

Solution Brief 2

ESSENTIAL CONDOM PROGRAM ANALYTICS AND MARKET INTELLIGENCE

In 2018 Mann Global Health drafted a report outlining “Challenges and recommendations for reaching “Fast-Track” targets for condom use”. This brief is one of four that flesh out specific recommendations made in that report, serving as a resource for donors, governments and implementing partners to identify and design opportunities to support in-country stewardship of condom programming through improved collection and use of evidence.

Investments in data collection, analysis, dissemination, and application at the global and especially the country level are required to improve the quality of decisions informing condom programming.

This tabular summary of key analytics and questions for market analyses includes a description and link to commonly available tools and resources to support data collection and analysis. This list is by no means exhaustive, but does include the strongest tools known to the authors at this time. In some cases, tools may require modification (i.e., to factor in existing resources in country), or a new tool may be needed to capture data more routinely (e.g., modeling behavior, or monitoring market breadth).

TABLE 1. Programmatic questions, and potential solutions to answer them.

Question	Suggested Tool
What are condom use behaviors? What proportion of the population is using condoms?	<ul style="list-style-type: none"> • DHS Surveys for general populations by the DHS Program • PHIA Surveys for general populations by Columbia University • Bio-behavioral Surveys (BBS) for Key Populations (formerly known as BSS) by CDC • Tracking Results Continuously (TraC) Surveys by PSI • Modeling, such as the Commodity Gap Analysis by Avenir
How many condoms are needed to protect high-risk sex acts?	<ul style="list-style-type: none"> • Condom Needs and Resource Requirement Estimation Tool by UNAIDS
What behavioral factors are associated with condom use?	<ul style="list-style-type: none"> • Commercial surveys, like this one for Project Chitenga: Protector Plus Zimbabwe • FoQus Studies by PSI • Tracking Results Continuously (TraC) Surveys by PSI
How is the market performing in relationship to enabling functions, such as regulations, financing, and supporting functions?	<ul style="list-style-type: none"> • Condom Landscaping Tool by Mann Global Health
How much are consumers willing to pay for condoms?	<ul style="list-style-type: none"> • Willingness to Pay studies such as this report by Abt Associates
Which condoms are consumers using?	<ul style="list-style-type: none"> • Condom use measured by source of supply such as A Total Market Approach for Condoms in Myanmar: The Need for the Private, Public and Socially Marketed Sectors to Work Together for a Sustainable Condom Market for HIV Prevention¹

¹<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4353889/>

Are subsidies targeting the right consumers?	<ul style="list-style-type: none"> • Measures of relative poverty included in population-based surveys, like The Equity Tool by Metrics for Management • Measures of absolute poverty included in population-based surveys like The Progress out of Poverty Index (PPI) by IPA
What is the total size of the market in volume & value? What are trends over time?	<ul style="list-style-type: none"> • For public sector data, figures pulled from decentralized sites as described in this paper from PSI and the HC3 project • For social marketing data, annual distribution data from DKT • Retail audits from companies like Nielsen • Value estimates can be made by factoring the total volume of social marketed and commercial condoms multiplied by price to consumer
How available are condoms at different delivery points in the market?	<ul style="list-style-type: none"> • MAP surveys by PSI that use Lot Quality Assurance Sampling (LQAS)
What is the range of products (types, brands) and price points available?	<ul style="list-style-type: none"> • Large censuses of outlets, like FP Watch Surveys • Logistic management information systems (LMIS) for public sector
What is perceived availability by users?	<ul style="list-style-type: none"> • DHS Surveys for general populations by the DHS Program • PHIA Surveys for general populations by Columbia University • Bio-behavioral Surveys (BBS) for Key Populations • Tracking Results Continuously (TraC) Surveys by PSI
How reliant is the condom market on external donor subsidy?	<ul style="list-style-type: none"> • Condom Landscaping Tool by Mann Global Health

The following section outlines in more detail condom program elements that require analysis, approaches to support that analysis, and factors to consider when designing studies, research and analysis.

AN OVERALL UNDERSTANDING OF CONDOM USE BEHAVIORS CAN HELP US UNDERSTAND:

- **What proportion of the population is using condoms?**
- **What behavioral factors are associated with condom use?**
- **How much are consumers willing to pay for condoms?**
- **Which condoms are consumers using?**
- **Are subsidies targeting the right consumers?**

Condom use at last sex is typically the key measure of behavior. Trends in use are also depicted over time, and condom use is best understood if disaggregated by geography, age, partner type, and behavior. Examples include condom use at last sex with a non-marital, non-cohabitating partner for general adult populations, or condom use at last sex for youth. Standard surveys available in many countries include:

- **DHS Surveys for general populations:** Demographic and Health Surveys (DHS) are nationally representative household surveys containing standard model questionnaires providing data for a wide range of monitoring and impact evaluation indicators. Standard DHS surveys have large sample sizes of between 5,000 and 30,000 households, and are generally conducted every five years.

