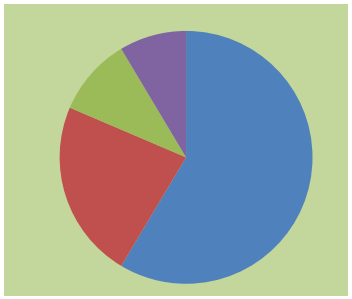
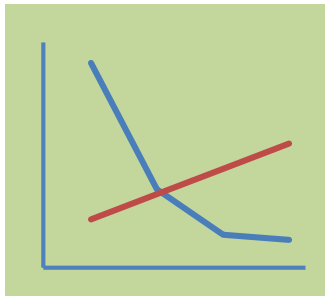
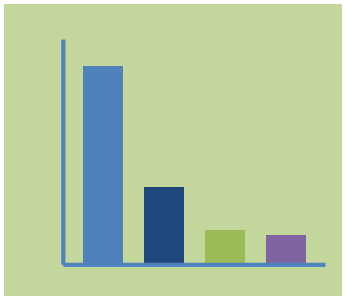
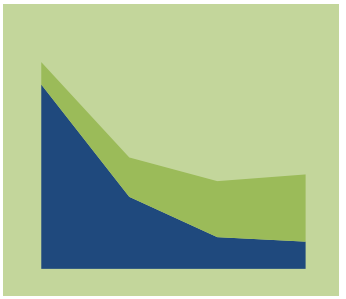
Avenir Health







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



Track20 Work with Family Planning Service Statistics

TRACK 20 FP2020

Track20

- Implemented by Avenir Health (formerly Futures Institute)
- Monitors annual progress towards the FP2020 global initiative
- Provides direct support to FP2020 commitment making countries on monitoring their family planning programs
- Creates, implements, and disseminates new tools and methodologies to maximize data use at the country and global level, with a focus on improving and increasing the use of family planning service statistics
- 5 year project funded by the Gates Foundation
  - Ending in March, in discussions for the next round

Approach

- Embed M&E Officers into Ministries of Health or Policy and Planning
  - Ideally dedicated to family planning
- Provide ongoing capacity building in annual monitoring
- Provide on demand technical assistance based on country priorities and needs, work varies by country
- Do not change systems, instead focus on activities that identify and improve data quality, availability, and use

Why Come Together Today?

- We plan to expand our work on service statistics and have collaboration with the government at higher levels and in departments of statistics

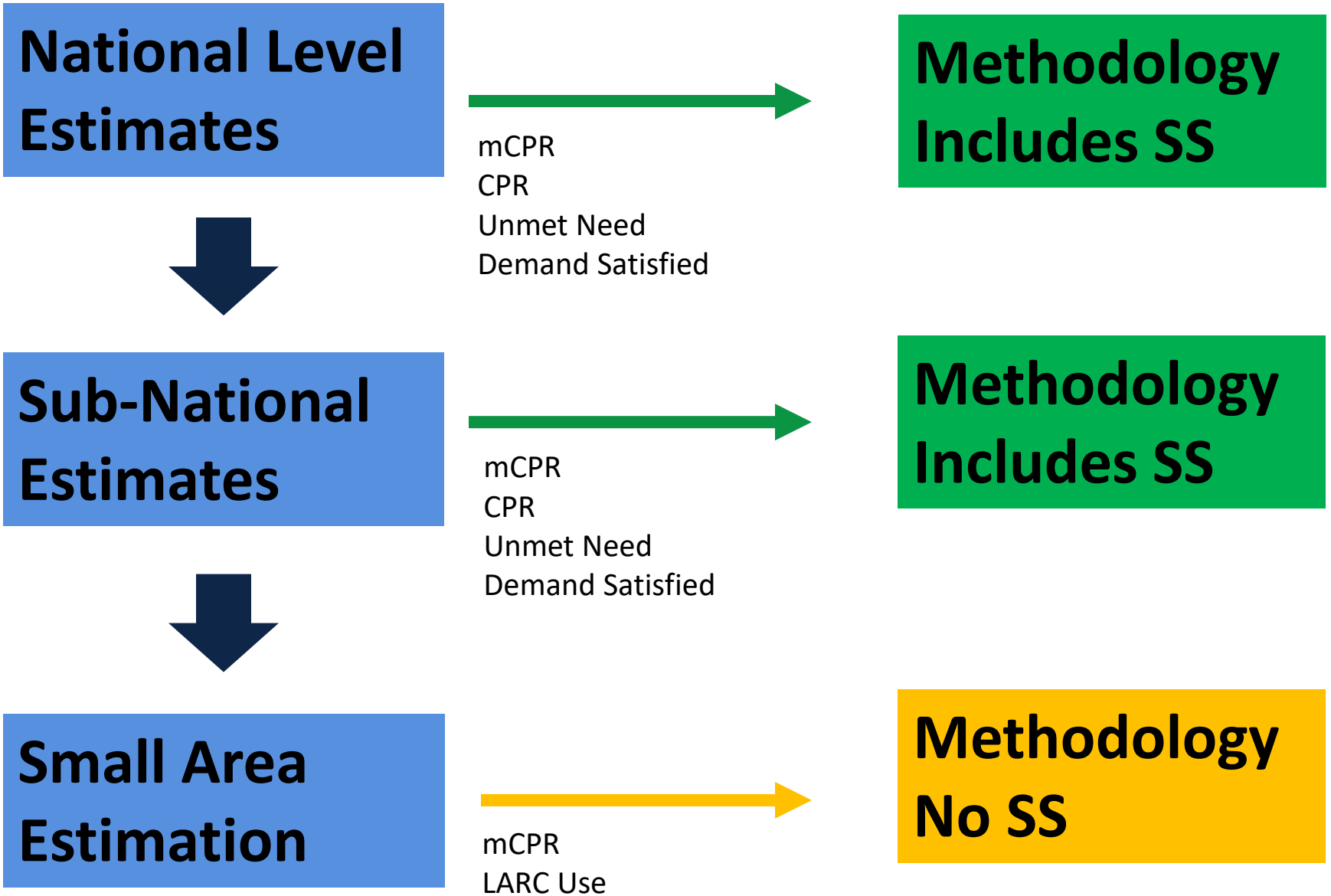
- We know many of you have been doing this work for longer than we have, so it is a good time to talk about collaboration

- Would like to share findings, but also to better understand how we can integrate your tools and approaches into our work

How Track20 Uses Service Statistics

- Tracking of annual indicators linked to overall family planning program performance
  - Linked to CIPs and FP2020
  - Involved creating and modifying methodologies to allow inclusion of service statistics
  - Capacity building to perform estimates incountry
- Maximization of service statistics data to identify barriers and successes in family planning program implementation
- Role of M&E Officers
- Effort to document content of HMIS, compare cross-country, and to assess the quality and utility of existing indicators and data elements

Tracking of annual indicators linked to overall family planning program performance


National Level Estimates
mCPR
CPR
Unmet Need
Demand Satisfied
Methodology Includes SS
Sub-National Estimates
mCPR
CPR
Unmet Need
Demand Satisfied
Methodology Includes SS
Small Area Estimation
mCPR
LARC Use
Methodology No SS

National Level Estimates

Existing model provides framework

- UN Population Division (UNPD) has an estimation model that already produced three of the FP2020 core indicators:
  - Modern Contraceptive Prevalence Rate (mCPR)
  - Unmet Need for Modern Contraception
  - Percent of Demand Satisfied by Modern Contraception

