Estimates of Progress: Integrating Private Sector Data into FP2020 Annual Estimates

Introduction

In recent years the Track20 Project has made large strides in increasing the use of routine data (e.g. Health Management Information Systems or HMIS) to inform progress in increasing mCPR.* This data is used to inform annual estimates of progress published in FP2020's annual progress report. In the 2018 Progress Report, 13 countries used services statistics to help inform their current progress. This is done through a two-step process. First, using a tool developed by Track20, Estimated Modern Use (EMU), service statistics are translated into estimated use. Next, these estimates are used in the Family Planning Estimation Tool (FPET), allowing the service statistics to influence estimates and projections of contraceptive prevalence.

Generally, countries include service delivery numbers or commodities provided via the public sector and some provided via NGO partners within the EMU tool (when this data is reported into the government HMIS system). Currently, accounting for the remaining missing private sector data is dealt with via a methodology developed by Track20 using DHS data on method source. This document explores potential alternatives to this approach by including private sector sales data into the EMU tool.

Integrating Private Sector Data into HMIS Systems

The inclusion of all sectors within HMIS is being actively explored by countries as they move toward UHC so expanding the visibility of private sector provision, especially the commercial sector, will align with priorities of many health systems. In many countries parts of the private sector are already routinely reporting into government HMIS systems, most commonly NGOs; however, products distributed through social marketing programs and the more "commercial" private sector are less often included. Track20 has been working on expanding inclusion of NGO data that is delivered through social franchising clinics and examining opportunities to include data from social marketing, typically for short term methods via pharmacies. Data from social marketing sales, such as PSI data, is now being included in DHIS2 in Zimbabwe and is being explored in a few other countries where there is substantial social marketing of methods. While data from the private commercial sector is a harder reach, this too is beginning to be mandated through legal mechanisms, already in place in Ethiopia and Rwanda. Other work by SHOPS Plus has also focused on increasing routine reporting by private sector providers into HMIS systems. This work by Track20 and SHOPS Plus can be seen as a "long-term" fix – in a country where the full private sector routinely reports into the HMIS system, no further adjustments would be needed. However, for many countries achieving full reporting may not be feasible (especially from retail outlets and pharmacies) or may have a long-time horizon.

What is currently done in EMU

The current approach used in the EMU tool is to estimate what share of data is captured by the system for each method. This is done based on DHS data on source by method and information about current reporting.

For example, if a country knows that all NGO clinics report into their HMIS system but no other private entities, coverage would be estimated as the sum of public and private NGO (the first two columns in Table 1 below).

Table 1. Illustrative example of method source used for EMU adjustment

	Public	Private: NGO	Private: Medical	Private: Pharmacy	Other
Sterilization	80%	5%	15%	0%	0%
IUD	75%	15%	10%	0%	0%
Implant	85%	10%	5%	0%	0%
Injectable	40%	20%	5%	35%	0%
Pill	30%	10%	20%	40%	0%
Condom (M)	20%	20%	15%	40%	5%
Condom (F)	30%	40%	10%	20%	0%

For each year, volumes of services or commodities from the HMIS system would then be 'inflated' based on this adjustment factor to estimate the full market. For example, let's assume a country's HMIS system reported 100,000 implant insertions, and based on the table above this is expected to represent 95% of the market (Public + Private: NGO). Then, the total number of implant insertions for the year would be estimated as 100,000/95% = 105,263. A similar calculation is done for each method.

# Potential Alternative Process

This document explores an alternative approach to using the adjustment factors described above that incorporates data from private sector players into the EMU tool itself. Ideally, data would represent the full private market (NGO services, social marketing sales, commercial- including both clinical services and product sales) therefore negating the need for adjustment factors. In some cases, data may only be available for part of the private sector market in which case adjustment factors would still be needed to estimate the remaining missing volumes.

Several steps are needed for this alternative process to supplement what is already done as part of implementing the EMU tool:

1. Gain an understanding of who makes up the private sector through:

    a. Discussions with partners

    b. Analysis of DHS brand data (pills, condoms)

    c. Review of existing private sector assessments

2. Map what data is already being collected within the HMIS – in some cases, some private sector providers (especially NGOs) may already be reporting into the HMIS system.

3. Collate private sector data sources and determine what values are not already represented in the HMIS in order to create aggregate totals of either visits or commodity sales, by method, that is not already included within the HMIS system. Take note of where in the supply chain the data is being captured and ensure there is no double counting across sources (e.g. sales to a pharmacy & product dispensed from a pharmacy).

4. Determine what share of the market not already represented in HMIS this collated private represents, and create new adjustment factors if needed to account for any remaining market share.

