

## Women's self-care: Products and practices



People have practiced self-care for their sexual and reproductive health (SRH) for millennia. For women, this has meant managing menstruation, contraception, pregnancy, and childbirth—in addition to contending with illness for themselves and their families. In the 19th and 20th centuries, scientific understanding accelerated and new medical technologies appeared in industrialized countries, with developments such as aseptic technique for childbirth, antibiotics to treat and cure infections, progress in contraceptives, improvements in surgery, and a myriad of other practices with wide-ranging benefits.

Medical, public health, and technological advances have made it possible for people to live longer, healthier, and safer lives; and trained, motivated, and well-supported health workers in strong health care systems are essential to the well-being of individuals and communities. At the same time, self-care has become more sophisticated and data-driven, and research has demonstrated that when people are active participants in their own health care, adherence to medication and treatment regimens improves.<sup>1</sup> For example, self-care is essential for management of chronic conditions such as diabetes or heart disease, although it also requires engaged and supportive professionals. A self-care approach could be applied more broadly in the health field, including in SRH. While many descriptions of self-care have a disease focus, it also includes the concept of healthy individuals building their “health assets” by increasing their health literacy, becoming aware of their physical and mental conditions, and responsibly using products, services, diagnostics, and medicines.<sup>2</sup>

This issue of *Outlook* examines women's ability and their right to assess and manage their own SRH needs, with a focus on recent evidence for improved tools and practices that make this possible, especially in low-resource settings. First, we put forth a rationale for self-care in the context of SRH by reviewing international norms and guidelines about health,

PATH/Georgina Goodwin

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human rights, and task sharing. We then highlight new information on technologies and practices that can enable and expand SRH self-care.

## THE IMPORTANCE OF SELF-CARE IN SEXUAL AND REPRODUCTIVE HEALTH

### WHO's long commitment to self-care and SRH

The World Health Organization's (WHO) explicit position on self-care was articulated in 1984, when it reaffirmed that “people have the right and duty to participate individually and collectively in the planning and implementation of their health care,” and went on to define self-care as **“the activities individuals, families, and communities undertake with the intention of enhancing health, preventing disease, limiting illness, and restoring health. . . undertaken by lay people on their own behalf . . . either separately or in participative collaboration with professionals.”**<sup>3</sup>

WHO specified that public policies should demystify health care and allow people more choice in caring for themselves, while acknowledging the importance of building social support for self-care.<sup>4</sup> WHO also recommended that member states provide access to appropriate technology for safe self-care and, in 1998, included self-medication in its definition of self-care.<sup>5</sup>

In 2016, WHO adopted the Framework on Integrated, People-Centred Health Services,<sup>6</sup> defining this as “putting people and communities, not diseases, at the center of health systems, and empowering people to take charge of their own health rather than being passive recipients of services.”<sup>7</sup> In this approach, while people are entrusted with managing their own care where appropriate, the health system must do its part to become more integrated and responsive.

### Human rights, autonomy, and women's self-care

Women's autonomy also plays an essential role in SRH self-care.<sup>8-10</sup> A precondition for women to participate in self-care is that they must have *voice* and *agency*: a capacity to speak and be heard, and the ability to make decisions about their lives and to act on them free of violence, retribution, or fear.<sup>11</sup> Developing agency for SRH self-care is a process that begins in puberty or even earlier. Women and girls must assert their rights repeatedly, from menarche to menopause and beyond, to gain access to practices and products that enable them to make choices for their SRH—for example, how to time, space, or limit childbearing, or whether to have children at all. Social norms and unequal power relationships frequently limit women's voice and agency, and can evolve from discriminatory practices into legal restrictions that are especially onerous for groups such as adolescents, rural women, and refugees. Lack of agency also can prevent women and girls from accessing opportunities that could contribute to SRH self-care, including secondary education and access to new information technologies.<sup>11</sup>

The concept of women's autonomy is enshrined in the Universal Declaration of Human Rights<sup>12</sup> and other international human rights conventions, declarations, and consensus agreements. At the International Conference on Population and Development in 1994, nearly 180 countries adopted a program of action that recognized and championed the importance of autonomy and associated health rights.<sup>13</sup> As viewed by the United Nations Population Fund (UNFPA) 20 years later, “the landmark international conference . . . put people's rights at the heart of development. It affirmed sexual and reproductive health as a fundamental human right and emphasized that

empowering women and girls is key to ensuring the well-being of individuals, families, nations and our world.”<sup>14</sup>

WHO reinforces these concepts and recognizes rights “that are indivisible, interdependent and interrelated. In addition to the right to health, these include the right to self-determination including reproductive self-determination, freedom from discrimination, security and dignity of the human person, and freedom of thought and expression.”<sup>15</sup> Supporting voice and agency for women not only bolsters their safety, self-respect, and personal development, it also improves their standing and ability to make decisions in their families and communities.

### A new take on task sharing

Task shifting has a long history worldwide and is evident in the roles of nurse practitioners, physician assistants, nursing assistants, and lay health workers. In 2008, WHO issued guidelines and recommendations on task shifting, mainly concerned with developing countries, defining this as the “rational redistribution of tasks among health workforce teams. Specific tasks are moved, where appropriate, from highly qualified health workers to health workers with shorter training and fewer qualifications in order to make more efficient use of the available human resources for health.”<sup>16</sup> A related practice is task sharing, whereby higher-level cadres continue to provide a service but lower-level cadres also provide that type of care. In recent years, WHO has spoken out on the benefits of task shifting/sharing in the fields of family planning,<sup>17</sup> safe abortion care,<sup>18</sup> and maternal and newborn care,<sup>19</sup> as well as many others. In spite of these recognized benefits, limitations on who can provide and administer services and products often present medical barriers to task shifting and task sharing.<sup>20</sup>

Another kind of task sharing in health care is entrusting the individual to assess and manage



PATH/Therese Bjorn Mason

her own care, in an evidence-based way and with appropriate support from the health system and engaged communities. For SRH, this approach affirms and implements the WHO recommendations for self-care, as well as the concept of building health assets—whereby women access usable, accurate information to inform their own decisions; make use of appropriate technologies; and seek health services and professional help when necessary. WHO has specifically included self-care as a part of task sharing, noting, “Women themselves have a role to play in managing their own health and this constitutes another important component of task sharing within health systems.”<sup>18</sup>

Just as training is necessary for lower cadres of health workers when they take on new duties, women may want instruction and support from health care professionals for some tasks; for other tasks, women who are literate may be comfortable using information and instructions from posters or package inserts. Encouraging, preparing, and supporting women and girls to take ownership of aspects of their SRH care create multiple benefits: women will learn about their bodies and increase their self-sufficiency, and health workers can devote more time to conditions that require medical intervention (e.g., vaccinations, treating illnesses).

