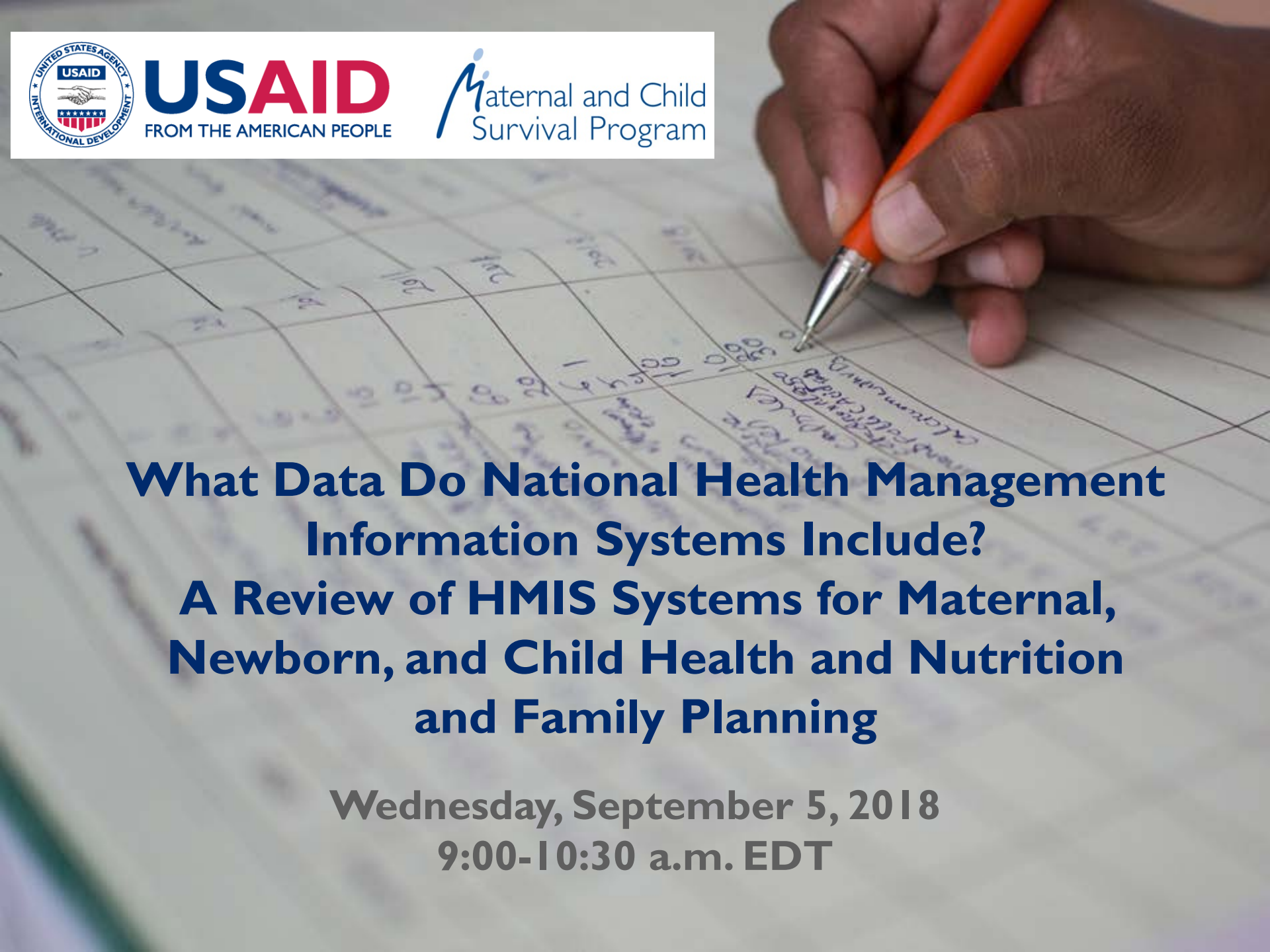

USAID
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Maternal and Child Survival Program

What Data Do National Health Management Information Systems Include? A Review of HMIS Systems for Maternal, Newborn, and Child Health and Nutrition and Family Planning

Wednesday, September 5, 2018
9:00-10:30 a.m. EDT

Introduction

- MCSP works at the country and global levels to improve reproductive, maternal, newborn and child health (RMNCH) and nutrition services
- *Measurement and Data Use for Action and Accountability* is a key MCSP learning theme
- MCSP undertook this review to better understand the RMNCH content of routine HMIS across USAID-supported countries
- In SDG era, importance of routine systems emphasized*

Photo credit: Karen Kasmauski/MCSP. Wandi Village, Nigeria 2018

**The Roadmap for Health Measurement and Accountability, 2015 (http://www.who.int/hrh/documents/roadmap4health_measurent_account/en/)*

Webinar Outline and Process

- Overview
- Background and methods
- Kahoot quiz
- Selected findings: Maternal, Newborn, and Child health, and Nutrition and Family Planning
- Summary
- Q&A

Photo credit: Kate Holt/MCSP. Accra, Ghana 2017

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FROM THE AMERICAN PEOPLE

Maternal and Child Survival Program

What Data Do National Health Management Information Systems Include? A Review of HMIS Systems for Maternal, Newborn, and Child Health and Nutrition and Family Planning

OVERVIEW

Photo credit: Kate Holt, Tshopo, DRC 2017

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Photo credits: Fernando Fidélis*/MCSP.* Mozambique *2014 & Karen Kasmauski/MCSP. Port de Paix, Haiti 2017*

