Toward a short-list of essential SS-based FP data elements and indicators

TRACK 20
FP2020

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Recap from Yesterday

What should we remember as we work through the day?

- Countries are heterogeneous with regard to LMIS systems

- Country acceptance is a key (and sometimes delicate) issue

- LMIS reform, including data use, is a medium- to long-term proposition

- Significant resources have been allocated to the effort

- Progress has been made, but gaps and important limitations remain

- Lots of tools and approaches have been developed (= opportunities for leveraging via collaboration)

- Data quality is an issue in most countries

- Needs and capacities vary by level in national programs/health systems, requiring explicit recognition

Rationale for agenda item

- A consensus short list of essential SS-based data elements and indicators with standardized definitions would provide useful guidance to countries to ensure inclusion of key indicators

  - Technologies, programs, and strategies evolve over time, and tend to change more rapidly than does HMIS. HMIS in some/many countries lag behind new program developments
  - Consultation provides a forum for consideration of gaps/ innovative indicators

- To balance between collecting too much data, while ensuring countries have the data they need

  - Some countries collect too little, some too many, some the "right", relevant indicators and some not so much

Track20 Work in this Area

- Assess relative merits of commonly collected SS-based data elements

- Undertake analyses that maximize the utility of common SS-based data elements beyond routine monitoring

- Explore merits of new indicators

Thoughts on how to identify data elements (& indicators) for the short list

Pull from existing based on analyses and experience (from data elements in Track20 supported countries)

- **Services Provided**
- **Discontinuation**
- **Quality**
- **Method Availability**

Consider additional indicators/outputs that can be created by existing elements

- **Access**

Can we pull anything from private sector data collection experiences?

- **PPFP (JHPIEGO)**
- **Quality (MEASURE)**

Country and Global Priorities

- **PPFP**
- **Disaggregation of injectables**
- **Channel of service (outreach)**
- **Integration**
- **Age disaggregation (youth)**

Assessment of Common Data Elements in SS Systems

Services Provided

Method Discontinuation

Service Quality

Method Availability

Categorize data elements into 4 areas, based on what is being collected in T20-supported countries (≥ 25%)

Total of 15 data elements across all categories. Definitely uneven in terms of distribution

This is the starting point for our analyses, based on what is currently being collected.

Does this approach work? Does it fit what we think should be included in systems?

Common data elements, by category

- **Services provided**
  - # Female & male sterilizations performed
  - # IUDs and implants inserted
  - # commodities distributed to clients (by method)
  - # FP service visits (by method)
  - # contraceptive users (by method)
  - # new acceptors (by method)
  - # PP women receiving FP counseling
  - # PP women adopting modern method (by methodO

- **Discontinuation**
  - # IUDs and implants removed
  - # dropouts (by method)

- **Method availability**
  - Stock outs (# and % of SDPs, by method) - dominant
  - #/% primary level SDPs that offer 3+ modern methods
  - #/% secondary level SDPs that offer 5+ modern methods

Criteria for Assessment

In order to qualify for a "short list" of essential data elements, data elements would ideally:

- Have high **utility** for tracking FP program implementation and performance, including:

  - Satisfy routine monitoring needs,
  - Providing information needed for the calculation of one or more key indicators, and
  - Are useful in analyses that provide insights into program dynamics or functioning

- Not be unduly cumbersome or difficult to record in connection with service delivery (i.e., are **feasible**), and

