



**KATHMANDU**

25-28 MARCH 2019 / KATHMANDU, NEPAL

**19<sup>TH</sup> GENERAL MEMBERSHIP MEETING OF THE  
REPRODUCTIVE HEALTH SUPPLIES COALITION**



# The Power of Data

## Data Convergence and Utility-A Process Example

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## Introduction

- Limited access to timely and quality logistics data from health facilities creates challenges for effective supply chain decision-making
- Data availability alone is not enough for SCs to perform
- In addition to robust information systems, creating a “**data culture**” by training and empowering staff to analyze and use data for decision-making is key to improving supply chain performance



## UNFPA Nigeria Experience

- **TASK:** Create a visualization that tells a story, illustrating the importance of strengthening the supply chain, and how it contributes to larger FP outcomes
- Used simple and free tools
  - Excel and Public Tableau
- Presented to stakeholders mid-2018
  - National: recipient of reports
  - State: producers of data/reports



# Process



# PROCESS A

## Identify Needs

### Work with the team to identify

- Challenges
- Goals
- Audience:
  - Users
  - Recipients of reports

### Questions to ask:

1. What decisions do you make in your current role that could be made easier with access to quality data?
2. From the data sources given, identify the ones most useful to you?
3. How would you improve upon the format of the data for easier use and sharing?



# PROCESS B

## Identify and Review Data

1. Data Collection
2. Cleaning
3. Standardize across datasets

- Geographies and locations
- Time periods
- Methods

**LMIS**

**Data from state Requisition, Issues and Reporting Forms RIRF**

December 2010 distribution				April 2011 distribution											
State and NGO	Product	Beginning balance	Phy Ct	Period	Organisation unit / Data	Family planning clients counselled	Female 15-49 years using modern contraceptives	New family planning acceptors	Deliveries - Assisted	Deliveries by skilled birth attendants	Preterm deliveries	Deliveries - Normal	Maternal deaths audited		
ABIA	Condom Female	-		1	Jan-17	ng Federal Government	475 954	282 093	201 682	30 620	86 852	1 098	115 879	18	
	Condom Male	-		2	Feb-17	ng Federal Government	448 870	244 046	190 041	28 990	79 768	1 605	110 782	15	
	Depo Provera	-		3	Mar-17	ng Federal Government	433 923	228 653	179 926	34 967	93 523	1 434	123 622	35	
	Microlut	-		4	Apr-17	ng Federal Government	395 686	206 945	165 586	33 384	93 875	1 225	127 141	76	
	IUD	-		5	May-17	ng Federal Government									
	Microgynon	-		6	Jun-17	ng Federal Government									
	Noristerat	-		7	Jul-17	ng Federal Government									
	Impanon Classic	-		8	Aug-17	ng Federal Government									
	Implanon NXT	-		9	Sep-17	ng Federal Government									
	Jadelle	-		10	Oct-17	ng Federal Government									
	Levonorg	-		11	Nov-17	ng Federal Government									
	Cycle Beads	-		12	Dec-17	ng Federal Government									
	Consumable Kit	-		13	Total										
	Petogen	-		14											
	Sayana Press	-		15											
ADAMAWA	Condom Female		1,783												
	Condom Male														08,00
	Depo Provera														4,8
	Microlut														1,6
	IUD														7,7
	Microgynon														5,0
	Noristerat														
	Impanon Classic														
	Implanon NXT														67
	Jadelle														36

**HMIS**

**FAMILY PLANNING BRIEF**

**PMA2020/KADUNA, NIGERIA**  
APRIL - MAY 2018 (ROUND 5)

Performance Monitoring and Accountability 2020 (PMA2020) uses innovative mobile technology to support low-cost, rapid-turnaround surveys to monitor key indicators for family planning. The project is implemented by local universities and research organizations in 11 countries, deploying a cadre of female resident interviewers trained in mobile-assisted data collection. PMA2020 Nigeria is led by the Centre for Research, Evaluation Resources and Development (CERED) and Bayero University Kano (BUK). Overall direction and support is provided by the Bill & Melinda Gates Institute for Population and Reproductive Health at the Johns Hopkins Bloomberg School of Public Health through a grant by the Bill & Melinda Gates Foundation. For more information please visit <http://www.pma2020.org>

Modern Contraceptive Prevalence Rate (Married Women, Age 15-49)

State	Rate (%)
Oyo	30.7
Lagos	25.5
Nasarawa	24.3
Rivers	22.1
Azibo	22.0
Kaduna	16.7
Izoba	12.9
Kano	7.8
National	18.0

