



# E-COMMERCE AND REPRODUCTIVE HEALTH SUPPLIES: FAMILY PLANNING IN THE DIGITAL AGE



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## Organization Bio

**The Institute for Reproductive Health** at Georgetown University (IRH) has over 30 years of experience in designing and implementing evidence-based programs that address critical needs in sexual and reproductive health. The hallmark of our work is translating scientific data into simple and practical guidance for clinic- and community-based reproductive health programs. Through partnership with international and local organizations, IRH strives to: expand family planning choices to meet the needs of women and men worldwide; advance gender equality by helping women and men across the lifecycle learn about and take charge of their reproductive health; and involve communities in reproductive health interventions that improve their wellbeing. This work touches many cross-cutting themes within reproductive health such as Family Planning, Adolescents, Gender Equality, Fertility Awareness, Strategic Scale-up, Mobilizing Technology for Reproductive Health, and Monitoring, Learning & Evaluation. IRH goes beyond research and development of new reproductive health tools and focuses on introduction and scale-up of sustainable approaches.





## E-COMMERCE CASE STUDIES SERIES

This is the overview report accompanying a series of seven case studies written to provide the reproductive health (RH) supplies community with a deeper understanding of the current landscape and future potential of obtaining RH supplies through e-commerce. Each case study highlighted in this report focuses on either one specific country (India, Kenya, Mexico, and the United States) or one new and underused RH technology (emergency contraception, female condoms, and the Standard Days Method®). These case studies are descriptive only, and do not advocate for or against e-commerce as a means to distribute RH supplies.



## EXECUTIVE SUMMARY

Customers around the world are connecting to the internet and finding a world of products and services available at their fingertips. Over 46% of the world's population went online in 2015, many of them to shop.<sup>1</sup> With the click of a button and a payment mechanism, customers can buy almost anything. The size of the overall global e-commerce marketplace is enormous; business-to-consumer online sales reached an estimated US \$1.5 trillion<sup>1</sup> by the end of 2014.<sup>2</sup> Given this phenomenal growth, reproductive health (RH) supplies and information have also become more available online, giving customers new channels to obtain these essential products and services.

In recognition of the potential importance of e-commerce, the Institute for Reproductive Health (IRH) at Georgetown University partnered with seven organizations to examine RH supplies in an internet age. IRH and partners wrote case studies describing the current environment and potential for e-commerce sales of a wide range of RH supplies in four countries—India,

Kenya, Mexico and the United States (U.S.)—and examined three underused family planning (FP) methods—emergency contraception (EC), female condoms, and the Standard Days Method® (SDM)—from a global perspective.

This series of cases illustrates the current extent of RH supplies' availability via e-commerce and the likelihood of expanding it in the future. It also provides insight into the hindering and enabling factors that exist within and across different settings and for diverse FP methods globally, explores findings concerning e-commerce infrastructure and regulatory issues, and presents possible areas for future research.

The four country case studies share a common theme of rapid increases in internet availability and use, especially through advancements in mobile technology. However, prospects for e-commerce of RH supplies also reflect the different contexts of a developing country (Kenya), emerging market countries (India and Mexico) and a fully developed, thoroughly online country (the U.S.). E-commerce of RH supplies exists at varying stages in all four countries but is likely to expand in each of them.

The three studies of underused FP methods highlight how their unique characteristics affect their potential for online expansion. For each of the methods, we identified potential benefits for distribution through e-commerce, which increases visibility, product information, and access.

<sup>i</sup> All monetary amounts are in United States dollars, unless specified otherwise.

## KEY HIGHLIGHTS

➤ **Infrastructure:** For RH supplies to reach the end customer, a complex infrastructure system must be in place, from internet access to payment mechanisms to last-mile delivery. While globally each of those components is growing, many places are still missing one or more required pieces of this puzzle. For example, in certain countries, mail delivery is not routinely offered to street addresses, which can hamper delivery.

➤ **Regulation:** Over- and under-regulation both emerged as barriers to access. Over-regulation decreases the availability of many methods online, and under-regulation may leave customers without trust in online sellers. Even when written regulations do not hinder online provision, confusion about regulation can cause both buyers and sellers to shy away from online sales.

