10
Monitoring and evaluation

PATH/Gabe Bienczycki

The introduction of subcutaneous DMPA (DMPA-SC, brand name Sayana® Press) promises to expand women's access to family planning options by increasing opportunities for lower-level health workers and even clients themselves to administer injectable contraceptives. Insights from the first introductions can help inform new country experiences and transitions, whether small pilots or scaled delivery. This section discusses results and lessons learned during introduction pilots in four countries and provides recommendations to guide future efforts by ministries of health and implementing partners related to **monitoring and evaluation.**

INFORMING DECISIONS AND MEASURING RESULTS

Monitoring involves collecting, storing, and analyzing data from ongoing programs to inform decisions and help improve implementation. Monitoring data can provide insights into what is working well or not in a given program, without the added cost of evaluation. Careful analysis of monitoring data from the DMPA-SC pilot introductions helped PATH and partners assess whether the project was functioning as expected, identify where technical or programmatic course corrections were needed, and summarize project results. PATH worked with partners to develop indicators that linked directly to project goals and desired outcomes. The monitoring data ultimately helped measure the effect of introducing the DMPA-SC product, Sayana Press, as a new contraceptive product in each country's method mix and family planning program.

At the outset of pilot introductions, PATH collaborated with local and global stakeholders to build consensus on a set of global indicators across Burkina Faso, Niger, Senegal, and Uganda. Working with each national system, PATH developed a multicountry monitoring approach for these indicators and a central web-based system for entering and managing

data. Each country's introduction plan included a section describing the monitoring system. Defining the monitoring approach early on ensured that data collection could begin as soon as provider training and service delivery were under way in each country.

INTRODUCTION TIP

Plan the introduction monitoring approach early and thoroughly, and include a session on data collection for monitoring purposes in the provider training.

SELECTING AND DEFINING INDICATORS

PATH selected global indicators based on key interests of national stakeholders and donors to make decisions regarding scale-up and future investments in DMPA-SC. In addition to tracking volumes of doses administered, PATH's approach to monitoring DMPA-SC pilot introductions measured indicators related to new family planning users, youth, and switching to DMPA-SC from other methods, especially intramuscular DMPA (DMPA-IM)

Global indicators for DMPA-SC pilot introduction.

PATH tracked the list of indicators shown below across all countries for donor reporting and decision-making purposes; each pilot introduction country tracked a longer list of indicators. The service-delivery and logistics indicators were compared across all four pilot countries to illuminate results of various introduction approaches. Training indicators provided a framework for tracking implementation progress and contextualizing product uptake.

Service-delivery

• Number of doses of DMPA-SC administered to clients, by service-delivery channel.

• Number (and percent) of DMPA-SC doses administered to new users of modern contraception.

• Number (and percent) of DMPA-SC doses administered to users under age 20 years, ages 20 to 24 years, and ages 25 years and older (not available for Burkina Faso).

• Number (and percent) of DMPA-SC doses administered to users who switched from DMPA-IM (not available for Niger), and from other methods (not available for Niger and Uganda).

• The relative proportion of DMPA-SC and DMPA-IM doses administered, where both methods are offered side-by-side.

Logistics

• Number of doses of DMPA-SC distributed to health facilities.

• Number (and percent) of facilities with a stockout of DMPA-SC.

Training

• Number of training sessions held.

• Number of providers trained, by level/type.

• Number (and percent) of trained providers achieving competency in injectable administration (DMPA-SC and/or DMPA-IM).

Average monthly consumption, as described in the section on product distribution, is an additional indicator of keen interest to global donors and national family planning stakeholders. PATH did not track this indicator specifically because data on the number of doses administered to clients were more accurate measures of consumption for the pilot phase. If accurate and timely data on doses administered to clients are available in routine settings, they can be used to determine AMC. In the event of delays in reporting, these data could be used temporarily until actual consumption data (number of doses administered) are available.