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Photo credits: Fernando Fidélis*/MCSP.* Mozambique *2014 & Karen Kasmauski/MCSP. Port de Paix, Haiti 2017*

Health initiatives and investments

- Initiatives in the SDG era
  - Every Woman, Every Child
  - A Promised Renewed
  - Every Newborn Action Plan
  - Ending Preventable Maternal Mortality
  - FP2020

- Investments at the country and global level in RMNCH programming

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Photo credits: Fernando Fidélis*/MCSP.* Mozambique *2014 & Karen Kasmauski/MCSP. Port de Paix, Haiti 2017*

Management and monitoring need good metrics

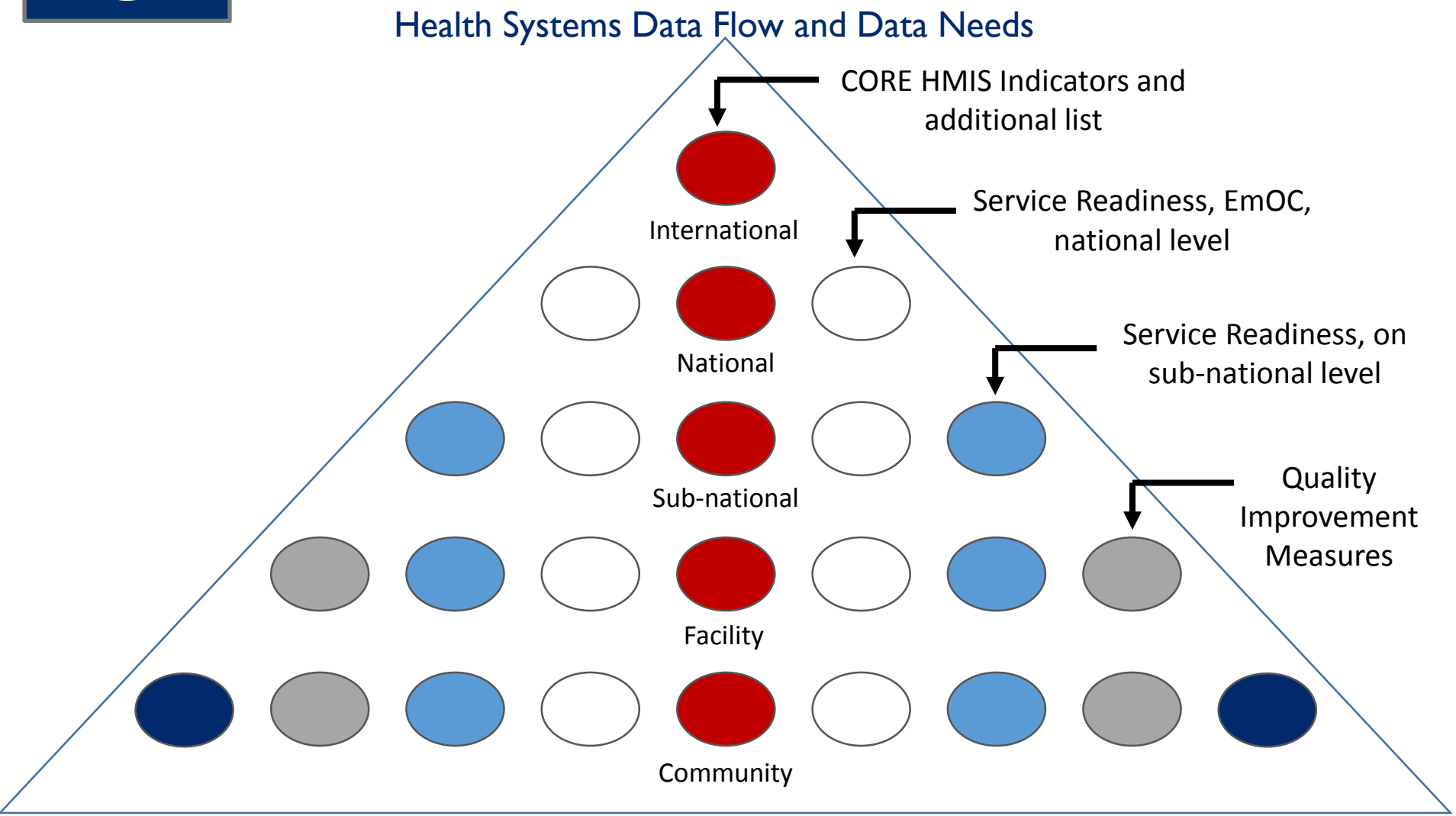
- Country programs require high quality data to make good management decisions at the national, sub-national and local levels

- Numerous recent and on-going global initiatives aim to improve metrics for monitoring and accountability

Photo credit: Karen Kasmauski/MCSP. Okene, Nigeria 2018

Photo credits: Fernando Fidélis*/MCSP.* Mozambique *2014 & Karen Kasmauski/MCSP. Port de Paix, Haiti 2017*