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*“Women themselves have a role to play in managing their own health and this constitutes another important component of task sharing within health systems.”*

—World Health Organization

#### **PRODUCTS AND PRACTICES THAT FACILITATE SELF-CARE**

New and improved products and tools can help women exercise autonomy, as demonstrated over the past 70 or more years; for example, the modern tampon, developed in the 1930s, made managing menstruation easier, and the combined oral contraceptive pill, introduced in the 1960s, was a huge breakthrough in women’s control of their fertility. Recent progress includes improvements in vaginal barrier methods, such as newer versions of the female condom and diaphragm, lower-dose oral contraceptive pills (and their over-the-counter status or availability in some countries), and oral emergency contraception (EC). Researchers and professional groups—particularly the Oral Contraceptives Over-the-Counter Working Group, which maps availability worldwide<sup>21</sup>—have long advocated giving control to women by allowing nonprescription

access to oral contraceptives—including for adolescents.<sup>22,23</sup> For menstrual hygiene, there are now better disposable sanitary pads, as well as environmentally friendly reusable pads and menstrual cups. New tools are available to help women track and understand their fertility, including ovulation predictors, home pregnancy tests, and phone-based applications for predicting menstrual cycles. These tools can also enable more informed and continued use of contraceptive products (e.g., condoms or other barrier methods, EC, or hormonal methods). Collecting and attending to user perspectives, including through practices such as user-centered design, are important components of the development of many of these successful self-care products and practices, as illustrated in the box on page 4.

As new products and methods make their way into low-income countries—often introduced by the private commercial sector or by nonprofit, nongovernmental organizations—women recognize the opportunities for taking control, and they understand how this can lead to improvements in other aspects of their lives, such as time for educational and career opportunities.

The array of SRH self-care products that women in low-income countries can access and afford is increasing. This issue of *Outlook* focuses on recent

## User-centered design: A tool for developing self-care products and practices

User-centered design (UCD) is a method of creating a product or intervention, or improving a practice, that engages the people who will use it directly in the design process. The principles of UCD have been employed in health care interventions for many years. With this participatory approach, products and practices are more likely to be adopted and to result in lasting impact, because they have attributes that users truly want and need. In global health, stakeholders include not only clients but also their partners, health workers, pharmacists or shop owners, communication experts, and health system managers. UCD is also iterative: a product is designed, prototyped, and improved by repeated testing with users before reaching its final form.

Below are some examples suggesting the potential of UCD in products and practices for women’s SRH self-care.

### Developing contraceptive vaginal barrier methods: Woman’s Condom and SILCS Diaphragm

PATH employed a user-centered process to develop, test, and refine the SILCS Diaphragm (Figure 1) and Woman’s Condom—two nonhormonal methods that expand options for woman-initiated contraceptive protection. In consultation with women, their partners, and health workers, researchers developed performance objectives, prototyped multiple iterations of features, and assessed proof-of-concept designs in laboratory tests. This was followed by rounds of evaluating, refining, and validating the designs with users and other stakeholders in diverse regions to confirm ease of use and acceptability.

### Designing a contraceptive self-injection program

DMPA-SC (subcutaneous depot medroxyprogesterone acetate), an injectable contraceptive administered every three months, is now available in a device that makes it possible for women to inject themselves. A self-injection



Figure 1. Final SILCS Diaphragm with user-requested features, manufactured as CAYA™ by Kessel medintim GmbH (Waldorf, Germany).

program is currently being developed in Uganda based on the iterative process of UCD (Figure 2). Developing “journey maps” helped designers understand client and provider experiences, perspectives, and needs by walking through every step of a program. Input from family planning clients, health workers, and health officials refined the journey maps and program design.

### Reducing unintended pregnancies among adolescent girls

Adolescents 360 ([www.psi.org/special-project/adolescents-360/](http://www.psi.org/special-project/adolescents-360/)) aims to improve access to and voluntary use of modern contraceptives among girls 15 to 19 years of age in several sub-Saharan African countries. Teams made up of researchers, programmers, designers, and adolescents are using a UCD approach with adolescent girls and their influencers—parents, boys, and community leaders—to generate and test a wide range of designs and get rapid feedback on what does and does not work. For example, teams are working on how to generate demand among adolescents by avoiding terms such as “family planning” in communications and by encouraging more youth-friendly practices among the private-sector outlets.

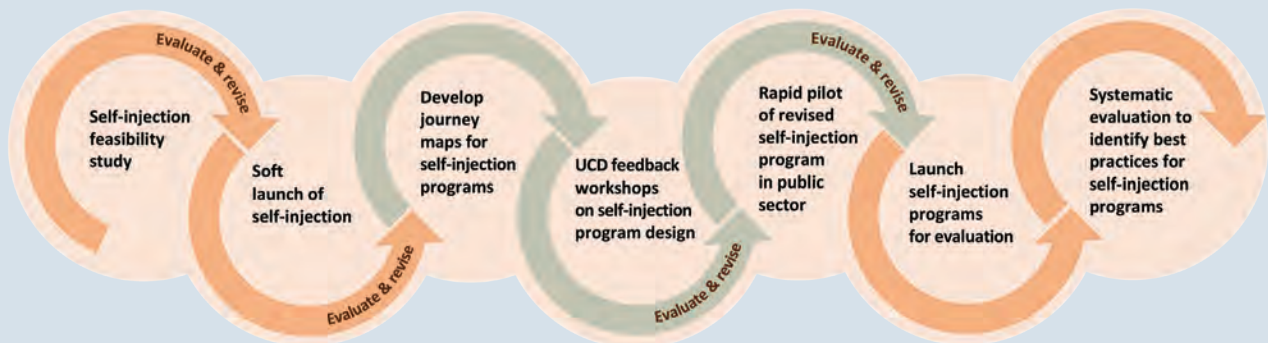


Figure 2. Iterative process of user-centered design for a DMPA-SC self-injection program.

developments and improvements in products and practices that have a growing evidence base for feasibility and acceptability, and that maximize women's ability to care for themselves. Beyond the products and practices featured in detail below, many other self-care options for SRH are well-established—and new ones are under development. See the box on page 9 for more examples and information.

## Contraception

Across the world, 214 million women want to avoid, delay, or limit childbearing but are not using a modern form of contraception; this leads to more than 88 million unintended pregnancies in developing countries every year.<sup>24</sup> Among women who initiate use of a modern contraceptive method, approximately 20 percent—and a higher proportion of adolescents and young women—discontinue using it within one year, and they may not switch to another method.<sup>25</sup> Having a range of contraceptive choices helps a woman find one that suits her needs, which evolve and change over her life. Evidence also shows that the more contraceptive methods are available in a country, the more women will use modern contraception.<sup>26</sup>

Several new or improved options expedite women's autonomy and control over their SRH, while also expanding the range of established alternatives available in most low-resource settings: self-administration of injectable contraception, new versions of the contraceptive vaginal ring, pericoital or "on-demand" use of oral contraception, and newer fertility awareness methods.

