



# Innovations for Equality



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In a rapidly changing world, UNFPA needs dynamic solutions to meet the needs of women and girls and deliver sexual and reproductive health and rights (SRHR) for all. We must embrace innovation to deliver on our three transformative results to end preventable maternal deaths, end unmet need for family planning, and end violence gender-based violence and all harmful practices, including female genital mutilation and child, early, and forced marriage. The UNFPA Innovation Fund has investments under four innovation thematic priorities—digital health, SRH commodities, data, and innovative finance.

The Fund supports small to medium innovative ventures which test, rapidly prototype, pilot, and transition to scale new solutions through the Innovation Pipeline, alongside big signature initiatives to create “global goods” for the development community on a wider scale. This collection of stories from across the Asia Pacific region, illustrates how UNFPA and partners are innovating to meet the needs of women, girls and the most vulnerable.

# The Dhaka Connection

The informal settlements of Dhaka are chaotic, overcrowded and under-resourced. For pregnant women with few resources, it can be a challenge just getting to a health centre for antenatal care. The links between midwives and obstetrics units in referral hospitals are weak. UNFPA is bridging that gap and saving lives through an app that helps doctors, nurses, midwives and drivers to work together as a team.

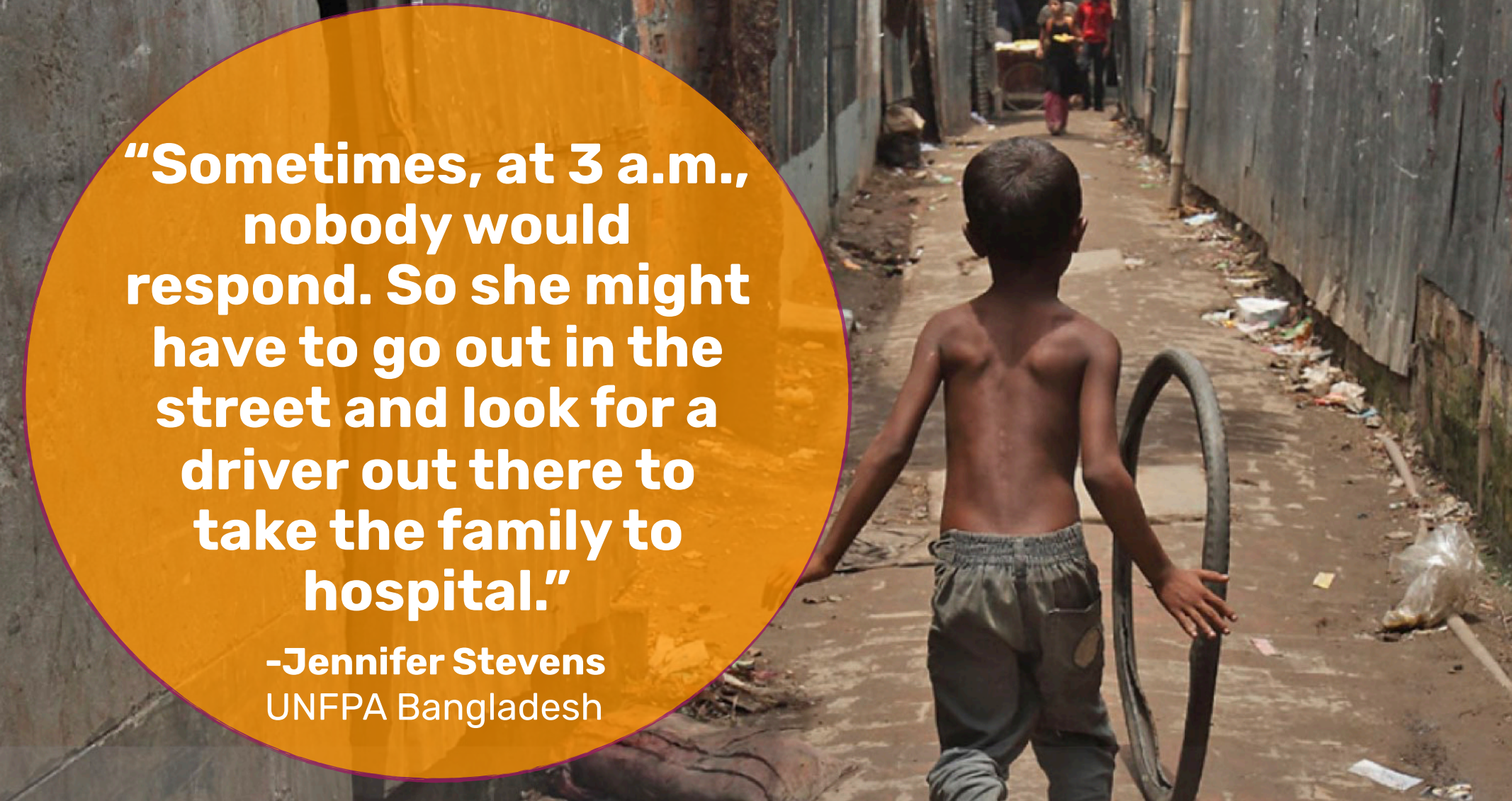
Azmal Hossain and Jennifer Stevens were part of the team that developed the app. "Now in Bangladesh, almost 25 per cent of people live in slums," says Azmal. "Primary health-care services are just not there."