Resource: [The DHS Program](#)

- **PHIA Surveys for general populations:** The Population-based HIV Impact Assessment (PHIA) survey measures the reach and impact of HIV programs in PEPFAR-supported countries. Each offers household-based HIV counseling and testing conducted by trained survey staff, with return of results. The results measure national and regional progress toward UNAIDS's 90-90-90 goals and guide policy and funding priorities.

Resource: [PHIA Project](#)

- **Bio-behavioral Surveys for Key Populations (BBS, formerly known as BSS):** Bio-behavioral surveys provide information on behaviors among key populations who may be difficult to reach through traditional household surveys, but who may be at high risk of contracting or transmitting the virus. BBS uses a consistent sampling methodology, data collection methods and indicators to track trends in behavior over time.

Resource: [2017 Biobehavioral Survey Guidelines \(The Blue Book\) by CDC](#)²

- **Modeling:** Other sectors, like family planning, use modeling to estimate modern contraceptive use on an annual basis. For HIV prevention, a similar modeling process could be used, but it would need to be standardized and supported by the larger prevention community. PHIA surveys, DHS surveys, and other national data sources could be used for base estimates and to understand patterns of use that feed into hierarchical models. Surveys among key populations would also need to be included to cover condom use by PWID, FSW, MSM, Clients, and other priority populations. In the absence of country-level data, global and regional estimates would be used, an approach deployed by FP2020.

Resource: [Commodity Gap Analysis](#) recently released by Avenir.³

User segmentation is research that identifies the target audience's needs, motivations and influencers, and how they affect condom use. Quality program segmentation can guide organizations in tailoring their programs to sub-populations most in need of condoms, with messaging relevant to that population. A number of studies can support user segmentation strategies.

- **Consumer insight studies** that examine behavior and use triggers can increase the effectiveness of program design for the consumer.

Resources: Commercial surveys, like this one by TNS on [Project Chitenga: Protector Plus Zimbabwe PSI's FoQus studies](#)⁴

- **Quantitative surveys** that identify factors associated with condom use, such as awareness, self-efficacy, and risk perception are best applied if based on established behavior change theory and analyzed through logistic regression. Results provide information to implementers on how to best design programs. Data are usually collected through repeated cross-sectional surveys and from a representative sample of the target population.

Resource: [PSI's Tracking Results Continuously \(TraC\) Surveys](#)⁵

Willingness to Pay (WTP) studies provide insights into consumers' price preferences for a product. An industry standard has been the [Foreit and Foreit method](#), which asks respondents a set of five hypothetical questions. Some implementers have not found this method helpful and have used alternatives:

- The van Westendorp price sensitivity meter, which is used to determine the best price for condoms by asking a series of four questions to understand perceived value: 1) At what price would you doubt the quality of the condom because it is too cheap?; 2) What price would you consider a bargain?; 3) What price would you consider expensive, but you would still buy the condom?; 4) What price would you consider too expensive so that you would opt for another product?
- Experimental strategies that offer respondents the opportunity to buy condoms through: 1) bidding games to identify the proportion of respondents willing to buy a given brand at or below different price points; or 2) discrete choice models, which yield estimates on the proportion of respondents who prefer to purchase a product compared to all other options.

Resource: [This report on WTP for condoms in five African Countries](#) from Abt Associates covers the two styles of data collection above, which are more appropriate.⁶

Condom Use by Source of Supply is important to understand how consumers access condoms. This is particularly important if we understand the importance of targeting subsidy to the poorest; for example, wealthier populations accessing free condoms is an indication subsidy is being mis-allocated. Very few surveys ask about "source of supply," specifically

²<https://www.cdc.gov/globalhivtb/who-we-are/resources/publications/bluebook.html>

³https://www.rhsupplies.org/uploads/tx_rhscpublications/Commodity_Gap_Analysis-2018.pdf

⁴<https://www.psi.org/research/methodologies/qualitative-studies-foqus/#segmentation>

⁵<https://www.psi.org/research/methodologies/quantitative-studies-trac/#overview>

⁶https://aidsfree.usaid.gov/sites/default/files/2017.10.25_af-retail-env-condoms-rep.pdf

the use of public, social marketed, and commercial brands. Adding photos of the condom packaging for each sector would avoid the “Kleenex problem,” where respondents use the social marketed condom brand to refer to the entire category of condoms, and would improve reporting.

