

## APPENDIX 4 - SRH INNOVATIONS IN DEVELOPMENT SETTINGS<sup>10</sup>

Innovation example	Date	Short description	Organisation	Location	Target population	SRH component	Problem being addressed	Intended outcomes	Innovation component (product (digital), product (non-digital), service, mode of delivery, development/design process, partnership model, policy, approach to scale and dissemination)	Type of innovation (invention, adaptation, adoption)	Innovation Phase (Recognition, Search, Invention/Adaptation, Pilot, Scale)	Source of information
A ride-hailing app being used to order and deliver SRH commodities, including contraceptives, HIV tests & safe delivery kits, in Uganda (Safeboda)	July 2020 - ongoing	Communities can order SRH commodities (contraceptives, HIV tests and safe delivery kits) through a local ride-hailing app Safeboda and have them delivered to their door.	UNFPA, MSI & Safeboda	Kampala, Uganda	Women of reproductive age	Family planning Safe pregnancy, delivery & postpartum care HIV/AIDS & STIs	Under Uganda's COVID-19 lockdown, contraceptives and other reproductive health supplies were in short supply and girls and women may face challenges in accessing them.	The innovation increases access and availability of family planning commodities by ordering through the popular ride-hailing app SafeBoda and directdelivery to the individual's doorstep. The e-shop allows individuals to order the products they need. By making the e-shop available via the widely used SafeBoda app, organisers were able to reach an extensive user base. When a user requests an item, the app identifies the nearest pharmacy within a 7 kilometre radius where the item is in stock. A SafeBoda driver then picks up the item and delivers it to the user. Users of the SafeBoda app say this new service is an important development, "especially [for] things we fear to order over the counter.	Product (digital) Mode of delivery	Adaptation	Pilot	UNFPA - Ride-hailing app delivers contraceptives to users' doorsteps
A youth-designed and led contraceptive uptake project in Ethiopia, Nigeria and Tanzania (Adolescents 360)	2016 - 2020	Adolescents 360 (A360) is a four-year project aimed to increase access to and uptake of voluntary modern contraception among adolescent girls (15-19 years old) in Ethiopia, Nigeria and Tanzania. A360 is reimagining and redefining the way sexual and reproductive health programs are designed and delivered for adolescent girls and young women. This means shifting from a typical model where programmers design programs to one where youth and adults from a range of disciplines design programs together.	PSI (funded by Gates Foundation and Children's Investment Fund Foundation)	Ethiopia, Nigeria (North and South) and Tanzania	Adolescents & young people	Family planning	Adolescents 360 (A360) is about reimagining and redefining the way sexual and reproductive health programmes are designed and delivered for adolescent girls and young women. This means shifting from a typical model where programmers design programmes to one where youth and adults from a range of disciplines design programs together.	Increase access to and uptake of voluntary modern contraception among adolescent girls (15-19 years old) in Ethiopia, Nigeria and Tanzania.	Development/design process (participatory/UCD)	Adaptation	Scale	PSI.org - Brochure April 2017 A360 - Northern Nigeria Matasa Matan Arewa (MMA)
The use of heat-stable carbetocin for postpartum haemorrhage	July 2015 - January 2018	Heat-stable carbetocin was developed by Ferring Pharmaceuticals to address limitations in refrigeration and cold-chain transport of medicines in low- and lower-middle income countries. Heat-stable carbetocin is now recommended by WHO for the prevention of excessive bleeding after all births in settings where oxytocin is unavailable or its quality cannot be guaranteed, and where its cost is comparable to other effective uterotonic.	Ferring Foundation/MSD for Mothers, WHO	23 hospitals (sites) in 10 countries — Argentina, Egypt, India, Kenya, Nigeria, Singapore, South Africa, Thailand, Uganda, and the United Kingdom	Women of reproductive age	Safe pregnancy, delivery & postpartum care	The prevention of post-partum haemorrhage.	Carbetocin has the potential to be an important uterotonic contribution to the compendium of medicines administered to prevent postpartum hemorrhage.	Product (non-digital) Partnership model	Invention	Scale	Key Informant Interview
The use of the non-pneumatic anti-shock garment (NASG) to prevent postpartum haemorrhage and shock	2012-2015	NASG is a first-aid device used to stabilise women who are suffering from obstetric haemorrhage and shock. It is made of neoprene and Velcro and looks like the lower half of a wetsuit, cut into segments. This simple device helps women survive delays in getting to a hospital and getting the treatment that they need. It can be applied by anyone after a short, simple training.	Multiple (UNICEF, UNFPA, WHO)	Global (examples in 9 countries, including Papua New Guinea)	Women of reproductive age	Safe pregnancy, delivery & postpartum care	The prevention of post-partum haemorrhage and shock.	Information not readily available.	Product (non-digital)	Adoption	Scale	Key Informant Interview