*Self-administration of injectable contraception.* Self-administration of an injectable contraceptive, available only from a health worker in the past, is now a reality. The manufacturer of the most widely used injectable product has developed a subcutaneous version of the drug DMPA (depot medroxyprogesterone acetate, DMPA-SC) and packaged it into a



PATH/Gabe Blenczycki

Self-injection of the contraceptive DMPA-SC is now a reality.

simple-to-use device (BD Uniject™ injection system). This presentation of DMPA-SC makes it possible for more community health workers in remote settings to offer the method and creates the first opportunity for women to self-inject in their homes or elsewhere privately. DMPA is widely used in sub-Saharan Africa, as an intramuscular injection, at least in part because it can be used without a partner's knowledge.<sup>27</sup> DMPA-SC has the approval of the United Kingdom (UK) Medicines and Healthcare products Regulatory Agency and of more than 25 other countries worldwide. WHO recommends self-injection of DMPA-SC where appropriate information, training, referral linkages, and follow-up are ensured.<sup>18</sup> One injection lasts for three months, so if a woman learns how to self-inject, she can obtain additional devices to keep at home, avoiding costly and time-consuming trips to a clinic.

Research across several countries has demonstrated that most women are able to self-inject subcutaneous DMPA

following training.<sup>28-30</sup> Researchers in Uganda<sup>31</sup> and Senegal<sup>32</sup> studied whether women wanted to self-inject and whether they would be able to do it, by training more than 350 women in each country in this technique. The answer to both questions was a resounding "yes," with 87 percent in Uganda and 72 percent in Senegal self-injecting both competently and within the appropriate time frame, following one-on-one training by a health worker. Nearly all self-injectors in the two countries—between 93 and 98 percent—said they would like to continue self-injecting, and most were able to store devices at home at room temperature without a problem. The ministries of health in both countries are preparing to translate this evidence into practice by scaling up self-injection of DMPA-SC as a contraceptive option.

*The contraceptive vaginal ring* is a hormonal device that a woman can insert and remove herself, although she may need help at first use from a health worker or someone who has used the product. This method was

developed more than 40 years ago, and a disposable model that is left in place for either three weeks (one week out for menstruation) or four weeks (no menstruation) has been available for over a decade. Unused rings can be stored at room temperature for up to four months. This ring does not require daily attention, and it can be (and should be) left in during coitus. Novel contraceptive rings are in development or early use in some countries, including one that can be worn for one year on a 21-day-in/7-day-out regimen<sup>33,34</sup> and one that supports women who are breastfeeding.<sup>35</sup> Multipurpose rings that could protect against HIV as well as unwanted pregnancy are also being explored.

*Pericoital, or “on-demand,” contraception* can be used by women who want an intermittent method that is taken only when needed (as opposed to a daily pill), under their control, and not detectable by a sexual partner. A large number of women with an unmet need for contraception state that their reason for not using a contraceptive method is infrequent sexual activity,<sup>36</sup> implying a gap in the methods available for a woman-controlled contraceptive that can be used as needed, for infrequent sex. The only currently available option is to use levonorgestrel EC pills as a regular contraceptive method.<sup>37</sup> While this recurring, occasional use of levonorgestrel is an off-label use (i.e., the product label states that the drug is intended for one-time use), there have been widespread reports that some women are using it as their regular method.<sup>38</sup> According to both WHO and the International Consortium for Emergency Contraception, occasional repeated use of levonorgestrel EC pills for pericoital contraception is safe for healthy women, although ongoing methods are more effective.<sup>39,40</sup> A Cochrane review found that repeated use of pre- and postcoital hormonal contraception was not harmful, but it noted that the studies reviewed were older and were inadequate for current regulatory requirements.<sup>41</sup>

In India and Uganda, nearly 300 women participated in discussions about a potential “on-demand” method taken 24 hours before or after sex. The women found it both acceptable and appealing because it offers female-controlled, discreet use.<sup>42</sup> Another study of hypothetical acceptability of a pericoital contraceptive pill found that, among 6,000 women in Kenya and Nigeria, those who were under age 35 years, had a secondary or higher education level, and had previously used EC or other family planning methods were more likely to report willingness to use such a pill.<sup>43</sup>

A recent prospective study of several hundred women using repeat EC demonstrated about 90 percent effectiveness after six months of use.<sup>44</sup> This proof-of-concept study indicated that a larger clinical study of pericoital use of levonorgestrel as a routine method is feasible.

#### *Fertility awareness via mobile technology.*

It is now possible for women to use proven fertility-awareness methods through smartphones, which are becoming much more common in low-resource countries. One application that has been studied extensively is the CycleBeads<sup>®45</sup> smartphone app. Based on the Standard Days Method,<sup>®</sup> which is classified by the US Agency for International Development and the WHO as a modern method of family planning,<sup>46</sup> this app provides women with information they can use to prevent or plan pregnancy by tracking their period start dates. It is available globally for iPhones and Android phones in English, French, Hindi, and Arabic and has been tested in depth in Kenya, Ghana, and India.<sup>47</sup> The CycleBeads app brings new users to family planning, is attractive to users who are concerned about side effects of hormonal methods, and is easy to use correctly. The app can be offered directly to users cost-efficiently through social media and does not require extensive support through traditional health channels.<sup>48</sup>

## Medical abortion

Women have been self-managing abortion for unintended pregnancies using herbs and other traditional means—many unsafe and ineffective—throughout history. But for more than a decade, they have been able to access oral drugs that safely result in a successful abortion; while the medications are typically obtained from a health worker, they can be taken at home or elsewhere outside a health care facility. The standard regimen for this process, termed medical abortion, includes a combination of mifepristone and misoprostol; the method is safe and up to 98 percent effective for pregnancy termination up to nine weeks gestation.<sup>49</sup> In 2005, WHO added these drugs to the *WHO Model List of Essential Medicines* for countries where abortion is not illegal,<sup>50</sup> and by 2017, more than 60 countries had registered mifepristone.<sup>51</sup> For countries where abortion is highly restricted, women still have the possibility of performing medical abortion by using misoprostol alone. This drug has other indications, such as for ulcers and for preventing postpartum bleeding, and thus is widely available. Misoprostol alone is about 75 to 85 percent successful in inducing abortion in the first trimester when used as recommended. While the effectiveness is not as high as that for the combination with mifepristone, misoprostol offers a safe and accessible alternative for women in difficult situations.<sup>52</sup>

WHO is clear on the right of women to safe abortion: “Laws and policies on abortion should protect women’s health and their human rights. Regulatory, policy and programmatic barriers that hinder access to and timely provision of safe abortion care should be removed.”<sup>49</sup> The number of abortions, including unsafe procedures, increases when modern contraceptives are not available.<sup>53,54</sup>

Medical abortion can provide a woman with control and privacy, and it reduces the demands that surgical abortion places on facilities and staff.<sup>55</sup> Administration of the abortion

medications can be self-managed;<sup>56,57</sup> however, it is important that women know where to go in the event that they have problematic bleeding or other issues (e.g., a potential ongoing pregnancy) that may require additional care. Information must be available to explain what to expect during the abortion process, to reassure her that the method is safe, and to inform her that contraception may begin immediately after taking the initial medicine (mifepristone).<sup>58,59</sup>

Studies have found that medical abortion is highly acceptable to women in many countries, including the United States,<sup>56,60</sup> China, India, Cuba, Armenia, Georgia, Vietnam, Nepal, and Ethiopia.<sup>61,62</sup> A systematic review of women managing their medical abortions found this practice to be acceptable and feasible, with most women in the 36 studies reviewed reporting a strong sense of satisfaction with their choices, despite some initial anxiety.<sup>63</sup> Effective counseling by trained health workers offered women a sense of confidence and preparedness. Women valued the ability to schedule taking the medications at home so they could plan for the expulsion (and expected bleeding) while working and caring for their households and families, but they also relied on Internet information, hotlines, and pharmacies for answers to questions during the process.