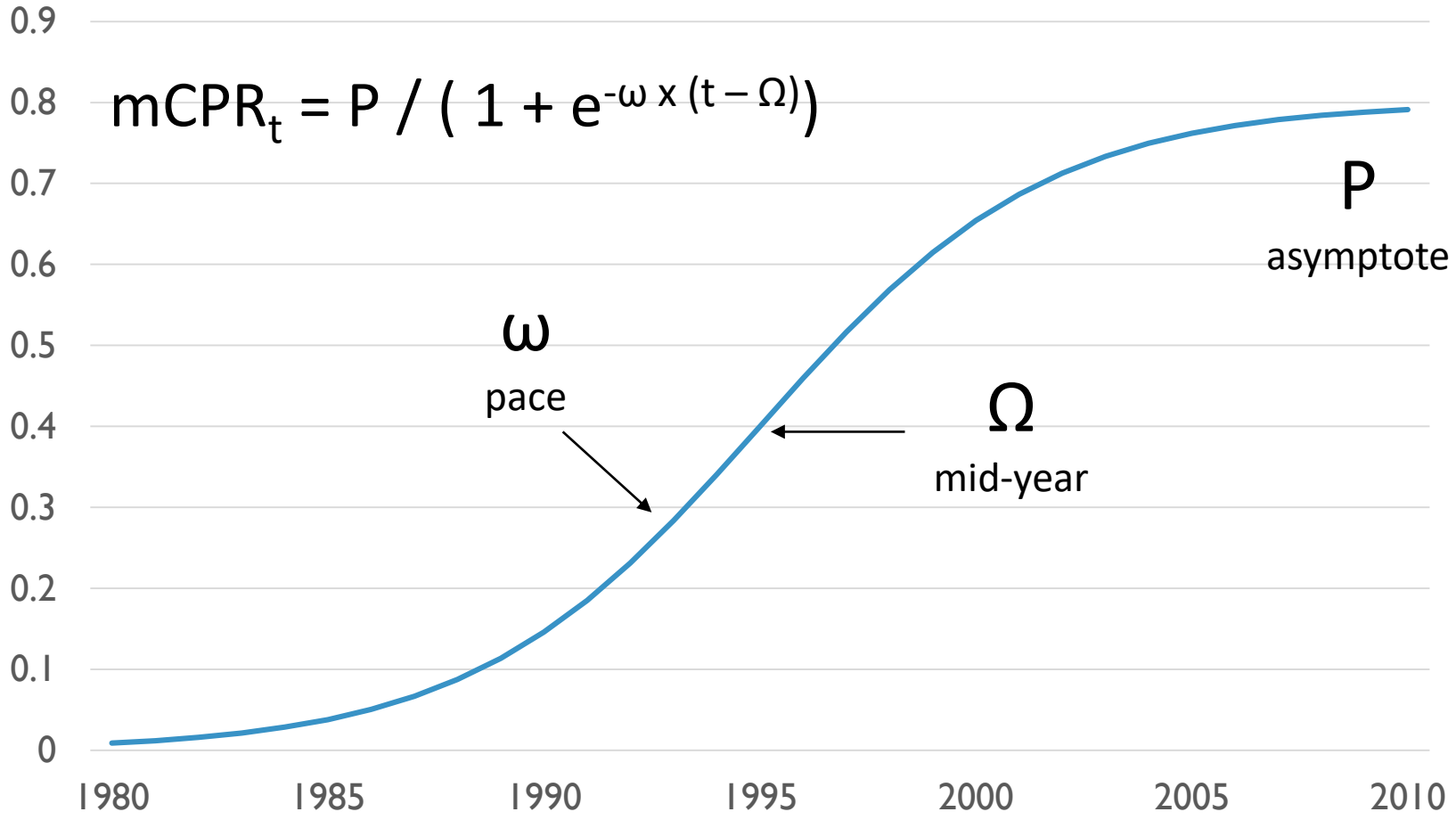
  - Bayesian hierarchical model
  - Logistic growth curve models the trend from low to high CPR

    $$mCPR_t = P / (1 + e^{-\omega \times (t - \Omega)})$$

  - Time series model captures deviations from smooth trend

Source:
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.

Logistic Trend for mCPR



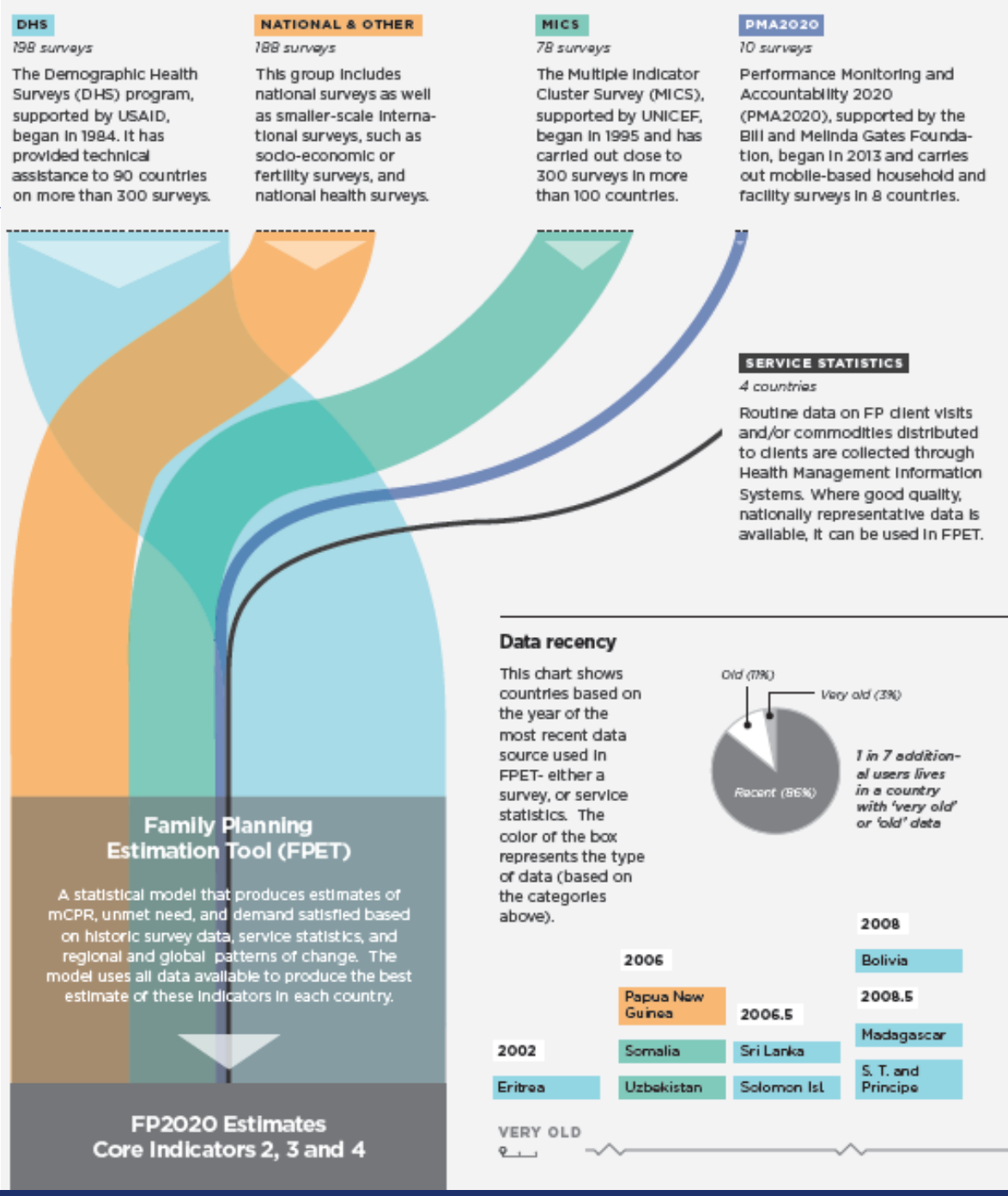
Family Planning Estimation Tool (FPET)

- Three modification to the UNPD model
  - Ability to run one country at a time (One Country Model)
  - Online and user friendly (fpet.track20.org)
  - Ability to add service statistics

- Service statistics provides an opportunity to see if investments are changing the trend after the last survey.
- Uses data that is available in all countries, produced annually (or more frequently), available at the sub-national level

FP2020 USES MULTIPLE DATA SOURCES

- Data limitations present a significant challenge to tracking key indicators on an annual basis.
- To produce reliable annual estimates despite gaps in data sources, FP2020 uses the Family Planning Estimation Tool (FPET).
- FPET projects estimates for mCPR, unmet need, and demand satisfied based on historic survey data from multiple sources.