➤ **Information Provision:** For all methods, particularly underused ones, the internet can be an entry point for customers to learn more about their RH options. However, sorting through the accuracy of information online can be difficult for even the most sophisticated users, and research suggests that interpersonal communication is critical for customers.

➤ **Customer Profile and Preferences:** Customer behavior is complex. People are motivated by convenience, anonymity, and increased method choices, but in many places, they have concerns about deliveries and payments. Many consider buying RH supplies online, but they assess whether an online purchase is better or worse than going to the nearest health center or pharmacy.

➤ **New and Underused Methods:** Online sales will not immediately transform underused methods – such as EC, female condoms, or SDM – into frequently purchased methods like male condoms, but the internet can bring these methods to new customers and increase overall product awareness.



## CASE STUDIES & OVERVIEW OF E-COMMERCE OF RH SUPPLIES

This series of reports is intended to:

1. Prepare the RH supplies community for a future in which global growth of e-commerce will impact how RH supplies, services, and information are accessed by end users; and
2. Provide a “map” of the e-commerce landscape through which the RH supplies community can

consider key trends, opportunities, and challenges of digital marketplaces as platforms for the sale of RH supplies.

This overview report describes both the present status of and future prospects for e-commerce and RH supplies. It is intended only to be descriptive and advocates neither for nor against e-commerce sales of RH supplies.

This summary report is accompanied by seven case studies, covering in detail a selection of methods and countries. Case study authors relied on a variety of research techniques, including desk and internet research

**Table 1.** Case study leads.

Case Study*	Partners/authors
India	Kaarak Enterprise Development Services Pvt. Ltd.
Kenya	iHub Ltd.
United States	IRH
Mexico	MexFam
Emergency Contraception	The International Consortium for Emergency Contraception (ICEC)
Standard Days Method	Cycle Technologies
Female Condoms	Universal Access to Female Condoms Joint Programme (UAFC)

\* See: <http://irh.org/e-commerce-for-rh-supplies-case-studies>

and key informant interviews. We encourage interested readers to find the link to these more detailed reports provided in Table 1.

## BACKGROUND

- Commercial sales of RH supplies are increasing worldwide, giving women and men another channel to obtain contraceptives and other supplies.
- E-commerce is growing worldwide, particularly in the developing world.
- Data on exact sales of RH supplies via e-commerce is difficult to obtain, due the proprietary nature of commercial sales data.

Ensuring reliable supplies of contraceptives is crucial if the goal of FP2020<sup>ii</sup> – expanding access to modern contraception to an additional 120 million women in less than five years – is to be reached. Retail sales of contraceptives are an important way to expand access and complement free or subsidized sources of FP methods. In areas of rising incomes, retail sales account for a growing share of contraceptive distribution. E-commerce accounts for a relatively small but growing proportion of those sales. In many settings, the time could be right for RH supplies to join the broad range of goods sold via e-commerce.

**The role of retail sales** in increasing availability of RH supplies is well documented. Based on a recent analysis

of Demographic and Health Surveys (DHS) data from 1992 through 2012, the private sector has contributed to an increased use of modern contraceptives around the world, primarily short-acting methods. In the last 20 years, between 40% and 49% of modern contraceptive users relied on the private sector in Asia and Latin America, with a smaller proportion, between 27% and 30%, in Sub-Saharan Africa.<sup>3</sup>

India's experience is a valuable example of the growth of this category; in recent years the overall commercial market has grown, as more Indians decide to adopt and pay for spacing methods of FP.<sup>4</sup> The India case study estimates the current total annual commercial market at 1 billion male condoms, 32 million cycles of oral contraceptives (OCs), 18 million EC doses and 10,000 female condoms. This market for spacing methods is currently projected to increase; India has a large youth



<sup>ii</sup> FP2020, an outcome of the 2012 London Summit on Family Planning, is a global partnership that supports the rights of women and girls to decide whether, when, and how many children they want to have.