### HIV and AIDS

Nearly 18 million women aged 15 years and older were living with HIV/AIDS in 2016; in sub-Saharan Africa, the most heavily affected area worldwide, women made up approximately 58 percent of the adults living with HIV.<sup>64</sup> Young women aged 15 to 24 years are especially at risk, and alarmingly, girls accounted for 91 percent of new infections in the 15-to-19-year old group in Southern Africa in 2015.<sup>65</sup>

*HIV prevention.* Current self-managed options for prevention are imperfect. Female and male condoms protect against transmission of HIV, as they do against other sexually transmitted



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infections, but women must negotiate their use with male partners. Another prevention approach that women (or men) can initiate and manage, in coordination with a health worker, is taking oral medications to prevent HIV infection. The most widely publicized of these regimens is pre-exposure prophylaxis, or PrEP, which consists of the antiretroviral drugs tenofovir and emtricitabine.<sup>66</sup> However, adherence to the required regimen has been a barrier to success—the medications must be started 20 days before occurrence of most types of sexual activities and must be taken consistently every day for the highest effectiveness (92 percent).<sup>67</sup> This demanding protocol has prompted research into pills that can be taken intermittently and long-acting injections.<sup>68</sup>

Prevention studies have been conducted with pericoital application of vaginal gels, but adherence in using this medication also was low, leading one reviewer of studies to comment, “It is imperative to design and market products that people will actually use to prevent HIV infection.”<sup>69</sup> This

reinforces the importance of user perspectives in developing tools and programs for self-care (see box on page 4). The contraceptive vaginal ring discussed above also is being studied for delivery of drugs to prevent HIV transmission.

*HIV testing.* Affordable self-test kits for HIV increasingly make it possible for women to learn their HIV status in private, after which they can begin the process of finding and beginning treatment services, if needed. In 2015, an estimated 30 percent of people living with AIDS were not aware of their status;<sup>70</sup> early diagnosis allows timely initiation of treatment and notification of current and past sexual partners. In 2016, WHO issued new recommendations for HIV self-testing (HIVST) and partner notification as part of a comprehensive package of testing and care offered to people with HIV and their partners.<sup>71</sup> Four manufacturers currently produce HIVST rapid diagnostic tests approved by stringent regulatory authorities, including the UK Medicines and Healthcare products Regulatory Agency<sup>72</sup> and the US Food and Drug

Administration.<sup>73</sup> They are available over the counter in many countries, with prices ranging from US\$1 to US\$16 and falling.<sup>74</sup> Of note, some home-test kits have been found to give false results; consumers should always check for approved products.<sup>75</sup> HIVST can be performed either with blood from a finger prick or from a swab of the inside of the cheek. Anyone with a positive result should still see a qualified health worker after a positive result on self-testing, to confirm diagnosis and discuss treatments.

Studies on the acceptability of HIVST have yielded largely positive results. A study in South Africa with 155 adolescent girls found that nearly 95 percent used and interpreted a self-test correctly, and they found it highly acceptable.<sup>76</sup> Two studies in Kenya involving about 125 women also found high acceptability, with one also showing that it helped reduce anxiety between clinic visits.<sup>77,78</sup> While HIV self-testing is growing in accessibility and acceptability, more operational research is needed in order to gain a more nuanced understanding.

### **Cervical cancer screening: vaginal self-sampling for HPV DNA**

Cervical cancer rates remain unacceptably high in many low-resource settings, despite the existence of vaccines that can prevent most cases. Eighty-five percent of the 270,000 annual deaths in 2012 occurred in developing countries—an illustration of egregious inequality.<sup>79</sup> Sexually transmitted human papillomavirus (HPV) is the cause of cervical cancer, and to prevent infection, HPV vaccine must be given to girls before sexual activity begins.<sup>80</sup> For women who do not receive the vaccine, screening for and treating precancerous lesions provide a bulwark against this disease, which takes years to develop and strikes women in their prime, when they are raising families, engaged in careers, and contributing to communities. But few women in low-resource settings have access to screening; this stands in contrast to high-resource settings,



PATH/Xiomara Celeste González

For cervical cancer screening, women can now use a vaginal self-sampling kit.

where complex lab-based screening enables health workers to identify and treat precancerous lesions before they evolve into cervical cancer. Tests for HPV DNA have been developed and approved as a primary screening tool,<sup>81</sup> and this testing—from a cervical or vaginal swab—is more sensitive than previous screening methods for cervical cancer, allowing less frequent screening and reducing costs to both women and health systems.

A breakthrough for self-care is vaginal self-sampling for HPV DNA testing, which allows women who do not want a pelvic exam (particularly from a male health worker) to access this potentially lifesaving testing. While counseling is necessary on when to seek screening and the sampling kit must be obtained from a health worker, women can perform the collection privately. The sensitivity and specificity of the test using self-collected vaginal samples compare favorably with those using cervical samples collected by health workers, showing concordance of around 90 percent in many studies.<sup>82,83</sup>

### **MAKING SRH SELF-CARE A REALITY**

Women's ownership of their SRH is a rights-based expression of self-determination that has the potential to improve their health, with benefits extending to families and communities. Overall, there is good evidence of acceptability and feasibility across a spectrum of practices and products intended to promote self-care, demonstrating that health systems and practitioners can and should trust women with many aspects of their own care.

In high-resource countries, a steady flow of new products, technologies, and practices has facilitated women's ability to control their fertility and manage other aspects of their SRH, but many women in low-income settings face significant barriers to accessing these tools. Deeply entrenched norms place limitations on women's decision-making and autonomy, and taboos against talking about sex—notably for adolescent girls—may prevent women from seeking out SRH



## Additional information on women's self-care choices

### Menstrual health

*Outlook on Reproductive Health. Girls' and Women's Right to Menstrual Health: Evidence and Opportunities:*

[www.path.org/publications/files/RH\\_outlook\\_mh\\_022016.pdf](http://www.path.org/publications/files/RH_outlook_mh_022016.pdf)

Menstrual Hygiene Day website:

[www.menstrualhygieneday.org/about/about-mhday/](http://www.menstrualhygieneday.org/about/about-mhday/)

### Contraception

World Health Organization (WHO) female condoms page:

[www.who.int/reproductivehealth/topics/rtis/female\\_condom/en/](http://www.who.int/reproductivehealth/topics/rtis/female_condom/en/)

Free the Pill website:

[www.freethepill.org/where-on-earth/](http://www.freethepill.org/where-on-earth/)

International Consortium for Emergency Contraception website:

[www.cecinfo.org/](http://www.cecinfo.org/)

Institute for Reproductive Health fertility awareness page:

[http://irh.org/focus-areas/fertility\\_awareness/](http://irh.org/focus-areas/fertility_awareness/)

### Multipurpose prevention technologies

WHO multipurpose prevention technologies (MPTs) page:

[www.who.int/reproductivehealth/topics/linkages/mpts/en/](http://www.who.int/reproductivehealth/topics/linkages/mpts/en/)

International Partnership for Microbicides fact sheet:

[http://www.ipmglobal.org/sites/default/files/attachments/publication/mpt\\_fact\\_sheet\\_may2017.pdf](http://www.ipmglobal.org/sites/default/files/attachments/publication/mpt_fact_sheet_may2017.pdf)

### Sexually transmitted infections

*Sexually Transmitted Infections: An Unfinished Agenda for Women and Adolescent Girls' Health and Well-Being:*

[www.path.org/publications/files/APP\\_sti\\_br.pdf](http://www.path.org/publications/files/APP_sti_br.pdf)

### Fertility and pregnancy monitoring

FPwatch Supplement: Pregnancy Test Kits (PTKs): [www.psi.org/wp-content/uploads/2017/06/FPwatch-PTK-supplement\\_2017.pdf](http://www.psi.org/wp-content/uploads/2017/06/FPwatch-PTK-supplement_2017.pdf)

information, products, and services.<sup>84</sup> To overcome these psychological and cultural hurdles, a woman first must believe that she has a right to self-care as a means of achieving her reproductive intentions and goals. Then she must decide what she wants—for example, to avoid sexually transmitted infections, or avoid or delay pregnancy—and what specific products will help her meet her goals. Finally, she must act on her beliefs and decisions.<sup>85</sup> At this point, she may encounter health workers who have biases—for example, against making contraception or anti-HIV products available to adolescents or unmarried women. Further challenges include the reality that some technologies are still too expensive for women in low- and middle-income countries. Some technologies are not available because they are not yet approved by national governments or their regulatory agencies, or not prequalified by WHO, commercial success is considered risky, or perceived or real habits and attitudes make acceptability unlikely.

Strategies that program designers, implementers, and policymakers can deploy to support women's autonomy and self-care for SRH include the following:

- Advocating for and raising awareness of the importance of women's autonomy in SRH self-care. This could mean, for instance, promoting international covenants and national laws that codify the rights to nondiscrimination, privacy and confidentiality, and education and information.<sup>15</sup>
- Investing in, developing, and broadening access to self-care products for women and girls, and building the evidence needed to strengthen the design and acceptance of self-care practices.
- Furthering women's SRH literacy. A basic understanding of reproductive anatomy and physiology is the foundation for good health. Beyond this, women have a right to information and education regarding correct use of products and practices for self-care.
- Ensuring that high-quality services related to SRH self-care practices are available, because the health system—the public and private sectors—still has a critical role to play. When engaging in self-care, women need to be equipped to know when they should seek professional support, and understand their options for doing so.
- Contributing accurate information to social media and websites. Women everywhere have become more self-reliant in finding information online—but its accuracy and quality remain a concern. Promoting reliable Internet sources at clinics and pharmacies could help women and girls find good self-care practices.
- Providing a range of SRH products and services so women can find the best option for themselves. Some women may continue to prefer health worker interactions for certain issues and services (e.g., receiving a contraceptive injection, obtaining a sample for HPV DNA screening, HIV testing, medical abortion where available). Others want to maximize managing their SRH.
- Considering platforms, as well as products, that facilitate SRH self-care. For example, training and supporting drug shop and pharmacy staff to provide a wider variety of contraceptive methods and information has been identified as a promising high-impact practice in family planning.<sup>86</sup> Staff can also provide correct and complete information on safe and effective use of medical abortion medications.<sup>87</sup>
- Developing and evaluating new approaches in order to identify practices that work for reaching vulnerable populations with self-care options. Women who are at high risk for violence, sexually transmitted diseases, and unwanted pregnancy—including

adolescent girls, women in rural areas, sex workers, refugees, and displaced persons—often lack social support structures, education, and information sources.<sup>88,89</sup> Deliberate efforts should be made to reach them and address the specific challenges they face for self-care.

## Conclusions

Encouraging SRH self-care can help women and girls build their health assets; make health care products and practices more accessible; reinforce the internationally agreed upon human right to good health and self-determination; and alleviate human resource shortages in health systems by using evidence-based and promising practices.

The foundation for effective self-care is high-quality SRH programs within national health systems, which should provide accurate, accessible information along with effective, usable, and affordable technologies, and skilled health worker services as needed. The concept and practices of self-care are appealing to many women, and an expanding array of outlets (e.g., pharmacies and drug shops) and information channels (e.g., social media and mobile phone applications) are allowing women self-motivated, self-directed access. Exciting new developments in the SRH field—including a growing body of evidence for practices such as contraceptive self-injection, pericoital (“on-demand”) use of oral contraception, home-based medical abortion, and self-testing for HIV and HPV—provide an opportunity to refocus attention on this important and evolving approach to improving the health and well-being of women and girls.