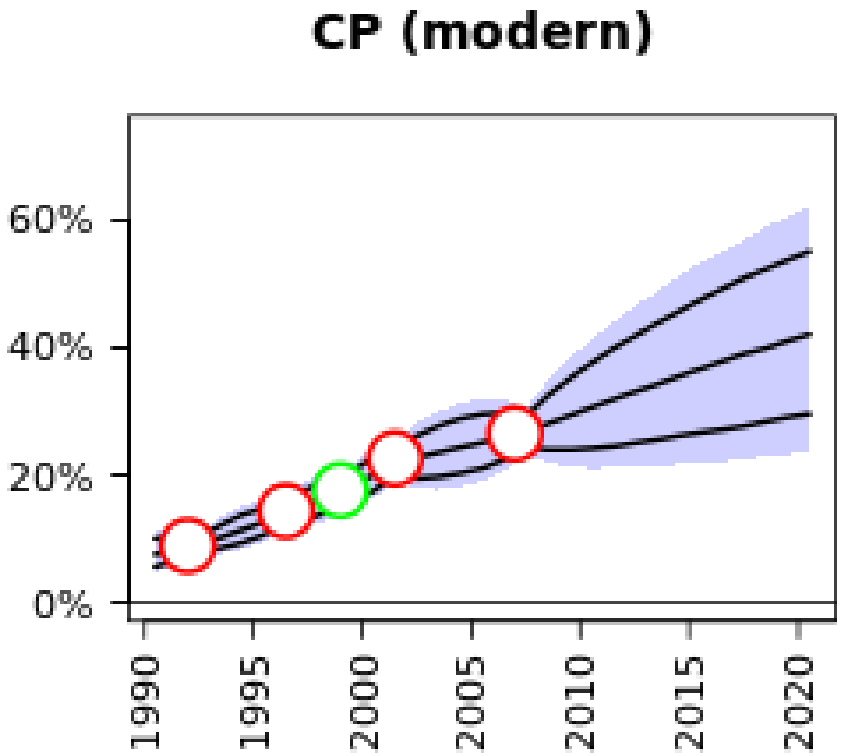


Using Service Statistics in FPET

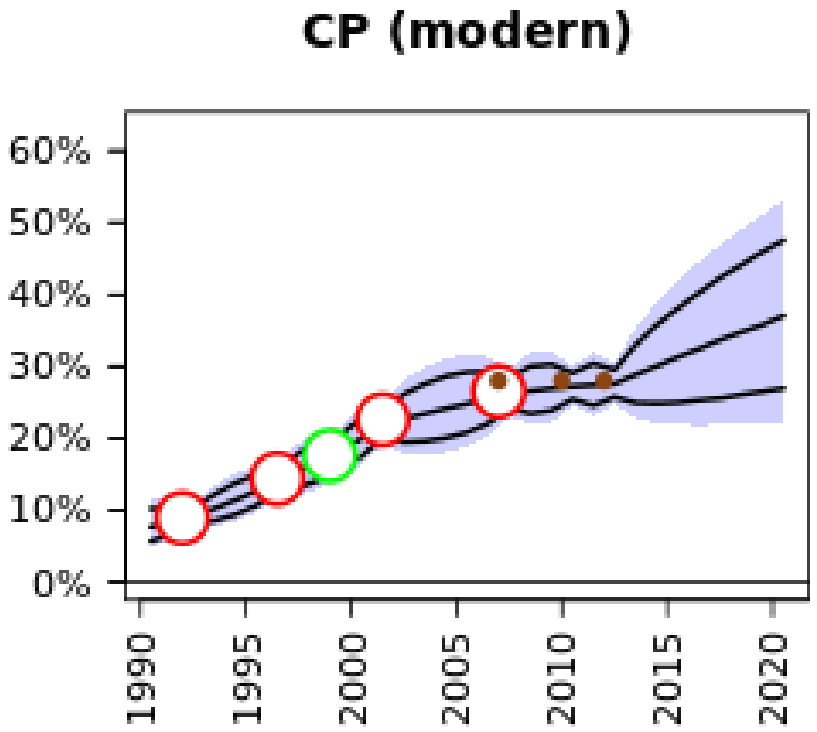
- One limitation with Bayesian is that statistical uncertainty grows rapidly in years since last data point (i.e., survey)
- To address this, FPET has been adapted to permit inclusion of FP service statistics
- Two benefits of including SS:
  - Provides information on trend in contraceptive use since last large survey to inform FPET projections, and
  - Reduces statistical uncertainty in estimates
- What data can be used?
  - # of service visits (by method)
  - # commodities distributed to clients (by method)
  - # contraceptive users by method

Using Service Statistics

No Service Statistics



With Service Statistics



Progress in Using SS at the National Level

- About 35 countries each year produce the numbers directly
- A minority are able to use service statistics in the estimates.
  - Making progress each year in expanding the number of countries, but still a long way to go

Using Service Statistics			
Year 1	Year 2	Year 3	Year 4
2	2	5	13

How well Does it Work?

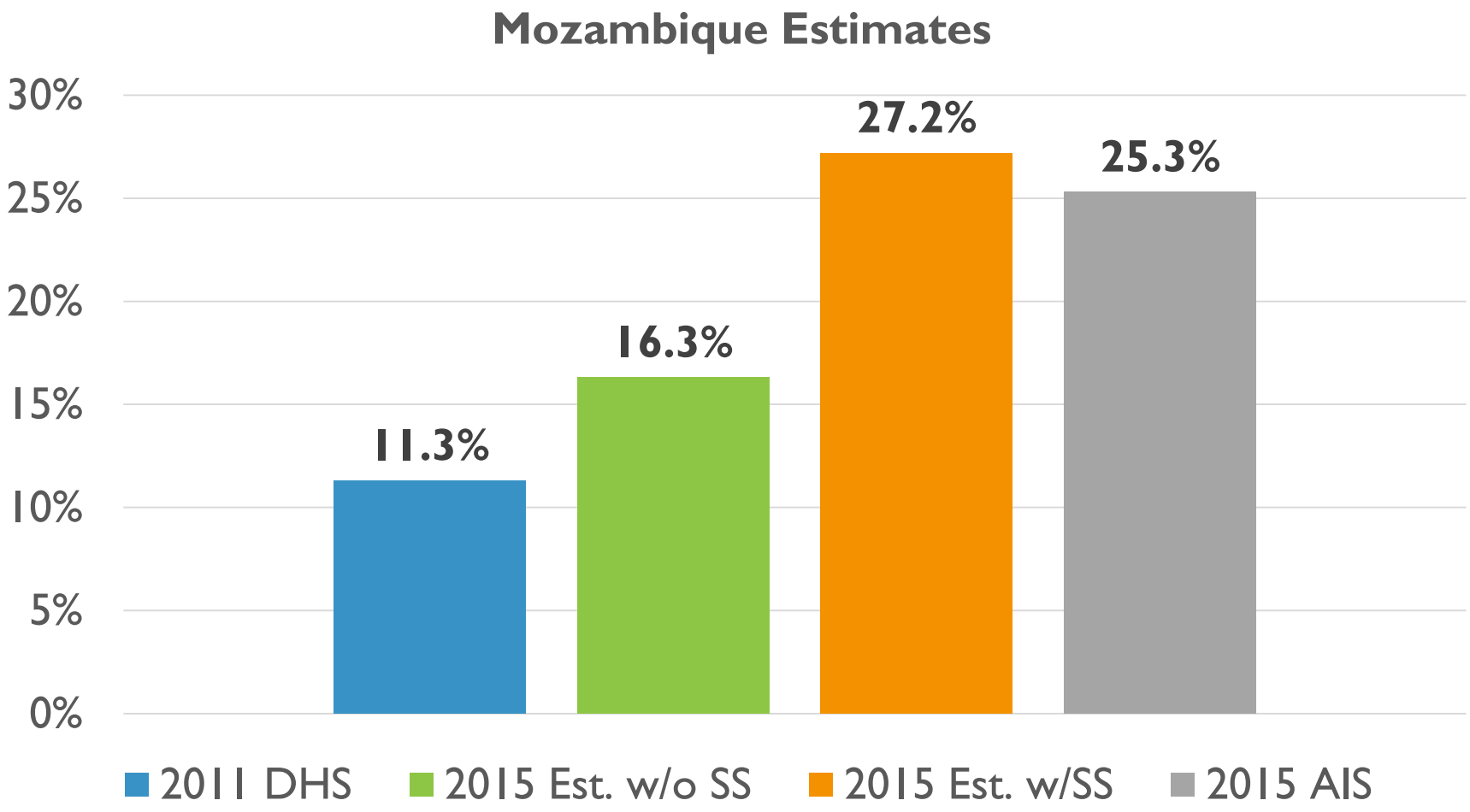
- To assess merit of adding SS, mCPR projections in 15 countries with at least 3 years of SS data prior to a large scale survey were run to assess comparative projection accuracy
  - The reference survey was dropped from the runs – the rationale of the test was to predict this "missing" value
  - The survey itself estimate was the gold standard for assessing accuracy