**KEY FAMILY PLANNING INDICATORS**  
Select Family Planning Indicators Across Recent Surveys (All and Married Women, Age 15-49)

Indicator	Round 3 (May-Jul 2016)	Round 4 (Mar-Apr 2017)	Round 5 (Apr-May 2018)
All Methods	15.1	17.5	17.4
Modern Methods	14.0	16.1	15.6
Long Acting/Permanent	4.9	5.8	5.6
All Married	20.3	17.7	18.7
All Married	15.8	16.7	16.7
All Married	6.5	6.5	7.9

**Unmet Need and Contraceptive Use, by Age (All Women)**

	A	B	C	D	E	F	G	H	I
1	createdby	lastsubmi	recordu	startrecdate	endrecdate	lastsubmissiondate	fac_code	sdpname	sdpstate
2	gprhcs05@gprhcs05@fa4e70a51	10/20/2017 14:18	10/20/2017 14:20	10/21/2017 19:02	ABI01036	SHC LIVIN	Abia		
3	gprhcs05@gprhcs05@fa4e70a51	10/20/2017 9:35	10/20/2017 9:37	10/21/2017 19:03	ABI02032	GOD'S CAI	Abia		
4	gprhcs05@gprhcs05@fa4e70a51	10/19/2017 11:48	10/19/2017 11:52	10/19/2017 21:07	ABI04011	PHC AGBC	Abia		
5	gprhcs05@gprhcs05@fa4e70a51	10/19/2017 20:23	10/19/2017 20:28	10/19/2017 21:07	ABI08036	IBEAJA ME	Abia		
6	gprhcs32@gprhcs32@707263c45	10/23/2017 10:35	10/23/2017 10:36	10/23/2017 20:29	ADA01002	MURGARA	Adamawa		
7	gprhcs32@gprhcs32@707263c45	10/21/2017 10:38	10/21/2017 10:40	10/21/2017 11:38	ADA02022	JANGJIANG	Adamawa		
8	gprhcs32@gprhcs32@707263c45	10/24/2017 16:20	10/24/2017 16:20	10/24/2017 21:03	ADA06006	ARAHTECH	Adamawa		
9	gprhcs32@gprhcs32@707263c45	10/18/2017 15:50	10/18/2017 15:51	10/18/2017 17:03	ADA11014	BOKKEN D	Adamawa		

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## Available Tools/Data in Nigeria

- State Requisition, Issues and Reporting Forms (RIRF) 2010-2017
  - Three levels (SDP, State, national)
    - Beginning balance
    - Consumption
    - Requests
    - Issues
- GPRHCS surveys-2014-2017
  - Stock outs/availability of products
  - Trained staff
  - Supervisory visits
  - Forms used
- DHS-PMA2020 reports
  - National and various states
    - mCPR
    - Method Mix
- NHMIS-FP 2011-2017
  - mCPR users
  - New FP Acceptors
  - Reporting rates
- NSCIP/Navision
  - Rolling out in 2018



# PROCESS C

## Create Database(s)

### 1. Compile data into databases

- Sort and filter
- Conditional formatting
- Pivot tables and graphs

### 2. Create queries and desired indicators

- Calculated fields
- Quality checks
- Pivot tables, filters, graphs

	A	B	C	D	E	H	I	J	L	M	N
1	Entity	State	UNFP	Rep_P	Rep_Y	Dist_M	Dist_Y	Product	Qty_Begini	Qty_rec_l	Cons_4M
	or_N	A_Sup	po						ng_Balance	ast_4M	
253	ADAMAWA	State	Yes	Jan-Apr	2017	August	2017	Condom Ferr	140	500	325
254	ANAMBRA	State	Yes	Jan-Apr	2017	August	2017	Condom Ferr	14,100	-	-
255	AKWA-IBO	State	Yes	Jan-Apr	2017	August	2017	Condom Ferr	17,212	6,000	23,212
256	BAUCHI	State	No	Jan-Apr	2017	August	2017	Condom Ferr	980	1,000	978
257	BAYELSA	State	No	Jan-Apr	2017	August	2017	Condom Ferr	1,118	-	800
258	BENUE	State	Yes	Jan-Apr	2017	August	2017	Condom Ferr	13,600	-	12,900
259	BORNO	State	Yes	Jan-Apr	2017	August	2017	Condom Female			
260	CROSS RIV	State	No	Jan-Apr	2017	August	2017	Condom Ferr	4,548	12,000	14,748
261	DELTA	State	No	Jan-Apr	2017	August	2017	Condom Ferr	6,497	24,000	18,572
262	EBONYI	State	No	Jan-Apr	2017	August	2017	Condom Ferr	870	1,000	538
263	EDO	State	Yes	Jan-Apr	2017	August	2017	Condom Ferr	21,959	5,000	18,283
264	ENUGU	State	No	Jan-Apr	2017	August	2017	Condom Ferr	5,463	-	2,704
265	EKITI	State	No	Jan-Apr	2017	August	2017	Condom Ferr	30	500	57
266	GOMBE	State	Yes	Jan-Apr	2017	August	2017	Condom Ferr	7,277	-	3,850
267	IMO	State	Yes	Jan-Apr	2017	August	2017	Condom Ferr	4,191	-	1,895
268	JIGAWA	State	No	Jan-Apr	2017	August	2017	Condom Ferr	4	2	5
269	KADUNA	State	Yes	Jan-Apr	2017	August	2017	Condom Ferr	6,771	5,000	11,771
270	KANO	State	No	Jan-Apr	2017	August	2017	Condom Ferr	3,545	1,372	3,989