## REFERENCES

- Levinson W, Lesser CS, Epstein RM. Developing physician communication skills for patient-centered care. *Health Affairs*. 2010;29(7):1310–1318.
- Webber D, Guo Z, Mann S. Self-care in health: we can define it, but should we also measure it? *SelfCare*. 2013;4(5):101–106.
- World Health Organization (WHO). *Health Education in Self-Care: Possibilities and Limitations*. Geneva: WHO; 1984. Available at: <http://apps.who.int/iris/handle/10665/70092>.
- World Health Organization (WHO). *Self-care in the Context of Primary Health Care. Report of the Regional Consultation, Bangkok, Thailand, 7–9 January 2009*. New Delhi, India: WHO; 2009. Available at: [http://apps.searo.who.int/PDS\\_DOCS/B4301.pdf](http://apps.searo.who.int/PDS_DOCS/B4301.pdf).
- World Health Organization (WHO). *The Role of the Pharmacist in Self-Care and Self-Medication*. Geneva: WHO; 1998. Available at: <http://apps.who.int/medicinedocs/pdf/whozip32e/whozip32e.pdf>.
- World Health Organization (WHO). *Framework on Integrated, People-Centred Health Services: Report by the Secretariat*. Geneva: WHO; 2016. Available at: [http://apps.who.int/gb/ebwha/pdf\\_files/WHA69/A69\\_39-en.pdf?ua=1](http://apps.who.int/gb/ebwha/pdf_files/WHA69/A69_39-en.pdf?ua=1).
- Service delivery and safety page. World Health Organization website. Available at: <http://www.who.int/servicedeliverysafety/areas/people-centred-care/ipchs-what/en/>. Accessed October 1, 2017.
- White Ribbon Alliance. *The Self-Care Solution: A Commitment to Improving Maternal, Newborn and Child Health Worldwide That Leaves No One Behind. Frequently Asked Questions*. Washington, DC: The White Ribbon Alliance; 2016. Available at: <http://whiteribbonalliance.org/wp-content/uploads/2016/03/FAQ-Self-Care-.pdf>.
- Women and their communities page. Ipas website. Available at: <http://www.ipas.org/en/What-We-Do/Women-and-their-communities.aspx>. Accessed October 2, 2017.
- Sexual & reproductive health page. United Nations Population Fund (UNFPA) website. Available at: <http://www.unfpa.org/sexual-reproductive-health>. Accessed October 2, 2017.
- Klugman J, Hanmer L, Twigg S, Hasan T, McCleary-Sills J, Santamaria J. *Voice and Agency: Empowering Women and Girls for Shared Prosperity*. Washington, DC: World Bank Group; 2014. Available at: <http://www.worldbank.org/en/topic/gender/publication/voice-and-agency-empowering-women-and-girls-for-shared-prosperity>.
- United Nations (UN). *Universal Declaration of Human Rights*. Paris: UN; 1948. Available at: [http://www.ohchr.org/EN/UDHR/Documents/UDHR\\_Translations/eng.pdf](http://www.ohchr.org/EN/UDHR/Documents/UDHR_Translations/eng.pdf).
- International Conference on Population and Development (ICPD) page. United Nations Population Fund (UNFPA) website. Available at: <http://www.unfpa.org/events/international-conference-population-and-development-icpd>. Accessed October 1, 2017.
- United Nations Population Fund (UNFPA). *Programme of Action Adopted at the International Conference on Population And Development, Cairo, 5–13 September 1994*. New York: UNFPA; 1994. Available at: [http://www.unfpa.org/sites/default/files/pub-pdf/programme\\_of\\_action\\_Web%20ENGLISH.pdf](http://www.unfpa.org/sites/default/files/pub-pdf/programme_of_action_Web%20ENGLISH.pdf).
- World Health Organization (WHO). *Sexual Health, Human Rights and the Law*. Geneva: WHO; 2015. Available at: [http://www.who.int/reproductivehealth/publications/sexual\\_health/sexual-health-human-rights-law/en/](http://www.who.int/reproductivehealth/publications/sexual_health/sexual-health-human-rights-law/en/).
- World Health Organization (WHO). *Task Shifting: Rational Redistribution of Tasks Among Health Workforce Teams: Global Recommendations and Guidelines*. Geneva: WHO; 2008. Available at: <http://www.who.int/healthsystems/TTR-TaskShifting.pdf?ua=1>.
- World Health Organization (WHO). *Task Shifting to Improve Access to Contraceptive Methods*. Geneva: WHO; 2013. Available at: [http://apps.who.int/iris/bitstream/10665/94831/1/WHO\\_RHR\\_13.20\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/94831/1/WHO_RHR_13.20_eng.pdf?ua=1).
- World Health Organization (WHO). *Health Worker Roles in Providing Safe Abortion Care and Post-abortion Contraception*. Geneva: WHO; 2015. Available at: [http://apps.who.int/iris/bitstream/10665/181041/1/9789241549264\\_eng.pdf?ua=1&ua=1](http://apps.who.int/iris/bitstream/10665/181041/1/9789241549264_eng.pdf?ua=1&ua=1).
- World Health Organization (WHO). *WHO Recommendations: Optimizing Health Worker Roles to Improve Access to Key Maternal and Newborn Health Interventions Through Task Shifting*. Geneva: WHO; 2012. Available at: [http://apps.who.int/iris/bitstream/10665/77764/1/9789241504843\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/77764/1/9789241504843_eng.pdf?ua=1).
- Shelton JD, Angle MA, Jacobstein RA. Medical barriers to access to family planning. *The Lancet*. 1992;340(8831):1334–1335.
- Global oral contraception availability page. Oral Contraceptives Over-the-Counter (OCsOTC) Working Group website. Available at: <http://ocotc.org/world-map/>. Accessed October 5, 2017.
- American College of Obstetricians and Gynecologists. Over-the-counter access to oral contraceptives: committee opinion no. 544. *Obstetrics & Gynecology*. 2012;120(6):1527–1531. Available at: <https://www.acog.org/Resources-And-Publications/Committee-Opinions/Committee-on-Gynecologic-Practice/Over-the-Counter-Access-to-Oral-Contraceptives>.
- Upadhyia KK, Santelli JS, Raine-Bennett TR, Kottke M, Crossman D. Over-the-counter access to oral contraceptives for adolescents. *Journal of Adolescent Health*. 2017;60(6):634–640.
- Guttmacher Institute. *Adding It Up: Investing in Contraception and Maternal and Newborn Health* [fact sheet]. New York: Guttmacher; 2017. Available at: <https://www.guttmacher.org/sites/default/files/factsheet/adding-it-up-contraception-mnh-2017.pdf>.
- Jain AK, Winfrey W. Contribution of contraceptive discontinuation to unintended births in 36 developing countries. *Studies in Family Planning*. 2017;48(3):269–278.

CycleBeads and Standard Days Method are trademarks of Georgetown University.