Country	Most Recent Survey(s)	Year	mCPR MW	Type of SS Data	Start Year of SS	End Year of SS
Benin	MICS	2014	12.5	Comm - Clients	2005	2015
	DHS-MICS	2011.5	7.9	Comm - Clients	2005	2015

Results

	SS	No SS
Number of Countries	15	
Number of Observations	24	
% estimates with SS closer to median than no SS	58.3%	
Avg. distance from survey median	4.2	4.3
Avg. CI size	11.1	16.2

Importance of Service Statistics



Understanding within Country Variance in SS Data Quality

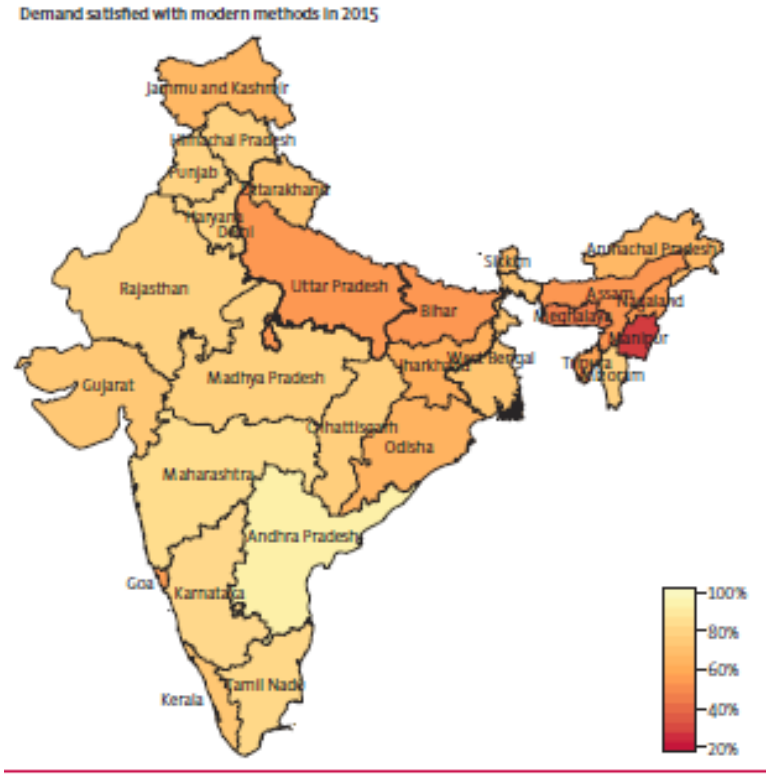
- Question: Is SS data quality within countries the same across data elements, or does quality vary by data element within countries?
- Analysis: Rank order correlations for comparing data quality for (a) commodities vs. service visits and (b) commodities vs. active users data with regard to accuracy in tracking mCPR.
- **Results: Spearman's Rho (Rank-Order Correlation)**
  - **Commodities vs. Visits = .625**
  - **Commodities vs. Users = .635**
- Interpretation: While countries are fairly homogeneous with regard to data quality across data elements, considerable within-country variability remains. Comparable quality data across data elements cannot be assumed

Sub-National Estimates

- Same process and methodology as national estimates
- Can go down to the same level as surveys
  - Province, Region, State, County
- Completed in most FP2020 pledging countries
  - Mix between those who do it directly and those that are done by Track20

Sub-National Monitoring in India

- FPET for all 29 states
- FPET for all districts in Uttar Pradesh and Bihar and selected priority districts in other states
- Analysis of service statistics trends for all states
- Indicator briefs for all states
- Consensus workshops in Uttar Pradesh and Bihar
- M&E officers in Uttar Pradesh and Bihar
- Rapid prevalence survey in 10 districts in Uttar Pradesh



New JN, Cahill N, Stover J, Gupta YP, Alkema L. Levels and trends in contraceptive prevalence, unmet need, and demand for family planning for 29 states and union territories in India: a modelling study using the Family Planning Estimation Tool Lancet Glob Health 2017; 5: e350–58

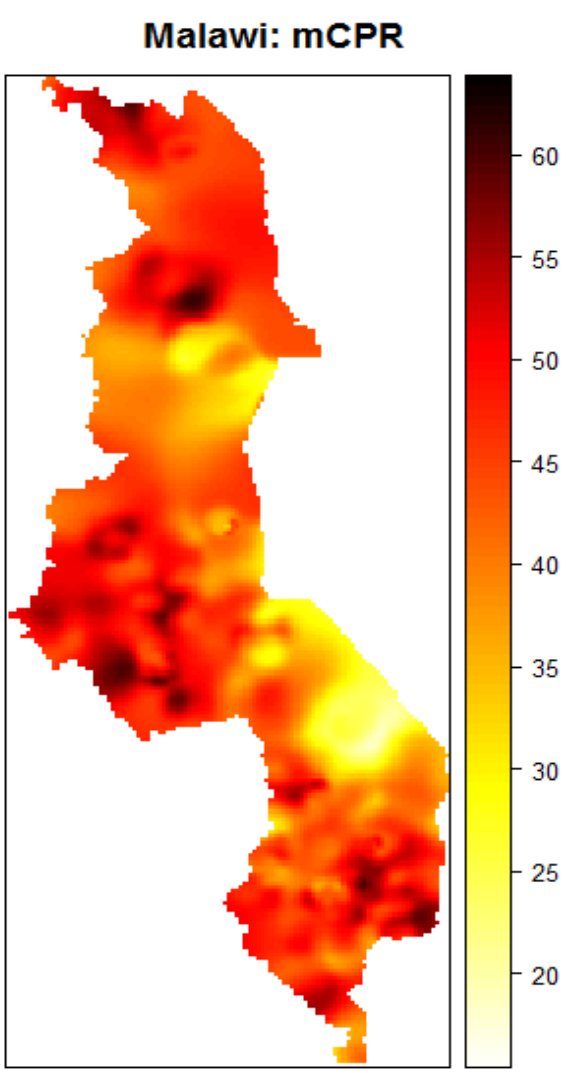
Sub-National Monitoring in Indonesia

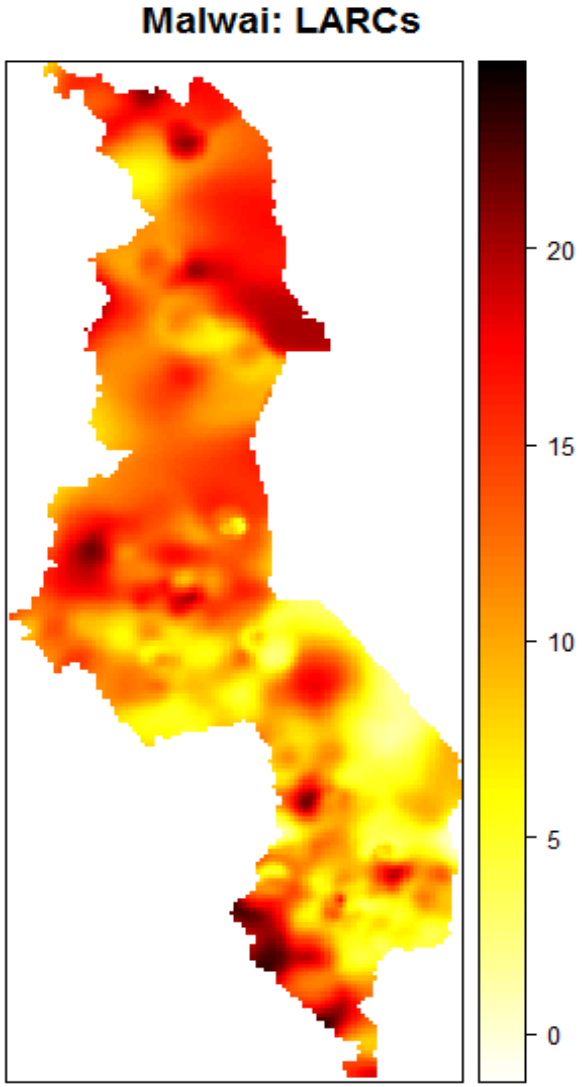
- FPET for all 34 provinces
- Expansion of national dashboard to provide operational indicator results for all 514 districts (sub-districts pending)
- Interactive dashboard tool (prototype) in 4 provinces and 11 priority districts to support customized local analyses
- Analysis of service statistics trends for all provinces
- Guidelines for analyses of HMIS data, use in supervision, and communication of results Pilot test of self-implemented rapid district survey protocol in 11 districts