Resource: This peer-reviewed paper in Health Policy and Planning: [A Total Market Approach for Condoms in Myanmar: The Need for the Private, Public and Socially Marketed Sectors to Work Together for a Sustainable Condom Market for HIV Prevention](#)⁷

Equitable distribution of condom users across wealth, geography, and gender categories is important to understand how well subsidy is targeted at those most in need. The DHS and other behavioral surveys contain questions about household assets, but the number of questions could be reduced for ease of data collection, implementation, and analysis. Ideally, equity would be calculated by source of supply (as noted above in the Myanmar paper).

Resource(s):

[The Equity Tool](#) for measures of relative poverty (by SES quintile).⁸

[The Progress out of Poverty Index \(PPI\)](#) for a measure of absolute poverty.⁹

AN UNDERSTANDING OF CONDOM SUPPLY IDENTIFIES

the sectors and actors contributing to condom supply and access, and can be generally characterized by analysis supporting market depth, and market breadth.

Market Depth can help us understand the total size of the market in volume & value, and trends over time. Components of Market Depth include market share and market value.

- **Market share:** The total volume and share of product on the market, including the breakdown of condoms distributed through the public, social marketing, and commercial sectors, is an important component of Market Depth. Market share can help us understand the relative contribution of sectors, and the general trend of that contribution over time.

- **Public sector distribution** data are usually based on commodities “pushed” from central stores, not “pulled” from decentralized sites. Data are often inconsistent across sources and make it difficult to monitor the effect of the condom programming at the district level. Triangulating available sources of public sector data is often the best bet to estimate public sector distribution.

Resource: This paper from PSI and the HC3 project highlights the need for investments in the quality and consistency of public sector distribution data down to the district level to track subsidy and the targeting of free condoms.¹⁰

- **Social Marketing data** are based on distribution and sales figures collected monthly.

Resource: DKT International publishes distribution data for Social Marketing programs that report their sales data to DKT on an annual basis. Historical reports can be accessed [here](#).¹¹

- **Commercial sector data** are often unavailable, but it is possible to estimate by triangulating data sources. For example, understanding volumes of just one or two larger brands can help to understand total commercial market size.

Resource: Commercial retail audits, like Nielsen, are the best sources of data. But in many low- and middle-income countries, retail audits are not commercially feasible. It is generally possible to roughly estimate commercial market contribution through in-depth interviews and triangulation of data.

⁷<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4353889/>

⁸<https://m4mgmt.org/equity/>

⁹<https://www.povertyindex.org/about-ppi>

¹⁰<https://www.psi.org/publication/hc3-zimbabwe-condom-report/>

¹¹<https://www.dktinternational.org/contraceptive-social-marketing-statistics/>

- **Market Value:** The value of the market is the average consumer price multiplied by market volume. Value trends can help us understand if a market is getting healthier, by becoming less reliant on subsidy, greater engagement of the commercial sector, or indicates a social marketing sector that is actively managing pricing.

Resource: Typically, a simple calculation of the total volume of social marketed and commercial condoms multiplied by price to consumer. Public sector condoms, which are usually distributed for free, are not included in the calculation.

Market Breadth helps us understand:

- What is product availability at different delivery points or outlets in the market?
- What is the range of products (including variants and brands) and price points available at different delivery points?
- What is perceived availability by users?

Components of Market Breadth include:

- **Price:** The range of price points for condoms on the market. Prices will range from zero (for free condoms) to the amount charged for the most expensive commercial brand. Social marketed condoms should be included in the price range as well.
- **Number of Brands:** The total number of condom brands on the market. An increase in the number of brands suggests choice is improving, and that the market is growing over time. Social marketed and commercial brands should be included.
- **Availability:** The degree to which condoms are present on the market. Availability can be measured by 1) market penetration - the proportion of outlets with condoms; or 2) coverage – the proportion of geographic areas where condoms are available according to pre-defined minimum standards.
- **Perceived availability**, or self-reported availability by users, should also be tracked on a regular basis, and can be as informative, if not more so, than actual access data. This is because most access data are not contextual to the user. 80% of pharmacies may carry condoms, but in some countries, pharmacies are concentrated in urban areas. Condom availability ‘when and where I need them’ is a question that can be included in condom use population-based surveys outlined above.

Resources:

PSI’s MAP surveys [here](#)¹² and [here](#)¹³ use Lot Quality Assurance Sampling (LQAS) to measure geographic coverage, quality of coverage, and access. MAP studies can also provide information on prices, number of brands, and stock-outs. While primarily used in the past for commercial retail outlets, they can be effective for measuring free distribution at priority outlets, such as guesthouses or bars.