nformation for tracking and quality improvement



Source: DHIS2 training materials/UNICEF/WHO

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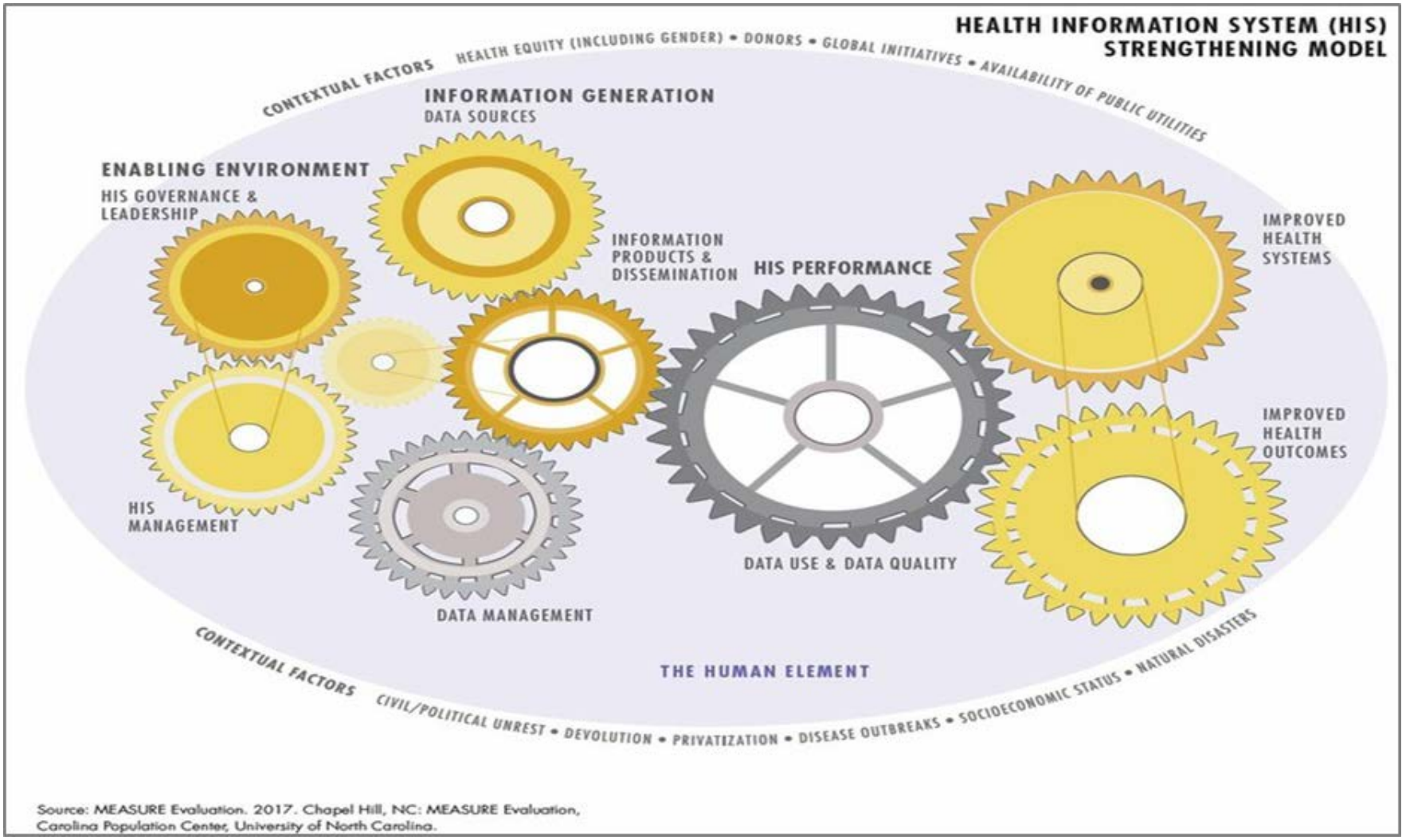
Photo credits: Fernando Fidélis*/MCSP.* Mozambique *2014 & Karen Kasmauski/MCSP. Port de Paix, Haiti 2017*

System Stregthening



Source: MEASURE Evaluation. 2017. Chapel Hill, NC: MEASURE Evaluation, Carolina Population Center, University of North Carolina.

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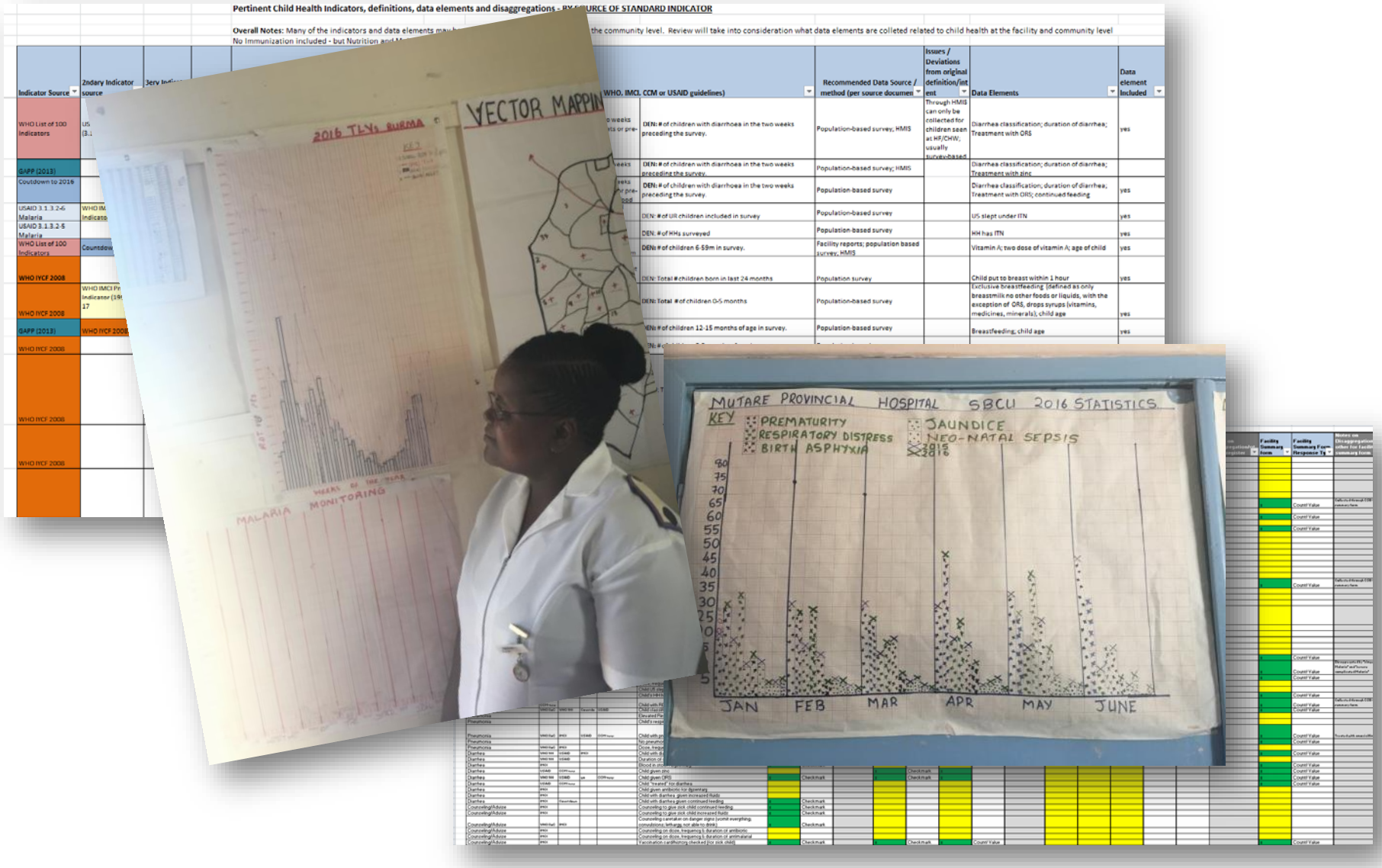
Photo credits: Fernando Fidélis*/MCSP.* Mozambique *2014 & Karen Kasmauski/MCSP. Port de Paix, Haiti 2017*