During the design of the monitoring system, PATH paid careful attention to defining indicators consistently within each country, as well as globally. Harmonizing indicators across all countries allowed the team to conduct a cross-country analysis of monitoring data, which provided rich information on the outcomes of different training and introduction approaches (see Section 4: Planning the country introduction strategy). PATH found early on, however, that indicators were interpreted or defined in different ways by partners in different countries. For example, the definition of "new user of family planning" was debated in each setting. It could refer to a client trying a particular method for the first time, to a client who had used family planning in the past but had discontinued and was restarting anew, or to a client who had never before used any modern method of contraception. Ultimately, all four countries reached consensus consistent with the final definition and revised existing data collection tools as needed to reflect this understanding.

In addition, given that DMPA-SC is expected to increase access through more remote delivery channels, PATH found that it was important to determine how to break down (or disaggregate) data in ways that allowed for analysis by different channels (e.g., community based-distribution (CBD), mobile outreach, different types of facilities; see box).

It was also important to assess the degree of difficulty of, and value in, collecting each indicator. PATH linked each indicator to the project goals and desired outcomes and limited indicators to those essential for project monitoring and decision-making. In other words, only collect the data that you need. The most essential information can get lost in monitoring plans attempting to track a large number of indicators. At the country level, a process of negotiation among stakeholders was necessary to refine indicator lists. To separate the "nice to know" from the "need to know", PATH and partners applied criteria such as how feasible it would be to collect the data and how important the data would be for decision-making.

INTRODUCTION TIP

To avoid undue effort and expense, only collect data on monitoring indicators that are really needed, ensuring that all data are valuable and feasible to collect.

Some common family planning indicators have been defined and asserted by international agencies—such as Family Planning 2020 or the Reproductive Health Supplies Coalition's Take Stock campaign—to track progress toward international family planning commitments (see resources at the end of this section). These indicators can serve as a reference for nongovernmental organizations (NGOs) and ministries of health (MOHs) in countries

Monitoring community-based distribution.

Existing monitoring systems may not be equipped to collect and report data on CBD. Data may be rolled up together for an entire district, for example, with no information about which data come from community health workers (CHWs) and which data come from facilities they may be affiliated with (i.e., where the CHWs receive supervision, pick up products, and turn in data). To discern the contribution of a CBD program, it is necessary to break out service-delivery data from CHWs. Where there are limited systems to collect data at the community level, this requires:

• Extending the existing monitoring system to the community level.

• Training CHWs in data collection. During training, special care should be taken to ensure that CHWs understand monitoring indicator definitions and how to apply them consistently.

• In the case of national scale, adapting and updating the health information system (HIS) and LMIS to dissaggregate and to account for CBD of contraceptives to truly understand the contribution of DMPA-SC.

introducing DMPA-SC, where a multicountry monitoring system is not needed.

THE NEED FOR A MONITORING PLAN AND RESOURCES FOR IMPLEMENTATION

Once indicators were finalized, PATH developed comprehensive country monitoring plans to map out how data would be collected in each country, at what level, data sources (including data collection tools), reporting frequency, and parties responsible for data collection and reporting. The plan for each country was unique and tailored to

💡 **INTRODUCTION TIP**

Develop standard operating procedures, particularly if multiple organizations are collecting data.

leverage existing systems (see graphic). PATH also developed data flow diagrams and standard

operating procedures for data collection, which helped to define roles and responsibilities.

To develop the monitoring plans, PATH reviewed and assessed existing national HISs to determine how data collection for global indicators could be integrated into existing systems and what new systems would be needed. The PATH team visited health facilities at various levels to review data collection tools, LMIS, and HIS reporting forms. Modifications were sometimes as simple as training health workers to write in the method name (DMPA-SC or DMPA-IM) rather than simply writing "injectable" or ticking a box for injectables.

