



## Appendix - Project Descriptions

### Transition to Scale Projects

#### **Bringing affordable, eco-friendly menstrual health products to rural Rwanda**

*Sustainable Health Ventures, Ltd. | Implementation Country: Rwanda | \$1,000,000*

Funding from Grand Challenges Canada will enable Sustainable Health Ventures (an initiative of Sustainable Health Enterprises) to empower an estimated 225,000 hard-to-reach rural adolescent girls in Rwanda with high-quality menstrual pads and to educate 7,300 adolescents at more than 100 schools about menstrual health within 3 years.

A survey from Sustainable Health Ventures says 18 percent of women and girls in Rwanda miss out on school and work each year because they cannot afford to buy menstrual pads.

Sustainable Health Ventures empowers women and girls to live more productive lives by manufacturing and distributing affordable menstrual pads, coupled with menstrual health education and advocacy.

Developed with earlier funding from Grand Challenges Canada, Sustainable Health Ventures' patented process converts locally-available banana fibers into the absorbent core of disposable menstrual pads without the use of chemicals. The pads are sold at an affordable price-point to women and to schools where they can be given to girls who need them.

Complementing the product is a comprehensive menstrual health curriculum designed to debunk myths and taboos about menstruation in schools and nationwide, developed and delivered in partnership with the Rwandan Ministries of Health and Education. The curriculum is designed to be integrated into existing national training for teachers and community health workers, maximizing its impact on hard-to-reach adolescent girls.

Johnson & Johnson, a key project partner, is helping Sustainable Health Ventures shift from manual to semi-automated pad production process, reducing production costs and laying the foundation for expansion to other low- and middle-income countries. Other partners include Vitol Foundation, PIMCO Foundation, Serena Foundation, and additional individual and corporate donors.

#### **Bold Idea for Girls: promoting sexual health and rights among women and girls in Kenyan slums**

*HOPE worldwide Kenya | Implementation Country: Kenya | \$135,000*

With new support from Grand Challenges Canada, HOPE worldwide Kenya will seek to reduce HIV infections among 500 vulnerable adolescent girls and young women in Kenya's Mukuru and Dandora informal settlements through the *Bold Idea for Girls* project.

Out-of-school girls and women aged 15 to 24 are disproportionately at risk of adolescent pregnancy, HIV and other sexually transmitted infections due to risky behaviors predisposed by poor knowledge of prevention, poverty and a lack of empowerment regarding sexual and reproductive health and rights.

HOPE worldwide Kenya's *Bold Idea for Girls* project, developed with earlier support from Grand Challenges Canada, reduces risky behaviors while addressing social and economic conditions -- a unique combination of HIV/STI education, gender and life skills programming, and vocational and entrepreneurial skills training.

The *Bold Idea for Girls* project has shown very promising results. In a pilot involving 546 girls living in Nairobi's Mukuru slum, knowledge and awareness of HIV and risky sexual behaviors and practices improved from 49 percent before the program to 98 percent after, and reported condom use increased from 13 percent to 92 percent. STI prevalence of 79 participants who volunteered for STI screening was 10 percent, compared to 32 percent among a comparable group of girls. The proportion of girls with sustainable income levels rose from 14 percent pre-program to 44 percent after.

Financial and in-kind partners include the US Centre for Disease Control & Prevention, Plan International, Mercy Corps and Toto Health, with Wal-Mart Foundation and General Motors providing in-kind support.

## **Proof-of-Concept Projects**

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### **AFRICA**

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#### **Backpack “Mobikits” for Improved Reproductive, Maternal, Newborn & Child Health** *Childlife International | Implementation Country: Kenya*

In Africa slums and rural areas, many women learn their HIV status through antenatal and childbirth services -- but only 10 percent of women in Nairobi's Kibera slums receive antenatal care.

This project will improve access to care among HIV-positive women and girls using mobile natal kits (“Mobikits”). These backpacks, powered by solar energy, are equipped with a computer and telemedicine apps to allow health practitioners to diagnose and treat mothers and their babies locally, increasing critical care for HIV-positive women.

Some 300 pregnant HIV-positive women and women intending to get pregnant will be enrolled. In addition to pre- and post-natal services, education sessions will be conducted on healthy pregnancy, healthy eating and nutrition, childbirth and postpartum months, including family planning, breastfeeding, maternal and infant care.

### **The African HPV-Related Cancers (AHRC) Initiative: An innovative solution for cervical cancer self-screening in Kenya**

*Innovative Canadians for Change Foundation (Edmonton, Canada) | Implementation Country: Kenya*

In Kenya, Edmonton-based innovators will introduce a simple new swab to empower women to self-screen for the Human papillomavirus (HPV), a precursor to cervical and other cancers. The novel approach overcomes both cost and social barriers to diagnosis in East Africa, which has the world's highest incidence and mortality rate of cervical cancer.

