Family Planning Measurement in Focus

Session 1: Family Planning Estimation Tool (FPET)

Kristin Bietsch

February 27, 2024

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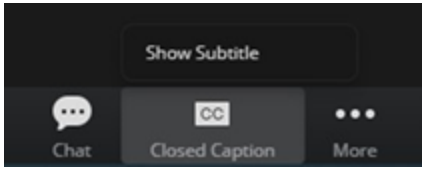
Zoom Reminders

- If at any point during today's webinar you are unable to hear the speakers, please make sure you've connected your audio by selecting the headphones icon.

- Please send a message to *Everyone* in the chat box to introduce yourself.

- Closed captioning in English has been enable for this webinar, to view the live English subtitles on your screen, click on the CC icon and select to *Show Subtitle.*

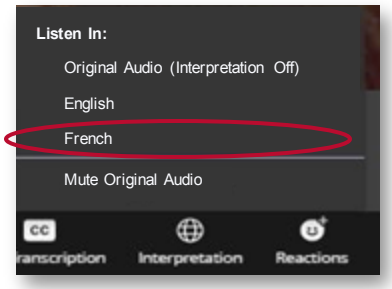


- Finally, please note that this meeting is being recorded.

Interprétation en français pendant le webinaire

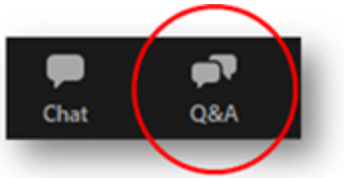
- Pour les participants qui écoutent en français :

- Lorsque les présentateurs sont anglophones, cliquez sur l'icône d'interprétation et sélectionnez français pour avoir la possibilité d'écouter le webinaire en français.



Zoom Reminders / Rappels Zoom

Please submit your questions for the presenters in the Q&A box.



Presenters will either reply back to you via text in the Q&A box or will answer your question during the Q&A discussion portion of the webinar.

Veuillez soumettre vos questions pour les présentateurs dans la boîte de questions-réponses.

Les panélistes vous répondront soit par SMS dans le boîte de questions-réponses ou répondra à votre question lors de la Partie de discussion de questions et réponses du webinaire.

Today's Objectives

- Provide an overview of the Family Planning Estimation Tool (FPET) and how it is used by FP2030 countries across the globe
- Provide instructions on how to conduct FPET runs, add new surveys, visualize results, and create ambitious but obtainable family planning goals
- Include hands-on demonstrations of FPET*

fpet.track20.org

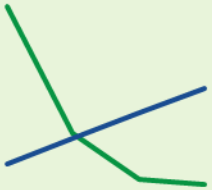
*You will be required to create an FPET account

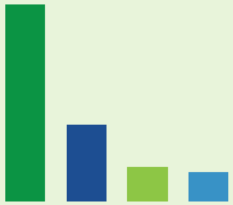
Family Planning Measurement in Focus Webinar Series

The second webinar in the Family Planning Measurement in Focus series will be held on **Wednesday, March 13th, 8:30-10:00am EDT**.

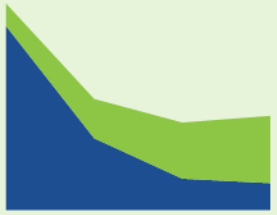
This webinar will focus on the Service Statistics to Estimated Modern Use tool (SS to EMU), which allows family planning programs to transform routine service statistics across all contraceptive methods into a single metric of Estimated Modern Use (EMU).

REGISTRATION LINK: https://jsi.zoom.us/webinar/register/WN_LT7P9hEySx6_UAu7SqQPnA#/registration