Blending oxygen and Bubble CPAP for newborn care	2020 - ongoing	Vayu developed the Vayu Bubble CPAP (Vayu-bCPAP) solution to mitigate challenges providing respiratory support to newborns in low-resource settings where pressurised air is in short supply and electricity is intermittent.	Vayu	Global	Newborns	Newborn care	Every year, more than 1.3 million newborns and infants die before their first year of life.  Respiratory support is needed, but necessary oxygen concentration, flow rates, and pressure are often not available in low resource settings and worldwide. The most common treatment option for ventilatory support is via a nasal continuous positive airway pressure (CPAP) device. Many of the commercially available CPAP machines can't be used because:  They are cost prohibitive – machines cost as much as \$12,000. They often requires both pressurised oxygen and air. Oxygen tanks may be ubiquitous, but pressurised air is in short supply. They require uninterrupted electricity and considerable maintenance.	The ultra-low-cost Vayu-bCPAP device allows for precise delivery of oxygen concentration, flow, and pressure that can dramatically improve the outcomes of newborns and infants worldwide.	Product (non-digital)	Invention/ Adaptation	Scale	Vayu Global Health Innovations - Engineering Health Solutions For The Poor  Unitaid - Life-saving infant oxygen device awarded Unitaid funding
A blood pressure cuff for hypertension in pregnancy with a traffic light warning system (CRADLE VSA)	2015 - ongoing	Blood pressure cuff for hypertension in pregnancy and traffic light warning system. The CRADLE VSA, with integrated traffic light early warning system, can identify women who are hypertensive, at increased risk of severe pre-eclampsia complications and in need of escalation of care.	King's College London	RCT conducted in Tanzania, South Africa, Mozambique, Nigeria, Zimbabwe, Zambia, Uganda, Malawi, Ethiopia, Sierra Leone, Haiti, India & Pakistan	Women of reproductive age Refugees	Safe pregnancy, delivery & postpartum care	Hypertension in pregnancy.	To reduce maternal and neonatal deaths and complications as a result of hypertension in pregnancy.	Product (non-digital)	Invention	Pilot	King's College London - Early Warning System Hypertension
A new telemedicine abortion policy in Nepal	Information not readily available	In Nepal, COVID-19 adaptations included the provision of medical abortion through telemedicine. Various stakeholders came together to create a policy that allowed medical abortion to be provided through telemedicine.	IPPF member association	Nepal	Women of reproductive age SRH practitioners	Safe abortion/ post-abortion care	Lack of access to safe abortion care during COVID-19.	Information not readily available.	Advocacy	Adaptation	Scale	Key Informant Interview
A novel partnership with the transport network in Zimbabwe to sensitise communities on SGBV/SRH	Information not readily available	Women and young people wanted to make public transport a safer space and to be able to wear what they want in public spaces without harassment. Plan partnered with public transport unions to sensitise the men who work within the transport system on sexual violence and harassment. Modes of transport have also been branded with SRHR information. Men are becoming safeguarders for SRHR and protection.	Plan	Zimbabwe	Women of reproductive age Adolescents & young people	Gender-based violence General SRHR	High levels of SGBV and lack of knowledge of SRHR issues among communities.	Information not readily available.	Partnership model	Adaptation	Pilot	Key Informant Interview
A public-private partnership to reduce maternal and newborn mortality in Uganda and Zambia (Saving Mothers, Giving Life)	2012 - ongoing	Saving Mothers, Giving Life (SMGL) is a public-private partnership to dramatically reduce maternal and newborn mortality in sub-Saharan African countries. SMGL primary principles include: Surmount the 3 main delays—whether supply- or demand-side—to women receiving lifesaving care; Assess and strengthen the existing safe-motherhood safety net in a district, addressing gaps and mobilising all types of service providers—whether public, private, nongovernmental, or faith-based organisations; Integrate maternal health care, HIV-related services including prevention of mother-to-child transmission of HIV, and family planning; Improve care during labour, delivery, and the first 48 to 72 hours and organise services to ensure access to emergency obstetric care within a 2-hour travel window; Capture, analyse, and report all maternal and newborn deaths in a district	US Government	Uganda and Zambia	Women of reproductive age	Safe pregnancy, delivery & postpartum care Newborn care	High rates of maternal and newborn mortality in Uganda and Zambia.	Information not readily available.	Mode of delivery (systems approach) Partnership model	Adaptation	Scale	Pathfinder - Saving Mothers Giving Life (SMGL)