## INDIA:

India's RH e-commerce market, dominated by male condoms, is vibrant but still quite small (under \$2 million) relative to the estimated \$100-130 million in conventional channels for RH sales. However, it has gained momentum and is likely to expand rapidly. Two recent industry reports estimate the total e-commerce market size at between \$13.6 billion<sup>20</sup> and \$16.4 billion,<sup>21</sup> approximately tripling in size over the last five years. India's enormous potential market size for RH supplies suggests a proportionately large potential for obtaining these products through e-commerce.

population likely to follow a trend toward increased age of marriage and female education. While currently only 1% of retail sales for spacing methods occur online, both the proportion and the overall market are expected to grow.

**Access to the internet** has grown dramatically in the last five years and is projected to continue to increase rapidly worldwide. Some statistics from the case study countries illustrate this important trend:

- In India, internet indicators have improved rapidly over the past decade. Internet users rose from 50 million in 2007 to over 300 million in 2015 and are predicted to reach 500 million by 2018-19.<sup>5</sup> India has one of the fastest-growing rates of internet traffic in the world (33% compound annual growth rate).<sup>6</sup>
- In Kenya, more than half of the total population is online, and the percentage of adults of reproductive age is even higher. In 2014, 26.2 million Kenyans used the internet, an increase of 23% over the previous year.
- In the U.S., almost 250 million Americans already use the internet to communicate and explore websites.<sup>7</sup> The internet-based economy accounts for 4.7% of the U.S. economy – a proportion exceeded by only three

other countries in the world (the United Kingdom (UK), South Korea and China).<sup>8</sup>

Equally important is the increase in the number of people who use internet-enabled devices other than laptop or desktop computers. The mobile device industry is in a high-growth phase – a total of 3.6 billion unique mobile subscribers were tallied at the end of 2014.<sup>9</sup> That figure represents more than half of the world's population.<sup>10</sup> It is projected that by 2020, one billion additional subscribers will bring mobile access rates to 60% of the world's population. Importantly, inexpensive smartphones are becoming widely available in emerging markets where customers previously had no access to the internet.

In both established and developing markets, smartphones are quickly shifting the paradigm for accessing media and information, making internet use more mobile-centric.<sup>11</sup> Again, the case studies serve to illustrate this important point. India, for example, is expected to surpass the U.S. in 2016 with over 200 million smartphones, and mobile telephone connections in Kenya reached 33.6 million in 2014 with a mobile penetration rate (percent of total potential customer population) of 78%. Worldwide, a growing portion of these mobile users have smartphones.

### **Major investments are being made in e-commerce.**

Some examples are:

- Estimates of investment in Indian e-commerce show an upward trend from \$55 million in 2010 to \$305 million in 2011 and over \$4 billion in 2014. The primary recipients of this investment are large online marketplaces such as Snapdeal, Flipkart, and Amazon.<sup>12</sup>
- The Communications Authority of Kenya estimates the value of e-commerce in Kenya at \$42.2 million.<sup>13</sup> E-commerce has spread over various platforms including online marketplaces, service delivery, taxi booking, and property and hotel listings.
- The U.S. is moving toward e-commerce so rapidly that according to a recent study, "retailers in nearly every sector are investing in capabilities to meet growing shopper demand to purchase goods via e-commerce."<sup>14</sup> The U.S. Census Bureau valued the 2014 U.S. e-commerce market at nearly \$300 billion,



## KENYA:

Kenya's e-commerce market is still developing and is limited by problems with logistics and delivery systems. There are currently only three online pharmacies in Kenya; only one sells FP products, not including male condoms. However, three other online sources of male condoms were found.

While cash predominates as the main means for purchase (90% of payments), the use of the mobile phone payment system, M-PESA, has facilitated the expansion of delivery services in Kenya and could become an important enabling factor for online sales of contraceptives.

accounting for 6% of the \$5 trillion overall U.S. retail market.

**Alternative payment systems**, such as M-PESA in Kenya and Paypal in the U.S., are bringing new users into the global marketplace and enabling internet sales.

**Access to online information** is also facilitated by the growth of internet-enabled smartphones. Mobile apps that facilitate the use of information-based methods (such as SDM and TwoDay Method®) are now available directly on individuals' phones through global marketplaces such as the Google Play Store and the iTunes App Store. In addition, while it is outside the scope of this study, the additional information available on websites and mobile apps can help customers find and choose RH supplies.