Less than 4 percent of at-risk women in Kenya undergo screening due to a suite of barriers including access to clinics and / or personnel to interpret the samples, as well as cultural concerns with Pap smear cervical exams.

The innovation creates the possibility of self-screening using a cervicovaginal swab and a process (called droplet digital polymerase chain reaction) to detect HPV. Early tests suggest an unprecedented 92 percent sensitivity and specificity for oncogenic HPV.

Easy to perform at potentially less cost than a Pap smear, the sample can be taken at home and the swab sent in a preservative solution for lab interpretation. After a pilot study in Canada to further validate the technology, an implementation study in Nairobi will involve a laboratory created in partnership with AMREF Kenya.

### **Converting banana fiber into low-cost menstrual pads for women and girls**

*Pad Heaven Initiative | Implementation Country: Kenya*

Commercial menstrual pads are too expensive for many women and girls to afford in Kenya, where over 45 percent of the population lives below the poverty line. An average pack of 8 pads costs approximately US\$1, significantly more than the daily income of many low-income Kenyan parents. Women and girls end up using pieces of cloths and rags to contain their flow, leading to infections which when left untreated, can be a major health risk.

Pad Heaven Initiative aims to manufacture hygienic, bio-degradable, and affordable menstrual pads using locally-produced banana fiber, and to provide them to women and girls in Kenya. Banana fiber is an environmentally-friendly alternative to the wood pulp used to make commercial sanitary pads, and is widely available in East Africa, where 20 percent of the world's supply of bananas is produced.

Pad Heaven Initiative will aim to produce 1,000 menstrual pads per day, to test the pads' acceptability in focus group sessions with women and girls, and to improve knowledge about menstrual hygiene. An estimated 30 women will gain employment in the production and distribution of the products.

### **Icebreaker: Social marketing to promote the female condom for family planning and HIV prevention**

*Predon Company Ltd. | Implementation Country: Kenya*

Unwanted pregnancies among single college women 15-19 years old is increasing in Eldoret, in western Kenya, leading to unsafe abortions and other health problems. Only 36.2 percent of women and 52.9 percent of men aged 20 to 24 report condom use despite nationwide efforts to increase HIV awareness, widespread male condom distribution, and common fears of unplanned pregnancy. Girls have little control over and inadequate power to demand condom use during sex, or are shy about purchasing, obtaining and using condoms.

Led by Predon Company, a marketing and communications agency in Kenya, the “Icebreaker” project will promote female condom use and HIV awareness, bundling the product and information into beauty care packages in salons frequented by young females near colleges. Through female condoms, women and girls will be empowered to protect themselves from unwanted pregnancy and HIV infection.

### **Reducing adolescent pregnancy in Sierra Leone**

*IsraAID and FOCUS 1000 | Implementation Country: Sierra Leone*

Teenage pregnancy in Sierra Leone exceeds 25 percent, often caused by sexual and gender-based violence, prostitution or early marriage. Pregnant teens face stigma, compounded by a lack of emotional support leading to high rates of depression, anxiety, malnutrition and substance abuse. Half of all female teenage deaths are pregnancy related.

This project combines livelihood support with mental health and psychological support, delivered using mobile technology, and social outreach by “community influencers” dedicated to improving the reproductive health and mental well-being of pregnant teenagers, newborns and adolescent boys. Training and sensitization will be conducted by pairing social workers with traditional healers and religious leaders, who will together lead peer groups.

Text messaging will be used to gather data, educate community leaders, and provide support to pregnant teens. Support will be provided to form babysitting cooperatives and other financially sustainable livelihood programming.

### **Ukweli Test Strips for Urinary Tract Infections**

*World Hope International (North Grenville, Canada) | Implementation Country: Sierra Leone*

Pregnant women are vulnerable to Urinary Tract Infections (UTIs), particularly in sub-Saharan Africa, where 30-50 percent of pregnant women will contract a UTI. UTIs often go undiagnosed because of barriers to testing, including cost, accessibility and social stigma. For a pregnant woman and her growing fetus, this is dangerous: an undetected UTI can spread to the kidney and bloodstream and can cause premature labor, slow intra-uterine growth, low birth weight or spontaneous abortion.

In collaboration with Lehigh University, World Hope International will develop and study different distribution methods for the Ukweli Test Strip, a low-cost test for UTIs, in rural areas of Sierra Leone, where women currently lack an affordable tool for screening UTIs. The research will

focus on finding the best entry point for test strips into the existing healthcare system to treat women quickly and decrease the risk of early labour.

The project will partner with local hospitals, clinics, and Community Health Workers in several communities to conduct screening and referral for treatment.

