

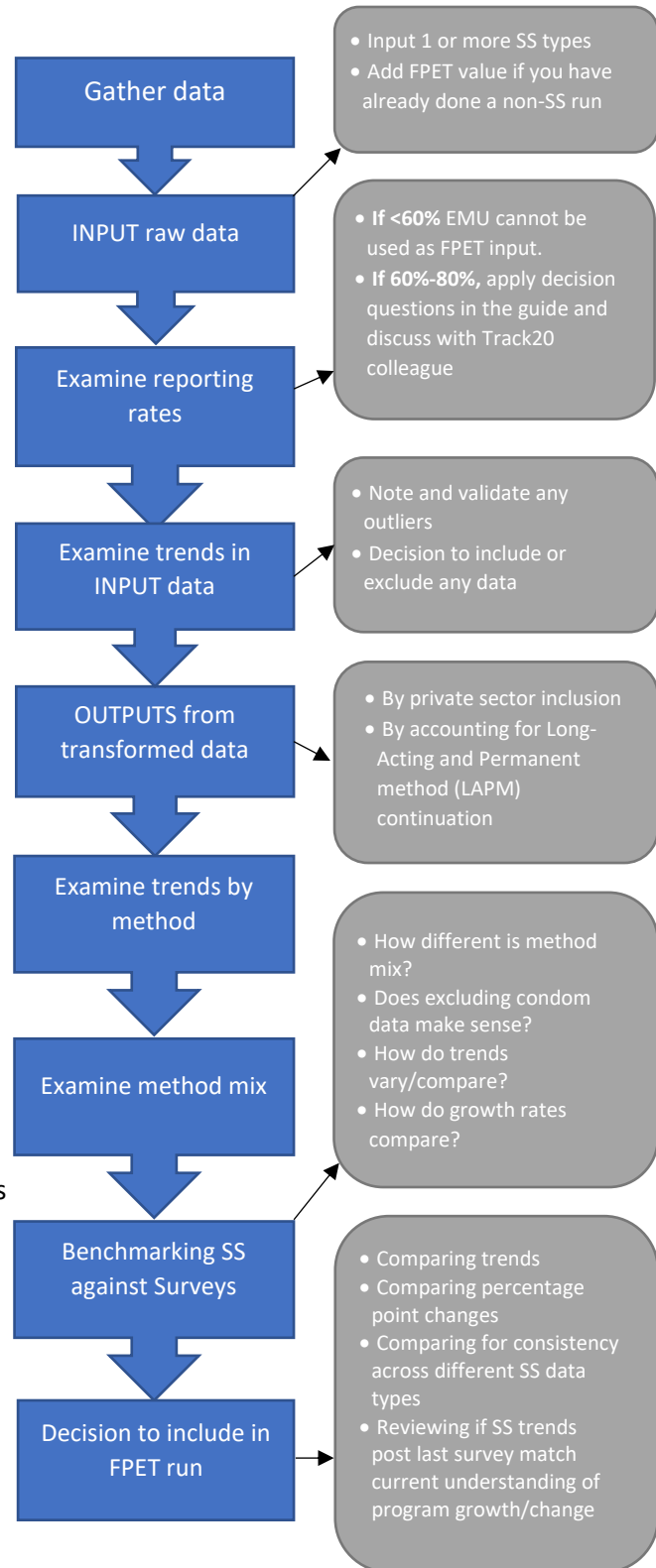
Tool Background

Track20 has developed the SS to EMU tool¹ to convert family planning service statistics into one single metric of **Estimated Modern Use (EMU)**, which can be used to estimate the total volume of family planning services in years between surveys or on a quarterly basis. The Service Statistic to EMU (SS to EMU) tool assists countries in reviewing their service statistic data, an important step in itself, and then converts the data into EMU, which can be compared against mCPR from surveys or other models. The tool can also be used to estimate EMU at lower geographic levels (states, districts or any level that has service statistics) where survey data may not be available. While the EMU is meant to approximate mCPR, it is not a measure of prevalence. What it can do is help countries track changes in trends between surveys, and be used as a cross-country, international FP indicator.

The EMU can be used as an input into the Family Planning Estimation Tool (FPET), which does calculate estimates for current and future mCPR, based on a variety of data sources. Inputting the EMU allows FPET to consider service statistics in its calculation of estimated mCPR, unmet need and demand satisfied by modern, and can play an important role in recognizing changes in trends between surveys.