In view of these compelling trends, this review asked what the implications are for the RH supplies community as e-commerce increases globally. What opportunities does e-commerce present for increasing availability of contraception, including new and underused methods? What risks does it present for quality assurance of commodities and information provided to the customer?

## FINDINGS

This shift to online purchasing is already having an impact on health products. One survey shows that globally, among online shoppers, customers spend an average of 22% of their disposable income online.<sup>15</sup> As an example of a highly developed e-commerce market, U.S. health and personal care e-commerce revenue was estimated to reach \$19.7 billion in 2015.<sup>16</sup> As this shift in customer buying behavior becomes more common globally, more customers are likely to turn to digital marketplaces to obtain contraceptives, including new and underused RH supplies.

RH supplies already available on the internet include male condoms, EC, OCs, pregnancy tests, and CycleBeads®. They can be purchased from online marketplaces that sell a broad range of goods such as Amazon and JUMIA, dedicated FP websites, and alternate channels for brick and mortar pharmacies and clinics.

While data tracking e-commerce sales of RH supplies over time is generally lacking, it is clear that these products are now widely available in e-commerce markets globally. Male condoms in particular appear to be available online almost universally. Other methods face limitations depending on their unique characteristics. EC and other hormonal methods are limited by prescription requirements in some countries. Underused methods may be limited by lack of customer information, which decreases demand and discourages suppliers from offering them widely. Some methods, such as injectables, currently require the assistance of a health professional in most settings.

All four country case studies found e-commerce sales of FP methods in varying degrees. While the range of RH supplies available online is currently quite narrow in some countries such as Kenya (limited to OCs, EC, and injectables from one online market and three online sites providing male and female condoms), it is extremely diverse in others, such as India and the U.S., with at least 15 brands of male condoms and many brands of OCs, EC, and female condoms available through multiple e-commerce markets.



## UNITED STATES:

E-commerce in the U.S. holds potential for expanding contraceptive access not only by reaching new customers, but also importantly, by expanding customer access to product options. It has a mature e-commerce market in many categories, low barriers to entry for new sellers, innovative approaches to rapid delivery and an expanding online market for health and personal care products. Over-the-counter contraceptives are readily available for U.S. customers through various online marketplaces, some of which are purely virtual, while others are e-commerce subdivisions of traditional brick-and-mortar drugstores.

### Infrastructure

When discussing e-commerce, several types of infrastructure are crucial to enable successful sales. The first is internet infrastructure. As discussed above, in this area we found rapid improvement and expansion globally, particularly where smartphones are permitting a leap into e-commerce that bypasses the fiber optic and landline internet common in developed countries. The global nature of the internet, particularly large web shops such as Amazon.com and Alibaba.com, and the extensive reach of some delivery systems support the global availability of RH supplies via e-commerce. However, in some countries, there were barriers to RH suppliers accessing this infrastructure freely. For example, in the U.S., one hindrance cited was bias or fear of backlash among a few e-commerce platforms that refused ads or deliveries for contraceptives. In Mexico, although RH supplies were available online, search functionality is poor, and it is difficult for customers to find their method of choice without knowing the specific brand name or drug formulation.

The second is payment infrastructure. Here too, research found positive trends, such as the emergence of mobile

wallet payment systems, which co-exist with well-established cash-on-delivery systems. Mobile wallets are a facilitating factor in countries such as Kenya and India. Even while these systems are emerging, the high prevalence of cash-on-delivery provides a solid basis for maintaining and expanding online sales as the mobile wallet systems mature. More mature and highly banked markets such as the U.S. or Mexico, where significant proportion of the population has purchased online with a credit card, debit card, or PayPal, have benefited from the rapid expansion of electronic payment systems.

E-commerce still requires physical infrastructure to fulfill online orders. In this area, challenges in product delivery, particularly to hard-to-reach rural populations, were found. This lack of rural infrastructure could be a significant limiting step for e-commerce in some countries. For example, in Kenya, Mexico, and India, despite rapid expansion, infrastructure for e-commerce is still largely an urban phenomenon. Both India and Mexico have seen large investments in e-commerce and the internet sector, which could address some of these problems.