5. Add these values (after adjustment, if needed) to the HMIS data to get a full picture of the market.

Illustrative Example of Mapping Private Sector Data
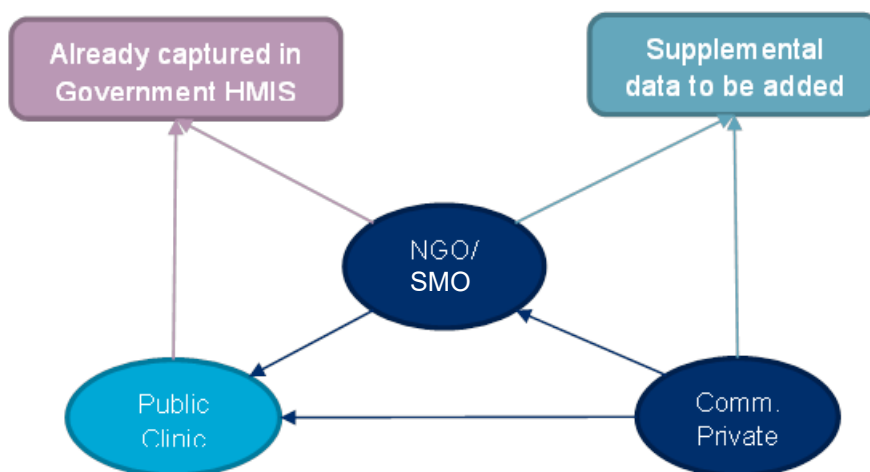
What private sector data is available?

Table 2 below provides a summary of potential data sources for private sector family planning data. In some cases this data is already publicly available, in other cases the data can be requested from partners in countries or may need to be purchased from private companies.

Table 2. Potential sources of private sector data

Source	Notes	Access to data
DKT Social Marketing Statistics	Sales volume by method Includes reporting by DKT, PSI, MSI as well as other SMOs *For PSI, includes all channels; for MSI only includes social marketing channel*	Publicly available (Excel): https://www.dktinternational.org/contraceptive-social-marketing-statistics.
PSI	Sales volumes and service provision	Publicly available (PDF): https://www.psi.org/publication/2018-year-end-global-impact-report *Can request in Excel format from PSI*
DKT	Sales volumes and service provision; includes public sector and NGO sales in some countries	Publicly available (Excel) : https://www.dktinternational.org/resources/results
MSI	Sales volumes and service provision by delivery channel	Must request from MSI
IPPF	Number of services delivered	Must request from IPPF local affiliate
Other local implementing partners data	Data collected will vary by country (may include visits, service provision and/or sales volumes)	Must request this data from local implementing partners
IQVIA	Distribution volumes (from wholesale distributers); may also include NGO/SMO volumes; only includes implants, injectables, and pills.	Data must be purchased; one year of data available for some countries (already purchased), but no trends
Nielson	Distribution volumes (from wholesale distributers); may also include NGO/SMO volumes; mostly condoms (may be other methods)	Data must be purchased; some may be available via Abt/SHOPS Plus for select countries

Exploring potential to add private sector data into EMU

In order to identify which countries to select for potential inclusion, a matrix was developed to look at overlap between Track20 countries, countries with a SHOPS Plus presence or past SHOPS Plus work, and existence of private sector data sources (see Annex 1 for this matrix and details of factors considered). **Nine countries were identified by this process for in-depth analysis**. While detailed results by country are not publicly available, a summary of key findings and recommendations is presented in Table 3.

Data on the commercial private sector is limited. In some cases this data may be purchased from companies such as IQVIA or Nielson; however, they do not always have commercial retail data available in the countries of interest. For countries with large commercial FP markets, further work is needed to understand if and how commercial data can be leveraged.

In cases where NGOs and/or socially marketed products make up a large portion of the private sector market, there is often close alignment between the current EMU private sector adjustment and private sector user estimates. When the private sector adjustment underestimates the available private sector data, it is often because a method that is largely acquired in the private sector is not represented in the public sector service statistics, so the adjustment factor either largely inflates from a very small number, or the method is missing in the case that public provision is zero. Condoms are particularly problematic when using the adjustment factor because in many countries a large percentage of women report their condom source as shop, church, friend, or other. Condoms also present a challenge due to limitations in assumptions needed to convert volumes of condoms sold or distributed into users, and accounting for dual protection (e.g. condoms being given to women who also receive other FP methods). In some countries clean trends were found, while in other countries trends were problematic. The EMU is already set up to calculate with and without condoms, because of these issues. **Where private sector condoms are a large share of the method mix, using private sector data instead of the adjustment factor may produce a more viable trend.**

In some cases estimated users based on HMIS data do not reconcile closely with recent survey data; this is especially true in countries where rapid increases in Long-acting reversible contraceptives (LARCs) are seen within HMIS data. In these cases, it is more difficult to examine the benefits of adding private sector data, as it was difficult to reconcile total users against survey data. Further analysis of both HMIS and private sector data is needed in these countries before recommendations can be made.