Small Area Estimation

- Modified a methodology/tool from the HIV field PrevR
- Have run for about 8 countries
- Still run internally, not yet rolled out to countries
- Not yet able to include service statistics
  - That is the next step
  - ***Including linking it to FPET, so all levels can be produced simultaneously with service statistics feeding into all levels***

SAE: Malawi





Maximization of service statistics data to identify barriers and successes in family planning program implementation

Improving Quality and Analysis of Routine Data

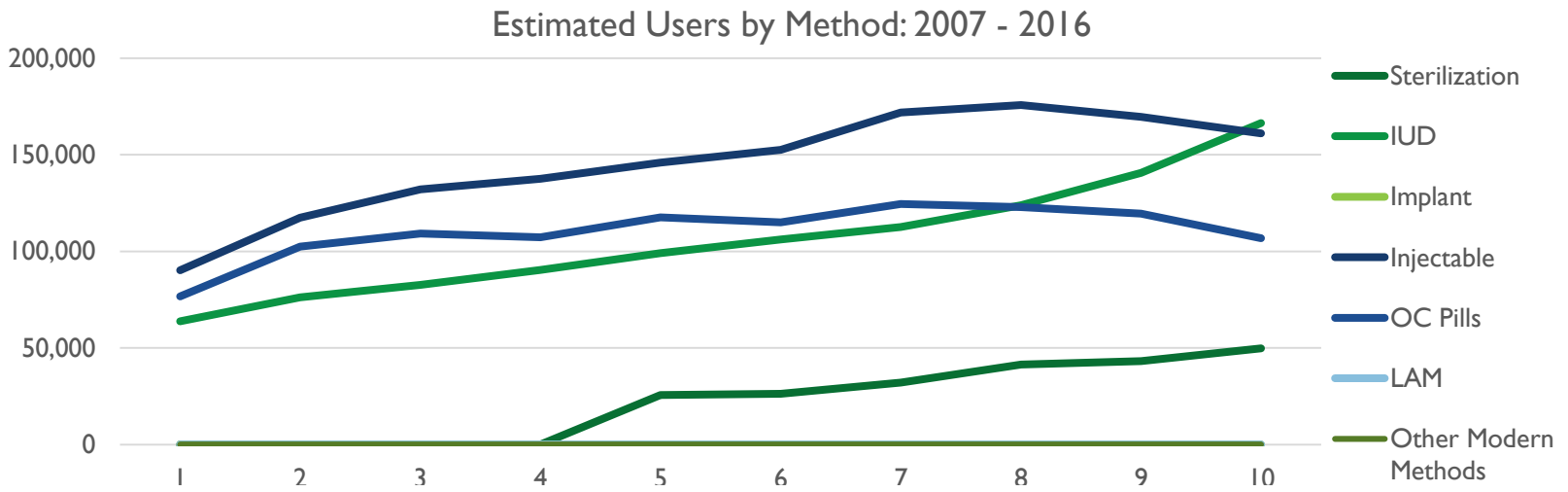
- Emphasis on use of SS data beyond topline FP indicators and beyond routing tracking
- Focus on analyses that highlight issues in need of further attention
- As for all Track20 activities, priority is for government to undertake analyses
- Varies by country, based on system, priorities, and quality of data
- Ultimate goal is to identify analyses that can be imbedded directly in systems to support informed decision-making
  - DHIS2 Module
  - List of recommended indicators (discussed tomorrow)

Estimated Method Use

- Creation of a new indicator to distinguish use estimates that are derived from service statistics.
- Not intended to stand alone as mCPR. This is the value that is put into the model to inform estimates after the last survey.
- Calculated using a tool called the ***SS to EMU Converter***.
- Tool converts FP service outputs to CYPs and then mCPR for short term methods. For long-acting methods (LARCs), adjustment is also made for IUD and implant insertions in prior years.
- All estimates for adjusted for private sector market share.

Estimated Method Use

- In addition to providing the EMU for inclusion in FPET, the process of using the spreadsheet is a quality check for HMIS data.
- Compares method specific trends over time, compares service statistics to trends from surveys, compares different service statistics data elements



SS to EMU Converter Tool

Set-up: Select your country then complete the form below

Country	India	select from the dropdown list
Are you using subnational data?	No	
Population	Married Women	

Language: English

Boxes in gold indicate a place where you will need to enter data

Boxes in light yellow indicate a place where data is automatically populated or calculated, but you can replace if you have more recent data.
Please document any changes that you make to the default data

Contraceptive Commodities

Contraceptive commodities distributed to clients

Do you have data on contraceptive commodities?	Yes	
Source:	HMIS	(HMIS, DHIS2, LMIS)
First year of data available:	2008	
Most recent full year of data available:	2017	
What sectors are reporting?	Public Only	select from the drop-down list

Contraceptive commodities distributed to facilities

Do you have data on contraceptive commodities?	No	
Source:		(HMIS, DHIS2, LMIS)
First year of data available:		
Most recent full year of data available:		
What sectors are reporting?		select from the drop-down list

FP Visits and Users

FP Visits

Do you have data on FP visits?	No	
Source:		(HMIS, DHIS2, LMIS)
First year of data available:		
Most recent full year of data available:		
What sectors are reporting?		select from the drop-down list

FP Users

Do you have data on FP users?	Yes	
Source:	HMIS	(HMIS, DHIS2, LMIS)
First year of data available:	2008	
Most recent full year of data available:	2017	
What sectors are reporting?	Public Only	select from the drop-down list

Next

TRACK 20

SS to EMU Tool Integrated in DHIS2

- To promote efficiency and sustainability, the SS to EMU tool has been integrated within the DHIS2 platform, allowing calculations and estimates to be produced automatically
- This is particularly important for sub-national estimates, in terms of time and capacity
- Can be done as part of the main system (Kenya) or as an added module (Malawi)

Expansion to a Full FP Module

This is being transformed into a full family planning module that includes the SS to EMU, but also includes:

- Automatic checks for outliers
- Identification of changes outside of trends
- Integration of other data, such as surveys, census, etc. for analysis and triangulation
- A series of visualizations that supports decision-making
- Can replace the existing FP environment or be set up as a module

Other Activities

- Incorporation of private sector data into public HMIS (Zimbabwe)
- Survey in Cameroon to determine provider time to fill out FP register and get their feedback on the utility of different data elements.
- Validation of service statistics with rapid surveys (India)
- Various analyses on quality and utility both at the country and cross-country levels, the later to be discussed tomorrow.

Role of M&E Officers

Country Ownership

- Capacity: placement of FP dedicated M&E Officers within Ministries of Health
  - Annual training, plus on demand technical support
  - Provision of tools and modules that support quality analysis of data and informed decision-making

- Process: Government hosting of an annual consensus workshop to review data and estimates and agree on final numbers.
  - Compare actual progress to desired growth
  - Discuss ways to improve estimates going forward with a focus on quality improvements for service statistics

Kenya M&E Officer

- Analysis of the PPFP data set for selected facilities to inform reviews of the family planning reporting tools
- Ongoing DHIS2 analysis on low mCPR counties to focus programmatic efforts
  - With FP Measurement Group on priority data needs
  - With NCPD on Advocacy needs
  - With the FP TWG on the Annual Work Plan and monitoring activities
  - With the County Health Management Teams on interpreting signals from their data
- Develop guidance for counties on how to finance FP in order to support county level engagement in financing for family planning-Integrating FP into the National Insurance scheme(NHIF)
- Kenya is the first Track20 country to embed the Service Statistics EMU Tool within DHIS2
  - visibility on information that is usually siloed like stock-outs, changes in method prevalence by county

Cameroon M&E Officer

Current Challenges:

- Ensure all partners, both technical and financial, fit into the logic of the FP Operational Plan
- Convince all actors to use a single harmonized FP data collection tool (harmonized register)
- Ensure consultation between all actors of MOH involved in FP to coordinate and collate work plans.
- Triangulate regional data from DHIS2 and surveys
- Ensure a good reporting of data from regions pending the effective implementation of DHIS2