More complicated changes involved adding additional columns to family planning registers, or creating entirely new forms. For example, PATH found itself stretched to allocate sufficient human resources and budget for data collection in Senegal and Uganda, where DMPA-SC could not be integrated fully into the national system. PATH staff needed to pick up data at the health facility level on a quarterly basis in both countries because data flowing through the national

Data collection and reporting pathways
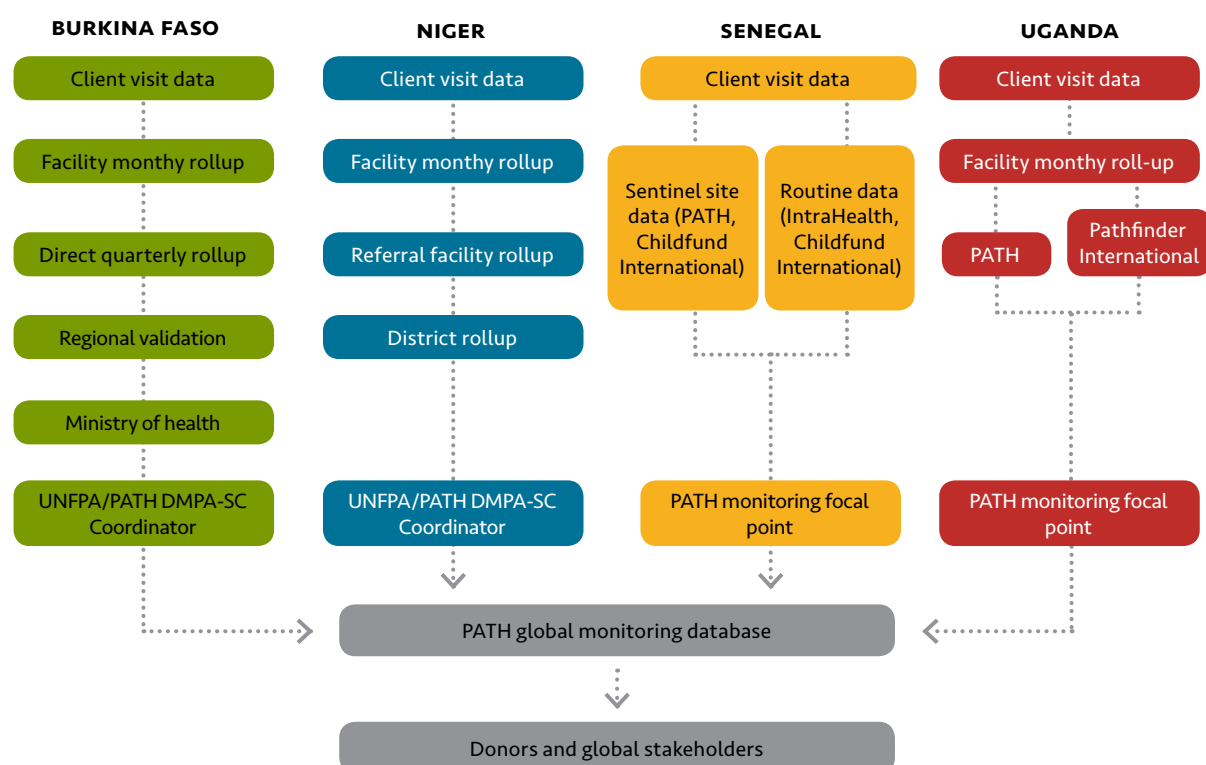
Note: UNFPA, United Nations Population Fund.

Monitoring community distribution in Uganda.

The Ugandan MOH pilot introduction strategy involved CBD of DMPA-SC in 28 districts through Uganda's existing national cadre of CHWs, which form Village Health Teams (VHTs).

Prior to pilot introduction, CBD of contraceptives by VHTs was rolled up into health center data, so the impact of the CBD program in Uganda had not been measured. PATH extended the monitoring system to the community level by developing a family planning register and client roster for VHTs, as well as a health center summary form for the VHT supervisor to aggregate CBD data. The family planning registers included pictorial images to facilitate comprehension by CHWs, many of whom have a low level of literacy.