Despite these limitations, analysis found that **in most countries examined using the available private sector data, as opposed to the private sector adjustment, produces similar or better results for inclusion in EMU**. This data better reflects short term shifts in the method mix of private sector commodities and services that are not captured when using the adjustment based on FP source data from the DHS that is infrequently updated. For some countries, a further adjustment may still be needed to account for the remaining missing commercial sector; however, limited data availability has not allowed this adjustment to be explored at this time.

Table 3 below provides a high-level summary of the findings for the nine selected countries (see Annex 1 for details on country selection). Detailed results for each country are not publicly available. These findings are based on preliminary desk work and should be validated through more in-depth engagement with country stakeholder and examination of additional data sources available in country.

Table 3. Summary of preliminary recommendations and findings

Country	Preliminary Recommendations & Key Findings
Afghanistan	DHIS2 now includes ASMO and some private pharmacies and providers so no additional work is needed
Benin	Add partial data from PSI (pill and condom sales)—consider adding further discount for supply chain wastage
Burkina Faso	Integrate MSI data from social marketing sales (mostly pills, condoms)
Cameroon	Don't use social marketing data due to inconsistencies; very high condom use creates issues with reliability
Cote d'Ivôire	Add AIMAS data on social marketing sales
Kenya	Add NGO and social marketing data; but need to confirm in country not double counting (as there is work underway to include private sector providers in HMIS)
Madagascar	Add social marketing data for condoms; other methods appear to be already be included in EMU
Nepal	Add NGO and social marketing data; additional data may be available locally. Need to confirm no double counting of NGO data as there is work underway to include private sector providers in HMIS
Tanzania	Add social marketing data; NGO provision already captured in DHSI2

Recommendations

Several challenges exist that must be addressed in order to integrate private sector data into EMU that is not already being captured within HMIS as these are often collected in a different way and sometimes at different points in the supply chain. Based on review of data and initial scoping, some recommendations have been made for consideration when including private sector data:

- As a short-term measure, while pursuing the long-term goal of integrating additional private sector data into country HMIS systems, adding additional private sector data (that is not already captured in the HMIS) to EMU instead of the private sector adjustment factor is generally recommended. However, additional adjustment may be needed when data is only available from NGOs or social marketing programs and it is known that there are significant private commercial volumes beyond this distribution.
- Given the variability of the size of the private sector, as well as the level of integration of private sector clinic data into national service statistics, in some countries it may be most appropriate to limit the inclusion of private sector data (especially social marketing) to specific methods, such as pills.
- Condom volumes are particularly problematic for modeling, as condoms may be used for

dual or HIV protection only purposes, as well as handed out freely. Condoms need to be considered carefully, and potentially include a discount factor or even exclude altogether in contexts where they are a small share of the method mix (as is already common practice with EMU).

- For countries with very small private markets, it may not be worth the effort of going through this process as it will have little impact on overall estimates.
- Emergency contraception has only recently begun appearing in survey method mixes. In the short term, it may be best to exclude it from this analysis. There are often large volumes captured in social marketing sales data that are not able to be reconciled with survey data.
- Further exploration is needed to get a fuller picture what data is being captured by companies like IQVIA and Nielson to better understand how these estimates can be leveraged, especially to give visibility into the commercial private sector. As a next step, test cases have been identified to compare IQVIA data with private sector data from other sources.

Next Steps

This work represents the first comprehensive attempt to look at the potential to leverage additional private sector data that is not already being reported into HMIS within the EMU Tool across a wide range of countries. While this work has highlighted many challenges, there are also some promising examples of where inclusion of private sector data into EMU could improve estimates. This analysis has been done through a global desk review, and so has not been able to fully address the needs of each country. Further, no commercial sector data was purchased for this exercise; opportunities may exist in select countries to leverage additional data. Through further collaboration with Track20, priority countries will be identified for more intensive country work with the aim of expanding the inclusion of private sector data into the EMU Tool, and ultimately in the production of FP2020 Core Indicator estimates.