fill rate	CYPs Issued	MoS Begining Balance	MoS Requested	MoS Issued	Average MoS during period
0%	-	3	-	-	2.8
38%	2,500	1	3.1	3.1	3.6
100%	395	1	7.9	7.9	9.1





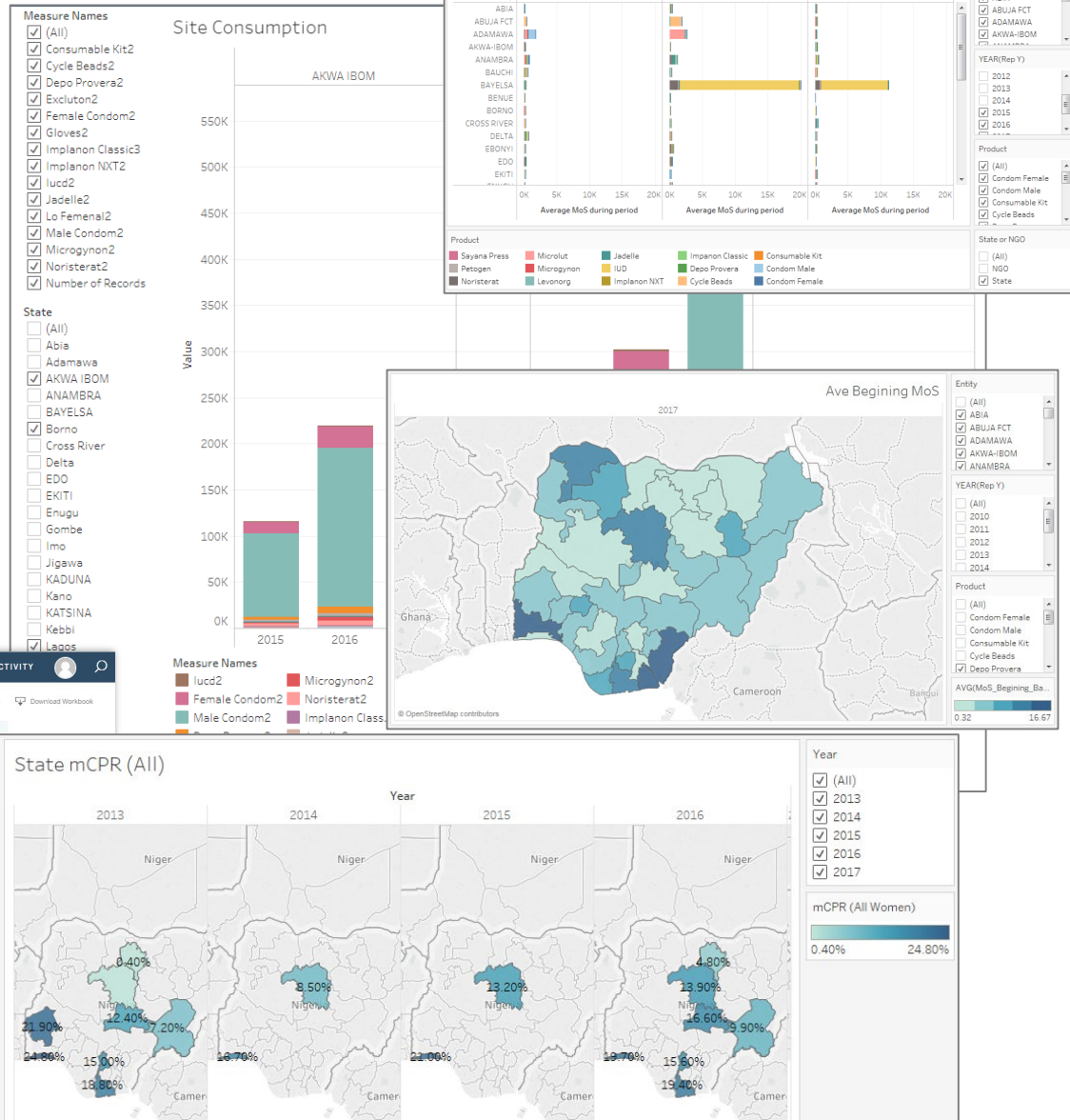
## Calculate and View the Indicators from the Need Identified Earlier