- Be based upon evidence that the data elements can be measured relatively accurately in actual practice (**quality**).
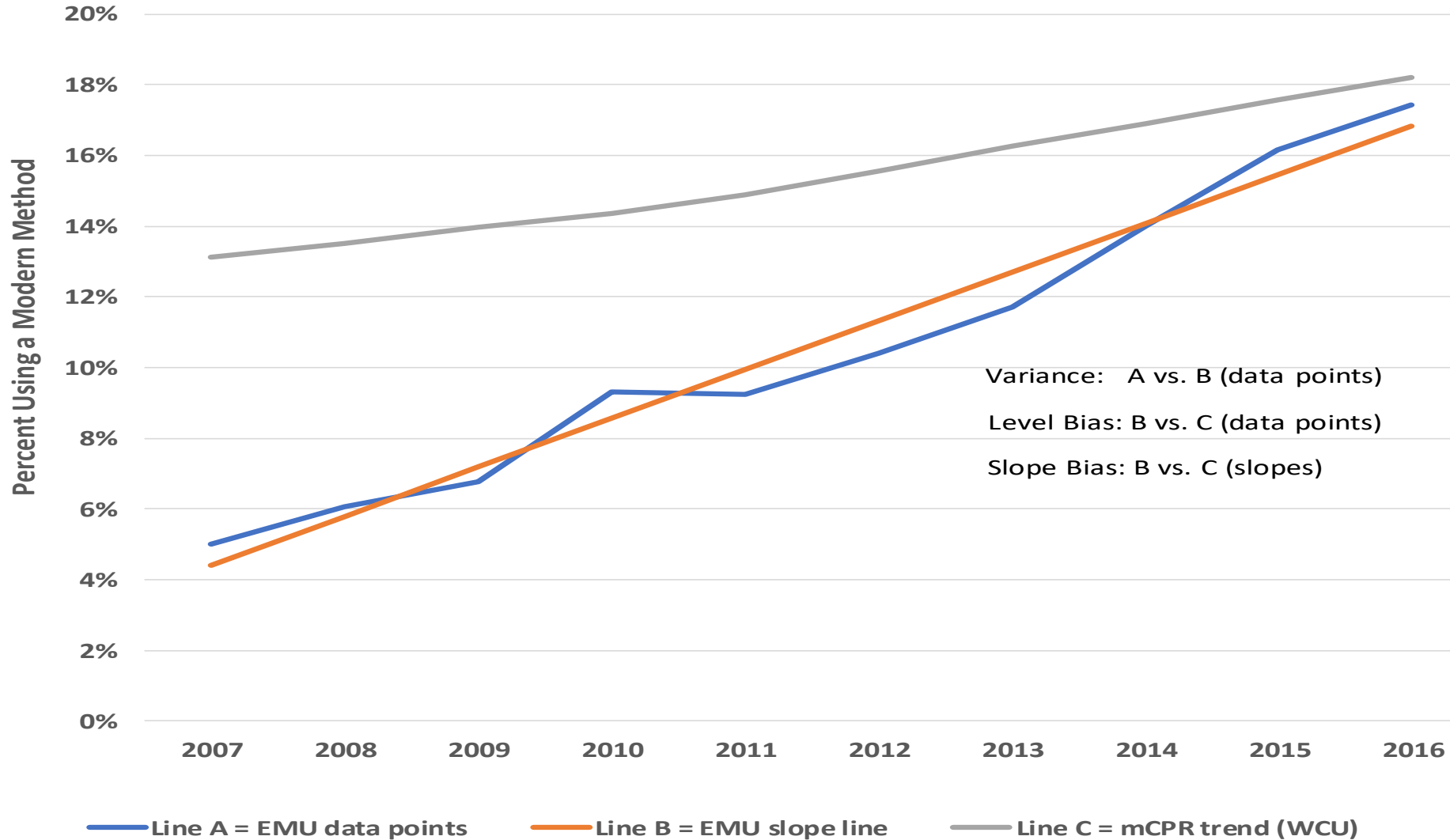
Services Provided

- A study was done to assess the relative merits of three FP data elements based upon data from 33 countries:
  - # of service visits (by method)
  - # commodities distributed to clients (by method)
  - # contraceptive users by method

- Alternative SS data elements assessed via comparison of mean square errors (MSE) in projecting annual mCPR values.