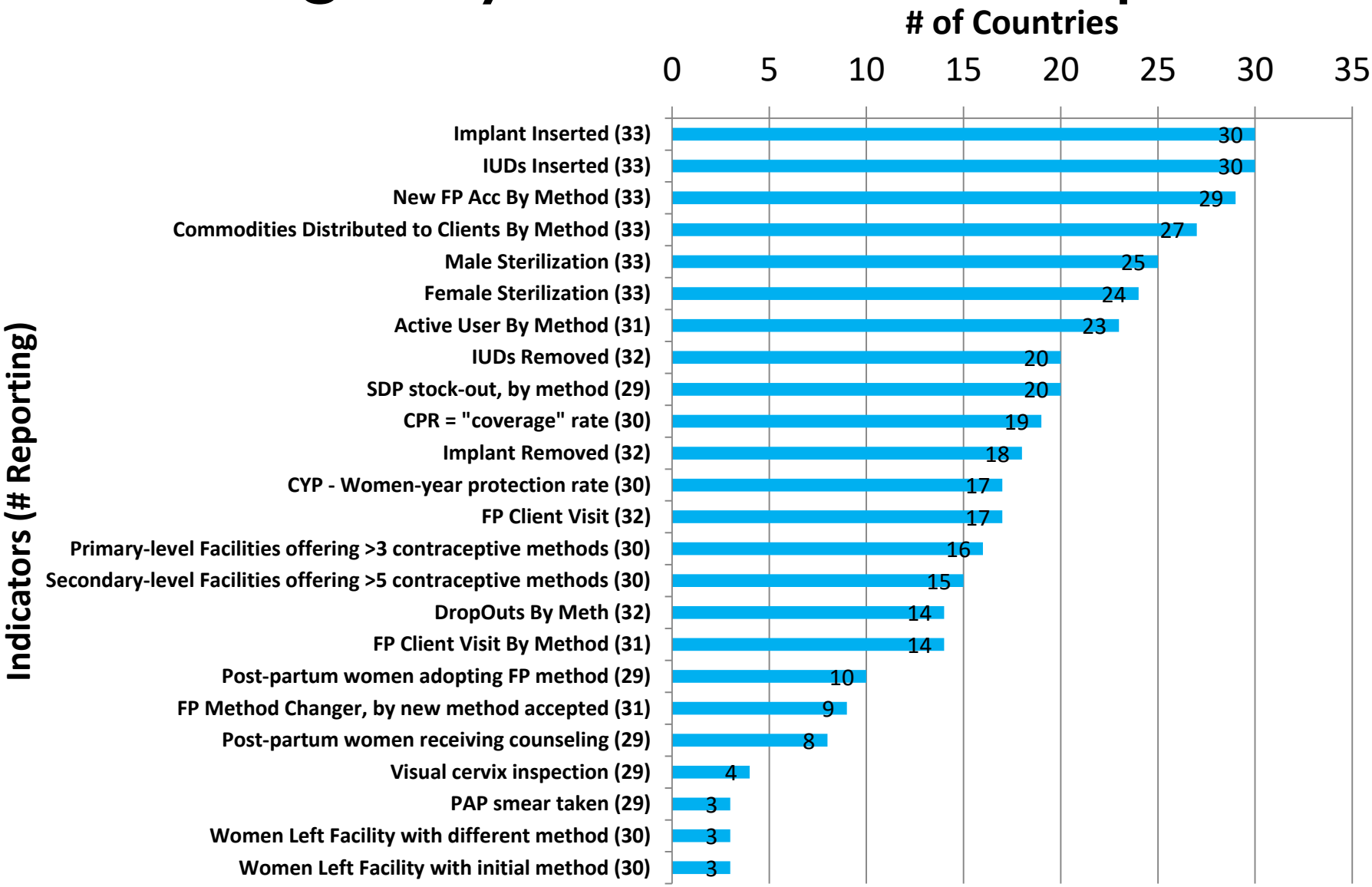
Effort to document content of HMIS, compare cross-country, and to assess the quality and utility of existing indicators and data elements

Sources of Data

Maximizing the opportunity while working in multiple countries, a survey on their HMIS systems was implemented

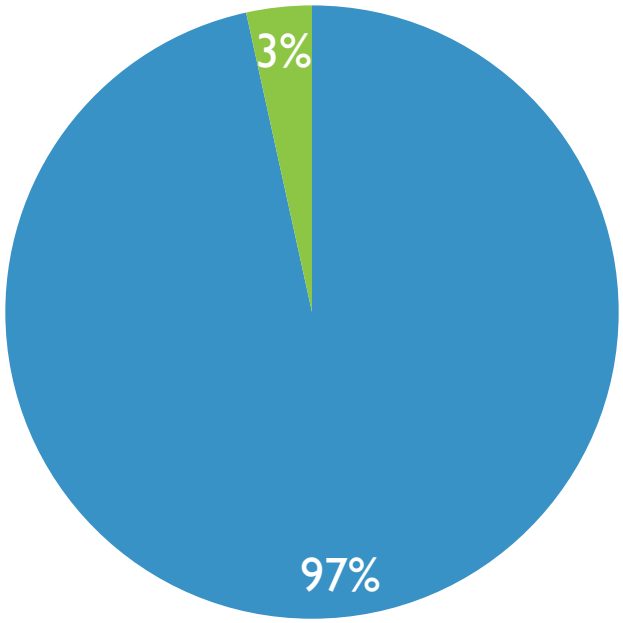
- Questionnaires completed by Track20 Monitoring & Evaluation Officers in countries supported by Track20 (FP2020 pledging countries)
- Inventories of data elements included in HMIS systems
- Certainly not representative, although regional variations are clear in terms of some indicators