- 26 Ross J, Stover J. Use of modern contraception increases when more methods become available: analysis of evidence from 1982–2009. *Global Health: Science and Practice*. 2013;1(2):203–212.
- 27 PATH. *Sayana Press (DMPA-SC in Uniject) Clinical Brief*. Seattle: PATH; 2017. Available at: [http://www.path.org/publications/files/RH\\_sp\\_clinical\\_br\\_rev.pdf](http://www.path.org/publications/files/RH_sp_clinical_br_rev.pdf).
- 28 Beasley A, O'Connell White K, Cremers S, Westhoff C. Randomized clinical trial of self versus clinical administration of subcutaneous depot medroxyprogesterone acetate. *Contraception*. 2014;89(5):352–356.
- 29 Cameron ST, Glasier A, Johnstone A. Pilot study of home self-administration of subcutaneous depo-medroxyprogesterone acetate for contraception. *Contraception*. 2012;85(5):458–464.
- 30 Prabhakaran S, Sweet A. Self-administration of subcutaneous depot medroxyprogesterone acetate for contraception: feasibility and acceptability. *Contraception*. 2012;85(5):453–457.
- 31 Cover J, Namagembe A, Tumusiime J, Lim J, Drake JK, Mbonye AK. A prospective cohort study of the feasibility and acceptability of depot medroxyprogesterone acetate administered subcutaneously through self-injection. *Contraception*. 2017;95(3):306–311.
- 32 Cover J, Ba M, Lim J, Drake JK, Daff BM. Evaluating the feasibility and acceptability of self-injection of subcutaneous depot medroxyprogesterone acetate (DMPA) in Senegal: a prospective cohort study. *Contraception*. 2017;96(3):203–210.
- 33 Huang Y, Merkatz RB, Hillier SL, et al. Effects of a one year reusable contraceptive vaginal ring on vaginal microflora and the risk of vaginal infection: an open-label prospective evaluation. *PLOS ONE*. 2015;10(8):e0134460.
- 34 Delivering contraceptive vaginal rings page. Population Council website. Available at: <http://www.popcouncil.org/research/delivering-a-family-of-contraceptive-vaginal-rings>. Accessed August 28, 2017.
- 35 RamaRao S, Ishaku S, Liambila W, Mane B. Enhancing contraceptive choice for postpartum women in sub-Saharan Africa with the progesterone vaginal ring: a review of the evidence. *Open Access Journal of Contraception*. 2015;6:117–123.
- 36 Sedgh G, Ashford LS, Hussain R. *Unmet Need for Contraception in Developing Countries: Examining Women's Reasons for Not Using a Method*. New York: Guttmacher Institute; 2016. Available at: <https://www.guttmacher.org/report/unmet-need-for-contraception-in-developing-countries>.
- 37 Emergency contraception fact sheet page. World Health Organization website. Available at: <http://www.who.int/mediacentre/factsheets/fs244/en/>. Accessed October 2, 2017.
- 38 Raymond EG, Shochet T, Drake JK, Westley E. What some women want? On-demand contraception. *Contraception*. 2014;90(2):105–110.
- 39 World Health Organization (WHO). *Fact Sheet on the Safety of Levonorgestrel-Alone Emergency Contraceptive Pills (LNG ECPs)*. WHO/RHR/HRP/10.06. Geneva: WHO; 2010. Available at: [http://apps.who.int/iris/bitstream/10665/70210/1/WHO\\_RHR\\_HRP\\_10.06\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/70210/1/WHO_RHR_HRP_10.06_eng.pdf).
- 40 International Consortium for Emergency Contraception. *Repeated Use of Emergency Contraceptive Pills: The Facts*. New York: International Consortium for Emergency Contraception; 2015. Available at: <http://www.cecinfo.org/publications-and-resources/icec-publications/repeated-use-emergency-contraceptive-pills-facts/>.
- 41 Halpern V, Raymond EG, Lopez LM. Repeated use of pre- and postcoital hormonal contraception for prevention of pregnancy. *Cochrane Database of Systematic Reviews*. 2014;9:CD007595.
- 42 Cover J, Drake JK, Kyamwanga IT, et al. Consumer perspectives on a pericoital contraceptive pill in India and Uganda. *International Perspectives on Sexual and Reproductive Health*. 2013;39(4):195–204.
- 43 Chin-Quee D, L'Engle K, Otterness C. Prospects for coitally-dependent hormonal contraception: perspectives from women in urban Kenya and Nigeria. *Journal of Family Planning and Reproductive Health Care*. 2014;40(3):170–176.
- 44 Festin MP, Bahamondes L, Nguyen TM, et al. A prospective, open-label, single arm, multicentre study to evaluate efficacy, safety and acceptability of pericoital oral contraception using levonorgestrel 1.5 mg. *Human Reproduction*. 2016;31(3):530–540.
- 45 Period Tracker app for iPhone & Android page. CycleBeads website. Available at: <https://www.cyclebeads.com/period-tracker-app>. Accessed October 25, 2017.
- 46 Malarcher S, Spieler J, Short Fabic M, Jordan S, Starbird EH, Kenon C. Fertility awareness methods: distinctive modern contraceptives. *Global Health: Science and Practice*. 2016;4(1):13–15.
- 47 CycleBeads Android app for contraception & family planning: global impact progress in Ghana, Kenya, India [blog post]. CycleBeads blog. April 24, 2017. Available at: <https://www.cyclebeads.com/blog>.
- 48 Results: CycleBeads app in Kenya page. Institute for Reproductive Health website. Available at: <http://irh.org/result-cyclebeads-app-kenya/>. Accessed October 2, 2017.
- 49 World Health Organization (WHO). *Safe Abortion: Technical and Policy Guidance for Health Systems*. 2nd ed. Geneva: WHO; 2012. Available at: [http://apps.who.int/iris/bitstream/10665/70914/1/9789241548434\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/70914/1/9789241548434_eng.pdf).
- 50 World Health Organization (WHO). *WHO Model List of Essential Medicines: 20th list*. Geneva: WHO; 2017. Available at: [http://www.who.int/medicines/publications/essentialmedicines/20th\\_EML2017\\_FINAL\\_amendedAug2017.pdf?ua=1](http://www.who.int/medicines/publications/essentialmedicines/20th_EML2017_FINAL_amendedAug2017.pdf?ua=1).
- 51 Gynuity Health Projects. *Mifepristone Approvals*. New York: Gynuity Health Projects; 2017. Available at: [http://gynuity.org/downloads/biblio\\_ref\\_lst\\_mife.pdf](http://gynuity.org/downloads/biblio_ref_lst_mife.pdf).
- 52 International Women's Health Coalition. *Abortion With Self-Administered Misoprostol: A Guide for Women*. New York: International Women's Health Coalition; 2016. Available at: <https://iwvhc.org/resources/abortion-self-administered-misoprostol-guide-women/>.
- 53 Cohen S. Access to safe abortion in the developing world: saving lives while advancing rights. *Guttmacher Policy Review*. 2012;15(4):2–6.
- 54 Sedgh G, Singh S, Shah IH, Ahman E, Henshaw SK, Bankole A. Induced abortion: incidence and trends worldwide from 1995 to 2008. *The Lancet*. 2012;379(9816):625–632.
- 55 Medical abortion page. Ipas website. Available at: <http://www.ipas.org/en/What-We-Do/Comprehensive-Abortion-Care/Elements-of-Comprehensive-Abortion-Care/Medical-Abortion>. Accessed October 1, 2017.
- 56 Swica Y, Chong E, Middleton T, et al. Acceptability of home use of mifepristone for medical abortion. *Contraception*. 2013;88(1):122–127.
- 57 Conkling K, Karki C, Tuladhar H, Bracken H, Winikoff B. A prospective open-label study of home use of mifepristone for medical abortion in Nepal. *International Journal of Gynecology & Obstetrics*. 2015;128(3):220–223.
- 58 Raymond EG, Weaver MA, Louie KS, et al. Effects of depot medroxyprogesterone acetate injection timing on medical abortion efficacy and repeat pregnancy: a randomized controlled trial. *Obstetrics & Gynecology*. 2016;128(4):739–745.
- 59 Raymond EG, Weaver MA, Tan YL, et al. Effect of immediate compared with delayed insertion of etonogestrel implants on medical abortion efficacy and repeat pregnancy: a randomized controlled trial. *Obstetrics & Gynecology*. 2016;127(2):306–312.
- 60 Winikoff B, Ellertson C, Elul B, Sivin I. Acceptability and feasibility of early pregnancy termination by mifepristone-misoprostol: results of a large multicenter trial in the United States. *Mifepristone Clinical Trials Group. Archives of Family Medicine*. 1998;7(4):360–366.
- 61 Shah IH, Weinberger MB. Expanding access to medical abortion: perspectives of women and providers in developing countries. *International Journal of Gynecology & Obstetrics*. 2012;118 Suppl 1:S1–S3.
- 62 Woldetsadik MA, Sendekie TY, White MT, Zegeye DT. Client preferences and acceptability for medical abortion and MVA as early pregnancy termination method in northwest Ethiopia. *Reproductive Health*. 2011;8(19).
- 63 Wainwright M, Colvin CJ, Swartz A, Leon N. Self-management of medical abortion: a qualitative evidence synthesis. *Reproductive Health Matters*. 2016;24(47):155–167.
- 64 Joint United Nations Programme on HIV/AIDS (UNAIDS). *Fact Sheet July 2017: Global HIV Statistics*. New York: UNAIDS; 2017. Available at: [http://www.unaids.org/sites/default/files/media\\_asset/UNAIDS\\_FactSheet\\_en.pdf](http://www.unaids.org/sites/default/files/media_asset/UNAIDS_FactSheet_en.pdf).
- 65 Cohen J. Young African women are especially vulnerable to HIV/AIDS. *Science*. November 21, 2016.
- 66 Pre-exposure prophylaxis (PrEP) page. Centers for Disease Control and Prevention website. Available at: <https://www.cdc.gov/hiv/risk/prep/>. Accessed September 26, 2017.