- Diagnostic statistics:
  - Root mean square error
  - Variance
  - Level bias
  - Slope bias

Components of MSE Visualized

Variance: A vs. B (data points)

Level Bias: B vs. C (data points)

Slope Bias: B vs. C (slopes)

Percent Using a Modern Method

Line A = EMU data points   Line B = EMU slope line   Line C = mCPR trend (WCU)

Results for 33 Countries

(Results shown are medians)

MSE Component	Commodities to Clients (28 Countries)	Service Visits (8 Countries)	Current Users (13 Countries)
Root MSE	0.0779	0.0938	0.1574
Relative Variance	0.0021	0.0001	0.0012
Relative Bias - Level	0.3855	0.6015	0.5644
Slope Bias	0.0085	0.0073	0.0129

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Results: Pairwise Comparisons of Median MSE Results in Countries with at least Two Data Elements

MSE Component	Commodities vs. Visits (7 Countries)		Commodities vs. Users (8 Countries)	
	Commod.	Visits	Commod.	Users
Root MSE	0.0659	0.0727	0.1019	0.1844
Relative Variance	0.0017	0.0001	0.0091	0.0012
Relative Bias - Level	0.4578	0.6015	0.3103	0.5634
Slope Bias	0.0034	0.0151	0.0114	0.0070

Conclusions

- None of the data elements perform well as the basis for stand-alone estimates of mCPR – more productive to use in conjunction with FPET

- Level bias is the major issue for all three data elements; variance and slope bias sufficiently modest/small to be useful as inputs into FPET

- Commodity to client data performed the best, followed by visits data

- ***Do we want to make a recommendation on preference for commodities vs visits vs users?***

- ***Assume at least one of these need to be on the short list?***

Article on results in March issue of *Global Health Science and Practice*

Data Quality: "New Acceptors" Definition

Definition	Countries
First lifetime use of any contraceptive method	(6) Burundi, Kenya, Laos, Nepal, Niger, Pakistan
First lifetime use of any modern method	(8) DRC, Madagascar, Philippines, Uganda, Zambia, Zimbabwe Sierra Leon, Mauritianie
New (first time) in contraceptive service	(3) Benin, Nigeria, Tanzania
First time acceptor at institution	(2) Cote d'Ivoire, Senegal
New contraceptive users	(2) Guinee, Mali
Accepting method for first time after 12 month period of non-use	(1) Cameroon
First time acceptor at institution + restrarting user + changing institutions	(2) Togo, Afghanistan
Initiating method (no prior method + method changers)	(4) Vietnam Ethiopia, Liberia, Rwanda
Newly eligible couples accepting contraception + acceptors after delivery or abortion	(1) Indonesia
Sterilization & IUD acceptors	(1) India

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Further Systems-Level Analyses

Median MSE Results for Commodities to Clients Data: Selected Information System Features

Indicator	Root MSE	Relative Variance	Relative Bias - Level	Slope Bias
Country Has LMIS:				
Yes	0.0576	0.0012	0.2726	0.0076
No	0.0982	0.0025	0.4578	0.0088
Method of measuring stock-outs:				
Monthly inventory	0.0820	0.0187	0.3513	0.0068
Actual occurrence	0.0695	0.0025	0.2748	0.0151
How data are transmitted from SDPs:				
Paper	0.0964	0.0025	0.4430	0.0151
Electronic	0.0659	0.0010	0.3103	0.0054

Discontinuation

Already accounted for in the EMU for Implants and IUDs.

Did a separate analysis using data from 8 countries that collect removal data for IUDs and Implants comparing reported removals against expected removals. Cote d'Ivoire, Guinea, Togo, Kenya, India, Nepal, Indonesia, Tanzania

Overall, implant removals track better than IUD. We tend to see problems in insertions for IUD as well in some countries (India, Pakistan), so not surprising.

Some limitations in the analysis because we do not have enough years preceding the first year of data collection on removals. This is evident when looking at how data improves over time. If you look at all years of data the number of removals is less accurate compared to when you look at just the last three years. So the over all trend is improving

Discontinuation Implants

Of all countries, Cote d'Ivoire recorded removals most closely match the expected removals based on insertion statistics and removal rates. Because Cote d'Ivoire's program was relatively new in 2014, the early removals match expected removals from early adopters.