Data Regularly Recorded and Reported

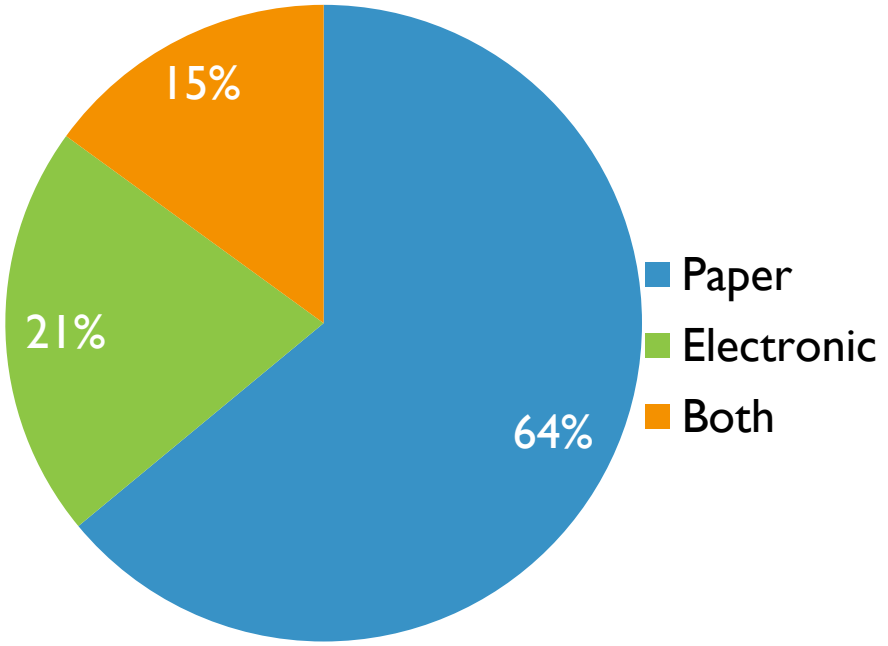


Recording and Reporting Systems

Service data recorded at service delivery points (SDPs) in the government system

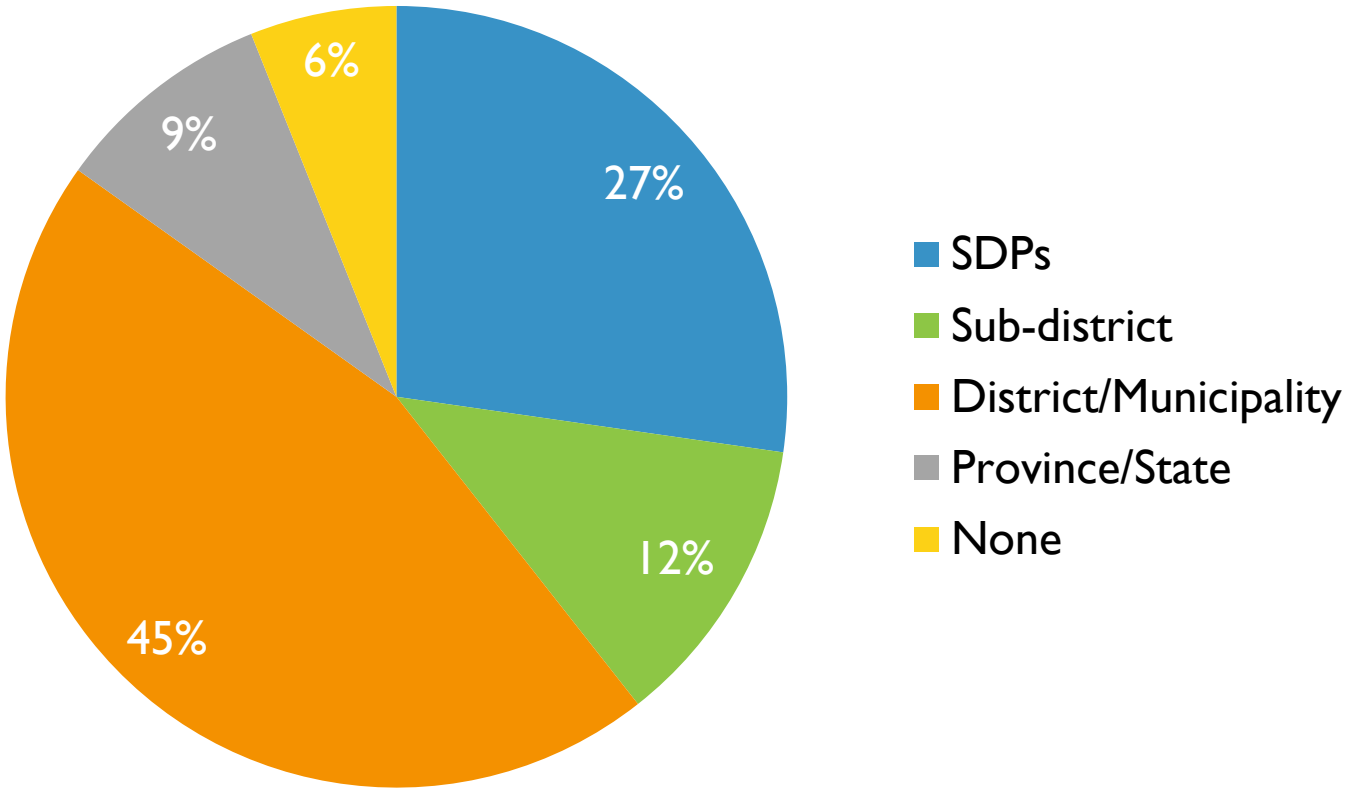


Media used for data reporting from SDPs to the next level up (e.g. District Health Office)