Background and Methods

Photo credit: Kate Gilroy, MCHIP. Manicaland, Zimbabwe 2016.

Purpose of this review

Photo credit: Karen Kasmauski/MCSP. Anjro, Madagascar 2018

- To better understand and document what information on MNH, child health, nutrition, and FP **content, quality and health outcomes** is currently included in **select USAID priority countries**.

- Identify gaps and advocate at the national level for incorporation of new MNH, child health, nutrition, and FP elements/indicators related to **content and quality** services at the national and/or facility or community levels of the HMIS

Countries included in the review

	MNH	FP	Child Health & Nutrition
Afghanistan	◆	◆	◆
Bangladesh	◆	◆*	◆
DRC	◆	◆	◆
Ethiopia	◆	◆	◆
Ghana	◆		◆
Haiti	◆	◆	◆
India	◆	◆	◆*
Indonesia	◆		◆*
Kenya	◆	◆	◆
Liberia	◆	◆	◆
Madagascar	◆	◆	◆
Malawi	◆	◆	◆
Mali	◆	◆	◆
Mozambique	◆	◆	◆
Myanmar	◆		◆*
Namibia			◆
Nepal	◆		◆
Nigeria	◆	◆	◆
Pakistan	◆	◆	◆
Rwanda	◆	◆	◆
Senegal	◆		◆*
South Sudan	◆		
Tanzania	◆	◆	◆
Uganda	◆	◆	◆
Zambia	◆	◆	◆
Zimbabwe			◆

**included in review, but still undergoing analysis*

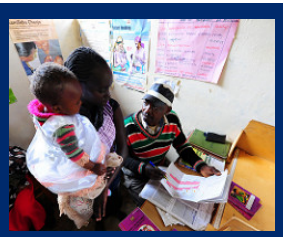
Subnational HMIS:
Common data flow from facility to district level