Year	Avg.	Total
2010	2.0	1.3 M
2015	2.2	1.5 M
2020	2.5	1.9 M



Family Planning Estimation Tool

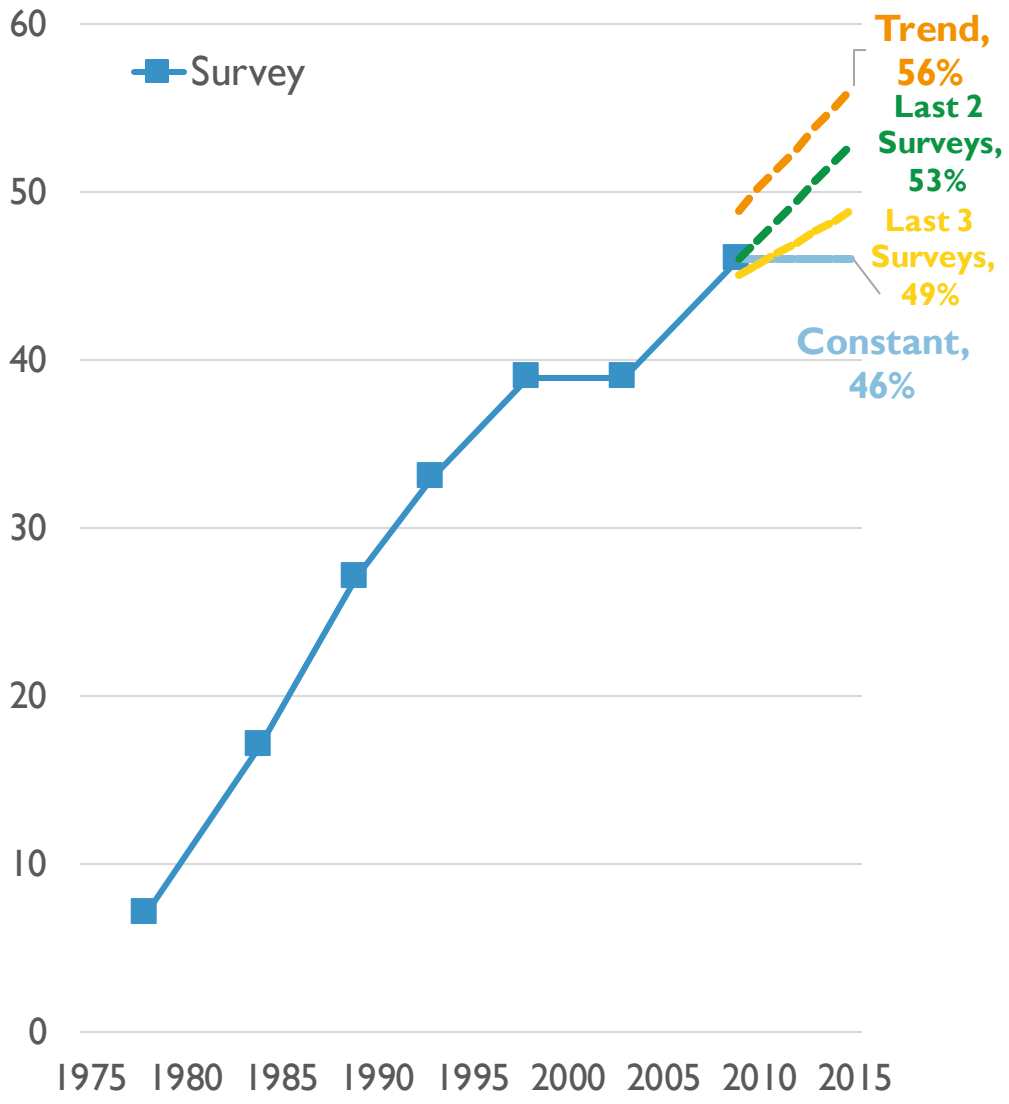
TRACK 20 FP2020

February 2024

Kristin Bietsch, PhD

How can we best estimate current mCPR?

1. Use the most recent survey?
2. Extrapolate the trend from the last two surveys?
3. Extrapolate the trend from the last three surveys?
4. Extrapolate the trend from all available surveys?
5. Service statistics can provide annual estimates but are they accurate?



Advantages to Using FPET

- FPET provides annual estimates, surveys are generally every 5 years
- FPET can be used to compare multiple surveys that might show similar and/or dissimilar trends
- FPET supports governments in using data produced through public sector health services.
- FPET is available online and can be used by anyone, encouraging more transparency and ownership of the results.
- FPET uses the same methodology as the UN and in the HIV field
- FPET can be applied at the decentralized level to produce estimates of key family planning indicators.

FPET allows for better understanding of country progress & provides alternative to relying on last (sometimes outdated) survey – it provides annual estimates

Use all existing information from various surveys

SS can produce better estimates when other data sources are limited or outdated. Using SS data also encourages review and investment in SS systems

Track20 is training MEOs in country to use the model, encouraging country ownership of the process and the results, for global reporting and country-level monitoring.

The methodology has been widely accepted and is an innovation in FP monitoring

Subnational use of FPET & the ability to produce estimates is particularly important in the era of decentralization and targeted national family planning programs.

FPET in Action:
Brighton Muzavazi, Monitoring & Evaluation Officer from Zimbabwe, tells us how he uses FPET in his work

An Existing Model Provides the Framework

UN Population Division (UNPD) has an estimation model that already produces annual estimates of key family planning indicators:

- CPR
- mCPR
- Traditional Method Use
- Unmet Need for Modern Contraception
- Demand Satisfied by Modern Contraception

Sources:

1. Alkema L, Kantorova V, Menozzi C, Biddlecom A. "National, regional, and global rates and trends in contraceptive prevalence and unmet need for family planning between 1990 and 2015: a systematic and comprehensive analysis". *Lancet* 2013; published online March 12. http://dx.doi.org/10.1016/S0140-6736(12)62204-1.

Track20's Family Planning Estimation Tool (FPET)

Track20 built on that framework to create the Family Planning Estimate Tool (FPET)

Modifications to the UNPD Model

1. **One Country Version**
   - Prior assumptions on some parameters are informed by regional and sub-regional values from global model
   - Ability to run one country at a time
     - (UNPD model runs all countries and takes multiples days)
2. **Potential to Add Service Statistics to Inform Estimates**
   1. Informs projection past the last survey point
   2. Estimates are "anchored" by surveys
   3. Allows for estimates to be modified based on annual data, so we can see if we are continuing on the same trajectory, or shifting the line up or down
3. **Available Online for Open Use**

Model Methodology

FPET is a Bayesian hierarchical model

A Bayesian hierarchical model is a statistical model that estimates the likelihood of a given result based on prior observed values and is informed by data at multiple levels.

For the purpose of producing annual estimates of contraceptive prevalence, these models incorporate:

- ✓ multiple sources of data (*surveys: National, DHS, MICS, PMA, Service Statistics*)
- ✓ data points over time (*survey results and trends: CPR, mCPR, Unmet Need*)
- ✓ different levels of data (*country/regional/global*)