PATH and partner organizations trained VHTs and health center focal points on proper data collection, storage, and reporting practices. With support from NGOs, health center focal points were responsible for overseeing VHT data collection, as well as working with VHTs to identify and correct any errors. VHTs received a small transport stipend to facilitate turning in data and restocking their supply of commodities each month. PATH's approach to monitoring CBD of DMPA-SC included at least quarterly supervision visits to health centers to monitor health center performance, review data collection practices, and pick up data. Partner NGOs reported their data to PATH staff in Uganda each quarter, and the data entry clerk entered all project data into the online database for subsequent analysis and donor reporting. Country-specific data analysis was performed and reported back to the country to facilitate decision-making about scale-up.
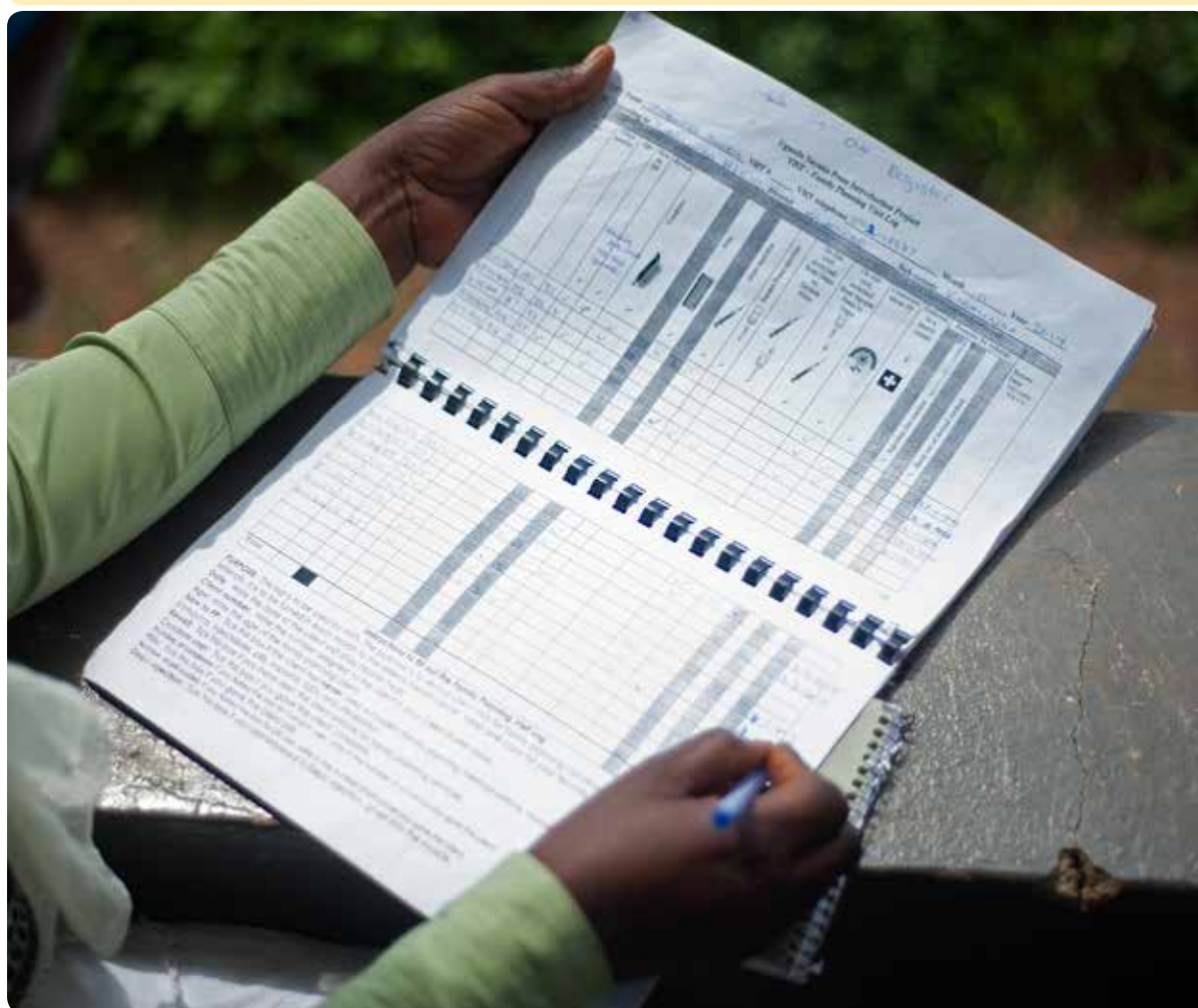
"The women coming for family planning are the last to be seen at the clinic so they go home late. It can take three hours to be seen. For many, it takes two to three hours to get here because there are no nearby health centers. Most women are farmers or businesswomen and need to work. We sometimes have stockouts of the needles, so we prefer that the device is together. There are 35 women enrolled in the Sayana Press self-injection study here. Most of the women are impressed and excited after their first injection because it's small and not painful."