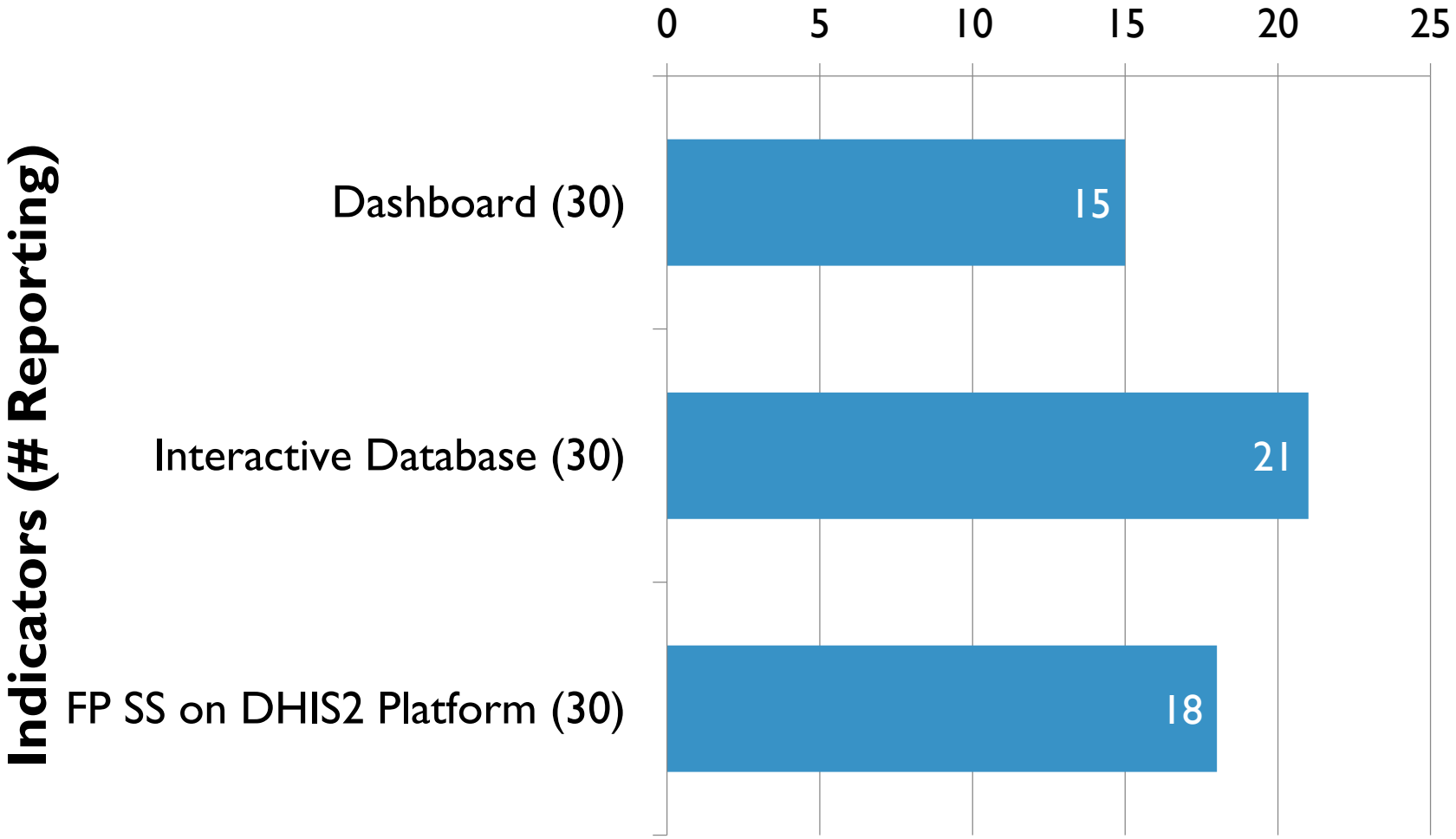


Recording and Reporting Systems

Lowest level where data are entered into a database and reported electronically

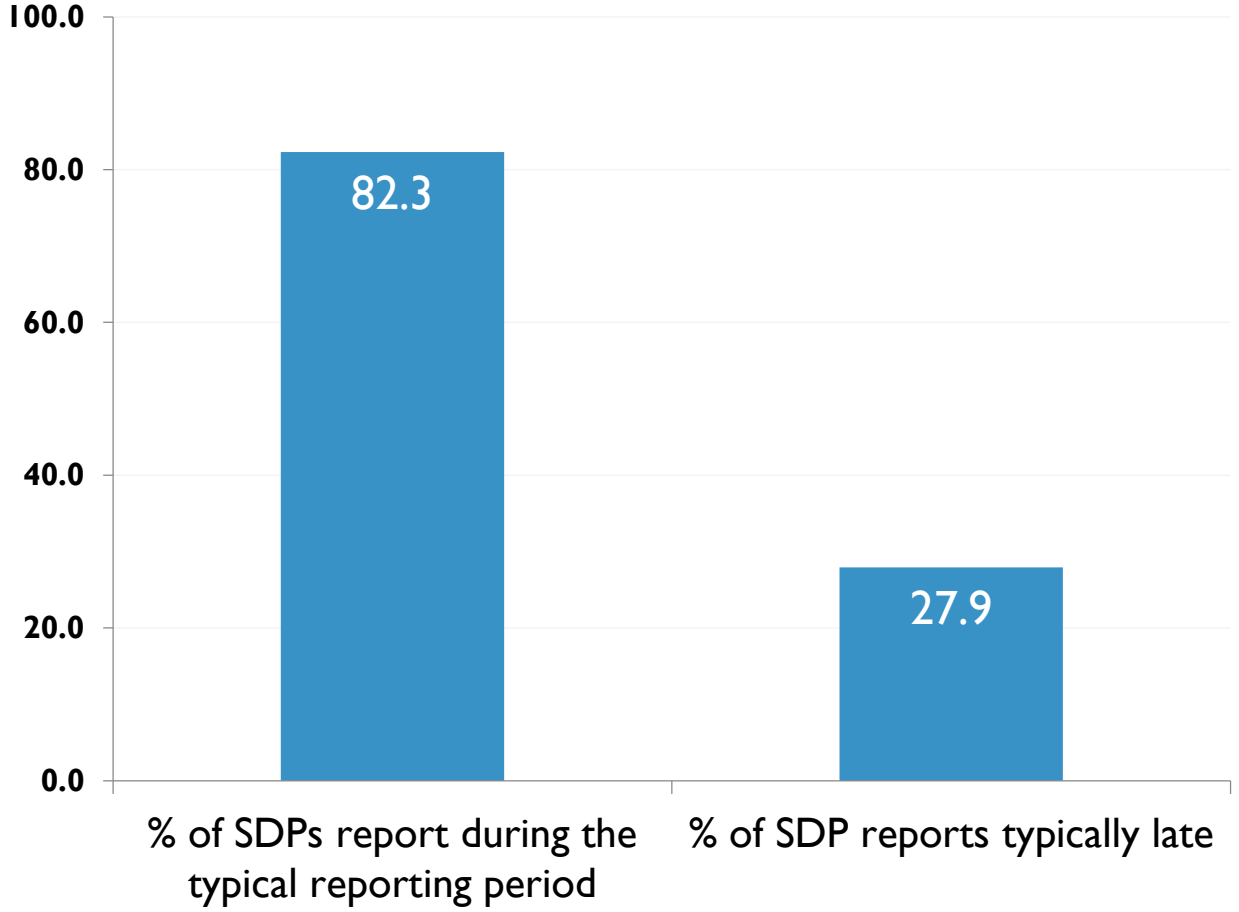


Data Dissemination



Data Completeness

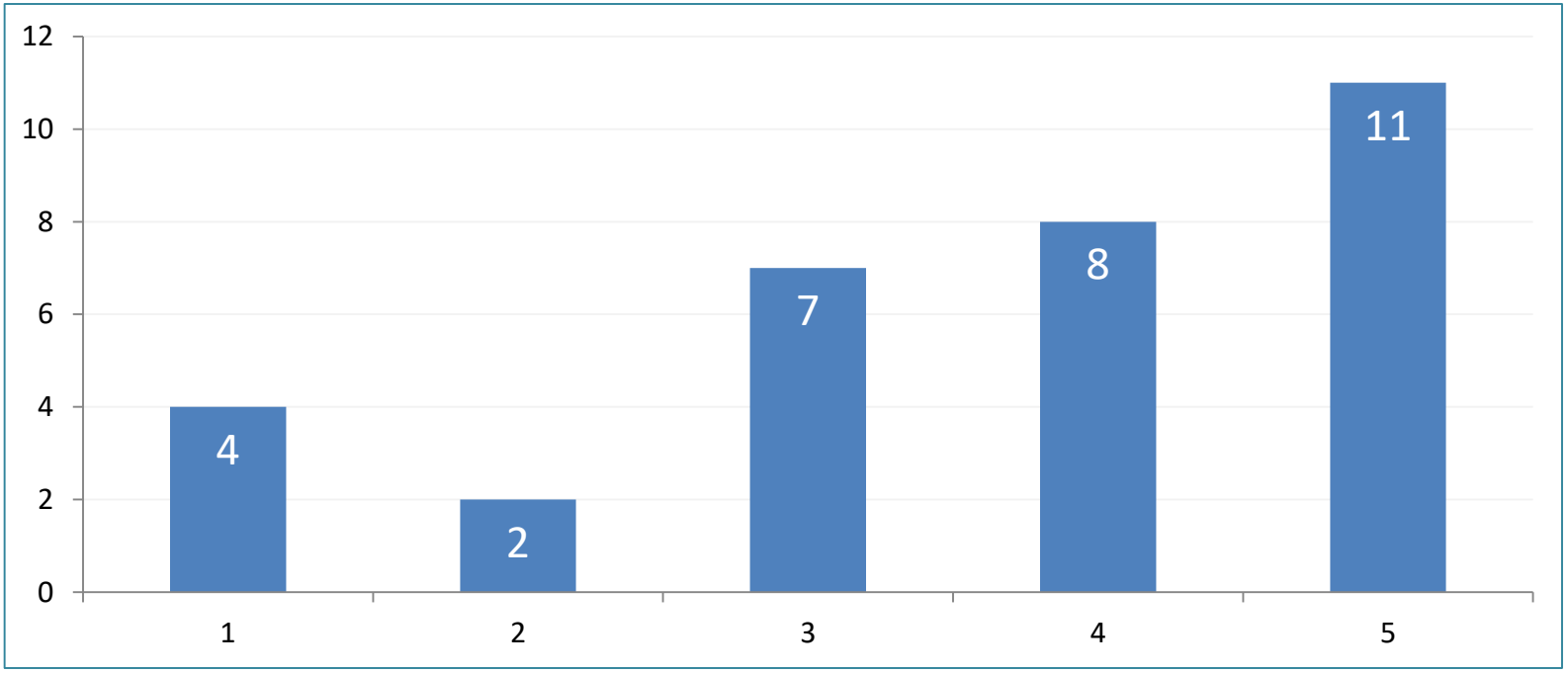
Reporting Coverage



Data Use

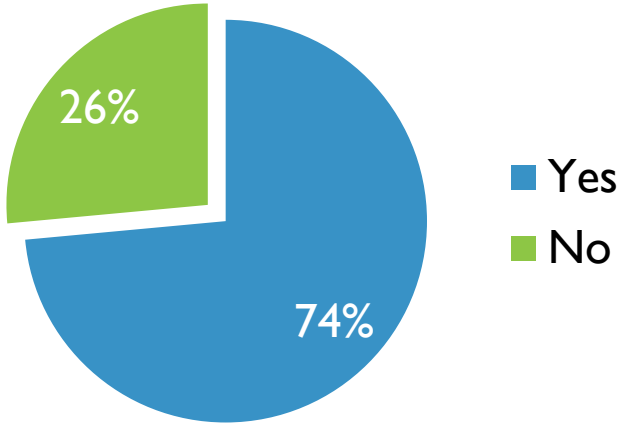
Meaningful use of SS data

Use SS data (1-5 scale: 1 = for simply compiling data in reports (monthly, quarterly, annual) that are not used to 5 = regularly used for program planning, monitoring and/or making program improvements
→ **Mean score: 3.625; min-max 1-5; Median 4)**

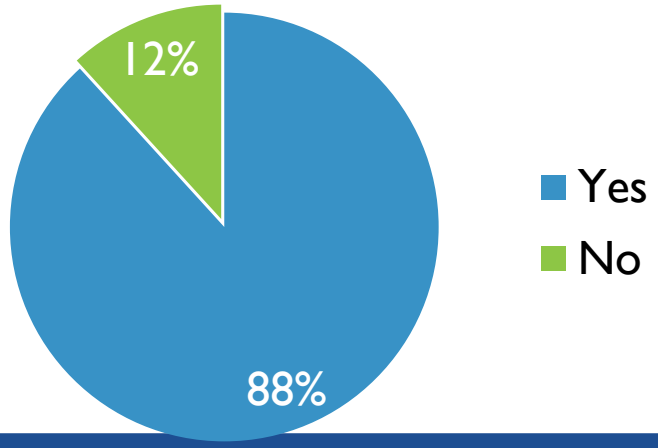


Private/NGO Sector

Public sector contraceptive commodities to the private/NGO sector



Countries in which private/NGO sector reports to govt.



But, private sector reporting coverage averages only 55%

Opportunities for Collaboration

- Track20 does not change systems of implement new systems, our findings can be available to those who do
  - Can also support FP data review meetings if they are not covered with funding
- Track20 does not work directly at the level of basic recording protocols and systems – partnership with other orgs that do would be productive
- Track20 has not done facility level data audits, but potentially could for very specific reasons, would be helpful to train M&E Officers in methodologies
- Identification and testing of new/innovative indicators

Thank you