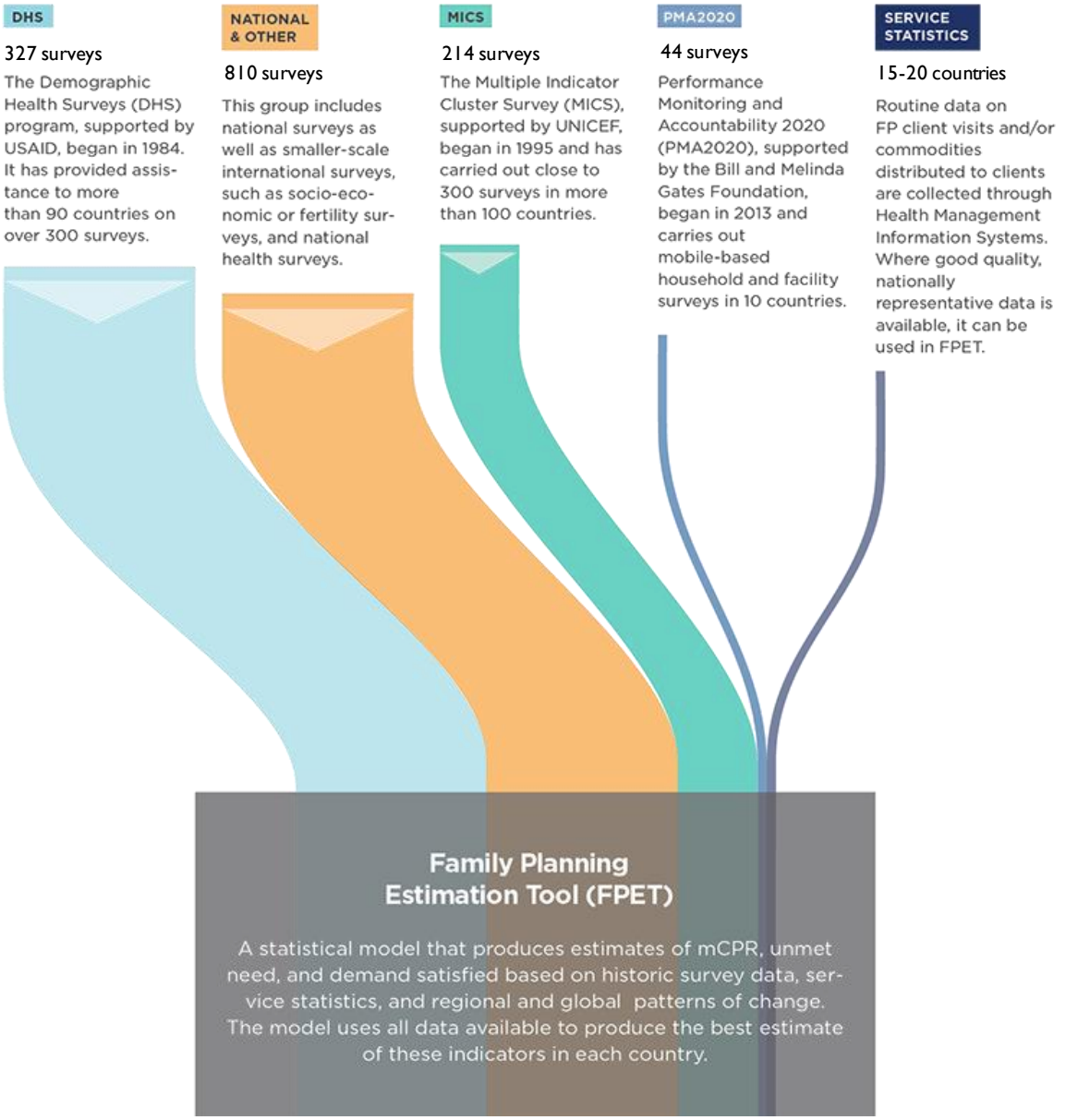
Using this information, the model aims to provide the best estimate of each indicator given all available data and an estimate of the confidence interval around each data point.

Incorporating Multiple Data Sources and Levels

FPET uses data from a wide range of sources to inform annual estimates of FP2030 Core Indicators.

Sources include:

- DHS
- National and International Surveys
- MICS
- PMA
- Service Statistics



Service Statistics (EMU Tool) & FPET

- Commodities to Clients
- Commodities to Facilities
- Visits
- Users

Join us for an EMU webinar on Wed, March 13

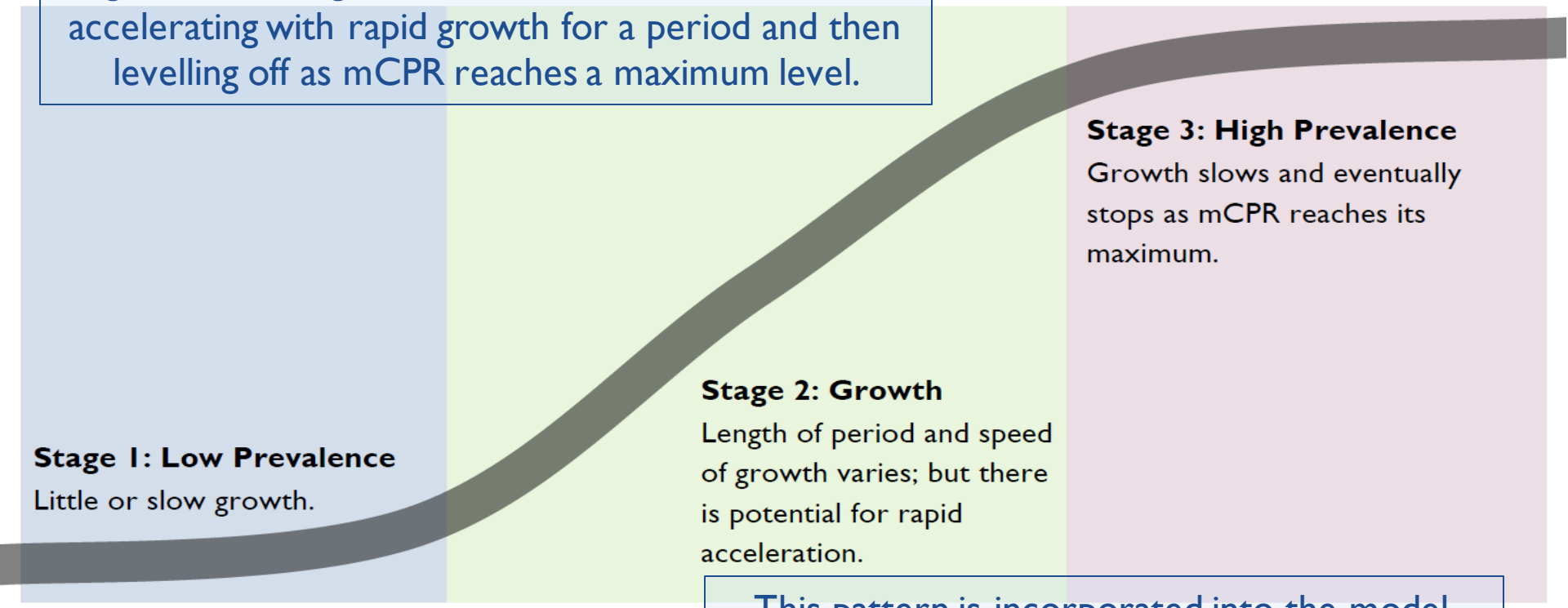
Service Statistics (EMU Tool) & FPET

Rules for using Service Statistics in FPET

1. Must have at least 3 years of consistent data
2. Must have at least one year of data overlapping a survey
3. Must have at least one year of data past the last survey
4. Must have Reporting Rates higher than 80%,

Incorporating the Family Planning S-Curve

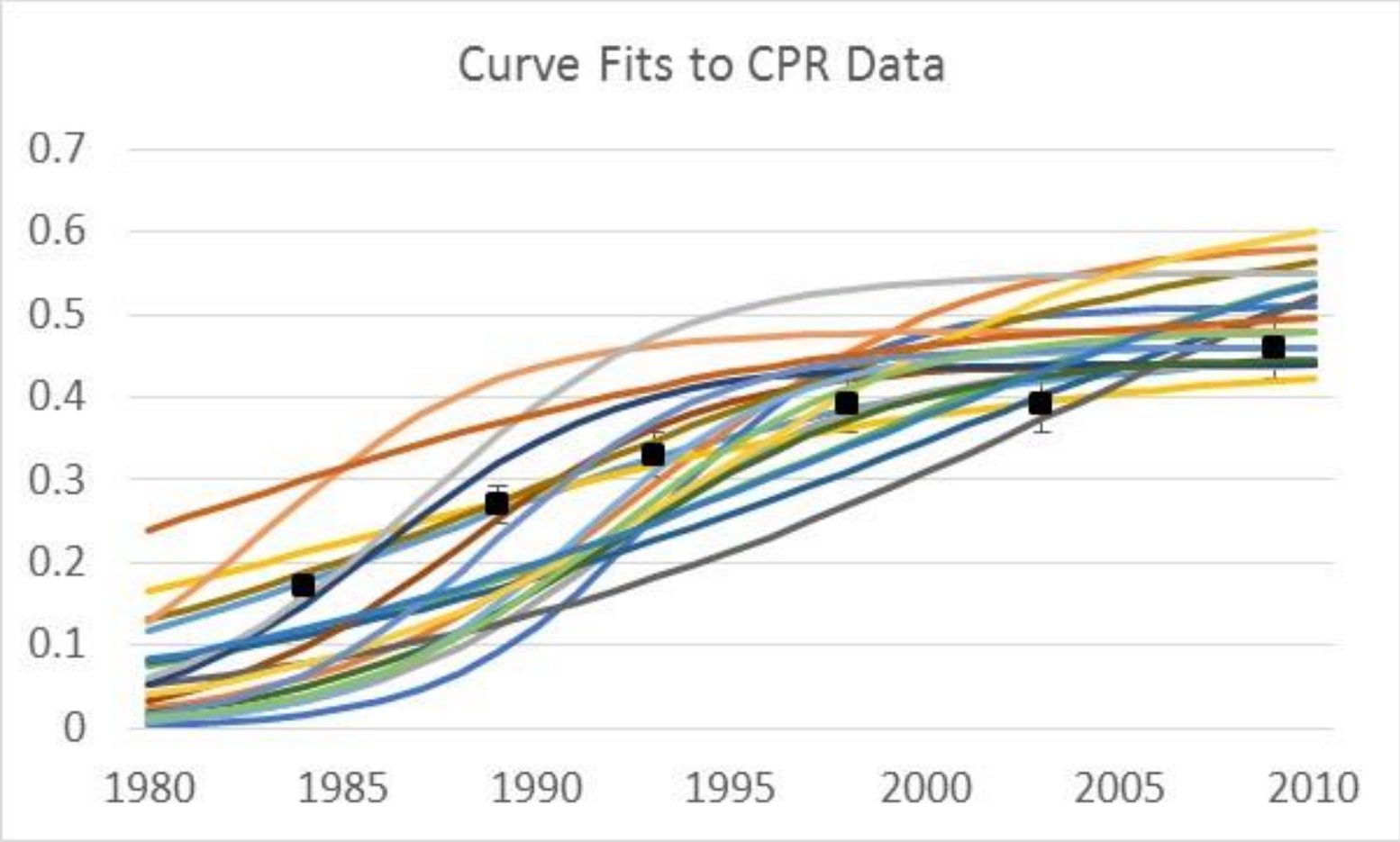
mCPR typically grows in a S-Shaped pattern, with growth starting out slow at low levels of mCPR, accelerating with rapid growth for a period and then levelling off as mCPR reaches a maximum level.