While its role in calculating mCPR through FPET is important, the EMU metric itself, and the data review process associated with use of the conversion tool, have value on their own in terms of improving data quality and use, opening dialogue between data and program staff, and providing regular tracking of trend changes between surveys. The SS to EMU tool transforms several types of generally available service statistics data (family planning commodities distributed to clients, family

Process Highlight Map



planning visits, or family planning users) into the single EMU metric and estimates annual growth rate and method mix. With the EMU, countries can use their own data to answer the questions, “since our last survey, has our trend slowed down, stayed the same, or accelerated,” and “what does that mean for our programming and investments?”

How can this guide help me?

The SS to EMU tool has been designed with a simple and user-friendly interface. Though gathering and inputting the right data into the tool is a straightforward process, we have learned through experience that there are points at which users can benefit from a few guiding questions to help them think through their own data and context, and how best to proceed in the tool. This guide flags for the users those points in the process where stopping to consider key points or engage in discussions may be helpful.

This is not a step-by-step user guide to the tool. **Only points in the process where additional clarification or guidance has been shown to be helpful are highlighted. Because not every step is discussed here, you may see places in the guide where it skips from talking about Step 1 to Step 3 because clarification is not necessary for Step 2.**

The questions and guidance included in this document are intended to help you better understand, interpret, and contextualize service statistics data, often by asking you to compare service statistics and survey data. However, it is important to keep in mind that these two data types are different and are not expected to produce the same results. Surveys and service statistics gather their data differently: surveys are a sample of the total population of women of reproductive age in the survey area, and service statistics are essentially a full listing of women that visit health facilities and providers. There are clearly overlaps in who is recorded in the two approaches, but the groups are not the same. However, even though the values are not expected to be the same, comparing them can provide insights into the quality of service statistics. The trends from surveys and service statistics should be the same during overlapping time periods. By looking at these trends, you can gain insight into the quality of your service statistics.

Gathering your data

The tool requires the following data inputs

1. ***One or more of the following service statistics data sets, disaggregated by contraceptive method:***
 - a. 1) family planning commodities distributed to clients,
 - b. 2) family planning commodities distributed to health facilities,
 - c. 3) family planning visits,
 - d. 4) family planning users
2. ***Population of all women of reproductive age 15-49 (WRA).*** The EMU Tool contains national projections of WRA based on the latest UNPD World Population Projections (WPP), however a country or sub-national unit (state/region/province/county etc.) may decide to use other data sources such as national or sub-national census etc.

3. **Survey data on Modern Contraceptive Prevalence Rate (mCPR).** This includes Demographic and Health Survey (DHS), Multiple Indicator Cluster Survey (MICS), Performance, Monitoring and Accountability (PMA2020) surveys and so on. mCPR data based on an All Women population (rather than Married only) is preferred if available.
4. **Modern contraceptive method mix.** This is the proportion of modern contraceptive users, distributed by the method they are using, as reported in the most recent survey (DHS, MICS, national survey etc.) data.
5. **Reporting rates.** The user will be asked to enter the annual reporting rates (percentage) for the report through which the family planning data they have is reported. Having an accurate reporting rate and understanding how this rate is calculated in the HMIS system will be helpful to have on hand before starting the process.

Inputting Data

Tab 1: Country and Language Setup

Selecting your language. The user can select French or English. Changing the language selection after beginning the process can create errors, so think carefully about who will be inputting and using the data and which language will best serve your needs. Once you make the language selection, it should not be changed at any point. If you change the language while using the tool and encounter any issues, check that all your inputs/dropdown menus are using the currently selected language.

Tab 2: Population and Prevalence Set Up

FPET input. On this tab, the most recent survey data for DHS and MICS should automatically populate where available, as well as trended estimates of mCPR for Married Women and All Women from the UN Population Division. In addition, there is a blank space to input additional surveys (PMA, National, etc.) or an updated FPET value for each year if the model has been run in advance of using this tool. This data should be reviewed and updated if any values are missing.

Tab 3: Service Statistics Set Up

Which service statistics do you have? Which data should you input? There are four types of service data that can be input into the SS to EMU tool to generate the EMU (family planning commodities distributed to clients, commodities distributed to health facilities, family planning visits, or family planning users).

Contraceptive commodities distributed to clients are generally data that are reported up to the central level from a facility on the number of commodities provided to clients, or “consumption” data for IUD, implant and injectable methods, and “distribution” data for pills and condoms.

Contraceptive commodities distributed to facilities are generally data that are reported from the central or mid-level on the number of commodities sent to stock facilities, or “distribution” data.