Some methods are more impacted by physical infrastructure limitations than others. Products such as male and female condoms can be distributed within existing delivery services, since they are available from local and international sellers and have a long shelf-life. For EC, on the other hand, speed of delivery or advanced purchase is paramount. In developed markets there are vendors who guarantee two-hour delivery, but in other markets EC must be marketed as a product to be purchased in advance of need. For CycleBeads, the improvement of internet infrastructure allows the product to bypass the limitations of physical infrastructures; SDM can now be offered entirely via mobile and digital technology such as smartphone apps and websites.

### Regulation

Regulation is a complicated issue for RH supplies in general and for e-commerce sales in particular. Overregulated markets can inhibit market growth and broad access. This regulation can take several forms. In India, for example, the government has significant influence on retail pricing, reducing incentives for new sellers to enter the market.



## MEXICO:

Mexico's internet-based e-commerce is expanding rapidly, with more than half of the country online and a total market value of more than \$12 billion. A review of websites confirmed the feasibility of making online purchases for short-acting non-clinical FP methods, but found unevenness in the quality and type of information provided as well as difficulty searching for RH supplies online. Only 23% of Mexican women use non-clinical short-acting methods that are suitable for online sales. Young adults are more likely to use "internet-friendly" FP methods than their older counterparts and also more likely to make online purchases. These younger adults are an increasing segment of the Mexican retail customer population, which could lead to an increase in online sales.

In other markets, particularly in developed countries, restrictions require prescriptions for some contraceptives or enforce age barriers (e.g., prohibiting adolescents from purchasing contraceptives online). For EC in particular, the requirement for a prescription for certain types of EC and other restrictive laws and regulations, such as age limits, constrain online access.

There are some positive trends in this area. In the U.S., prescription products are increasingly available online, especially for refills. Major fillers of birth control prescriptions like Planned Parenthood, many drug store chains, health maintenance organizations, and student health centers allow customers with a prescription filed in their system to order their monthly refills online. Some sites have developed alternative prescription processes, with physicians available to prescribe online.

However, in markets where regulation is low, customers

may lack the trust required to make online purchases and payments. While no specific evidence of counterfeit or sub-standard RH supplies was reported in any of the case studies, this is a global concern for many methods sold online such as EC. In Mexico, there is current no existing regulation of e-commerce.<sup>iii</sup> Any product, regardless of quality, can be sold online, which can lead to unsafe products and a lack of customer trust. A lack of regulation is also a challenge for CycleBeads digital products; fertility trackers available online are not regulated for accuracy or quality, which can lead to customer confusion. For e-commerce to expand, online customers need to trust that they are protected from poor quality, fraud, or theft.

In some markets, regulations are not well known by sellers or customers or are subject to change. In India, because e-commerce of contraceptives is relatively new, there is significant legal uncertainty among key stakeholders. For instance, several company representatives and pharmacists interviewed were uncertain about which methods could be sold legally online and the legality of selling to minors under age 18. In the U.S., despite the fact that EC is available without a prescription, online vendors have encountered incidents in which Google has not allowed vendors to purchase ads for EC, and PayPal has refused to process payments.

## Information Provision

Currently, some websites provide high-quality consultation services. Online EC vendors, for example, offer a range of counseling and screening services such as chat rooms, medical screening carried out by physicians who write prescriptions, or detailed counseling and instructions for women seeking to buy EC among other RH supplies. Given the advances in telemedicine for client consultation, often in remote areas, there are likely to be opportunities to enhance the quality of online access to RH supplies through established methods for telemedicine.<sup>17</sup>

All three of the method-specific case studies emphasized the importance of e-commerce's ability to facilitate the exchange of information, offer guidance on method

<sup>iii</sup> Currently in Mexico there is no specific regulation of practices in e-commerce, though an amendment to the Telecommunications Act now considers digital platforms as a space regulated mainly for data management and privacy. See Mexico case study.