Data diverges in the most recent year. This could be from: (a) incomplete data reporting for the year; (b) more removals relative to insertions in the private sector (not captured in the service statistics); or (c) women in Cote d'Ivoire may have lower levels of discontinuation than the global average.
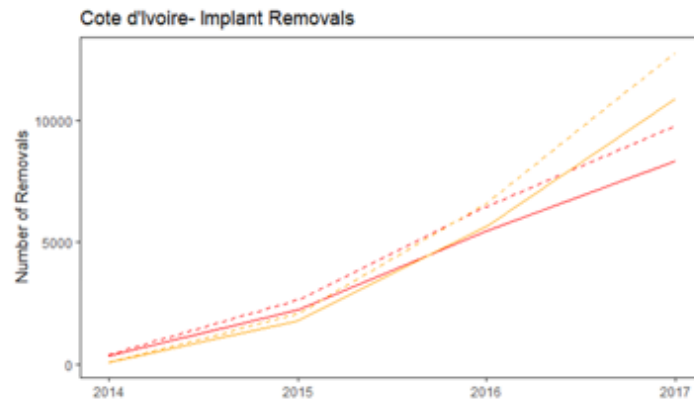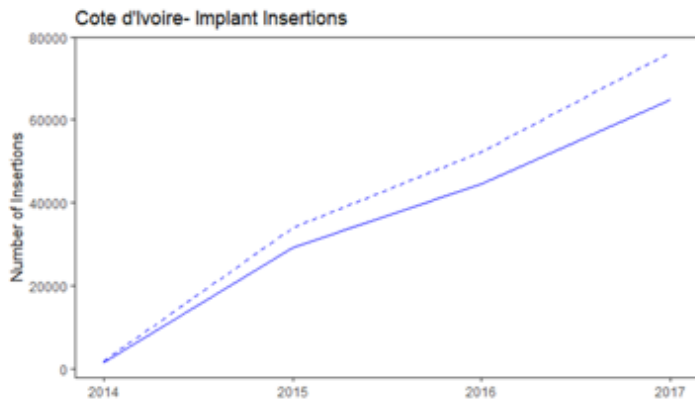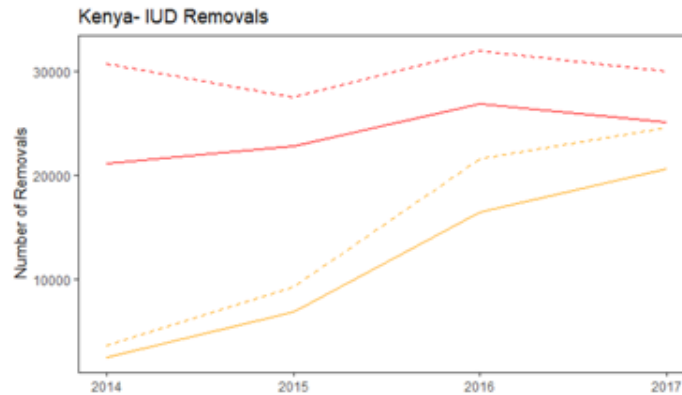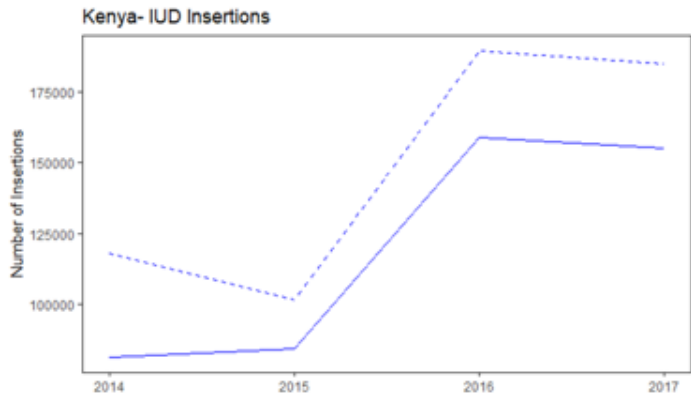
Cote d'Ivoire- Implant Insertions

Cote d'Ivoire- Implant Removals

Blue- Insertions
Red- Removals
Yellow- Predicted removals

Solid- recorded numbers
Dashed- adjusted by reporting rates and private sector

Discontinuation IUD

An example of the data converging in recent years.

The number of years of data available is insufficient to capture the full trend.