Family Planning Visits are generally data counting the number of times clients came to a facility for a family planning service.

Family Planning Users are generally data counting or estimating the number of people who are currently using a contraceptive method and may consider those using a method that was provided in a prior year.

All data types available should be entered. This will allow the user to review all data for quality issues and trends and pick the best data when choosing which data to use for regular program monitoring and as an input into FPET. In addition, entering multiple types of data allows the user to compare between data types to understand if the different types of data are providing similar signals, which may also help illustrate quality or issues with individual data types.

Definitional Clarifications

The SS to EMU tool estimates the number of contraceptive users based on the data entered, with slightly different methodologies depending on the data type. Therefore, for the calculations to be accurate, there must be a clear understanding of what type of data a country collects and what is truly measured by an indicator, regardless of how it is labeled. There may be variations between how an indicator is labeled and what data it actually contains, so below is some clarification on how to identify what type of data should be entered in the model.

Commodities data generally does not include information on Sterilizations (Tubal ligation or Vasectomy) as there is not a specific commodity linked to the provision of these services. Users of the tool should consider entering data on sterilization services provided or sterilization “visits” to their Commodities data entry sheet in order to fully capture service provision and avoid underestimating use based on commodities data as a result of the exclusion of sterilization services.

The FP Visits indicator is designed to calculate users based on the number of number of times clients access FP methods rather than the number of commodities distributed. This data should look very similar to commodity data for long-acting methods and injectables, as a single commodity is generally used during a single visit but would vary for methods like pills and condoms for which several commodities might be given during a single visit. In some countries, data that is capturing visits is labeled as “New Acceptors” and “Continuing Users”, to better distinguish between those who are new to a method and those who have already initiated a method and are returning for resupply. For the purpose of the model, this data should be considered “Visits” if an individual is counted as one or the other each time they come in for an FP service.

In the model, data entered as “FP Users” is interpreted as capturing the number of people currently using family planning. Data should only be entered as FP users if it is truly capturing ongoing FP use, rather than individual FP visits or services. Data should be considered “Users” data if 1) Long-Acting users are carried over from previous years for the duration of their method, 2) short-term method users (injectables, pills) are dropped if they do not return for resupply, 3) clients who switch methods aren’t counted twice – once under the old method and once under the new method.

What sectors are reporting? The user is given three choices: Public Only, Public and Some Private, All Public and Private.

The reason that this is asked is that later in the process an adjustment can be made to account for missing private sector data so the final EMU value will better reflect the whole market if private facilities are not, or only partially, reporting data to HMIS. The selection made by the user at this point will prompt a request later in the process for additional inputs. Regardless of which is chosen, the user will be able to determine how much of an adjustment is made depending on how much of the private sector is represented in their data.

Select one of the following that best reflects who is reporting into HMIS.

- **Public only:** only public facilities are required to report into the HMIS system. No private provision of family planning is captured.
- **Public and some private:** Public facilities and some private providers, such as NGO partners or private hospitals, are captured in the HMIS.
- **All public and private:** All public and private facilities are regularly reporting into the HMIS. Selection of this option is not common because it is unlikely that commercial outlets like shops or kiosks that sell condoms or other methods would be reporting into the HMIS. Because of the broad range of outlets included in the private sector, full reporting by private sector is rare.

Were any long acting methods introduced or scaled up in the first year of data? In order to more accurately estimate users of long-acting methods, the tool needs to account for women who received their method prior to the first year of data. To help estimate the number of long-acting users who received their method prior to the first year of data, the user is asked to note any long-acting methods that were newly introduced or undergoing substantial scale-up in the first year of data available for each data type. If methods were not newly introduced or scaling up, the user can leave this section blank.

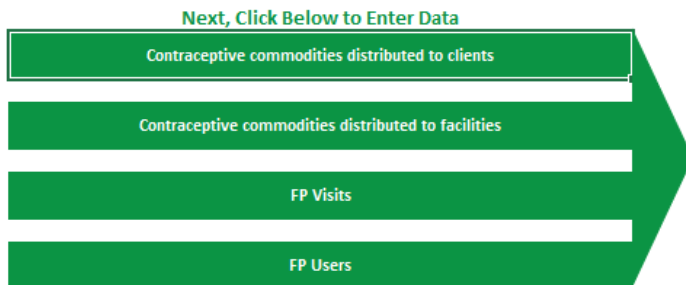
Tab 4: FP Source – Private Sector Adjustment Set Up

Step 2 – What Sectors are Reporting Your Data? Cells under Public, Private and Other will be colored green or yellow if the user previously indicated that some or all those sectors report into HMIS. If the sector does not report it will appear grey. In the colored cells, the user can select “Yes/No/Partially” from the drop-down menu to indicate what portion of the sectors the user previously indicated were reporting into HMIS are included in their data. This guides the tool’s handling of the private sector adjustment.