FP Watch¹⁴ provides estimates for key family planning access indicators using nationally representative, cross-sectional outlet surveys. Condom availability is included in these studies. These studies are costly and have been conducted in just five countries, but provide rich data on brands, pricing, and visibility in both the public and private sectors.

Innovative practice: PSI has piloted a retail audit panel in Mozambique to generate condom market performance information routinely.¹⁵ PSI/Mozambique used a panel of retailers to collect data on volumes, stock rotation, product and brand variants, pricing, source of supply, and stock keeping units (SKUs). The method would require some modification (e.g., in-person data collection vs. mobile data collection), but could offer a compromise between full retail audits and LQAS.

¹²<https://www.psi.org/research/methodologies/geographic-studies-map/#overview>

¹³<https://www.psi.org/wp-content/uploads/2014/10/Measuring-Access-and-Performance-MAP-Studies.pdf>

¹⁴<http://www.actwatch.info/projects/fpwatch>

¹⁵Keller B, Winskell A, Wheeler J, Sievers D. (2018). Implementing a Retail Panel to Understand Markets. Washington, DC: Population Services International

Public sector distribution data should also be tracked regularly through logistic management information systems (LMIS). It is important to track distribution by sub-distribution channel (e.g., civil society targeting youth populations at risk) or specific populations (e.g., condoms distributed at brothels or treatment facilities to people living with HIV/AIDS, PLWHA) to understand and categorize whom condoms are targeting.

AN OVERALL ANALYSIS OF THE CONDOM MARKET CAN HELP US UNDERSTAND:

How the market is performing in relationship to enabling functions, such as regulations, financing, and supporting functions.

Mann Global Health developed a set of tools for market analysis in support of condom landscaping efforts that can be found here.¹⁶ The tools facilitate a common, disciplined approach to analyzing enabling environmental factors such as policy, financing, rules and regulation important to any market. The tools can also help to organize and support analysis of the data collected and outlined below.

CONDOMS NEEDS ESTIMATES CAN HELP US UNDERSTAND:

The number of condoms required to protect high-risk sex acts.

Condom Needs And Resource Requirement Estimation Tool estimates condom need at a national level. National-level estimates can then be aggregated into regional and global estimates. The tool generates estimates of total condom quantities and funding required to achieve national targets, and includes condoms for HIV prevention and for family planning. UNAIDS has defined condom need targets as 90% of high-risk sex acts covered by a condom at last sex. The calculator estimates the number of condoms needed to achieve 90% use disaggregated by population (e.g., sex workers) and behavior, including sex with a non-regular partner. The Fast Track Tool also highlights the gap between current condom use and estimated needs to achieve 90% use in high-risk sex acts. It can help model a total market approach to sustainable condom markets, factoring in contributions from all channels of delivery.

Resource: UNAIDS Condom Needs And Resource Requirement Estimation Tool¹⁷

AN UNDERSTANDING OF THE ROLE SUBSIDY PLAYS CAN HELP US UNDERSTAND:

How reliant the condom market is on external donor subsidy, and the trends in subsidy over time. The analysis of subsidy can include:

- **National budgets:** identifying domestic resources the government has allocated to support condom procurement.
- **Donor funding:** identifying funds spent on prevention and on condoms.

Resources:

- Institute for Health Metrics and Evaluation (IHME). *Financing Global Health 2016: Development Assistance, Public and Private Health Spending for the Pursuit of Universal Health Coverage*. Seattle, WA: IHME, 2017 and country specific data available from donors in country.
- Market reliance on subsidy is an indicator that maps out a country's reliance on external subsidy in support of commodities. While some governments do procure condoms using domestic resources, such funding is presumed to be less volatile and more sustainable in the long run, so domestic funding is not included in this calculation. Market reliance on subsidy is expressed as a percentage, and is essentially a weighted average of the role that subsidy plays in supporting condom markets. For example, if the commercial market is 33% of the total market and 0% reliant on subsidy, social marketing is 33% of the total market and reliant on 50% subsidy (that is, product is 50% cost recovery), and free distribution is 33% of the total market and completely reliant on subsidy, then the market is 50% reliant on subsidy. [Mann Global Health Landscaping tools](#).¹⁸

¹⁶<https://aidsfree.usaid.gov/collections/condom-programming>

¹⁷<https://marketbookshelf.com/publications/condom-market-landscaping-tool-6-unaid-condom-needs-assessment-tool/>

¹⁸<https://aidsfree.usaid.gov/collections/condom-programming>