For more than 20 years, government partners have delivered health care for women in community health centres, but with surging populations there are still women who do not receive adequate care. "We were thinking of something that we could do for the mothers in the slums and that is how we built our ideas," says Jennifer, technical lead on the project and an experienced midwife.

More than 80 per cent of women in Dhaka slums have normal births without complications. However, in the complex cases, every moment counts in getting the mother to the hospital. "That was our key population; those rare births, that two out of ten that might need a higher level of care and be referred to hospital," Azmal says.

Designing the project from the point of view of the mother helped them to identify the main barriers to accessing services. "The most basic is getting them the transportation," says Azmal. "We looked at that idea, and we really wanted an app because everybody is very keen on the vision of 'Digital Bangladesh'."





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**-Jennifer Stevens**  
UNFPA Bangladesh


Despite the buzz about digital connectivity, as they conducted research the team discovered that two key groups in the process do not all have smartphones: drivers and pregnant mothers. “There was a lot of confusion over who our beneficiary was,” Jennifer says. “But the app is not actually for the woman because she’s not the one who’s calling for transport or calling the hospital for urgent referral.”

The project began by conducting consultations with midwives, mothers, drivers and hospital staff. The sessions helped uncover gaps in the existing, piecemeal system. “On transport, there was a list of drivers who the midwife would call,” Jennifer says.

“Sometimes, at 3 a.m., nobody would respond. So she might have to go out in the street and look for a driver out there to take the family to hospital.”

The informal settlements around Dhaka are labyrinthine and impassable for cars or ambulances. That became part of the project design. “In some countries, they identified systems like this and used existing Uber apps or things like that, which were not options for us because you can’t get a car into the slums,” Jennifer says. “We’re talking bikes and rickshaws with drivers who know the neighbourhood.”

**“Making contact with the transport and contact with the higher-level facility, these two things were the most important priorities.”**

An aerial photograph showing a vast, densely packed slum with numerous small, makeshift structures and corrugated metal roofs. In the background, a modern city skyline with several high-rise buildings is visible under a clear sky. A tall telecommunications tower stands prominently on the left side of the city skyline. The slum is situated near a body of water, with a small, sandy island in the foreground.

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UNFPA Bangladesh



The app identifies a pool of drivers for each patient who will be on call and who are familiar with the locations of the family's home, health centre and hospital.

Azmal says that streamlining transport was a major part of the project but points out that improving patient information transfer was the other big step forward that the app facilitated. Jennifer says, "We can put a lot of patient data in and then strengthen the communication between the health-care provider in the slum and the hospital, so that, once the driver does pick the woman up and get her to the hospital, they are prepared and ready because they are expecting her."