- Indicators:
  - mCPR
  - Method Mix
  - Contraceptive Availability
  - Contraceptive Stock out
  - Average Monthly Consumption
  - Fill rate
  - CYPs
  - Quality of reporting:
    - Does Beginning stock = ending stock
  - Months of Stock
    - Issued, held, requested
- Segmentation:
  - By geography
  - Through Time
  - Public vs. Private
  - By Method (incl. LARCs/non-LARCs)
  - Supported Sites/Non-Supported sites
- Identify Correlations:
  - SC indicators and Service indicators
- Visual Depiction:
  - Mapped or Graphic

# PROCESS D Create Dashboards

We used Tableau Public platform

- Allowed for free online access, but visible to those with a link
- Filtering to view any of the segments/indicators





## PROCESS E

# Turning Analytics into Action to Improve SC Performance

Work with team to understand how to **use** and **improve** data visibility and analytics:

- Establish key metrics, benchmarks, and problem-solving steps to identify and address challenges
- Identify actions that can come from indicators

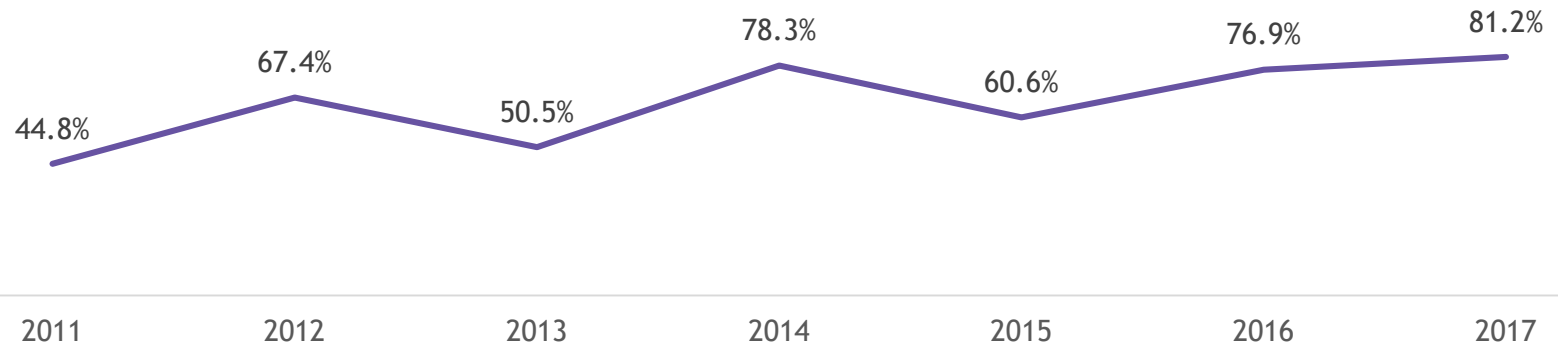
*Knowing when and what actions to take is key to driving supply chain performance improvement*



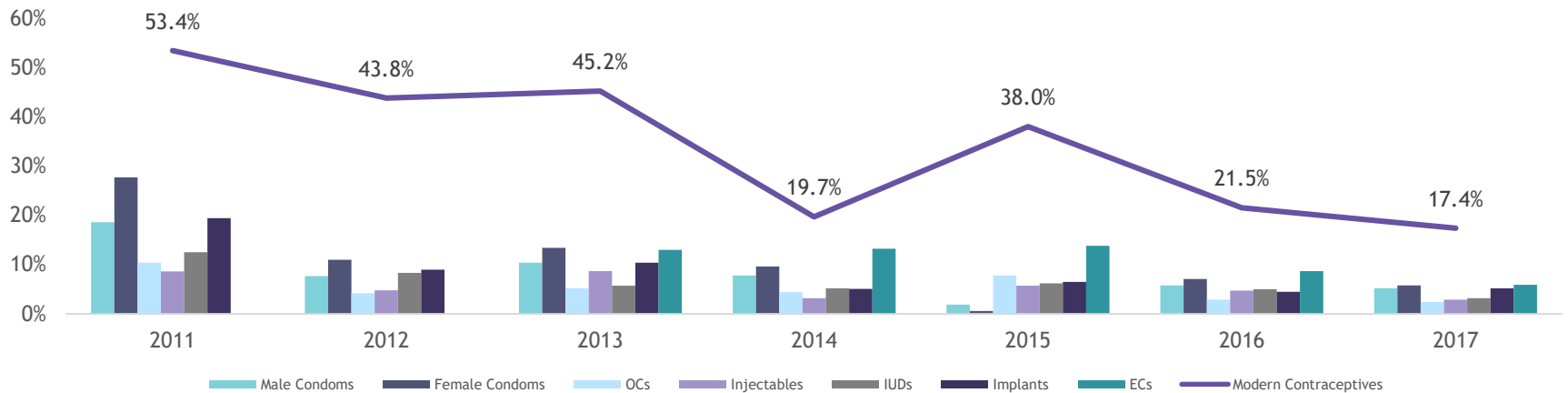
# Examples of Visualizations and Analytics-Nigeria