– Susan Palma Anek, DMPA-SC study nurse in Uganda

system only reached the central level every six months and did not include the full range of product indicators. This approach yielded high-quality data, but was costly and time intensive. For maximum efficiency, both teams combined data collection missions with supervision visits. Fortunately, at the end of the pilot, the HIS in each country was revised to include DMPA-SC.

💡 INTRODUCTION TIP

Combine monitoring data collection and provider supervision visits to minimize costs.

METHODS FOR DATA COLLECTION AND REPORTING

The most appropriate data collection system will depend on what is currently in place in the country setting, as well as the available budget.

PATH used existing paper-based data collection and reporting systems in the four introduction countries. Where electronic health records and data collection systems are already established, DMPA-SC could be integrated. Projects with well-resourced monitoring budgets may wish to explore the use of mobile data collection and reporting. Regardless of the system, introducing or modifying data collection tools requires pilot testing the tools to verify health worker comprehension, appropriateness to context, and efficacy of reporting mechanisms. Several rounds of revision may be needed before tools are ready for implementation.

💡 INTRODUCTION TIP

Pilot test monitoring tools to make sure providers understand them and that they work within systems.

DMPA-SC project coordinators intervened at the district level to pick up data and entered these data into a centralized web-based SharePoint database to facilitate timely access to project data for decision-making and donor reporting. Having data from all four countries in one database facilitated cross-country analysis. Where DMPA-SC is introduced on a pilot basis, some form of parallel system may be required to collect data for key indicators needed for decisions about future scale. Where DMPA-SC is introduced at national scale, however, the national HIS should be adapted to accommodate DMPA-SC as well as any new delivery channels.

> **INTRODUCTION TIP**
>
> Wherever possible, DMPA-SC should be integrated directly into the national health information and data collection system.

EVALUATING DMPA-SC INTRODUCTION: UNDERSTANDING COST, CONTINUATION, AND IMPACT

While monitoring provides data to help understand trends, evaluation helps understand why certain results are obtained and can be very useful to inform decisions about how to revise program implementation. Some questions cannot easily be answered through the analysis of monitoring data and may merit more in-depth program evaluation or operational research. For example, in the four DMPA-SC pilot introductions, it was not possible to track how long each woman who received DMPA-SC continued using the method, and whether those women tended to keep using this new method longer than other existing methods. Most country systems do not follow and report on individual clients over time through the HIS because it is difficult to do so accurately. Numerous unanswered questions about DMPA-SC among donors, country governments, and family planning implementers can only be answered through careful evaluation, ideally timed to coincide with product introduction. For example:

- Will DMPA-SC introduction result in increased injectable use and a higher contraceptive prevalence rate? For example, does DMPA-SC contribute to improved continuation rates for injectable clients compared with the alternative DMPA-IM? What about when it is administered by providers versus self-injected?

- Will DMPA-SC contribute to reducing unmet need for family planning? Will it draw new users of modern family planning methods to initiate and/or continue using contraception? What about young women and adolescent girls?