Reducing the time lost looking for drivers, tracking down patient files, testing for blood types – all these improvements increase the chances of survival for mothers and their babies.

Azmal points out that, while there's a tendency in innovation projects to come up with ambitious plans, it's important to focus on the core outcome: maternal and child survival. "We had a lot of ideas about how this app could help strengthen the system and it would be wonderful to expand on those moving forward," he says. "But we had to really stay focused on contact with a driver and contact with the higher-level facility. Those two things were the most important priorities."



# Using virtual reality to train doctors remotely in Timor-Leste

**Dr Eni Lila Dila works at the Maubisse Referral Hospital in a remote part of Timor-Leste. She knows from experience how difficult complicated births can be in a hospital that is often under-resourced. Eni took part in a 26-day obstetrics training course in Dili and got to practice challenging cases using a virtual reality (VR) training platform being developed by UNFPA.**

“The main reason for me to decide to become a doctor is because in Timor-Leste there are not enough doctors; the problem with health is so vast,” Eni says.

She decided to focus on maternal health and now runs the unit that seeks to ensure safe births in the rural interior of Timor-Leste, where lack of reliable roads or transport can deny women access to services. “I’m working in a mountainous area with very difficult access,” she says.

Eni’s maternal health unit gets referrals from villages even higher in the mountains and she often has cases where there are complications and she has to make life and death decisions based on her training. She says that there are many gaps in resources, skills and policies: “In maternal health services, we are facing a lack of ability and knowledge of how to deal with complications. There’s a lack of equipment and no guidelines on how to manage obstetrical problems.”

Eni says that attending the training course and connecting with other doctors from around the country has helped her deepen her knowledge and understanding: “When you just read the books, then you don’t see the cases. Without application of the learning, without real cases, you’re basically reading theory, theory, theory.”

She has found that the focused 26-day course in obstetrics has helped boost her comfort level in complex situations. “In terms of self-confidence, I wouldn’t say that’s going to be 100 per cent,” she says. “But there is more self-confidence because of the knowledge and the ability that I just learned.”

Eni is one of the first doctors in Timor-Leste to try out and provide inputs into the VR platform, which will teach students how to handle complications in childbirth. Eni says she was amazed by the learning experience. “I never, never imagined something like this,” Eni says. “This is an excellent tool to enhance our abilities, because you will see something in the headset, but it’s as if it’s real for you.”

Eni says that COVID-19 has increased the pressure on the already stretched health system because many specialists are stranded abroad, so the care that they are able to deliver is reduced.

“COVID-19 has also increased the number of referral patients from our hospital to Dili because of a lack of specialist doctors in our area,” she says.

Eni reports that big storms are frequent in her part of Timor-Leste, that women and girls are more vulnerable to health risks and that some people are reluctant to make the trip to the hospital to seek medical care. “It is very difficult to convince the community to come to seek medical treatment at the hospital,” she says.

She’s frustrated that she cannot do home visits to remote villages where the care is needed most. “We work in the referral hospital, so we have to be ready for the referral patients at any moment,” she says. “The health providers who work in the community health centres are working to change perceptions.”

Despite the limitations, Eni says that she and her colleagues do lots of community health promotion; however, it’s a long-term process: “Sometimes people prefer to look for traditional treatments when they get injured due to a storm.”





She hopes that she can gain more training not only in maternal health but also in internal medicine and infectious diseases. Eni is committed to learning as much as possible and is looking to expand her skills further, in paediatrics and surgery.

At the hospital in Maubisse, Eni will be busy treating patients. But when she has a moment, she'll be thinking about learning new skills on the VR platform. "VR will have a big impact on me and other health providers," she says. "It's really going to help us to maintain our skills and increase our self-confidence."

Eni and her fellow doctors made suggestions for the skills and scenarios they would like to learn from the VR modules. "We can learn new techniques through virtual reality," she says. "We can practice our hand movements and it can help us maintain our skills."