## Data for UNFPA and Their Story: Contraceptive Availability Has Increased at SDPs & Stock Outs Have Decreased

Modern contraceptive methods in stock in last three months

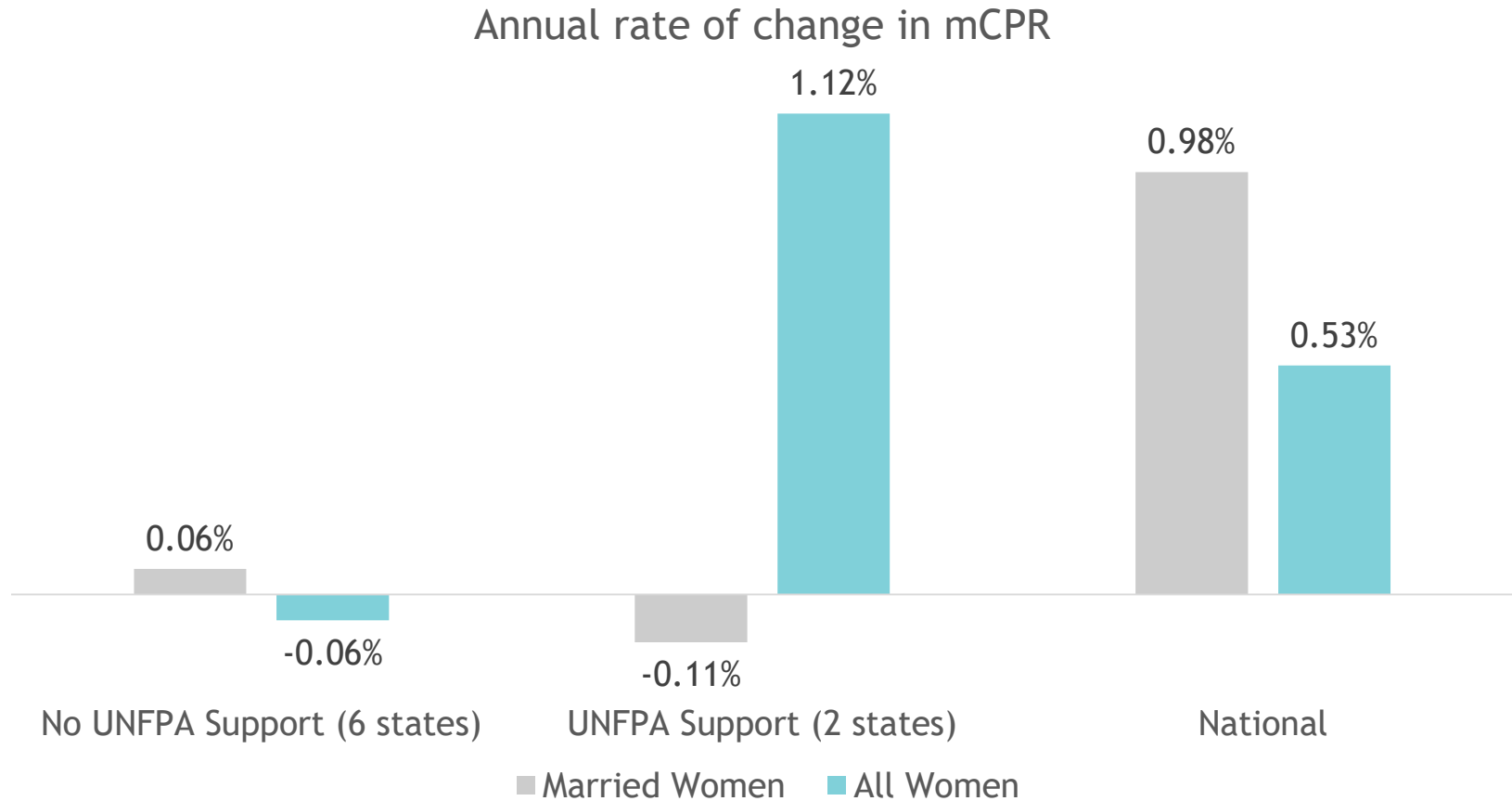


Stock out in the past 3 months-Public Facilities