## EMERGENCY CONTRACEPTION:

EC is sold online through several mechanisms: e-commerce marketplaces (such as Amazon.com), and pharmacy chains with an online presence. EC is unique in that rush deliveries or purchases in advance of need are critical. EC is widely offered online and well-established as an e-commerce product in many middle and high-income countries. Many mainstream online pharmacies now carry it along with their other health products. EC is available online in North, Central and South America, Europe and Asia, but no cases of online availability in Africa could be found.

options and how to use them, and in some settings provide access to phone screening and counseling to address the need for interpersonal communication and support. Some methods seem to require additional instructions. Online sales of female condoms, for example, are hindered by the need for instructions for first-time use, although this could likely be overcome with appropriate information on websites or apps. All four country case studies described the importance of interpersonal communication as a positive part of e-commerce of RH supplies, providing examples where online access can be combined with information dissemination and counseling with the added benefit of anonymity.

It can also be difficult for customers to accurately assess information online and make a fully informed decision about RH supplies. However, allowing users to share experiences and information can be a powerful tool. In many places, new web and mobile apps are directly aimed at informing purchasing decisions, either by providing customers with information or helping customers navigate contraceptive options. The use of e-commerce allows customers to upload feedback on their preferences and concerns, which vendors can then use to provide additional information and targeted marketing.

While online marketplaces and general vendors (Amazon, Target, CVS, and Drugstore.com) have simply added RH supplies to an existing portfolio of health-related products, there is evidence of commitment to women's health among RH-dedicated online sellers. Both general vendors and dedicated sites show promise in making RH supplies available through this channel.

### Customer Profile and Preferences

Infrastructure and regulations are only part of the picture. E-commerce is driven by customers, and customers have a large range of concerns and priorities. Stakeholder and customer interviews revealed questions around confidentiality, cost, and trust.

**Young customers.** One factor driving the growth of e-commerce and RH supplies is purely demographic. There is an overlap between the tech-savvy youth cohort who use e-commerce and those who have relatively high levels of unmet need for short-acting spacing methods – methods that are conducive to e-commerce sales. In the U.S., teenagers are most at risk of unintended pregnancy and also most likely to be online, though they may lack access to a payment mechanism. In Mexico and India, as in many countries, young people are more likely to both use short-acting methods and to be online. While only one-third of contraceptive users in India choose a spacing method, this is a large potential commercial market: an estimated 59 million married women of reproductive age are currently using spacing methods. These trends are not universal; in the U.S., long-acting reversible contraceptives (LARCs), though not likely to be offered online, are gaining in popularity. Overall, demand for short-acting methods is likely to remain high.

**Urban population.** In addition to demographic factors, urbanization may also drive e-commerce outcomes, as the urban environment facilitates both internet access and rapid delivery of products to customers. In Kenya, for example, there was a high use of spacing methods in urban areas, combining both the method choices and the logistical environment most suited to e-commerce. In Mexico (78% urban) and India (32% urban in 2014, projected to be 50% in 2050) the emerging youth cohorts in urban areas are potential customers for internet



## STANDARD DAYS METHOD® (SDM) VIA CYCLEBEADS®:

This method is available online in two formats. The first is physical CycleBeads, which can be ordered through the U.S.-based CycleBeads website. The second is through mobile and digital tools such as the CycleBeads smartphone app and CycleBeads Online, a web-based service. Both face similar challenges resulting from lack of method awareness and negative perceptions of natural methods. However, the digital versions overcome some logistical challenges of the physical product. Physical CycleBeads must operate in a global market where few distributors, high shipping costs, and difficulties creating a business model from a one-time purchase product are limiting factors. Digital forms of CycleBeads are more easily made available worldwide in a cost-effective way, and have, to date, been downloaded more than 150,000 times.

sources of short-acting methods. Second only to China in the number of urban dwellers, India's urban areas are expected to grow by 404 million people between 2014 and 2050.<sup>18</sup> All over the world, rural-to-urban migration is occurring rapidly. At this point, more than half of the world's population now lives in urban areas (54% as of 2014), and by 2050, 66% will be urban dwellers. This suggests potential growth for e-commerce in general, including of RH supplies.<sup>19</sup>

**Privacy.** While users stated that they appreciated the privacy and anonymity of online access, in some settings they had concerns about lack of privacy at the point of delivery. In many contexts there is still stigma around either FP in general or specific methods, such as female condoms. In India, customers' concerns about privacy at clinics and pharmacies may drive them toward online sales. But privacy at delivery can also be a problem for online sales, and many Indian companies are taking

measures to protect customer anonymity with discrete unmarked packaging.