Kenya- IUD Insertions

Kenya- IUD Removals

Blue- Insertions
Red- Removals
Yellow- Predicted removals

Solid- recorded numbers
Dashed- adjusted by reporting rates and private sector

Discontinuation

First round of data analysis suggests that this is not a high quality indicator (but important info for programs).

However, there are significant limitations that need to be addressed in the next round.

- Not all countries have country specific discontinuation rates. Global rates are used in these countries. Significant variation.
    - For the numbers for implants in Togo to match, the discontinuation would need to increase by 50%. This seems like a lot, but the global average is 11% at 12 months. Benin, borders Togo, and discontinuation is 35%.
- There may be more removals relative to insertions in the private sector. Private sector adjustments assume they are equal.
- Discontinuation rates that are country specific are from the last survey and some of those surveys are at the beginning of revitalized implant programs. Maybe they have changed in the short term.

Quality

Vastly under-represented in service statistics.

In systems we reviewed, only found 2 indictors in only a few countries:
- *% of women who left SDP with originally preferred method*
- *Reasons for method discontinuation*

We were not able to get the data to do a review of the quality, or even to fully understand the intent/usefulness of the indicators.

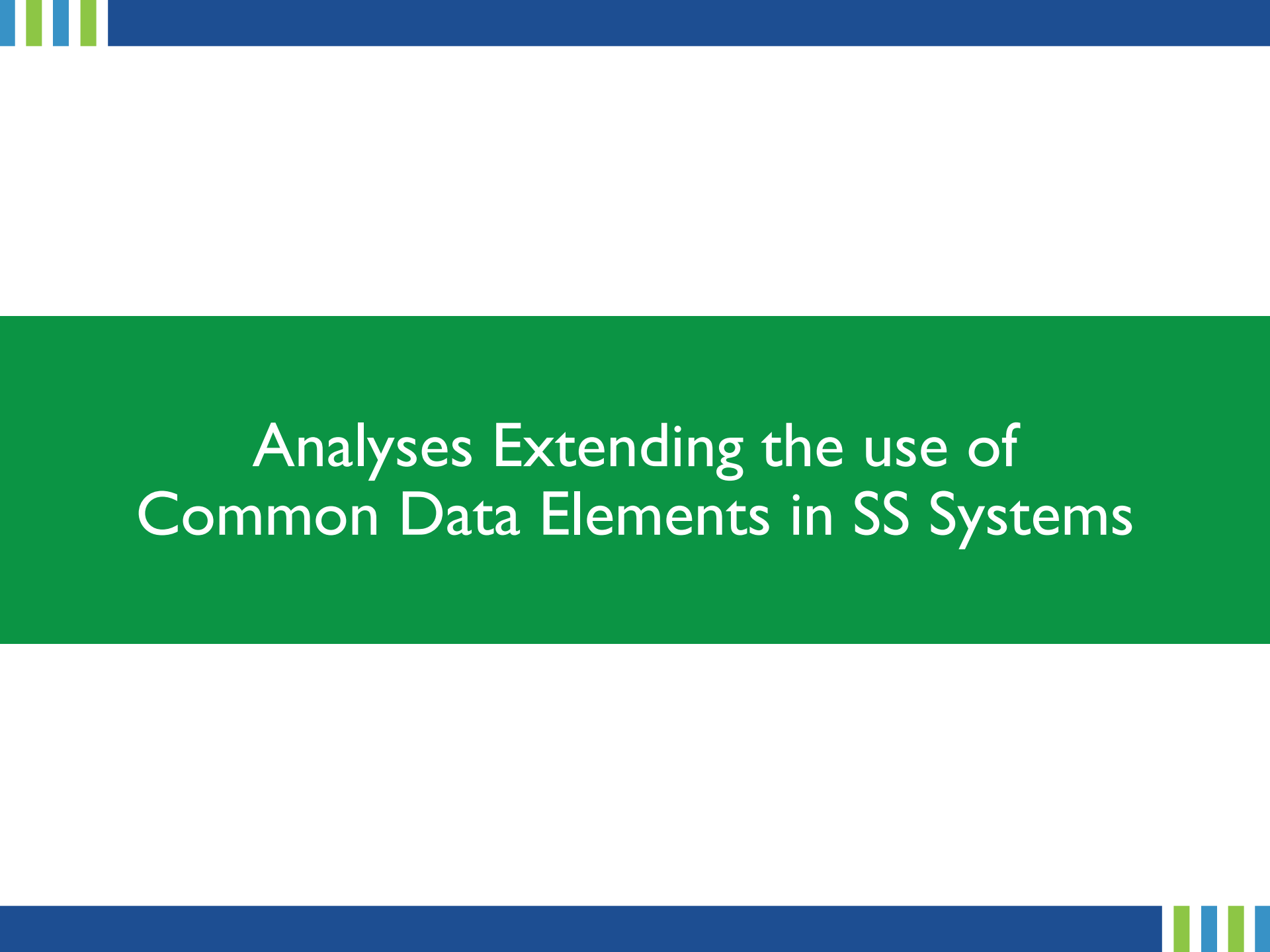MEASURE mentioned yesterday that they have been working in this area.