Source: GPRHCS

## UNFPA Supported States Have Higher Rate of All Women mCPR Growth than National Average

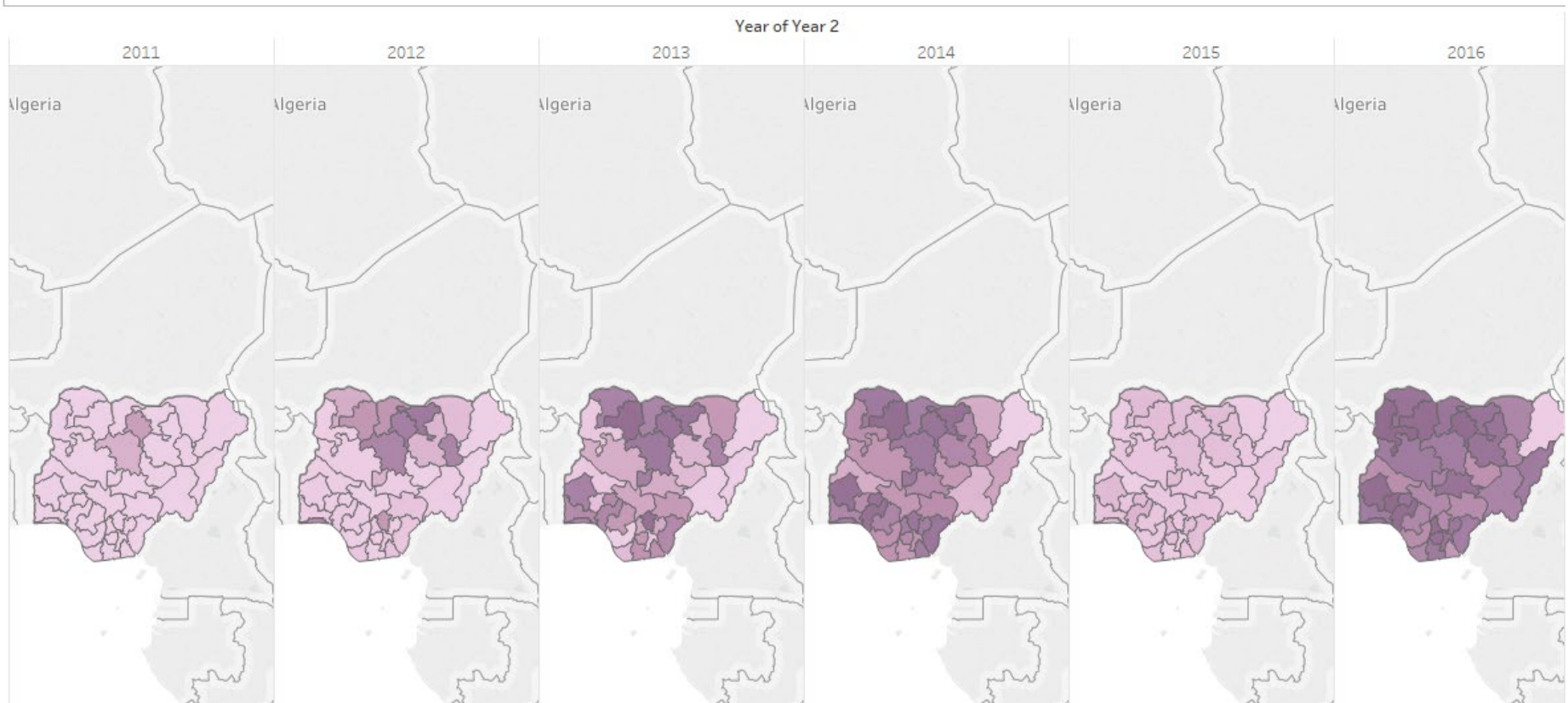


Limitation: Data from PMA2020 is not collected/available for remaining 29 states. Source: DHS and PMA2020