A ride-hailing app to transport women to deliver in health facilities in Mozambique (Chopela-Mama)	Information not readily available	Chopela-Mama is a new life-saving ride-hailing platform, bringing women in remote communities closer to their nearest health facility by connecting them to formal and informal drivers, ensuring expectant mothers can safely reach obstetric care on time and at no cost.	UNFPA Mozambique CO	Mozambique	Women of reproductive age	Safe pregnancy, delivery & postpartum care	It was observed that the causes of the high rates of maternal death and complications of pregnancy and childbirth, such as Obstetric Fistula, were intrinsically linked to DELAYS on three levels: (1) delays in the identification of abnormalities in the woman's health status; (2) delayers in seeking help to get to a health service with obstetric care and (3) delays in receiving an appropriate diagnosis and treatment. A worrying social scenario has been seen as the result of these delays: According to the 2017 General Population Census, in Mozambique, the mortality rate is 452 maternal deaths / 100,000 births. Besides, there are approximately 2,300 new cases of obstetric fistula each year. Chopela Mama Comes as a solution to the delays, by empowering community champions with this technological tool.	This integrated system aims to unlock pregnant women's access to obstetric care whenever necessary; allow the women to receive quick diagnosis, timely care and adequate treatments, all at zero cost; support community engagement and solidarity; expand technology literacy; improve the access to mobile phone in rural areas; promote mobile money.	Product (digital) Mode of delivery (access to safe delivery)	Adaptation	Pilot	Key Informant Interview
A portable prenatal kit for healthcare providers and women in rural Guatemala (Healthy Pregnancy)	2012 - ongoing	A portable Prenatal Care Kit to improve maternal and neonatal health in rural communities. The solution is based on the adaptation of health tools and protocols through a Portable Prenatal Care Kit, to bring to rural areas two medical tests considered essential all over the world to prevent up to 70% of pregnancy complications: ultrasound scans and blood and urine analysis. Both tests are common in developed countries, but they are not provided in rural areas of low-income countries due to the lack of technical resources and skilled health personnel. "Healthy Pregnancy" adapt both tests with innovative and context-appropriate processes to anticipate obstetric risks and achieve quality prenatal care in zones without electricity supply and telecommunication networks.	Ehas Foundation	Guatemala (rural locations)	Women of reproductive age SRH practitioners	Safe pregnancy, delivery & postpartum care	Lack of access to prenatal care in rural areas of Guatemala.	Information not readily available.	Product (non-digital)	Adaptation	Scale	EHAS - Healthy Pregnancy
Backpack "Mobikits" for improved reproductive, maternal, newborn & child health for HIV+ women and girls in Kenya	2017 - ongoing	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.	Childslife International  LastMile4D	Kenya (Kibera slum, Nairobi)	Women of reproductive age	Safe pregnancy, delivery & postpartum care Newborn care	Lack of access to pre- and post-natal care services for HIV+ women in Kenya.	Information not readily available.	Product (digital) Mode of delivery	Invention	Scale	R4D - Global Innovation Exchange (GIE): Technology Platform for Development Innovations and Funding
The distribution of menstrual cups to out-of-school girls with a tracking app to monitor uptake and use in Malawi	2016 - ongoing	UNFPA piloted distribution of menstrual cups for out-of-school girls. As an alternative to disposable hygiene products, the cups offer a sustainable solution to menstrual management. A tracking tool follows the uptake and usage of the cups, while an acceptability study will look at the impact on school attendance. Data from the study will guide future distribution.	UNFPA & Ministry of Health, United Nations Children's Fund (UNICEF), Malawi Girl Guides Association, Family Planning Association of Malawi.	Malawi	Adolescents & young people	Menstrual hygiene management	Forty percent of school girls in Malawi miss school due to menstruation, holding back their educational and economic opportunities.	Information not readily available.	Mode of delivery Product (digital)	Adaptation	Scale	Reliefweb - Unfpa Innovation Fund: Innovating For A World Where Every Pregnancy Is Wanted, Every Childbirth Is Safe, And Every Young Person's Potential Is Fulfilled Expanding The Possible

An SRH health promotion digital platform co-designed with Rwandan youth (CyberRwanda)	2018 - ongoing	CyberRwanda uses technology and storytelling to equip and empower adolescents with knowledge and self-efficacy to prevent unplanned pregnancy and HIV. CyberRwanda is a digital platform that aims to improve the health and livelihoods of urban and peri-urban adolescents (12-19 years) by supporting them at every step of their healthcare journey. Co-designed with over 800 Rwandan youth, the CyberRwanda online platform and corresponding programme includes narrative storylines, a robust FAQ library, and a youth-friendly pharmacy locator. For young people who do not have phone access, CyberRwanda is currently available on tablets in 60 schools across six districts and popular Youth Centers across the country. The CyberRwanda program also includes gamified digital and in-person training for pharmacists at partnering health facilities that educate them on topics such as provider bias, youth access to health products, and voluntary FP/RH care.	YLabs Global	Rwanda	Adolescents & young people People living with HIV/AIDS	HIV/AIDS & STIs	Lack of access to SRHR information for adolescents and young people in Rwanda.	Information not readily available.	Product (digital) Service (training for pharmacists – 'provider bias') Development/design process	Adaptation	Pilot	<a href="http://ylabsglobal.org">ylabsglobal.org</a>