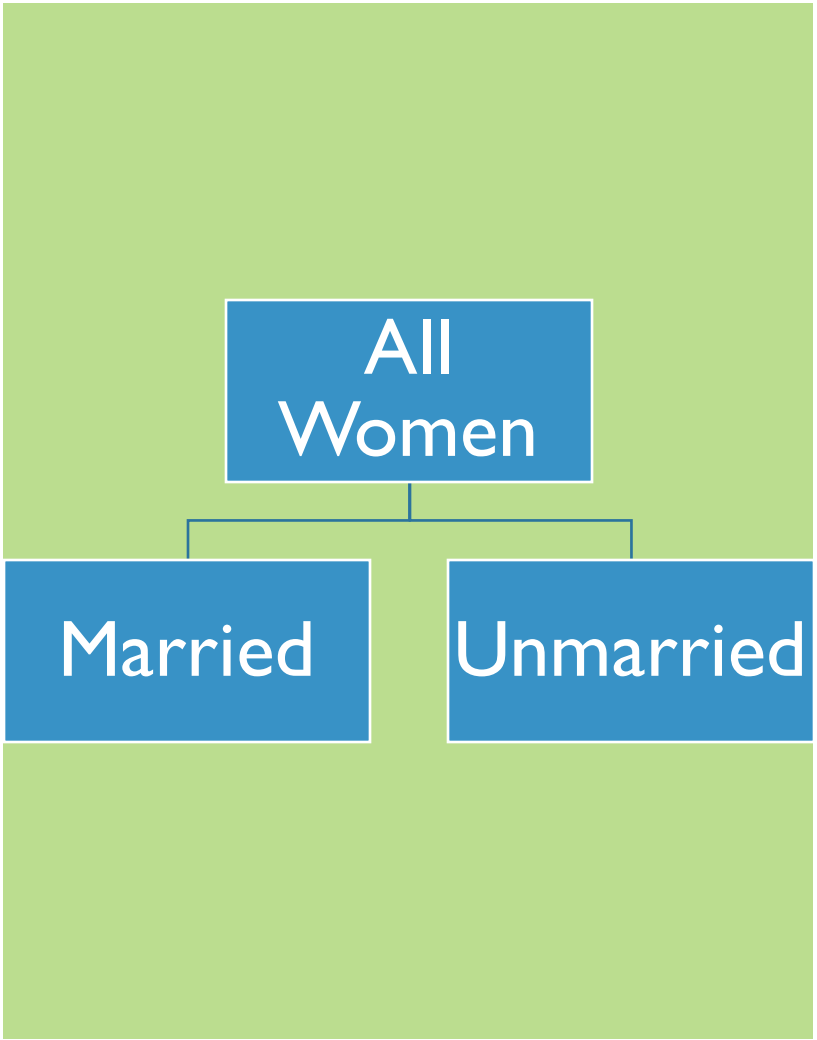
This pattern is incorporated into the model, determining the potential rate of growth in mCPR based on previous national, regional and global trends as well as the level of mCPR.

Fitting a Curve to Survey Data

The model creates thousands of potential curves, searching for the curve/trend that best fits the data provided for a given country. This curve is used to estimate the current value for Contraceptive Prevalence and develop projections for future years.



Modeling Different Populations



- FPET began by modeling married/in-union women
- Track20 and FP2030 have always reported all women estimates
- United Nations developed an unmarried model
  - Adds another layer of information- non-marital sexual activity
- Results from the two models are combined to create all women estimates

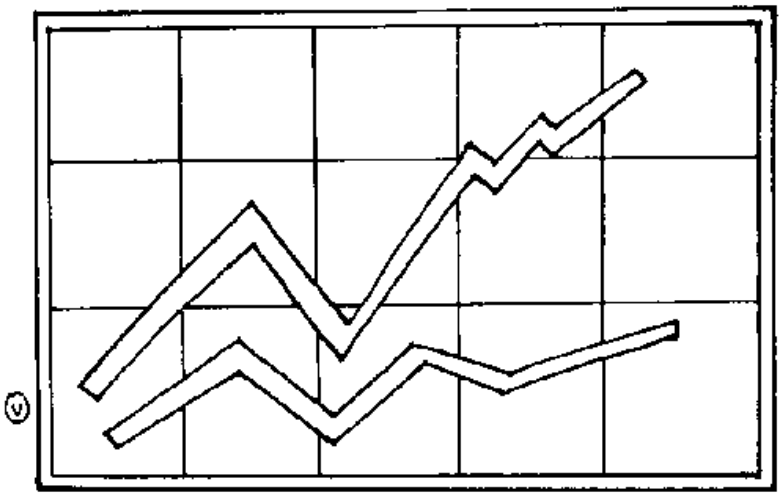
Data requirements

- Survey data is included in a default database on the FPET website
  - Separate entries for married and unmarried women
  - Users can add new surveys or delete surveys
- Population is annual estimates of married and unmarried women- created using the UNPD World Population Prospects and World Marriage data
- Service statistics are options and added by the users
- Subnational data can be used to run FPET

Communicating the Value of FPET in Case Studies

FPET is useful when you have:

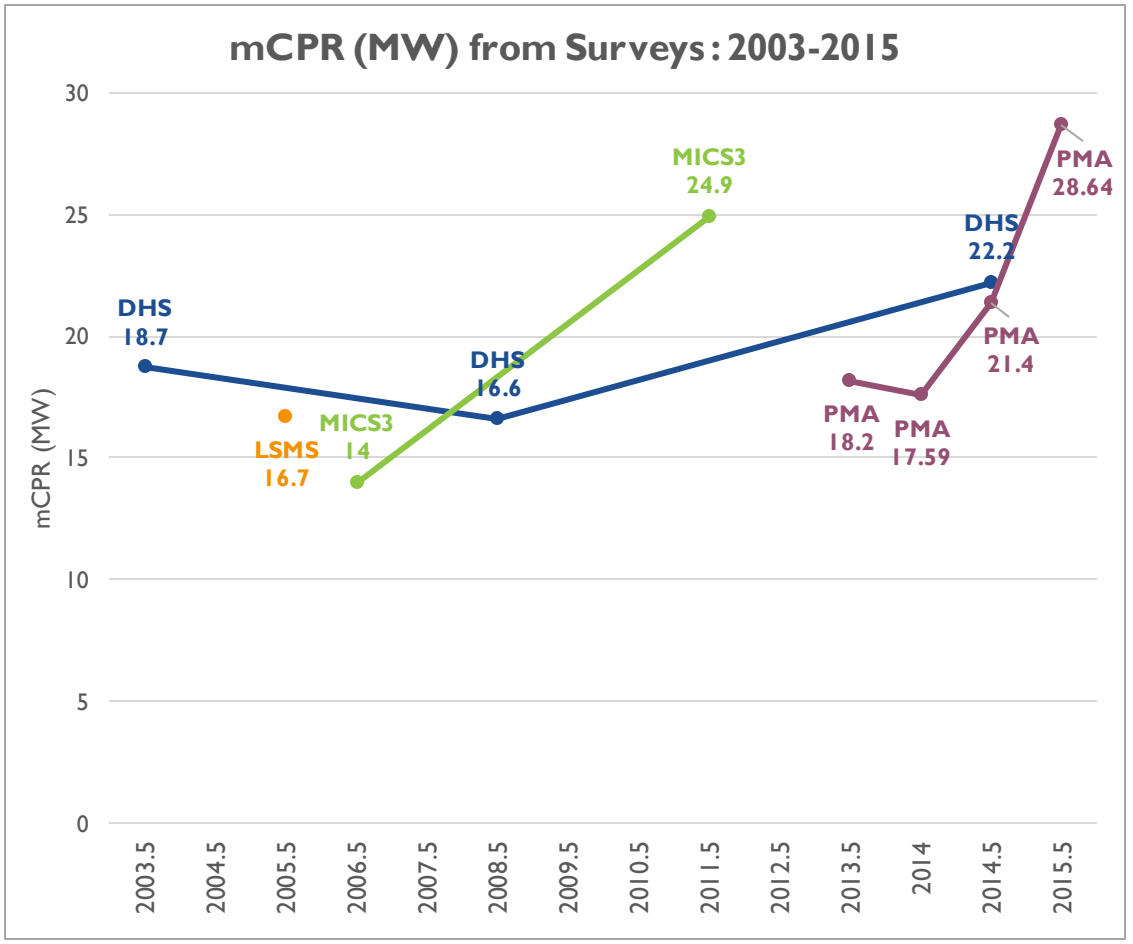
1. Conflicting survey information
   i. Varying types of surveys in given years
2. Little/Outdated data
3. Service Statistics data



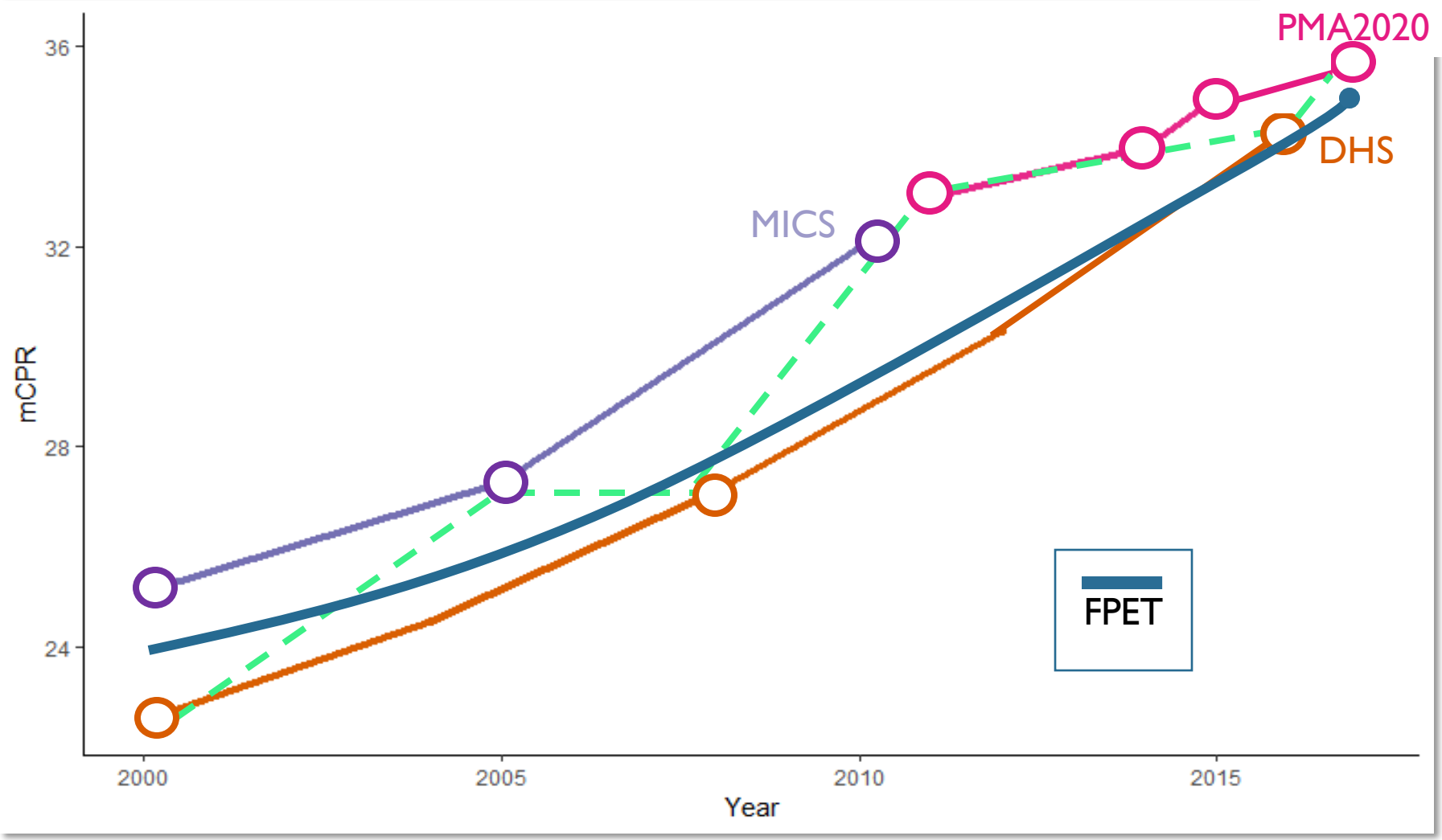
Ghana: what to do with lots of conflicting information?