# Reporting Rate-Mapped through Time

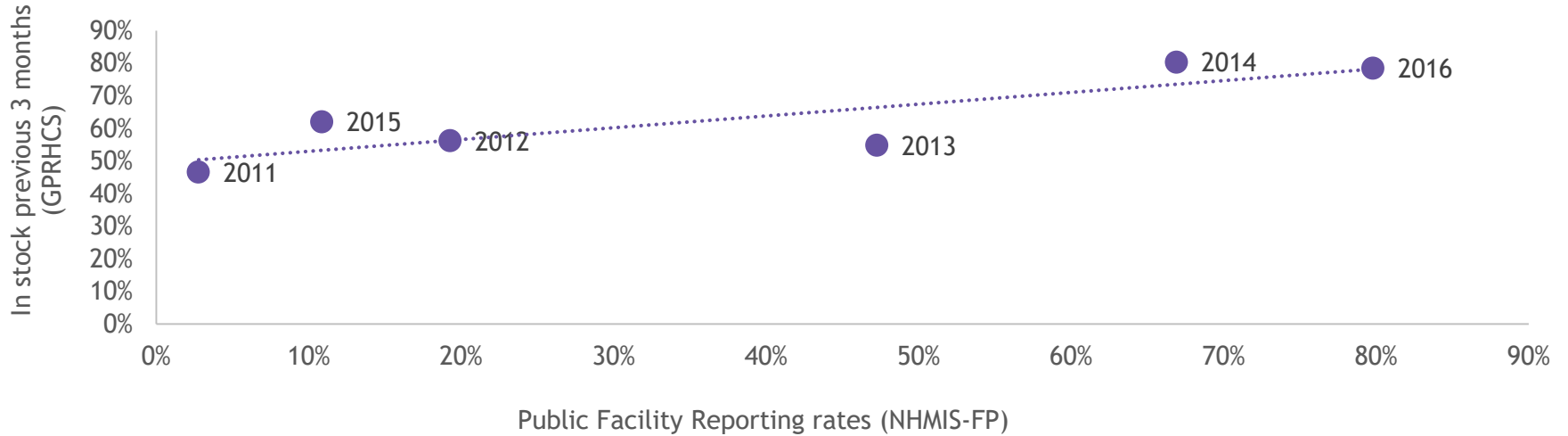
-allows for comparisons through time and by state