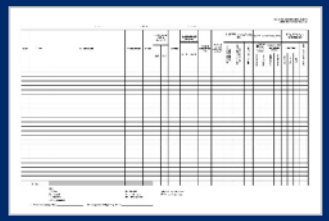
Client-provider interaction

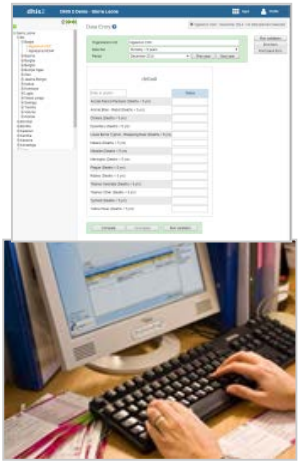
Registers

Summary Forms

DHIS2 or other software







HMIS data flow example: Nigeria

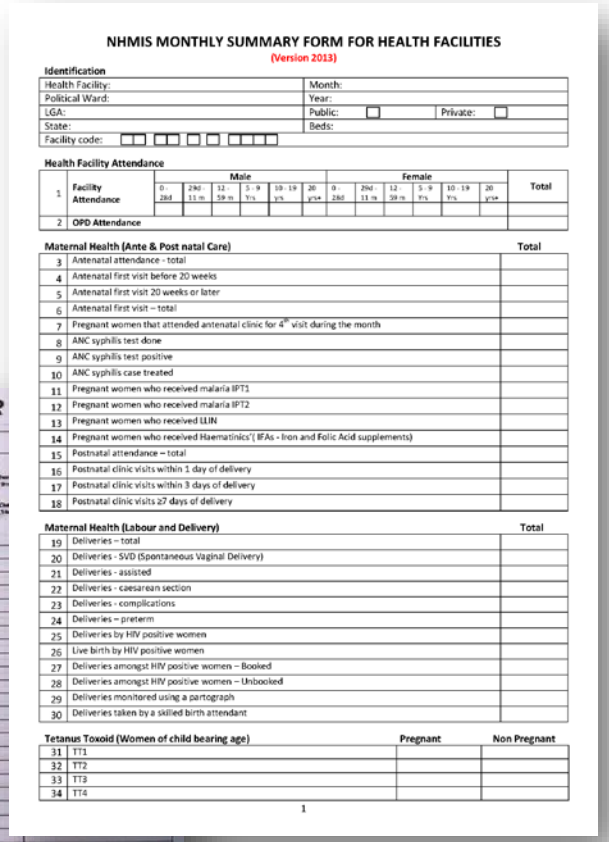
Facility

District

Provincial and National

Methods, Part 1

1. Developed list of data elements of interest based on global indicator recommendations and clinical algorithms
2. Collected standardized HMIS registers and monthly summary forms from countries



NHMIS MONTHLY SUMMARY FORM FOR HEALTH FACILITIES

(Version 2013)

Identification

Health Facility:	Month:
Political Ward:	Year:
LGA:	Public: ☐ Private: ☐
State:	Beds:
Facility code: ☐☐ ☐☐ ☐ ☐ ☐☐☐☐	

Health Facility Attendance

		Male						Female						Total
1	Facility Attendance	0 - 28d	29d - 11 m	12 - 59 m	5 - 9 Yrs	10 - 19 yrs	20 yrs+	0 - 28d	29d - 11 m	12 - 59 m	5 - 9 Yrs	10 - 19 yrs	20 yrs+	
2	OPD Attendance													

Maternal Health (Ante & Post natal Care)		**Total**
3	Antenatal attendance - total	
4	Antenatal first visit before 20 weeks	
5	Antenatal first visit 20 weeks or later	
6	Antenatal first visit – total	
7	Pregnant women that attended antenatal clinic for 4th visit during the month	
8	ANC syphilis test done	
9	ANC syphilis test positive	
10	ANC syphilis case treated	
11	Pregnant women who received malaria IPT1	
12	Pregnant women who received malaria IPT2	
13	Pregnant women who received LLIN	
14	Pregnant women who received Haematinics'(IFAs - Iron and Folic Acid supplements)	
15	Postnatal attendance – total	
16	Postnatal clinic visits within 1 day of delivery	
17	Postnatal clinic visits within 3 days of delivery	
18	Postnatal clinic visits ≥7 days of delivery	

Maternal Health (Labour and Delivery)		**Total**
19	Deliveries – total	
20	Deliveries - SVD (Spontaneous Vaginal Delivery)	
21	Deliveries - assisted	
22	Deliveries - caesarean section	
23	Deliveries - complications	
24	Deliveries – preterm	
25	Deliveries by HIV positive women	
26	Live birth by HIV positive women	
27	Deliveries amongst HIV positive women – Booked	
28	Deliveries amongst HIV positive women – Unbooked	
29	Deliveries monitored using a partograph	
30	Deliveries taken by a skilled birth attendant	

Tetanus Toxoid (Women of child bearing age)		**Pregnant**	**Non Pregnant**
31	TT1		
32	TT2		
33	TT3		
34	TT4		

1

Forms and registers included in the review

	Patient Forms	Registers	Summary forms
MNH	Partograph	ANC Labor & delivery PNC	Facility
FP	None	ANC PNC Labor & delivery FP	Facility
CH & Nut	**Community & Facility** Sick child recording forms	**Community & Facility** OPD/sick child Well child/Nut. Logistics	Facility Community

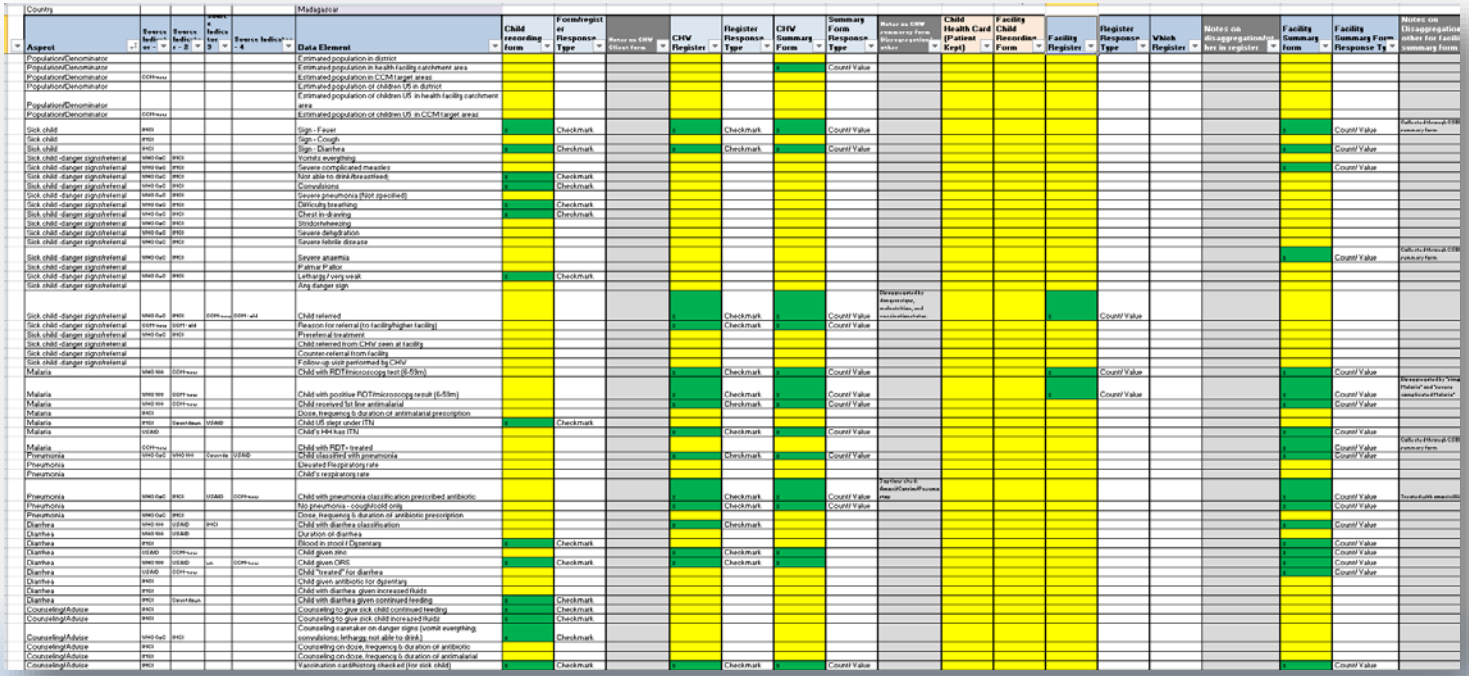
Note: FP review covered a limited number of data elements from registers, including counseling, PP/PA and commodity info