2000-2015:

- 10 Surveys
- 4 Different types of survey (DHS, MICS, PMA, & National)
- Shifting survey values can cause confusion and make it difficult to develop a narrative around change in Ghana.
- There can also be politics associated with using one survey over another when discussing the current situation



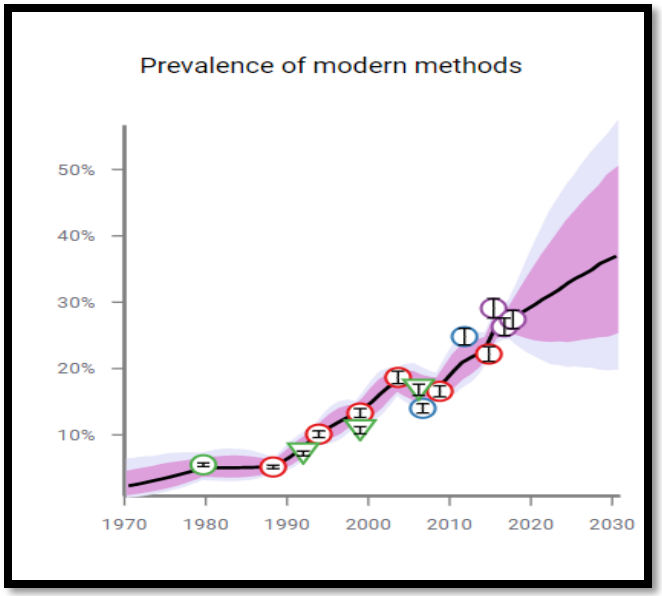
Conflicting information: differing surveys between years



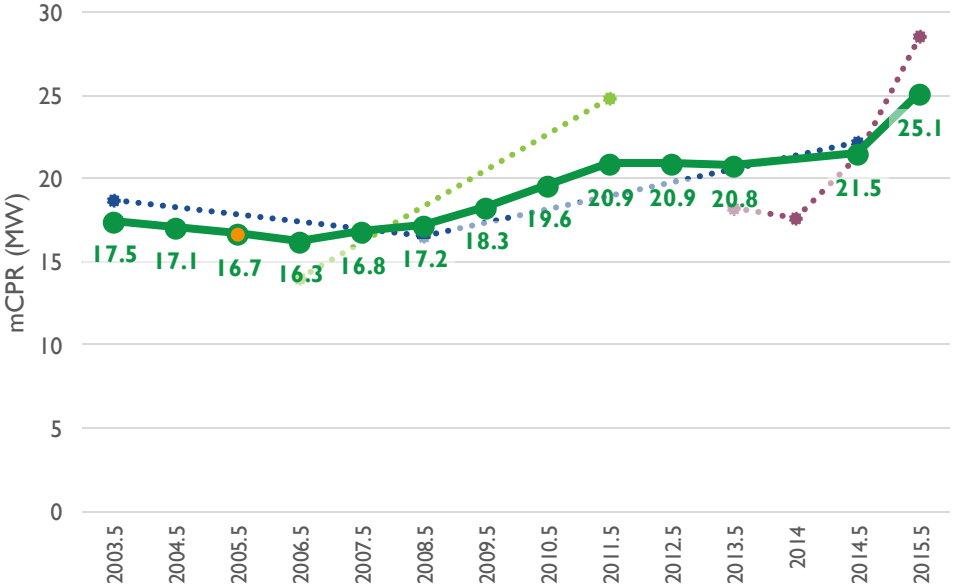
Ghana: what to do with lots of conflicting information?

FPET takes into account all of the data available for Ghana, as well as regional and global trends in growth in mCPR to create one estimate trend, incorporating the uncertainty around the estimate and variability between surveys.

In this case, FPET can help create a single narrative of progress and avoid the challenges of choosing one data point or debating the merits of the available data/studies. More data is better and FPET uses it all to inform estimates.



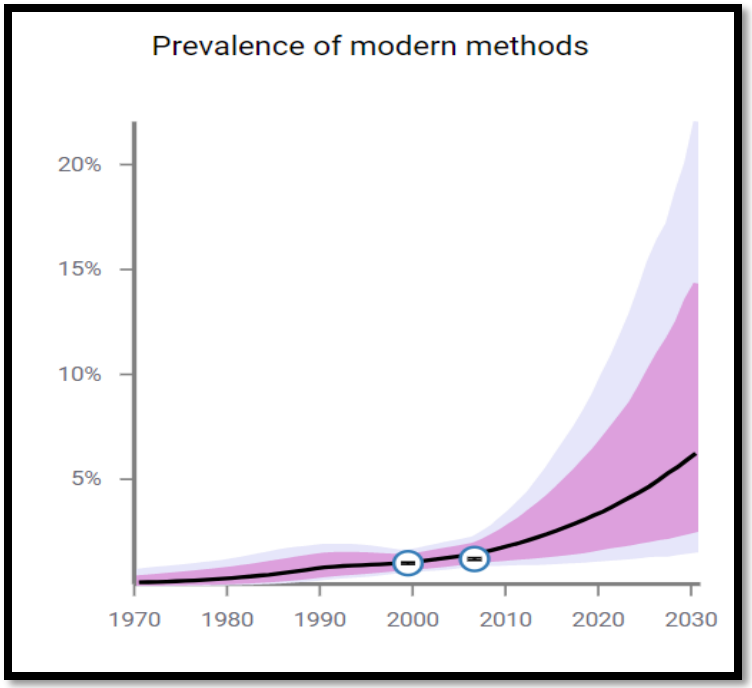
mCPR (MW) from Surveys & FPET: 2003-2015



Somalia: What to do when there is very little data?