- What is the cost of adding DMPA-SC to the method mix, and how does that cost compare with the cost of offering DMPA-IM?

- How cost-effective is DMPA-SC (from providers or self-injected) compared to provider-administered DMPA-IM? What is its relative contribution to preventing unintended pregnancies and their health consequences for women and children?

Evaluators and researchers should also consider using qualitative methods in DMPA-SC introduction. Qualitative approaches can help program teams to understand stakeholder, community, and women's attitudes toward DMPA-SC, or injectables in general, prior to introduction and can provide important clues about introduction approaches that may work best in a particular context. In addition, qualitative methods can be very helpful during the introduction of a new technology like Sayana Press by uncovering provider and client attitudes and beliefs about the product, illuminating health system issues such as monitoring data collection flow or stockout problems, and providing rich information about the impact of the introduction on women, couples, families, and communities.

When the pilot introductions began in 2014, PATH developed a research agenda to begin answering some of the key questions above and began to explore the feasibility and acceptability of self-injection with Sayana Press—an emerging priority. Research studies began about a year after the pilot introduction phase began, building on stakeholder, provider, and client familiarity with the product to maximize success. This research agenda was developed in consultation with country stakeholders, MOHs, and global donors.

PATH's DMPA-SC research portfolio.

Ongoing research studies on DMPA-SC continue to augment the growing evidence base for understanding the potential of this product, particularly for self-injection. Research conducted in prior years included a review and assessment of needs related to home administration in low-resource settings, provider and client product acceptability studies in Senegal and Uganda, a preference study among HIV-positive women in Uganda, and qualitative research on home and self-injection in Ethiopia, among other works. Many of these resources can be accessed at: sites. path.org/rh/recent-reproductive-health-projects/sayanapress/sayanapress-resources/. PATH and country governments are currently conducting research to address information gaps and better understand operational and programmatic considerations related to self-injection in sub-Saharan Africa. Launched in 2015, the studies are outlined below.

Study topic	What we learned/will learn (outcomes)	Countries
Self-injection stakeholder perspectives	Results of the study in Senegal and Uganda helped inform the operational feasibility study design (see Stakeholder Views on Self-Injection of DMPA-SC in Senegal and Uganda. Available at www.path.org/publications/detail.php?i=2688). Analysis enabled PATH to tailor advocacy and communications about self-injection based on country readiness.	Uganda Senegal Burkina Faso Niger
Self-injection operational feasibility	Most women can competently and independently self-inject. One-on-one training and a client instruction booklet seem to help maximize injection competence. Innovative approaches are still needed for efficient training, support, and product waste management in self-injection programs. See results of Uganda study published in "A prospective cohort study of the feasibility and acceptability of depot medroxyprogesterone acetate administered subcutaneously through self-injection." Available at http://www.contraceptionjournal.org/article/S0010-7824(16)30459-0/pdf.	Uganda Senegal
Self-injection acceptability	Adolescent girls found DMPA-SC easy to use, and many of them (but not all) could envision trying self-injection themselves. Providers were quite positive about self-injection as an option for women and adolescent girls (but not unanimously). Training, including advice on storage and disposal, and follow-up were identified as critical elements for the design of a future self-injection program.	Uganda
Self-injection continuation and cost-effectiveness	Whether self-injection of DMPA-SC contributes to longer continuation, relative to DMPA-IM administered by providers. Cost-effectiveness of self-injected DMPA-SC compared with DMPA-IM from providers. Results anticipated late 2017 for Uganda and mid-2018 for Senegal.	Uganda Senegal
Provider-administered continuation and cost-effectiveness	Whether DMPA-SC administered by a CHW contributes to longer continuation and is cost-effective, relative to DMPA-IM. -------------------------- Whether DMPA-SC administered at a clinic or via outreach contributes to longer continuation and is cost-effective, relative to DMPA-IM. Results anticipated mid-2017.	Uganda -------------- Burkina Faso

Beyond PATH's research portfolio and studies led by FHI 360 or other international institutions, MOHs and implementing partners in countries that are introducing DMPA-SC may choose to explore a wide range of research topics and lines of inquiry to generate additional evidence. Examples of research topics that could be explored in future DMPA-SC introduction programs include:

Contraceptive continuation

• How long do women who self-inject continue with this method?