Note: The VR module is not yet complete. What the doctors and midwives experienced was a game pre-installed in the VR headset, so that they could get a sense of what VR is like and how they would feel about it. This user-testing phase included a survey to collect information about the context in their duty stations and whether or not they would use VR.

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**-Dr Eni Lila Dila**



# Big data and family planning in the Philippines



**Social media has transformed the way young people in the Philippines talk about women’s health issues such as contraception and sexual rights. Candid conversations about all kinds of issues are happening online. UNFPA Philippines has developed a tool to track what people are concerned about so that public health messages can connect with the women and girls who need them most.**

Andrew Bautista and Norbie Mendoza were part of the team that developed the AI-powered tool. They said the first step was finding out where to look.

“The tool is designed to scour, or ‘scrape’, social media feeds in publicly available posts on Twitter and Facebook,” Andrew says. “The hope is that we can look into the sentiments behind these posts so that we can take a much closer look at what people think about these topics, especially in the areas of reproductive health,

education, population and development, and family planning.”

The colleagues emphasize that it’s been a team effort to get this far since the project began in 2019. They got started when their UNFPA Innovation Fund proposal was selected; the project was part of a national effort to design tech projects to improve healthcare in the Philippines.

“What we’re looking into with the project is how we can have more data mining, more real-time data in terms of what people think or know about family planning,” says Andrew.


Norbie remembers that close consultation with partners was an important part of the development of the tool. “We started first with a design-thinking process,” he says. “Together with government stakeholders, we researched and validated the idea in terms of its usefulness.”

The team was motivated to design a tool that could provide more timely data than traditional surveys and other health data sources. “Social media data are given in real time,” Andrew says, “so we’re able to capture these sentiments about certain topics around family planning as they are happening.”

Norbie explains that one of the important lessons was discovering which keywords would help them gather the buzz on issues such as safe sex and gender-based violence. “It is not random,” he says. “We do the scraping by using a set of keywords. So these keywords started with ideas about family planning and then we had to identify other keywords.”

The central innovation is the combination of a big data set with an algorithm that does sentiment analysis. “It classifies the sentiment of the post, if it’s positive or negative,” Andrew says. “It does that by analysing the language of the post in context.” They emphasize that it’s an ongoing process whereby machine learning helps the tool to get better at spotting the conversations that matter. “What we do is, we feed into the machine-learning component of the platform so it actually improves,” Norbie says. They go through sets of tweets and teach the algorithm which ones are important and which ones it can ignore.

Andrew says that they followed the same process with keywords. It took some time to teach the tool how to filter out “noise”. “If we added a new term like ‘rubber’ (which is a word used to refer to condoms), we got a lot of noise,” he says. “But if you add an exclusion criterion to remove posts with the word ‘car’ in them, the scope narrows and the tool can learn. So we tried to put qualifiers into the scraping algorithm to make sure that we were scraping relevant discussions about condoms and sex.”



**“It's very interesting to see what the people are actually talking about. We were surprised that these conversations are really happening.”**

**-Andrew Bautista,  
UNFPA Philippines**

The goal is to get the platform to the point where it can help shape and inform programming. “As it improves and we’re able to see what people’s sentiments are,” Norbie says, “we can actually adapt programmes to be more responsive to people’s needs, rather than taking a more top-down approach.”

It’s still early days and the team are refining the tool and sharing learning with government partners and UNFPA colleagues, but they are already hopeful about being able to identify areas where there are gaps in services, so that community health workers can respond with targeted support. “We can actually see what people are talking about in real time,” Andrew says. “If we see a cluster of people not able to access family planning services in a particular area, then we can look into it and send support.”

While the AI platform is sophisticated enough to detect subtle nuances in meaning, the team admits that it struggles with the

complexity of Filipino multilingualism. “Filipinos have the tendency to use different languages in the same sentence. So you switch from English to Tagalog, and this is something that we have been working on with the developer.”

As they improve the platform, the tool is giving UNFPA and partners access to a world and conversations in a way that can save lives.