For example, for a country where 75% of women access sterilization through the public sector and 25% of women access the service from NGOs, if the user knows that the HMIS includes reporting by all public sector facilities and some NGOs (say NGO X has agreed to report, but NGO Y does not) the user would select “Partially” from the drop-down menu for private sector and the tool will interpret “Partially” as 50% to indicate some, but not all NGO provision is represented in our data. The tool interprets “Yes” as 0%, “Partially” as 50% and “No” as 100%. As a result, the tool interprets that our data represents 87.5% of sterilization provision (the 75% of sterilization users accessing in the public sector + half of the 25% accessing through NGOs). Based on this, when the tool accounts for what data is missing, it adjusts the sterilization service numbers up by that missing 12.5% to calculate total users and the EMU.

Tab 5. Contraceptive Method Mix Set Up

Attention! Note that the “next” arrow on this page is divided into 4 sections. Each arrow section leads to a **separate Input Tab for each service statistic data type**. Please click on each arrow to go to the appropriate input tab and add data for all data types available.



Service Statistic Input Tabs

Each of the four types of service statistics has an Input Tab. Complete the tabs for each type of service statistics you are entering.

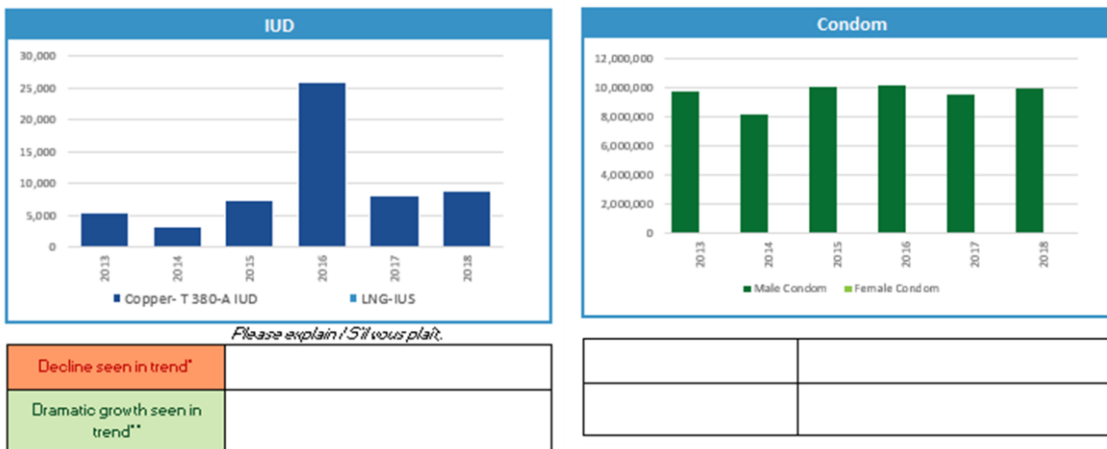
Step 1: Enter Reporting Rates. A reporting rate of above 80% is recommended to ensure confidence in the EMU as a metric for regular monitoring and as an input for the FPET tool. In places where reporting rates are reported as below 60%, it is not recommended to use the final EMU metric generated as an input into FPET. However, no matter the reporting rate, working through the data review and assessment processes of using the SS to EMU tool can be an important review of your country’s family planning data quality.

For countries where the reporting rate falls between 60%-80%, decisions on whether to use the EMU as a FPET input can be made on a case-by-case basis. In this situation, it may be helpful to consider the following:

- Are the same regions consistently reporting or not reporting?
 - If there are certain regions that consistently do not report, thus causing a reporting rate <80%, the data may be usable as the bias in the service statistics should be consistent across years. While the level of the EMU may not represent a national estimate of contraceptive use as certain regions are missing, the trends should generally represent what is happening at the national level.
 - If there is inconsistency in which regions are reporting, with different regions failing to report in different years, the data may not be useable in FPET as the bias is inconsistent across years. Changes in which regions are included or excluded may create artificial trends in the EMU, implying growth or decline based on which regions are included if there are differential levels of use or effort in those regions.
- Is there consistency in the reporting rate? Or does it vary year to year?
 - If the reporting rates are below 80% but generally consistent between years, the data may be usable in FPET.