Are there any indicators that stand out?

Should there be expectations about this type of indicator being included in HMIS?

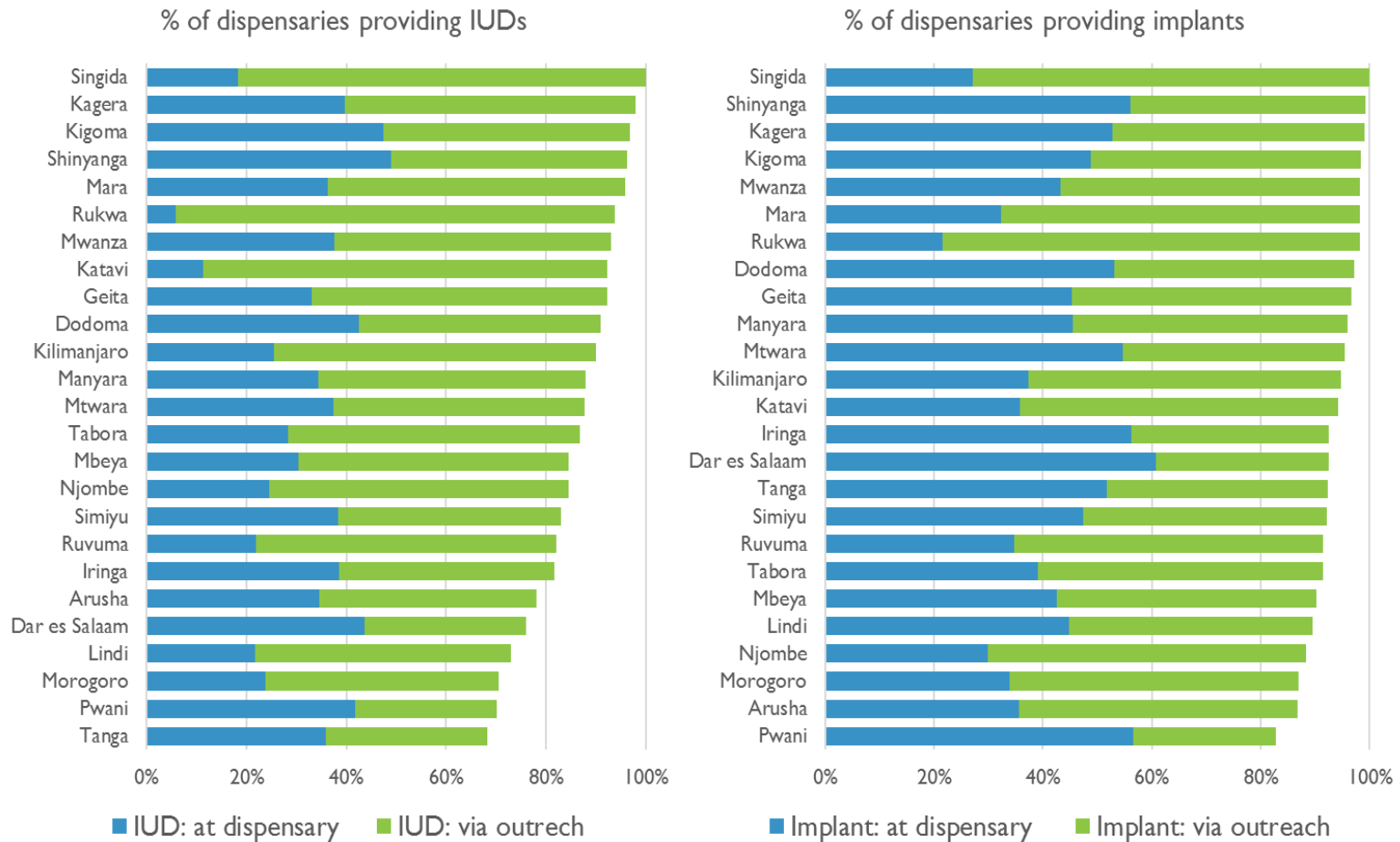*Any thoughts on what may be possible to collect?*