**More choice.** Customers appreciated the increased choice of methods online. In India, for example, online offerings include 14 brands of domestic and foreign male condoms (including latex-free male condoms), four brands of female condoms (two domestic, two foreign), and vaginal contraceptives; two brands of EC and one brand of OCs are also sold online. However, for customers to seek the range of products available, they first need to be aware of the selection and of the method itself, which can be a challenge for underused FP methods.

**Ease of purchase.** Issues of convenience and cost were also cited as a facilitating factor for e-commerce of FP methods, especially where government FP services are focused on specific population segments and entail long waiting times or informal surcharges. Markets for FP are segmented within each country; low-income populations primarily access FP through government clinics, while those with higher incomes mainly access products through the private sector. Competition with government-subsidized or free FP methods was cited as an impediment to online commercial access in Kenya and India, as was the high—and at times, prohibitive—cost of delivery for low-income customers. However, although there is wide availability of free or low-cost government-supplied contraceptives, few women surveyed in Kenya suggested that the cost of buying contraceptives online is an issue for them. E-commerce sales are expected to reach a different segment of the market than government provisioning. Convenience may be a persuasive selling point, given potential clients' experience of long waiting times at public facilities.

This competition with free FP markets may be more of a concern on the supply side, where suppliers and manufacturers may hesitate to enter a market where there are free or subsidized products available. For example, in India, despite the limited selection of free spacing methods from government clinics, the availability of these free contraceptives sources may undermine use of e-commerce.

**Trust.** Customers cited concerns of trust in product or service. In many places, people are used to receiving



## FEMALE CONDOMS:

**Female condoms:** Female condoms are sold through a variety of websites<sup>22</sup> and have been found in countries as diverse as India, China, the Netherlands, and the U.S. Online sales of female condoms are expected to start in the near future in Nigeria, Costa Rica, and other countries. Despite success in making female condoms available online in many countries, it is unclear whether the online presence of this method has led to significant rates of online purchases. Online sales of female condoms share some of the hindering factors related to other RH supplies, such as lack of infrastructure for rural deliveries. They are also hindered by a lack of product awareness and the need for instructions for first-time use. However, the lack of availability offline may ultimately spur online sales as product awareness increases. In low-resource countries where female condoms have been distributed for free or sold at a highly subsidized prices with donor support, it is a challenge to build a sustainable commercial market, let alone an e-commerce market. Female condom manufacturers are exploring sustainable business models and in doing so, exploring e-commerce as a viable option.

FP through health services. This may be for regulatory reasons—they must visit a doctor to ensure insurance coverage—or informational purposes—they want to ask a question. For example, a consistent message from stakeholders interviewed in Kenya was that e-commerce of RH supplies should provide information and counseling, due to a perception that some women may need face-to-face interaction when they first adopt a FP product.

## New and Underused Methods

The results of this investigation suggest that e-commerce is not a panacea for underused methods. The knowledge, attitudes, and practice issues that impede access to these methods are considerable both offline and online. However, online approaches may increase awareness and change attitudes for some audiences more cost-effectively than traditional information campaigns, making it a particularly useful approach for methods that may not be widely available through other FP providers.

**Prescription contraceptives.** In some countries, particularly in the U.S. and Europe, well-established and ethical online systems have been developed for the routine access of prescription contraceptives that comply with clients' local medical and regulatory requirements. The practice of online refilling of prescriptions is already well established. For prescription contraceptive methods that require multiple cycles (such as OCs, patches or rings), there is clear potential to expand the role of e-commerce for resupply.

**Cost and lack of product awareness** were prominent constraints described by the method-specific case studies. Cost was especially salient for EC and female condoms, and awareness was especially important for female condoms and CycleBeads. All three method case studies found various forms of stigma that hindered access to and use of the methods via e-commerce (e.g., conflation of EC with abortifacients, perception of difficulty of use for female condoms, and negative perceptions about “natural methods”). Interestingly, all of the above constraints to e-commerce also apply to distribution of these methods in a conventional, offline context.