1970-2019:

- Only 2 MICS (1999 & 2006)
- Difficult to discuss progress or changes when there is so little data, but we know (based on regional and global trends) that prevalence is not likely to be stagnant
- FPET uses hierarchical data to inform the trend in mCPR, providing a growth narrative (with caveats – note the credibility interval), rather than an unchanged estimate from 13 years ago.



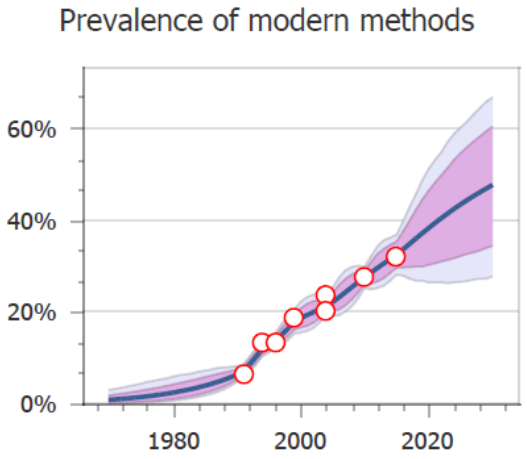
Survey (2006) mCPR (MW)	FPET (2019) mCPR (MW)
1.2%	3.7%

With FPET estimate, we see conservative estimate of .19% pt growth per year.

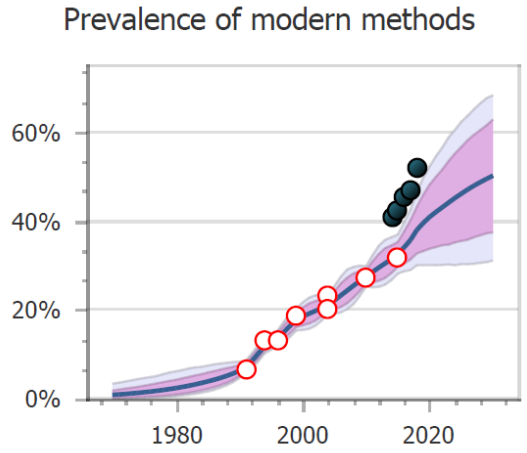
Tanzania: How can service statistics improve our estimates?

1980-2016:

- 8 Surveys
- Last Survey as in 2016, but we know it is likely that prevalence is growing
- Tanzania has consistent trends in service statistics, overlapping with the last survey, that indicate a steady upward trend.
- Incorporating service statistics:
  - provides more data on recent trends (especially important in short-term monitoring)
  - gives more confidence in the estimate in the years after the most recent survey
  - supports use of government data
  - promotes country ownership of estimates



2019	
Median	**CI (95%)**
36.9%	**26.7% - 48.6%**



2019	
Median	**CI (95%)**
39.5%	**30.0% - 49.7%**

FPET in Action:

Naveen Roy, Monitoring & Evaluation Officer from India, tells us how he uses FPET in his work at the national and state level

How to Run FPET

Two ways to run FPET: Default or Custom

Using Default Data
- Go to "Start Run"

Using Custom Data
- Go to "Prepare Data"

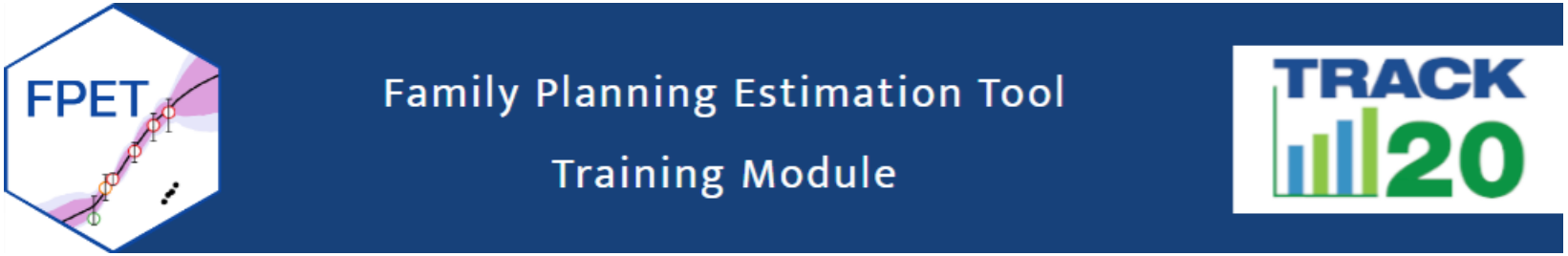
NOTE: Unmarried women in FPET are all unmarried women- regardless if they are sexually active or not

With custom data, if microdata is available, feel free to reach out to Track20 to help prepare inputs

FPET Examples:

- Default Data for Ghana
- Custom Data with New Ghana DHS

Additional FPET Resources



- FPET Handouts
- FPET Training Module
- Lancet Articles and UN Working Papers
- Email: track20@avenirhealth.org

Closing thoughts

Questions

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ADDITIONAL RESOURCES: https://track20.org/pages/track20_tools/FPET.php

THANK YOU

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