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Method Availability

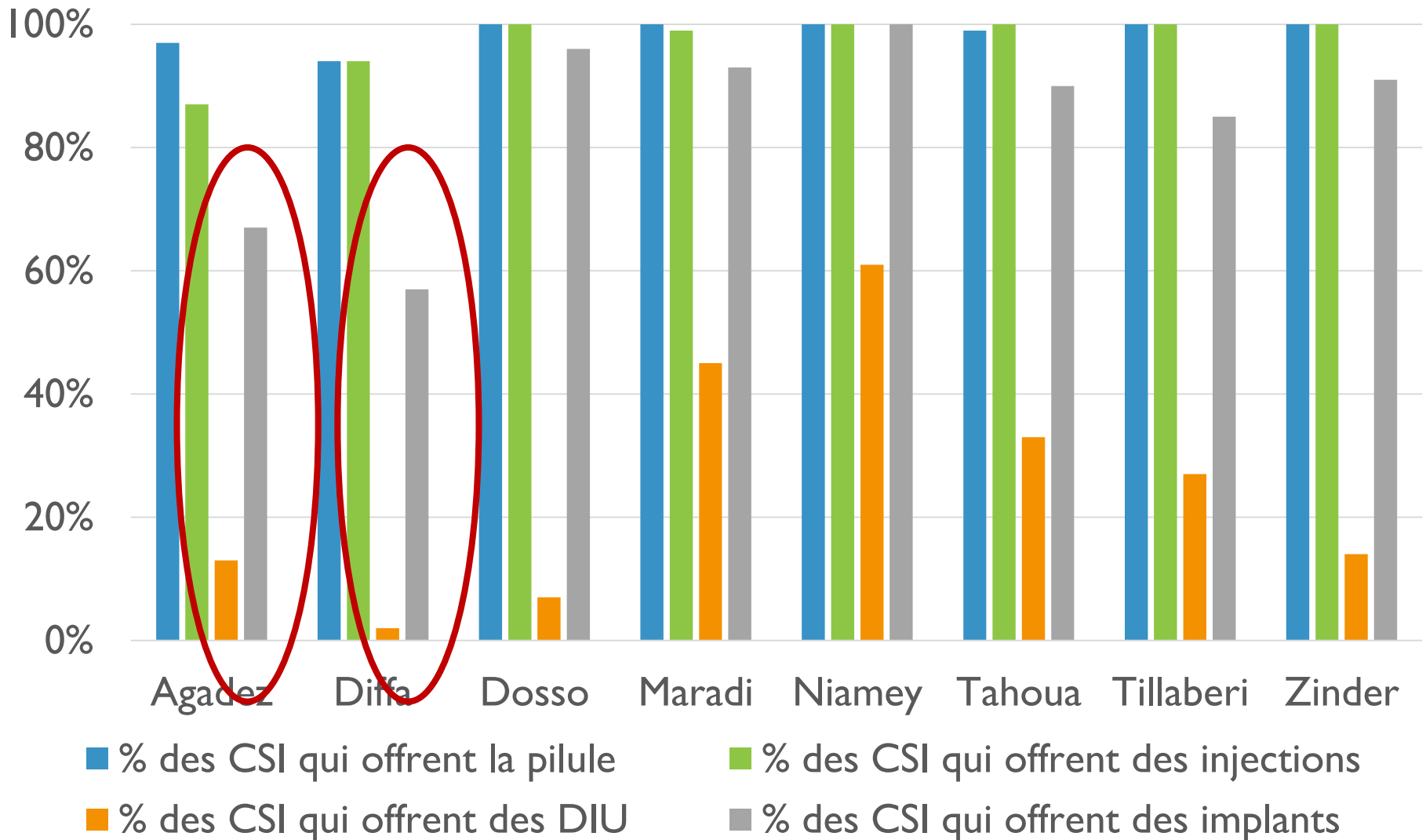This is the starting point for our analyses, based on what is currently being collected.