• What factors predict how long women will continue injecting?

• What kinds of programs lead to higher continuation rates?

• Do women who discontinue self-injection shift to other methods, return to provider-administered injection, or stop contraception?

Impact

• How successful is the program in reaching new family planning users?

• What impact does the program have on the contraceptive prevalence rate?

• Do rural women have increased access to contraception?

Implementation science

• What kinds of training formats are most cost-effective?

• What delivery channels work best to reach the most women?

• What health system factors influence program success?

• What delivery channels work to reach different segments of women (younger or older, married or unmarried, etc.)?

PATH /Siri Wood

RECOMMENDATIONS: MONITORING AND EVALUATION

- **Start early.** Developing key indicators and designing the monitoring system should coincide with planning an introduction or scale-up strategy. Delays in implementing the monitoring system will translate to delays in data collection and reporting and will likely result in missing information about the product's impact.

- **Use consistent definitions.** Consistent definition of indicators within and across countries is critical to obtain meaningful results. Indicators should be carefully crafted to ensure they will provide meaningful information. Sometimes an absolute number is meaningful to get a sense of volume, but at other times a percentage calculation can provide richer information.

- **Keep the scale of data collection manageable** and only collect data you need. To avoid undue effort and expense, first ensure that all data are valuable and feasible to collect.

- **Budget adequately for data collection.** Despite the high value of monitoring data, the time and financial resources needed to conduct monitoring well are often underestimated. Be sure to adequately prepare and finance the monitoring plan in advance. Until a new product like DMPA-SC is integrated into a country's LMIS and HIS (after the pilot phase), it may be necessary to plan and budget for separate data collection in the field. For maximum cost-efficiency, data collection missions can be combined with supervision visits.

- **Ensure the monitoring approach captures the contributions of more peripheral channels.** If CBD is introduced but data are rolled into the referral facility, the ability to measure the CBD component of a program is lost. When designing a monitoring system and forms, it is ideal to intentionally disaggregate data for any new delivery channels—such as CBD—to enable analysis of service innovations.

- **Train providers on monitoring tools and systems.** It is most cost-efficient and strategic to train providers on the monitoring tools at the same time they are trained on DMPA-SC. This approach has potential to improve data quality and reduce gaps in data collection. Training on data collection through supervision is more costly and requires correcting already established habits.

- **Consider whether evaluation or operations research activities are needed to provide additional information.** Monitoring data help understand numbers and trends; however, some questions are best answered through in-depth qualitative or quantitative evaluation (e.g., client or provider surveys) or operations research.

Monitoring Sayana Press Introduction: Final Pilot Project Results. Available at www.path.org/publications/detail.php?i=2551. PATH produced semiannual summaries of monitoring data compiled through a global database during pilot introductions. This brief summarizes the final cumulative analysis of data collected during the pilots and published in late 2016.

Key Indicators for Community-based Access to Injectable Contraception Pilot Studies. Available at www.k4health.org/sites/default/files/Key%20Indicators%20for%20CBA2I%20Final%20with%20Branding.pdf This document presents potential process and outcome indicators organized according to phases of CBD pilots along with related evaluation questions, data sources, and measurement tools. The list can be adapted to the local context and program goals to assess a pilot's progress toward intended outputs and achievement of goals.

PATH Sayana Press Introduction Project: Global Monitoring Guide. Available at www.path.org/publications/detail.php?i=2551. This guide describes the global indicators PATH found particularly relevant for Sayana Press pilot introduction when monitoring data were generated and analyzed across a number of countries, as well as guidance on definitions, and suggested data sources and measurement levels.