“We start to see how Philippine society is changing in terms of its willingness to discuss family planning,” Norbie says. “At the end of the day, we’re still a very conservative society and some topics are not very easy to bring up in public. But seeing an increase in the amount of conversation about these topics gives us hope that there’s a possibility for these issues to be openly discussed.”

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**-Norbie Mendoza**  
UNFPA Philippines



MONGOLIA



## “I didn’t have someone to consult when I became pregnant”

Enkhmaa Baatarkhuu is 18 years old and lives with her son and parents in the Nomgon district of Ömnögovi province in Mongolia. After graduating from ninth grade, Enkhmaa went to Ömnögovi to study, but she got pregnant at the start of tenth grade and left school. She recently took part in a pilot project with UNFPA to try out a chatbot, a new way of getting information about sexual and reproductive health. She used the Mandukhai chatbot and learned a lot about what services are available to girls like her. Enkhmaa would like to see the Mandukhai project expand so that Mongolian girls can be better informed about contraception and reproductive rights.

“I didn’t have someone to consult when I became pregnant, because I was living with relatives in the provincial centre and was afraid to tell my parents, who were living with my siblings far from me,” she says. “I left school and went back to the soum [country]. My son is almost 1 year old now. I wish I could have studied further with my friends.”

Enkhmaa has found it hard being dependent on her parents. There’s no school for her to continue her studies in her district, but she plans to go to Ulaanbaatar, the capital city, to work when her son is 2 years old; her parents will help with childcare.



She says that money worries played a part in her becoming pregnant. “I was financially dependent and used to worry about costs when seeking sexual and reproductive health services when I lived with my relatives in the provincial centre,” she says. “I didn’t know that there was an adolescent health cabinet where I could get free services and counselling.”

Without resources or information, she was left in the dark as she adjusted to school and city life. “I didn’t have much information about contraception,” she remembers. “I found out I was pregnant when I was three months along.”

She says there is a lack of comprehensive information available to girls about where and how to access free contraception. Enkhmaa says there is a taboo on adolescent sexuality in Mongolian culture, which prevents girls from seeking information and accessing counselling. She did not study health education when she was in school and says the provision of health education depends on where

you live. Like many things in Mongolia, it’s hardest for girls in rural areas, where services are limited. “I used to get information from my friends,” she says. “We used to talk mostly about love, relationships and menstruation. We would also get information from the Internet.”

Enkhmaa was one of a group of girls who trialled the Mandukhai chatbot developed by UNFPA as part of a pilot demonstration of what the platform could do when Mongolian girls asked real questions. “I wish Mandukhai had been piloted earlier,” she says. “She provided me with accurate information and they [UNFPA] said soon she will be able to refer us to health-care providers, with their contact details and locations on Google Maps.”

Mandukhai is based on Facebook, so girls are able to ask questions on family planning and sexuality and reproductive health round the clock. Through messaging with Mandukhai, Enkhmaa learned that provincial hospitals distribute free contraceptives through primary health-care centres.



Enkhmaa found the whole experience easy and helpful. “I will continue using Mandukhai,” she says. “She will be my friend and I’ll tell others to consult Mandukhai about adolescent sexual and reproductive health.”

Enkhmaa says that the answers provided by Mandukhai were accurate, easy to understand and short, which was good because “we don’t read long answers”. She explained that the openness and confidentiality of the chat made a big difference: “The most important thing was that Mandukhai would keep my secret. Girls prefer to chat online rather than having a face-to-face discussion when it comes to sexual and reproductive health issues.”

She points out that the lack of openness about reproductive health creates cultural barriers with serious consequences: “Because of the limited knowledge of family planning and access to services, girls like me get pregnant earlier. We always feel embarrassed to talk about our sexual health or worry about the confidentiality of services in small communities.”

Enkhmaa thinks that the need for a platform such as Mandukhai is urgent, because the lack of information is disrupting girls’ lives. “We need counsellors like Mandukhai,” she says, “to access information so we can make informed decisions that protect us from unwanted pregnancies, unsafe abortions, and sexually transmitted infections.”