**Integrated clinic and community-based delivery of reproductive health services in Togo**  
*Hope Through Health | Implementation Country: Togo*

The West African nation of Togo has a maternal mortality rate of 4.5 per 1,000 live births and child (under age 5) mortality rate of 78 per 1,000 live births.

Hope Through Health's model, developed in partnership with Togo's Ministry of Health, represents a new approach to reproductive, maternal, newborn and child health care in the country, including family planning.

The project trains and equips local women as community health workers to educate and enroll women into potentially life changing family planning programs, not only improving the availability of such programs but eliminating the barrier of clinical user fees. The project will provide ongoing mentorship and training of the community health workers in four underserved communities in northern Togo, where contraceptive prevalence is as low as 4 percent.

**Family Planning Benefits Card Program, Uganda**  
*Global Health Economics Limited | Implementation Country: Uganda*

Contraceptive use has the potential to prevent about 30 percent of maternal and 10 percent of child deaths in low-income nations. Providing universal access to modern contraceptives in Uganda has the potential to be a highly cost-effective use of scarce healthcare resources, and will meet the high unmet need (34 percent in 2011) for family planning.

The Family Planning Benefits Card (FPBC) program will incentivize the uptake of family planning services among the urban poor in Kampala for young people, 18-30 years old, using trained community health workers to provide counseling and guidance and recruit participants. Developed in partnership with a local health benefits firm and corporate sponsors, the benefits card will ensure access to family planning counseling and guidance, birth control methods, devices and supplies, emergency contraception, and transportation to partner clinics.

The FPBC program will recruit and interview 200 participants throughout the duration of the program, and will also train 10 community health workers to mobilize the community. The study will employ both impact and health economic evaluation methods to measure program impact. A quasi-experimental study design with two separate pre- and post-samples to measure program effectiveness and a model based cost-effectiveness and budget impact analyses will be conducted.

The FPBC program also includes a pilot, corporate sponsorship drive to test away for possible future funding and sustainability of the benefits card program. If successful, the project will expand to other urban communities, and to other groups of women with high unmet need for contraception.

## **A Passion for Health: Empowering Girls and Building Healthy Communities through Agribusiness**

*KadAfrica Estate Limited | Implementation Country: Uganda*

With the world's youngest population and endemic unemployment, family resources in Uganda are stretched and girls do not get the same opportunities as boys. Less than 50 percent of girls complete primary school and less than 1 percent finish secondary school in rural areas.

Education strongly affects reproductive behavior, infant mortality and attitudes on health. Highly vulnerable girls in Western Uganda commonly resort to risky behaviour, resulting in high teenage pregnancy and the highest HIV/AIDS rate nationwide.

KadAfrica offers passion fruit farming as a way to empower out-of-school girls, equipping them with knowledge, life-skills and health information. Girls become financially literate, generating through agribusiness the resources to practice family planning and educate their daughters — breaking the poverty cycle and building healthy communities.

KadAfrica provides a ready market for girls' fruit, sold to markets wholesale and for export to cover program costs. Through this integrated and sustainable approach, the project will train more than 6,000 girls and impact 30,000 community members over the next decade.

## **Propelling Motherhood: Training village health team members to improve postpartum care**

*The Shanti Uganda Society (Vancouver, Canada) | Implementation Country: Uganda*

In Uganda, less than 50 percent of new mothers access postpartum care, with many expressing negative perceptions around seeking care outside the home due limited access to care and lack of knowledge.

The Propelling Motherhood project will train and hire local Village Health Team Members to conduct home postpartum visits with an estimated 480 women identified through a partnership with the Shanti Uganda Birth House and Luwero District Hospital.

Village Health Team Members will collect and report data using a mobile technology developed for the program to improve clinical decision support, measurement and accountability.

By training Village Health Team Members, the project aims to provide personalized home care services that work within cultural structures to overcome the barrier of negative perceptions of care outside family circles and increase access to care.

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## ASIA

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### **Family planning in Afghan refugee camps: Where men make health decisions for women** *Rose Charities (Vancouver, Canada) | Implementation Country: Afghanistan*

This project serves a need identified in Afghan refugee camps for information and assistance in family planning. Afghanistan has high rates of maternal and infant mortality, particularly in refugee camps, where limited health services are combined with a lack of family planning education and counselling.

The goal of smaller families is shared by both men and women but knowledge is lacking and, by custom, men make health decisions relating to women accessing health services. The project focusses, therefore, on improving men's knowledge and attitudes, a departure from the conventional but largely unsuccessful approach of trying to reach and teach women.

Engaging men's groups in camps, this Vancouver-based project group promotes the financial and health benefits of family planning, endorsed by respected elders and imams, helping to foster attitudinal change, greater spousal dialogue, and women's access to family planning services and supplies.