Methods, Part 2

3) Used standardized data abstraction template to conduct review

4) Multiple rounds of data quality assurance

5) Analysis in Excel pivot tables



To play along, open this address on your phone:

https://kahoot.it

Quiz!

https://play.kahoot.it/#/k/ef9e5525-de72-42ba-a9e1-683c20bfe7fe

Photo credit: Karen Kasmauski/MCSP. Anosy Avaratra, Madagascar 2018

Selected Findings: Maternal and Newborn Health

Most ANC and L&D registers record presence of fetal heart tones.

- True
- False

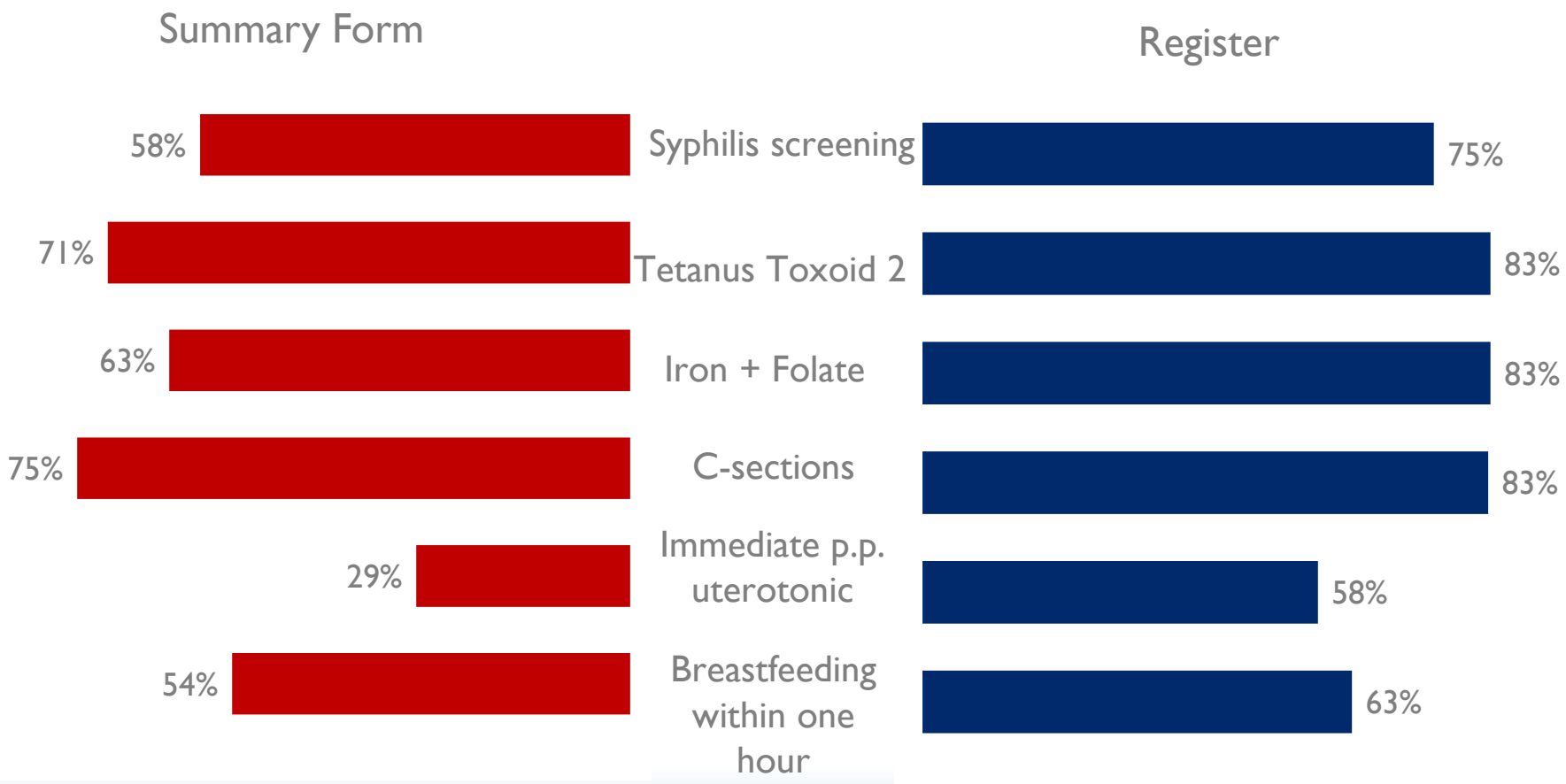
38% of ANC registers and 37% of L&D registers or partographs record presence of fetal heart tones.

