contraception for women who want it, Heil provided six options—pills, patch, ring, injection, IUD, or implant—along with the incentives just for checking in. She housed the contraceptive service in a clinic just upstairs from the women's substance use disorder treatment clinic, making it easy for participants to stop by on one of their daily or weekly visits. That eliminated one of the main issues inherent in usual care, which is referral to a community family-planning provider: having to sort out child care, transportation, and how to pay for the visit and the contraception in addition to visiting the treatment clinic.

In her 2016 pilot trial with 30 women, Heil confirmed incentives work. She has since completed a larger trial, extending the observation period from six months to a year. Half the women received contraception according to the WHO guidelines; the other half received contraception plus a financial incentive. Heil is currently completing a cost-effectiveness analysis of the different interventions, as well as reviewing her findings, which she says look promising.

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– SARAH HEIL, Ph.D.

"We just had that many more opportunities to talk with the women," says Heil. "Sometimes all we were talking about was how their day was or some issue they were having with their kids or their spouse or their parole officer or all the things that are going on in these women's lives, but we were building that rapport so the next time contraception came up, it was a little bit easier conversation to have."

ILLUSTRATION: SHUTTERSTOCK/SPARKSTUDIO

John Mundaka, M.D.

ACCESS Maternal Child Health Extension

for the majority of the population, or why family planning is so often underutilized. Mundaka has made a point of sharing that information with his gynecology colleagues, explaining that taking even as little as 10 minutes to talk about family planning with patients can have a positive effect.

"These same mothers are the ones that go out there and give the same knowledge or awareness we've given them to their most trusted friends," he says. Focused discussions with mothers have shown that women trust the information their friends provide—anyone who has used a particular method is automatically considered an expert. A woman who has successfully used an IUD, for example, could answer her friends' questions, and it would be seen as the "golden truth."

"It's the little discussions that we have with these mothers...that can take away the misconceptions that are in the community when they go out there and discuss with their friends," says Mundaka.

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That's not unlike what Heil observed in her work with women with opioid use disorders, where trust and relationship building proved to be key factors in successful contraception adherence. Some women arrived for their first visit and didn't want to take anything from the team. But the incentives meant they came back three times more often than those who were not getting any such external motivation, giving them the chance to get to know and trust Heil and her colleagues.

Also like in Vermont, co-location of services in Uganda was key. The family-planning clinic in Nakaseke was located next to the childhood immunization clinic. Women, who are far more likely to bring their infants and children for immunizations than get postnatal care for themselves, were referred to the family-planning clinic by immunization nurses.

There are challenges to working halfway around the globe. Although Dougherty is on site every three or four months, Heil has only been able to visit once, in March 2019. At all other times, they rely on Skype calls and Google Docs to keep track of each participant, her visits, her choice of contraception, and any complications.

"We could log in on a regular basis and see whether participants were coming in, and if so, what was happening with their methods," says Heil. "That way, if we saw something that was a little bit off, we could either email [the healthcare providers] or give them a call and try to work through that quickly instead of having to wait until everything was done."

They completed a single-arm trial with five women. Because all of the participants were using contraception right out of the gate, they halted the study and began a randomized controlled trial with 20 women. Half received either the intervention or usual care, which simply directs a woman to the postnatal clinic when she leaves the hospital after giving birth. At least 90 percent of the women in the intervention arm were on some method of family planning by the study's conclusion; 60 percent were on a long-acting reversible form. The control group's numbers were also good, which Dougherty and Heil say suggests work done by ACCESS—including ongoing efforts by its village health teams, which travel to remote areas to raise awareness about family planning—is having an impact.

"[ACCESS] not only provides a lot of information and contraceptive services, they also have done a ton with kids who have been orphaned because of HIV, and in trying to help those kids get educated and go on to school and a career and have that not be interrupted by an unintended pregnancy," says Heil.

Although in the short-term, Dougherty says they're focused on supporting their Ugandan colleagues in enhancing their response to COVID-19, in a country where there are 55 ICU beds for a population of 45 million, they are still looking ahead to more research. Dougherty and Heil are currently writing two papers analyzing their findings. They've also put in a request to the IRB for their next step: following the study participants' babies, to determine the effect of a mother's use of contraception on her infant's health and nutritional status. VM