MHM waste solutions: innovative underwear and laundry bags	Ongoing	Self-disinfecting menstrual underwear, and laundry bags; understanding socio-cultural norms, health outcomes and the environmental impact related to MHM. The solution is to trial education workshops alongside three sustainable products; menstrual underwear, a wash bag and a dry bag.  Alongside these products, an educational tool will be developed that focuses on health, menstruation, and health stigmas.  The underwear consists of multiple layers including a self-sterilising smart technology layer, multiple absorbent layers, and a leak-proof layer. This product is designed to be reusable, easily washable, and odour-neutralising.  The wash and dry bags ensure undergarments remain hygienic through avoiding contact with the latrine floor. This results in less risk of faecal contamination and mould exposure, as well as allowing undergarments to dry quickly. All solutions emphasize zero-waste, and culturally appropriate and discreet design – with the potential to enable users to wash and dry undergarments more freely.	Reemi	Bangladesh	Women of reproductive age	Menstrual hygiene management WASH	High rates of infection amongst women as a result of unhygienic MHM practices due to stigma and lack of private spaces.	Less menstrual waste in the environment. Less reported rates of serious infection and unsafe hygiene practices. Increased health knowledge and confidence. Reduced MHM stigma.	Product (non-digital)	Invention	Pilot	<a href="#">Elrha - Menstrual Hygiene Management (MHM) Waste Solutions: Innovative Underwear And Laundry Bags</a>
Human papillomavirus (HPV) self-sampling in Latin America and the Caribbean	2021	Through partnership with ministries of health and organisations in El Salvador, Guatemala, Honduras, and Nicaragua, public sector clinics have adopted HPV testing and thermal ablation to treat cervical lesions. 75% of women screened used a self-sampling approach for HPV testing self-sampling, avoiding the health sector resources and personal discomfort associated with a pelvic exam. In the Dominican Republic, research is comparing cervical cancer screening tests to identify the optimal approach for women living with HIV, who are at highest risk for cervical cancer.	PATH	El Salvador, Guatemala, Honduras, Nicaragua, Dominican Republic	Women of reproductive age	HIV/AIDS & STIs	Reluctance or difficulty in accessing HPV testing in Latin America and the Caribbean.	Information not readily available.	Product (non-digital) Mode of delivery(self-care) Partnership model	Adaptation	Pilot	<a href="#">Path - Sexual And Reproductive Health: Making innovations work for women and girls</a>

The use of microarray patch (MAP) technology to deliver PrEP and hormonal contraception	2021	PATH is testing two new uses for their microarray patch (MAP) technology, an easy-to-use, discreet drug delivery system. PATH is researching the feasibility and acceptability of MAPs to deliver products critical to SRH: 1) a pre-exposure prophylaxis (PrEP) drug to prevent HIV infection, and 2) hormonal contraception to prevent pregnancy. This process has been guided by women and their partners as well as health workers to ensure the products meet their needs.	PATH	Global	Women of reproductive age	HIV/AIDS & STIs Family planning	Lack of access to PrEP and hormonal contraception.	Information not readily available.	Mode of delivery (self-care)	Adaptation/ Invention	Pilot	Path - Sexual And Reproductive Health: Making innovations work for women and girls
A hypothermia bracelet to monitor the temperature of newborns in India (The BEMPU Hypothermia Bracelet)	2014-2016	The BEMPU hypothermia bracelet monitors a newborn's temperature continuously. If hypothermia develops, the device sounds an alarm, alerting the parent to warm their child by Kangaroo Mother Care well before hypoxia, hypoglycemia, or more serious complications occur. The wrist was chosen as a measurement site because it becomes cold earlier than the core, enabling early intervention. An accurate algorithm for early detection of mild hypothermia (cold stress) with newborns was created. A safe, functional and appealing physical version of the prototype was created using hypoallergenic medical-grade silicon rubber encasing a plastic housing. Within the body of the band is an electronic circuit with temperature probes, a microprocessor, lights and buzzers, all powered by a low-power small battery.	BEMPU Health	India	Newborns	Newborn care	Hypothermia is increasingly recognised as a major cause of neonatal morbidity and mortality in resource-poor settings. WHO recognises newborn thermal care as a critical and essential component of essential newborn care; however hypothermia continues to remain under-documented, under-recognised, and under-managed.	Decreased newborn mortality	Product (digital)	Invention	Scale	The Better India - How a Tiny Bracelet Can Save Millions of Newborn Babies Every Year in India