**Timeliness.** Among the three methods, EC has the unique constraints of a short timeframe within which it is effective and, in some settings, regulatory restrictions on use. E-commerce in developed countries can, at a high cost, expedite delivery or promote obtaining EC in advance of need at a much lower price.

E-commerce is likely to remain a means for distribution that runs in parallel to (and does not replace) offline sales and programming of underused RH supplies.

# CONCLUSIONS AND IMPLICATIONS

The current landscape for e-commerce of RH supplies varies considerably within and among countries, and future prospects for online sales of RH supplies within countries are similarly varied. The same is true for underused methods of FP sold online in several countries. Consequently, those interested in how online availability of RH supplies may expand must note specific situations in which this expansion would take place, with a focus on enabling and hindering factors.

Our findings show that trends in infrastructure (broadly defined to encompass all aspects of provisioning from internet search to product delivery), regulations of all kinds, and customer profiles and preferences are key factors that drive the availability of RH supplies online. While the specific nature of these factors vary by country and method, each is crucial in determining the type and scale of RH supplies online. A strong contributor to customer behavior is the availability and accessibility of information on RH topics online. Information is both a motivator for customers (they hear about methods before purchase) and an enabler for use (they are able to learn more about how to use methods and ask questions after choosing them). All of these factors are expected to remain important in the near future.

This report is intended to spark conversation on e-commerce and FP. This is a dynamic field that is quickly evolving. Within a short time, the findings from this study could be out-of-date. Many questions would benefit

from additional research. Of particular interest for future inquiry are the following areas:

- **Information provision - current and future state:** How do women and men prefer to receive information and counseling online and what supportive infrastructure encourages correct use? For sites that currently provide information, how accurate and helpful is the content? How can information on underused methods be disseminated through e-commerce?
- **Infrastructure requirements to facilitate e-commerce:** What are the pros and cons of global versus local websites in supplying RH services? How will electronic payment options such as mobile wallets expand e-commerce for RH supplies? How can delivery systems be improved to address customer concerns about privacy and security? What solutions can ensure reliable “last-mile” delivery systems for RH supplies, particularly for rural customers?
- **Demographic research to identify actionable opportunities to expand online access to contraceptives:** For example, research could identify segments of the population such as young adults who spend a great deal of time online and who are also in high-need of access to short-acting contraceptives. This group may be particularly likely to use e-commerce for RH supplies.
- **RH supplies potential assessment:** This study did not attempt to rank or categorize methods according to their e-commerce potential. However, important factors impact a method’s suitability such as shelf-life, prescription requirements, need for rush orders, existence of current commercial market, and product awareness. Future research could refine those themes into an assessment metric with recommendations by method.
- **Broaden the geographic reach:** Illustrative countries and methods were chosen to explore global questions and broadly applicable trends. More research could, however, be done on additional countries to validate our conclusions in other contexts – of particular interest would be a country in the Middle East or Central Asia.



- **Leveraging e-commerce approaches for traditional health systems:** More research is needed on effective ways to use e-commerce approaches to extend the reach of existing health facilities, and to facilitate resupply of ongoing FP users who currently obtain their method from clinics.
- **Multi-country study of the e-commerce regulatory context for RH supplies:** Comprehensive research is needed on the status of regulations affecting access to RH supplies online across a diverse sample of countries to better understand trends that hinder or facilitate access.
- **Case study-specific follow up:** Each of the case studies raised unanswered questions, given the constraints and goals of this research. For example, more research would be required to assess the true extent of internet purchasing by language and geography in India, to learn more about the online availability of EC in Latin America, or to assess whether Kenya's experience is truly representative of other East African countries. Specific research agendas could be built around filling these and other gaps.
- **Social marketing of contraceptives online:** As e-commerce becomes more and more available to clients who are not in the top economic tiers,

programs offering contraceptives at significantly reduced, subsidized costs are likely to be interested in offering their products online. Research on the feasibility of this approach is needed.

We would like to thank all our partners and their stakeholders for their continued enthusiastic engagement with this topic and look forward to participating in the on-going conversation about e-commerce as a potential channel for expanding access to RH supplies.



# Endnotes

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