Resources

Track20's Service Statistics to Estimated Modern Use (EMU) tool:
http://www.track20.org/pages/our_work/innovative_tools/SS_to_EMU_tool.php

Track20's Family Planning Estimation Tool (FPET):

http://www.track20.org/pages/our_work/innovative_tools/FPET.php

https://fpet.track20.org

Annex: Matrix of Potential Countries for Inclusion in Analysis

Country	Track20/Service Statistics Use Potential		SHOPS Plus role in country and potential to leverage existing work		Potential to leverage private sector data		Size of private sector for FP (DHS Source data)				Included or reason for exclusion
	SS Used in 2018 FPET	SS used in 2019 FPET	SHOPS Plus relationship?	Private Sector Assessment	IQVIA	Other	Public	Private Medical	Other	Survey	
Afghanistan	Yes	Yes	Current FS program			SM sales (MSI, ASMO)	47%	47%	7%	2015 DHS	Included
Benin		Yes	Current private sector bilateral	PSA (2013)	pills	SM Sales (DKT)	43%	33%	24%	2011-12 DHS	Included
Burkina Faso		No*		macro-level assessment (2014)	pills	SM Sales (MSI)	74%	11%	15%	2010 DHS	Included
Cameroon	Yes	Yes		macro-level assessment (2014)	injection, pill	SM Sales (PSI, DKT)	20%	27%	53%	2011 DHS	Included
Côte d'Ivoire	Yes	No*	Current private sector bilateral	PSA	injection, pill	SM Sales (AIMAS, DKT)	26%	46%	28%	2011-12 DHS	Included
Ethiopia		Yes	Current private sector bilateral			SM Sales (DKT, PSI, MSI)	84%	16%	1%	2016 DHS	*Small private sector*
Guinea		Yes			injection, pill	SM Sales (PSI)	29%	40%	31%	2012 DHS	*Old DHS*
Kenya		No*	FS program under SHOPS; current staff based there		injection, pill	Nielson (condom) SM Sales (MSI, DKT)	60%	34%	6%	2014 DHS	Included
Liberia	Yes	No				SM Sales (PSI- condoms only)	72%	24%	4%	2016 MIS	*Only condom data*
Madagascar		No*	Current SHOP Plus FS program	PSA		SM Sales (PSI)	73%	25%	1%	2008-09 DHS	Included
Malawi		Yes	FS program under SHOPS			SM Sales (PSI)	79%	6%	15%	2015-16 DHS	*Small private sector*

Country	Track20/Service Statistics Use Potential		SHOPS Plus role in country and potential to leverage existing work		Potential to leverage private sector data		Size of private sector for FP (DHS Source data)				Included or reason for exclusion
	SS Used in 2018 FPET	SS used in 2019 FPET	SHOPS Plus relationship?	Private Sector Assessment	IQVIA	Other	Public	Private Medical	Other	Survey	
Mali		Yes		PSA (HFG)	injection, pill	SM Sales (PSI, KJK)	72%	23%	6%	2012-13 DHS	*Small private sector, low SHOPS Plus priority*
Mozambique	Yes	Yes				SM Sales (PSI, DKT)	77%	16%	7%	2011 DHS	*Small private sector, low SHOPS Plus priority*
Nepal	Yes	Yes	Current SHOPS Plus FS program			Nielson (condom-urban); SM Sales (CRS, MSI, PSI)	69%	25%	5%	2016 DHS	Included
Niger		Yes		macro-level (2014)	pills		85%	5%	9%	2012 DHS	*Small private sector, low SHOPS Plus priority*
Nigeria		Yes	Current SHOPS Plus FS program			SM sales (PSI, DKT, MSI)	29%	60%	11%	2013 DHS	*Potential, would need State data*
Pakistan	Yes	No	closed SHOPS Plus FS program		injection, pill	SM sales (PSI, DKT)	44%	43%	14%	2017-18 DHS	*Potential, but low SHOPS Plus priority*
Rwanda	Yes	Yes	Pursuing Pop Core work			SM Sales (PSI/SFH)	91%	4%	4%	2014-15 DHS	*Small private sector*
Senegal		Yes	Current SHOPS Plus FS program		injection, pill	SM sales (ADEMAS, DKT)	87%	12%	1%	2017 DHS	*Small private sector*
Sierra Leone	Yes	No				SM Sales (MSI- EC condom only)	68%	28%	4%	2013 DHS	*Only EC and Condom data*
Tanzania	Yes	Yes	Current SHOP Plus FS program			SM Sales (PSI, DKT)	61%	34%	6%	2015-16 DHS	Included

Country	Track20/Service Statistics Use Potential		SHOPS Plus role in country and potential to leverage existing work		Potential to leverage private sector data		Size of private sector for FP (DHS Source data)				Included or reason for exclusion
	SS Used in 2018 FPET	SS used in 2019 FPET	SHOPS Plus relationship?	Private Sector Assessment	IQVIA	Other	Public	Private Medical	Other	Survey	
Togo	Yes	Yes		macro-level (2014)	injection, pill		53%	21%	26%	2013-14 DHS	*Small private sector, low SHOPS Plus priority*
Zimbabwe	Yes	Yes			Injection, pill	SM Sales (SOMARC)	73%	22%	5%	2015 DHS	*Potential to purchase IQVIA data*

*When the analysis began, these countries had the potential to use services statistics in 2019, so they were included.