- If the reporting rates are inconsistent between years, the data may not be useable in FPET. Large changes in reporting rates between years may imply growth or decline that is not actually occurring but is an artifact of more or fewer facilities being represented in the data.
- Inconsistency may not require the exclusion of all years of data – if reporting rates level out, the user may be able to use just those years of data for which there were consistent reporting rates.

Step 3: Review Your Data. The data you enter in Step 2 (enter Commodities Data) will populate graphs at the bottom the of worksheet to provide a visual representation of the data entered. Review each graphic, keeping an eye out for data that seem out of place. If outliers are detected, they could signify an error in data entry or in understanding and reporting of the indicator. In other cases, anomalies may reflect real short-term changes. In this case, opening a dialogue between the HMIS team and program staff is helpful to identify what has changed in the program or the environment that has caused the change. Any dramatic changes to trends (growth of >150% or decline of > 25% over 1 year) or outliers (input values that are more than 2 standard deviations from the average) will be flagged in the comment boxes below each graphic and prompt the user to add notes to document the reason for any unexpected data. In the example commodity to client input graphs below, the IUD graph is flagged for dramatic increases and decreases due to the jump in 2016. The user is prompted to provide an explanation for the data anomaly, which may require additional investigation, but the condom data with a steadier trend does not flag for comment.



Some questions to consider as you review:

- How are these trends being influenced by reporting rates? Should some years be excluded for low or inconsistent reporting rates?
- Do trends look consistent with your understanding of current programs in FP?
- If declines in a given method are seen, are these consistent with changes in method availability, distribution, and your understanding of trends in method choice?

- If dramatic growth in a given method is seen, is this attributable to the introduction of a new method? New or expanded efforts to socialize that method? Or might it be attributable to changes in the reporting system/incentives?
- Are declines in one method accompanied by growth in another method, indicating women switching between methods?
- Are there any outlying values (very high or very low compared to the overall trend for the method)? If so, could this be a data quality issue?

Reviewing Outputs

Review each Service Statistic Output Tab for unexpected data points. Once data is input into the relevant service statistic Input Tabs, review the associated Outputs Tabs. The Output Tab shows the Estimated Modern Users (EMU) by method and modern method mix calculated from the service data you entered. This data appears at the bottom of the page, after several visual reviews.

Step 1. Review the impact of the private sector adjustment on your outputs. Previously on the FP Source Set Up tab a private sector adjustment was applied to help account for services provided by the private sectors that are not included in your data. In this step, review the graphs and compare the adjusted and unadjusted estimates of users to assess whether the private sector adjustment is improving the estimates. Do adjusted or unadjusted values align better with the UNPD trend and method mix from surveys? The private sector adjustment can be revisited at this time, if it appears to be distorting estimates of users. To make changes to the adjustment factor, return to Tab 4, step 3.

Step 2. Compare trends and comparability of entered service statistics to survey data. Use the graphs to make a visual comparison. The user can provide any observation notes in the yellow boxes that appear below each graph. Keep in mind while reviewing:

- How do the trends in use by method look? Are particular methods growing/declining? If so, is this consistent with your understanding of what is actually happening?
- How does the method mix look? Is the most common method based on service statistics consistent with the most common method captured in surveys? Is it consistent with what is understood about contraceptive use in the country/region?
- How do the service statistics and survey data differ?
- Why do you think they differ? If so, can you explain the difference?
- In cases where the actual data points are different, are the trends similar?
- How does the overall trend from the EMU compare to the trends from Surveys (if available) or from FPET/UNPD?
- Consider the growth rates – is the growth rate from your EMU higher or lower than that of surveys or modeled estimates? Does the growth rate seem feasible? How does it compare with and without condoms?

Step 3: Confirm exclusion of condom data from EMU calculation. The default setting of the tool is to automatically exclude service statistic data on condoms from the EMU calculation. These data are excluded because there are factors impacting the accuracy of capturing a condom distributed as a family planning method used.

- Condoms are distributed for other uses besides family planning, such as prevention of HIV or other sexually transmitted infections.
- In some countries, the method of collecting the number of condoms distributed varies from other methods. For example, once a condom box is opened and left in the facility, the entire number of condoms in the box is counted as having been distributed.
- A condom distributed may not always guarantee that the condom is used. Because a condom is used by the client at the time of sex, outside a clinic setting, there is no way to ensure that every condom distributed is used. Clients make take more condoms than needed, they may expire before the client has an occasion to use them, etc.