Which data element is most commonly available in **antenatal care** registers:

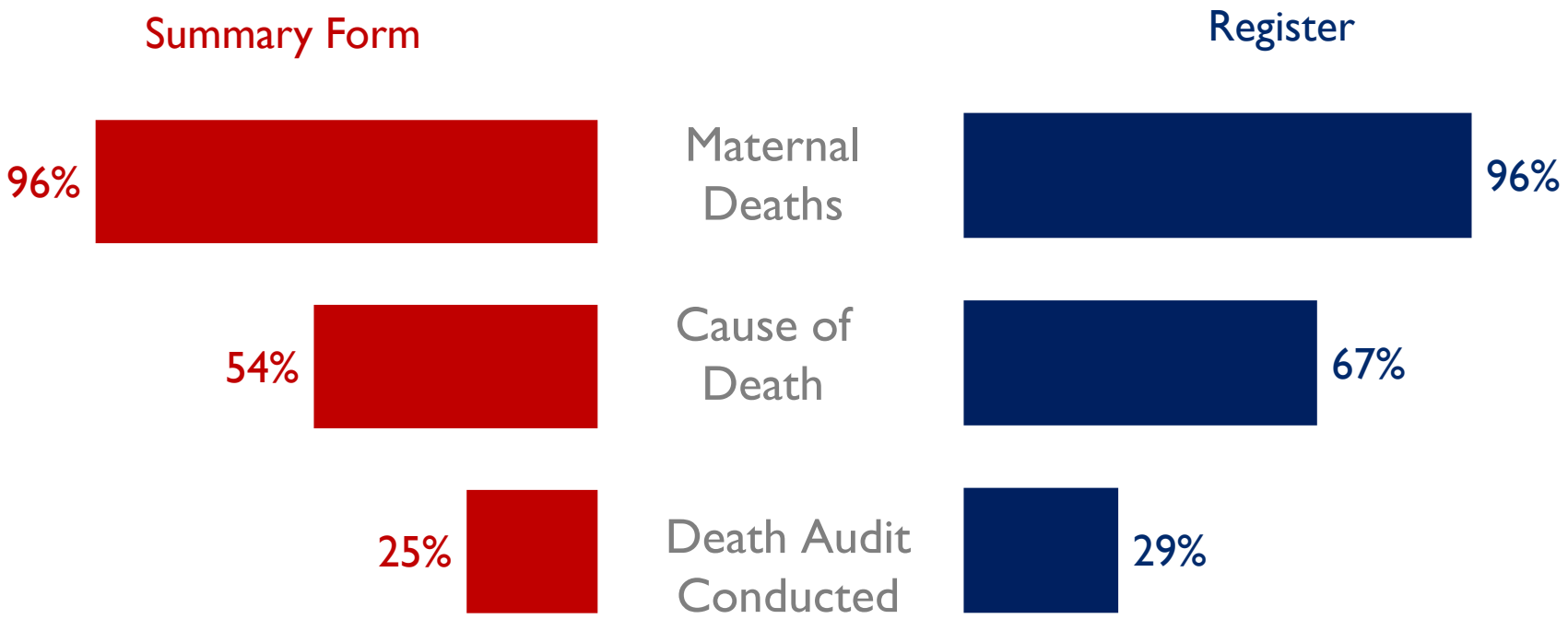
- Gestational age in weeks 71%
- Hemoglobin level 71%

- Pre-eclampsia/eclampsia diagnosis 21%
- Antepartum hemorrhage diagnosis 21%

Data collection for high impact interventions during antenatal, delivery and postnatal care



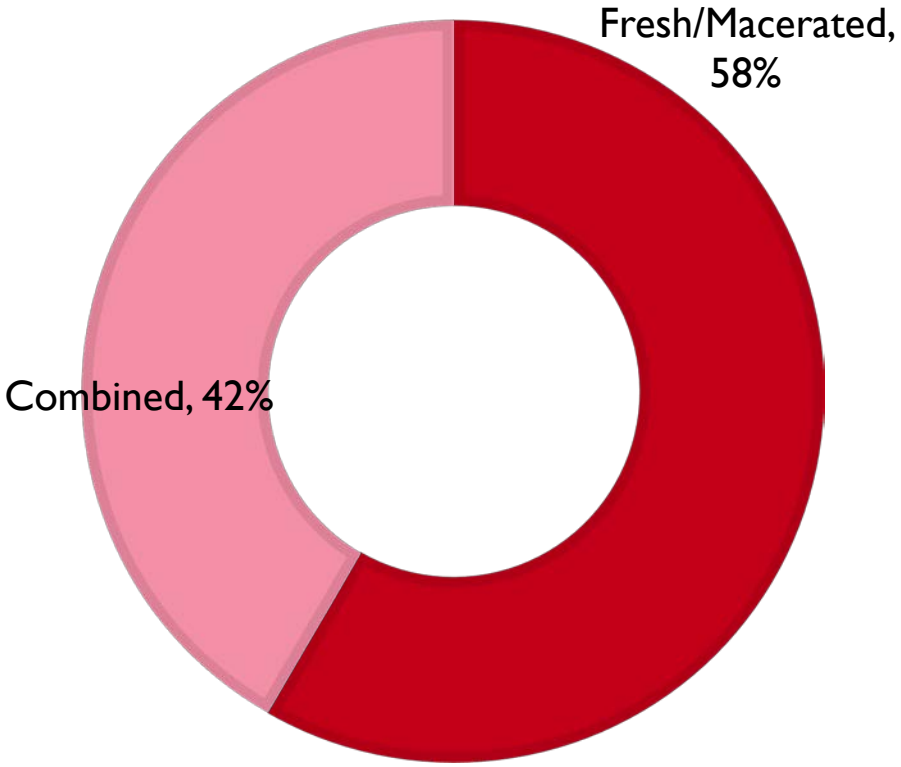
Institutional maternal Deaths are tracked by nearly all countries, but aggregated data on specific timing and cause data are lacking