The project will also aim to improve the health of mothers by reducing mortality from unwanted pregnancies, decreasing chronic anemia, improving the breastfeeding of infants, and increasing mother-infant interaction.

### **A maternal and child health app for Myanmar** *Koe Koe Tech | Implementation Country: Myanmar*

According to the United Nations Population Fund, for every 1,000 live births in Myanmar, where only one-third of deliveries are facility-based, two mothers and 62 children under age 5 die -- the worst rates in the region. Most maternal deaths are caused by treatable conditions such as bleeding and infection. Needed is greater access to information and health facilities.

This project will scale up nationwide its "maymay" mobile phone app ([koekoetech.com/maymay](http://koekoetech.com/maymay)), which provides access to quality information regarding pregnancy, a baby's first two years, nutrition and other topics, access to 10,000 doctors and midwives for advice, facilitates the setup of appointments, and ratings of medical personnel.

The new funding will enable more content to be added, including family planning, gender-based violence services, infectious disease prevention, and health Key Performance Indicator reporting. The app will be sustainable via ad revenues and doctor referral fees.

The University of Sydney and UCLA experts will assess the app's impacts.

### **Advancing family planning and gender equity through peer-delivered therapy in Pakistan's urban slums**

*Child Advocacy International | Implementation Country: Pakistan*

Improving the use of contraceptives is a top priority identified in Pakistan's national health plan. This project aims to improve the demand for and use of contraception in Pakistan's urban slums in Pakistan through a cognitive behavioural therapy (CBT) approach.

Accompanied by mobile phone and interactive voice-response technology, the CBT approach will use the principles of guided discovery, empathetic listening, problem solving and behavioural activation to address the misconceptions around contraception and empower women in decision making.

The project will organize and train couples to deliver the CBT-based intervention, creating networks of parents working with community health workers to form linkages with private and government family planning service providers.

### **Alleviating issues of teenage pregnancy in the Philippines**

*Sciventions (Toronto, Canada) | Implementation Country: Philippines*

In the Philippines, culture prevents discussion of sex, contributing to the highest teen pregnancy rate in Southeast Asia, growing from 6.5 percent in 1996 to 10 percent in 2013 -- with the worst rates found in rural and poor areas.

This Toronto-based project will use radio – the one medium that reaches the most remote places, even those with no electricity – broadcasting a twice weekly program in Palawan, an area southwest of Manila. The show will have three main segments: a talk show featuring interviews with health professionals, followed by questions from listeners sent via text message, then two minute information segments.

Topics to be covered include menstruation, conception, contraception and nutrition, bringing these taboo subjects into a more open discussion. Effectiveness will be tested by surveys at the beginning of the project and after six, 12 and 15 months.

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## **THE CARIBBEAN**

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### **Cervical cancer screening for factory employees in Haiti**

*Innovating Health International | Implementation Country: Haiti*

Haiti lacks sufficient means to screen women of reproductive age for cervical cancer, the leading cause of female cancer-related death. It has also been shown that Haiti's working-class, such as factory workers, have the least exposure to health programs and education.

In this project, women factory workers will self-swab to test for Human papillomavirus (HPV) with treatment if needed performed the next week by staff nurses in the factory infirmary. The model will allow women to receive cervical cancer screening and education directly where they work.

The model fosters sustainability as the private sector supports disease screening for employees and training of nurses, and is expected to create broader demand for screening services. Other expected benefits include the ability to provide adequate patient education in a community-based setting, no loss to follow up, and increased service uptake.

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## CENTRAL AMERICA

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### **Transforming Long-Term Rural Health Through Prenatal Health Groups**

*Fundacion Violeta Barrios De Chamorro Para La Reconciliacion y La Democracia, Nicaragua*

Clínica Verde, a global healthcare organization, operates a prototype clinic in Boaco, Nicaragua. The staff is guided by compassion and dignity for the poor; the clinic is grounded in principles of sustainable and human-centered design, and it provides nutrition and health education to enhance self-efficacy and preventive health care.

With its new support, the group aims to transform radically the long-term health of rural underserved communities in Nicaragua by expanding its Prenatal Nutrition Program to 10 new government health posts, in partnership with the Ministry of Health.

The program conducts interactive lessons and regular checkups with pregnant mothers, teaching them about the stages of fetal development, ways to care for their child in the womb, the importance of breastfeeding, and how to improve nutrition while pregnant and during their children's first five years. During the program, the pregnant women will also have the opportunity to learn about bio intensive gardening, an organic agriculture system to produce healthy food.

By focusing on mothers early in their pregnancy, partnering with the local government and public health sector, and creating powerful networks of support and education, the program helps improve the health of rural households and pregnant women, ensuring children are given a healthy start and a lifetime of improved wellness behaviors.