Exclusion of condom data is the default because in most countries, condoms do not make up a significant enough share of the method mix to justify including this imprecise data. However, in countries where condoms do make up a significant portion of the method mix, the user may change the default setting to include condom data. There are several graphs in the output tabs that can help the user see how including or excluding condom data will impact the results so they can make their own final decision on whether to include or not. Graphs in the output tab show trends and growth rates with and without condoms, and graphs showing the scale of estimated users by method can help the user consider whether condom use is being reasonably estimated (compared to surveys) or whether condom use is being significantly over-estimated, which is generally the concern. In most cases, the recommendation is to keep the default setting and exclude condom data.

After Step 3, the user can move on to input additional service statistics data types or continue to final EMU output review.

Final Review of EMU Output

In the Final EMU output tab the user can compare the results from the different types of service statistics data they entered and assess which would best inform regular program monitoring and be appropriate as an FPET input. Many of the same graphs shown on the individual output tabs are displayed here but may be projected further out in time and integrated with other data types to provide a more complete picture.

Step 1 – review the graphs. For each graph, the user should consider whether the data looks accurate enough to be used, and if so, which data type looks best? Some guiding questions for each graph include:

Comparing EMUs and mCPR:

- Which data trend is most consistent with your survey and FPET trends?
- Which data type produced the cleanest trend (least "noise")?
- Is one data type typically viewed as more reliable by the government? Does this preferred data type have the cleanest trend? How does this compare to the other types of data?

Comparing annual average percentage point growth between EMU and mCPR

- Which data type's average annual growth is most consistent with FPET & Survey results?
- Do any data types have excessively high growth rates?

Comparing Users by Method

- Which data type's method users are most consistent with Survey results?
- Do any data types have inconsistent or unexpected distributions of users by method?

Comparing Reporting Rates

- Which data type's reporting rates are highest and most consistent over time?
- Do any data types have particularly low or variable reporting rates?

Step 2: Making your final decision on which service statistic EMU to use for program monitoring and as your FPET input

- Which data type had a trend up to the last survey most consistent with FPET and surveys?
- Which data type has an annual growth rate most consistent with FPET and surveys?
- Which data type has the highest and most consistent reporting rates?
- Which data type has a trend after the last survey that best reflects current effort in family planning? What, if anything, has changed in the family planning program after the last survey?

Results – Trends in Users by Method. The graphic will show the trends in users by method based on the data source you selected. Use the drop-down menu to select different method types

Do your data meet the criteria for inclusion in FPET? Questions to consider

1. Data Availability

a. Do you have data that capture national family planning service statistics in your country, such as commodities distribution data (either to clients by providers OR to facilities), family planning visits data, or family planning users data? The source for these data would be your country's health management information systems (HMIS), or in some cases, the logistics management information system (LMIS).

2. Data Frequency/Recency

a. Do you have national annual estimates of these data for a minimum of three years?

b. Do you have service statistics that overlap with a national survey (DHS, MICS, PMA2020, or other national survey)? We strongly recommend that this be the case, so that you can 'calibrate' the relationship between service stats and mCPR.

c. Do you have service statistics that are more recent than your last survey? For example, if you had a 2017 survey, and your service statistics only go to 2017, then you do not need to use them in FPET, since it will favor the survey.

3. Data Consistency

a. Are your service statistics figures consistent from year to year, so that one can compare them to each other and 'believe' the trend they represent? For example, are reporting rates for these figures consistent from year to year? Are the estimates for each year representing the same methods/facilities?

b. If your answer to 3a is 'no', do you know why the data is not consistent? For example, did you change HMIS systems (introduce DHIS2)? Was there a reason that service statistics were not reported for a specific year? Do you have a way of adjusting the data to make it comparable between years?

4. Data Quality

a. Is the quality of your data similar from year to year (i.e. none of the years are missing specific data, or all years are missing the same data)?

If, for example, there was a problem with availability of registers one year, then that year should be excluded. But if the same problem occurred in all years, it is fine to use these data, as the effect on the data quality would be the same in each of the years.

b. Are reporting rates high and consistent over time?

If reporting rates are over 80% then the data can be used, however, if reporting rates are below 60%, these years should be excluded. Data with reporting rates between 60-80% may be usable but requires further review.

5. Data Accuracy

a. Do the service statistics figures seem to be in line with your country's family planning program and how it's changed over the years?

For more information the **SS to EMU Tool** and other **Track20 tools**, visit
http://www.track20.org/pages/track20_tools/tools.php