**“We always feel embarrassed to talk about our sexual health or worry about the confidentiality of services in small communities.”**

**-Enkhmaa Baatarkhuu**



# “The bigger question is how to make the transition from childhood to adulthood”



**UNFPA China’s pilot project on comprehensive sexuality education delivered an 8-session livestreamed course that followed international guidelines and helped teachers and schools with the support they needed. The first phase delivered the online course in 5 middle schools in Qinghai, Sichuan and Yunnan provinces. Xinzhi Hu and Xiaohong Shi were part of the team of experienced educators who presented the innovative course.**

“When I was growing up, I was never taught about sexuality,” says Xinzhi Hu, “so, when I became a teacher, I didn’t want my students to grow up like that.” She has been a biology teacher since 2012.

One year, Xinzhi taught her class a unit on reproduction and sexuality – some students liked it, some didn’t feel strongly either way and some found the topics shameful to discuss. “A

year later, I got an anonymous call from a boy who was very nervous,” she recalls. “I realized he must have been a former student. He said he had just masturbated and asked if it was harmful. He was afraid of what might happen.” Evidently, he also had no one else to talk to.



# “One girl wanted to talk more about how to say no to a boy who liked her but whom she didn’t like.”

-Xinzhi Hu

“That was the moment I realized that teaching children about sexuality was important,” she says. She knew that other children had similar questions and believed that they should be discussed openly in school, not just whispered about anonymously to a former teacher over the phone.

When UNFPA asked for teachers to join its pilot project on comprehensive sexuality education (CSE), she jumped at the chance. “I’m now the focal point in my school for the CSE course, so I coordinate the teachers, test the equipment and make sure everything runs smoothly.”

Students learned that Xinzhi is non-judgmental, and they asked her questions after the CSE sessions. “After the session on love and marriage, one girl wanted to talk more about how to say no to a boy who liked her but whom she didn’t like,” Xinzhi remembers. “That’s something a lot of girls want to

know.” Other students want to know more about contraception, health, homosexuality and other topics.

In other words, the course has started conversations where before there was silence. It addresses the small questions that children have, as well as the larger concerns behind those questions. “The bigger question,” says Xinzhi, “is how to make the transition from childhood to adulthood, how to have a relationship and make healthy choices.”

Teachers like Xinzhi are passionate about education, and students dearly want to learn. The CSE course connects the two. With more participation and more active roles for teachers, Xinzhi can envisage the project growing. “I want to see sexuality education in every school in every corner of China,” she says. “You learn something appropriate for your age about sexuality, and you are empowered.”



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In their hearts, all of  
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**-Xiaohong Shi**



“In China, sexuality is considered a shameful or dirty topic,” says Xiaohong Shi. “Puberty, menstruation, sexuality – people won’t talk about it. But they want to learn. In their hearts, all of them are very curious.”

Xiaohong should know. She’s got plenty of experience. In partnership with Marie Stopes International China, she has taught sexuality education to more than 5,000 students and adolescents. She’s been a certified mental health counsellor, social worker and supervisor in Qinghai province since 2015. Most recently, she was a tutor, or instructor, on UNFPA’s pilot project on CSE.

Good course content is vital, says Xiaohong, but so is a good teaching method. “My style is easy-going and relaxed, because I want students to feel comfortable. I talk about my son, aged 19, and how he wanted to learn. I make jokes and tell funny stories. I want kids to know this is just part of life.”

Students’ most common questions, she has found, are about puberty: they want to know about the physical and sexual changes they’ll undergo in the years to come. They ask about love and marriage, too: “Can I have a boyfriend or girlfriend?”, “Will my parents allow it?”, “How can I manage a relationship?” They’re also curious about how people have sex, how the sperm enters the egg, and homosexuality and heterosexuality.

According to Xiaohong “Livestreaming courses means that more people can get access to sexuality education. Students learn from a teacher outside their own village. Offline education is effective in its own way, too. We need both.” Xiaohong wants to see an expansion of the project: “For the project to grow, it needs more investment, more people to take part, and more support for tutors.” The most important point, she says, is the simplest: “It works.”



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