Analyses Extending the use of Common Data Elements in SS Systems

Tanzania: Using DHIS2 to look at variation in LARC provision by region

Availability (Health Centers)

Legend:
- % des CSI qui offrent la pilule
- % des CSI qui offrent des injections
- % des CSI qui offrent des DIU
- % des CSI qui offrent des implants

Exploring New/Innovative Indicators

Promising Indicators for Discussion

- Youth disaggregation of clients. Using an approach similar to DRC, which has a check box for clients under 20.
  - This is more realistic than collecting all age groups. Tanzania tries to do that and the quality is abysmal.
- Percent of SDPs with clients under age 20
- Percent of clients leaving SDP with original method of choice
- Reasons for discontinuation- already included in some registrars, just not aggregated up the system
- Percent of IUD and implant removals occurring within 1/3 months of insertion
- Reasons for discontinuation

Prioritizing Data Elements in Government SS Systems

Track20 Internal Nominal Group Process to Identify Essential Data Elements

- Data elements (n=14) reported being collected in n=33 T20 supported countries scored on three (3) criteria:

  - Utility
  - Feasibility
  - Quality

- Data elements scored 1-3 on each criterion, yielding composite score with range 3-9

Internal T20 Nominal Group Results

Data Elements	Utility	Feasibil-Ity	Data Quality	Overall Priority
New acceptors	2.1	1.9	1.6	5.6
Commodities distributed to clients	3.0	2.7	2.6	**8.3**
Client visits	2.3	2.9	2.3	**7.4**
Current users	2.9	1.4	1.3	5.6
Method changers	1.9	2.0	1.7	5.6
Post-partum acceptors	2.7	1.9	1.9	**6.4**
Drop-outs/discontinuers	2.3	1.4	1.3	5.0
IUDs & implants removed	2.1	2.3	1.3	**5.7**
Stock-outs	3.0	2.0	2.0	**7.0**
Facilities with 3+ or 5+ methods	2.1	1.9	2.0	**6.0**
Women leaving facility with initial choice of method	2.3	1.0	1.2	4.5
Reasons for discontinuation	2.4	1.1	1.1	4.7

For Group Discussion

The above classification scheme is based upon data elements that are currently being collected in 33 Track20-supported countries

- Are there new/other data elements and/or categories of data elements that should be recorded and reported that reflect new program directions?

- Does the relative importance/priority of certain data elements vary by stage of FP program development (i.e., early slow growth, middle rapid growth, high tapering growth)?

Expanded Nominal Group Process

- We would like to repeat the process among the wider group of professionals working on HMIS attending this consultation.

- Forms have been distributed

- If there are 2+ representatives from an organization, request collaboration on one submission per group

- When finished, turn in your form and proceed to tea/coffee break

- We will tabulate the results and present them later

Results – Consultation Internal Nominal Group Results

Data Elements	Utility	Feasibil-Ity	Data Quality	Overall Priority
# sterilizations (female/male)				
# IUDs & implants inserted				
# new acceptors				
# commodities distributed to clients (by method)				
# FP service visits (by method)				
# current users (by method)				
# method changers				
# PP women rec. FP counseling				
# PP women adopting modern method				
IUDs & implants removed				
# drop outs/discontinuers				
# of SDPs with stock-outs (method)				
# SDPs with 3+/5+ methods				