- 67 PrEP page. Centers for Disease Control and Prevention website. Available at: <https://www.cdc.gov/hiv/basics/prep.html>. Accessed October 8, 2017.
- 68 Long acting injectable PrEP to prevent HIV page. PATH website. Available at: <https://sites.path.org/drugdevelopment/projects/hiv aids/long-acting-injectable-prep-to-prevent-hiv/>. Accessed September 30, 2017.
- 69 Hope TJ, Marrazzo JM. A shot in the arm for HIV prevention? Recent successes and critical threshold. *AIDS Research and Human Retroviruses*. 2015;31(11):1055–1059.
- 70 HIV/AIDS fact sheet page. World Health Organization website. Available at: <http://www.who.int/mediacentre/factsheets/fs360/en/>. Accessed September 2, 2017.
- 71 World Health Organization (WHO). *Guidelines on HIV Self-Testing and Partner Notification: Supplement to Consolidated Guidelines on HIV Testing Services*. Geneva: WHO; 2016. Available at: <http://apps.who.int/iris/bitstream/10665/251655/1/9789241549868-eng.pdf?ua=1>.
- 72 Medicines and Healthcare products Regulatory Agency. Ordering HIV self-test kits online? Make sure you get the right kit [press release]. London: Government of the United Kingdom; December 1, 2015. Available at: <https://www.gov.uk/government/news/ordering-hiv-self-test-kits-online-make-sure-you-get-the-right-kit>.
- 73 Testing for HIV page. US Food and Drug Administration website. Available at: <https://www.fda.gov/BiologicsBloodVaccines/SafetyAvailability/HIVHomeTestKits/ucm126460.htm>. Accessed October 8, 2017.
- 74 Unitaid, World Health Organization, Population Services International. *Market and Technology Landscape: HIV Rapid Diagnostic Tests for Self-Testing*. 3rd ed. Geneva: Unitaid; 2016. Available at: [https://unitaid.eu/assets/HIV-Rapid-Diagnostic-Tests-for-Self-Testing\\_Landscape-Report\\_3rd-edition\\_July-2017.pdf](https://unitaid.eu/assets/HIV-Rapid-Diagnostic-Tests-for-Self-Testing_Landscape-Report_3rd-edition_July-2017.pdf).
- 75 Siddique H. UK medicines agency seizes HIV home-test kits over false result risk. *The Guardian*. August 22, 2017. Available at: <https://www.theguardian.com/society/2017/aug/22/uk-medicines-agency-seizes-hiv-home-test-kits-over-false-result-risk>. Accessed October 8, 2017.
- 76 Smith P, Wallace M, Bekker LG. Adolescents' experience of a rapid HIV self-testing device in youth-friendly clinic settings in Cape Town, South Africa: a cross-sectional community based usability study. *Journal of the International AIDS Society*. 2016;19(1):21111.
- 77 Kurth AE, Cleland CM, Chhun N, et al. Accuracy and acceptability of oral fluid HIV self-testing in a general adult population in Kenya. *AIDS and Behavior*. 2016;20(4):870–879.
- 78 Ngunjiri K, Heffron R, Mugo N, et al. Feasibility and acceptability of HIV self-testing among pre-exposure prophylaxis users in Kenya. *Journal of the International AIDS Society*. 2017;20(1):21234.
- 79 Human papillomavirus (HPV) and cervical cancer fact sheet page. World Health Organization website. Available at: <http://www.who.int/mediacentre/factsheets/fs380/en/>. Accessed October 5, 2017.
- 80 World Health Organization (WHO). Human papillomavirus vaccines: WHO position paper. *Weekly Epidemiological Record*. 2017; 92:241–268. Available at: <http://apps.who.int/iris/bitstream/10665/255353/1/WER9219.pdf?ua=1>.
- 81 World Health Organization (WHO). *WHO Guidelines for Screening and Treatment of Precancerous Lesions for Cervical Cancer Prevention*. Geneva: WHO; 2013. Available at: [http://apps.who.int/iris/bitstream/10665/94830/1/9789241548694\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/94830/1/9789241548694_eng.pdf?ua=1).
- 82 Porras C, Hildesheim A, González P, et al. Performance of self-collected cervical samples in screening for future precancer using human papillomavirus DNA testing. *Journal of the National Cancer Institute*. 2015;107(1):dju400.
- 83 Petignat P, Faltin DL, Bruchim I, Tramèr MR, Franco EL, Coutlée F. Are self-collected samples comparable to physician-collected cervical specimens for human papillomavirus DNA testing? A systematic review and meta-analysis. *Gynecologic Oncology*. 2007;105(2):530–535.
- 84 Glinski A, Sexton M, Petroni S. *Adolescents and Family Planning: What the Evidence Shows*. Washington, DC: International Center for Research on Women; 2014. Available at: <https://www.icrw.org/wp-content/uploads/2016/10/140701-ICRW-Family-Planning-Rpt-Web.pdf>.
- 85 McCleary-Sills J, McGonagle A, Malhotra A. *Women's Demand for Reproductive Control: Understanding and Addressing Gender Barriers*. Washington, DC: International Center for Research on Women; 2012. Available at: <https://www.icrw.org/publications/womens-demand-for-reproductive-control/>.
- 86 High-Impact Practices in Family Planning (HIP). *Drug Shops and Pharmacies: Sources for Family Planning Commodities and Information*. Washington, DC: US Agency for International Development; 2013. Available at: <https://www.fphighimpactpractices.org/wp-content/uploads/2017/06/DrugShops.pdf>.
- 87 Tamang A, Puri M, Masud S, et al. Medical abortion can be provided safely and effectively by pharmacy workers trained within a harm reduction framework: Nepal. *Contraception*. 2017; pii:S0010-7824(17)30436-5.
- 88 Santhya KG, Jejeebhoy SJ. Sexual and reproductive health and rights of adolescent girls: evidence from low- and middle-income countries. *Global Public Health*. 2015;10(2):189–221.
- 89 High-Impact Practices in Family Planning (HIP). *Adolescent-Friendly Contraceptive Services: Mainstreaming Adolescent-Friendly Elements Into Existing Contraceptive Services*. Washington, DC: US Agency for International Development; 2015. Available at: <https://www.fphighimpactpractices.org/wp-content/uploads/2017/06/AdolescentFriendlyContraceptiveServices.pdf>.

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#### Contributors

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