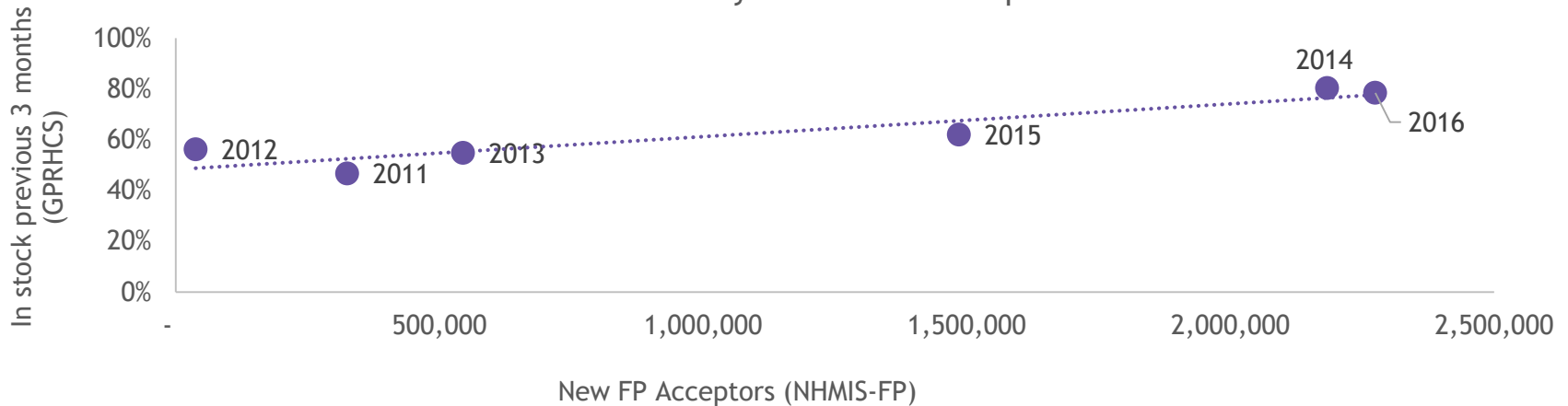


# Correlations

## Reporting Rates and Stock Availability



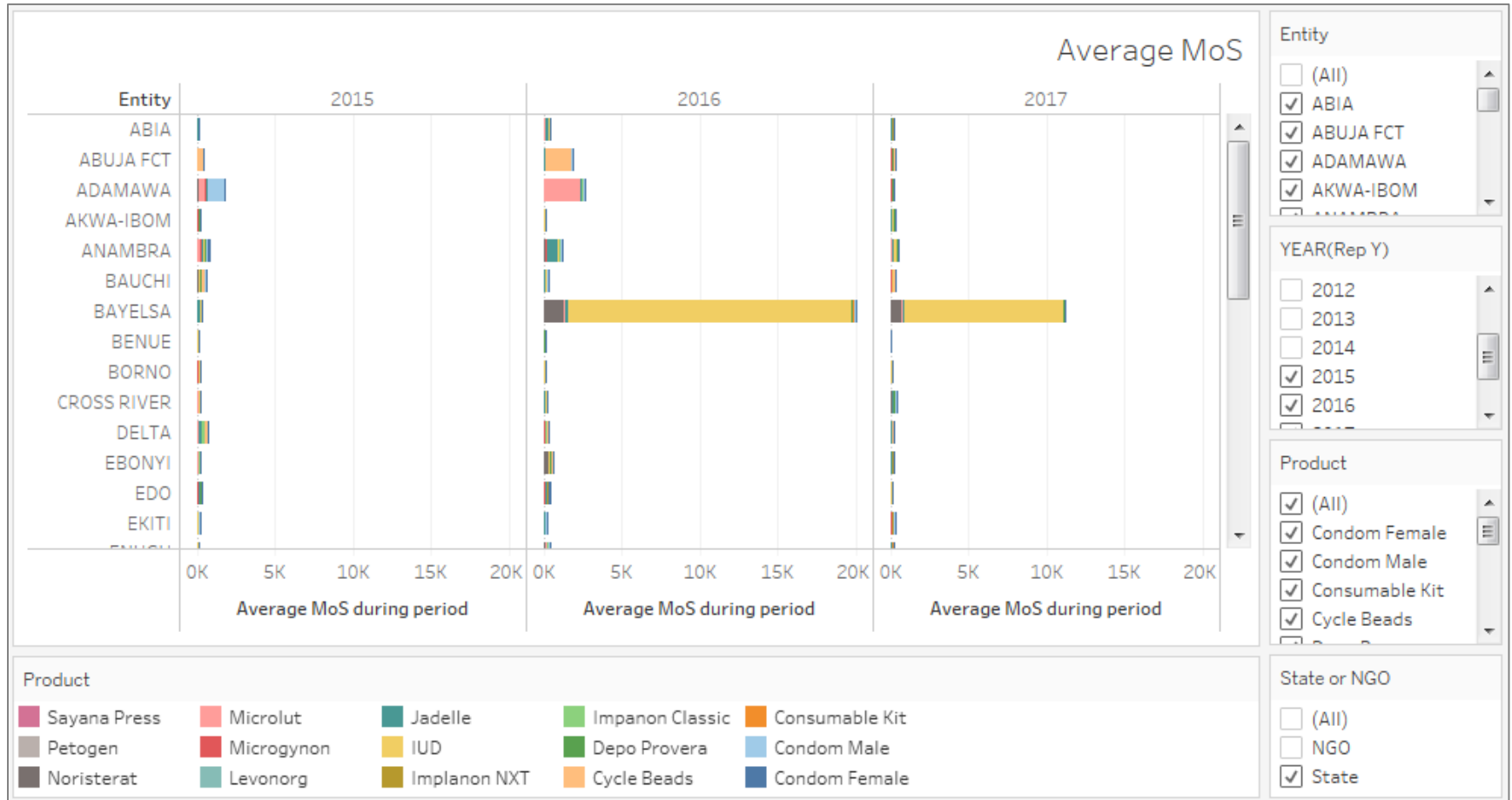
## Stock Availability and New FP Acceptors







## What Do You See in this Data?





# Summary



## Lessons Learned

- Programs may be able to better **maximize** the investment in information systems and data availability by ensuring time and resources dedicated to **designing analysis and visuals to serve key decision making processes**
- Simple tools, if developed well, can
  - Make decision making easier and faster, for all levels of the system
  - Allow stakeholders to prioritize where to spend limited resources
  - Allow lower level staff see how they compare to their neighbors and which areas require improvements
  - Empower and encourage staff at all levels to be solution oriented
  - Allow for quick reporting..... more time to implement!
- Data and visualizations alone do not improve SCs. To create a culture of data use, a structured and rigorous process is also required and should include:
  - Common goal
  - Leadership
  - Financial and technical support
  - A process for monitoring, problem solving, recognition, action planning, and team meetings



What data do you have? How can you better use your data for decision-making?