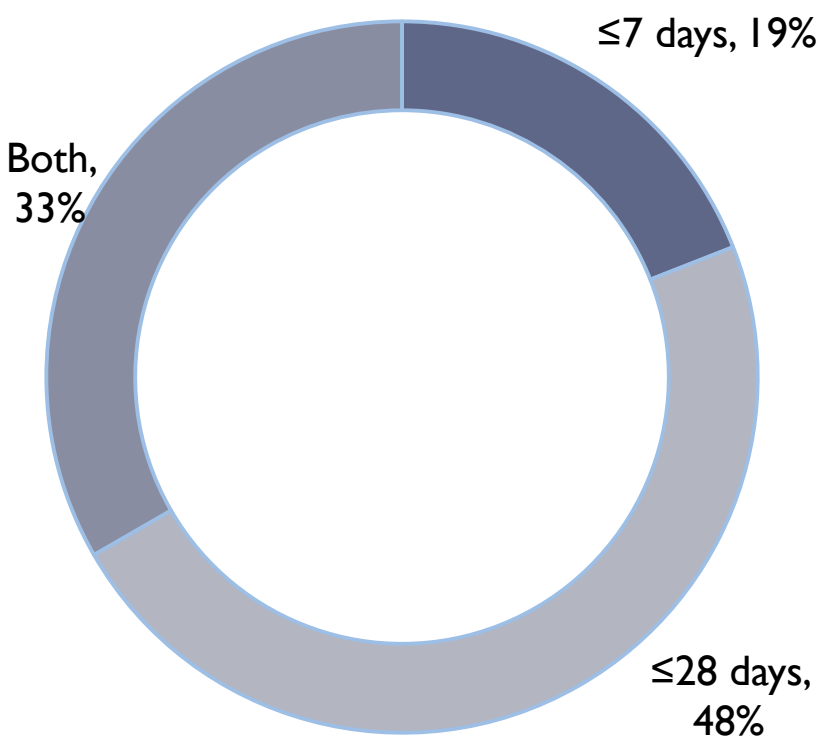
- No summary forms tracking " pre-discharge" maternal deaths specifically.

Stillbirth and Institutional Neonatal Mortality Data

Stillbirth Reporting
(Summary Forms)



Neonatal Mortality Reporting
(Summary Forms)



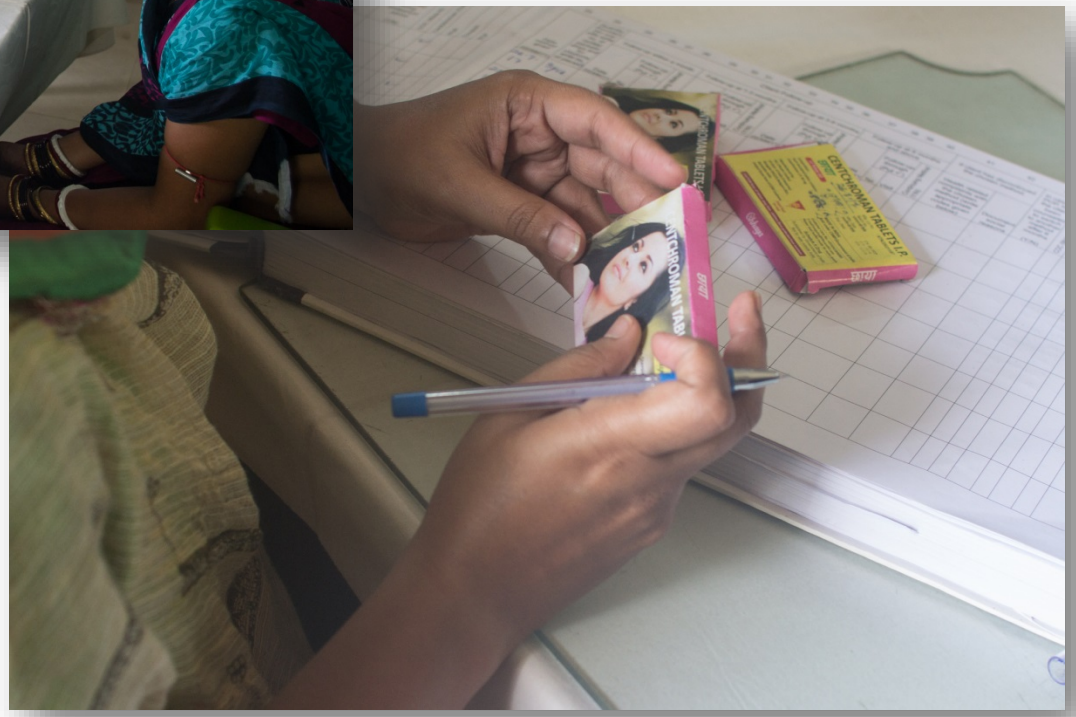


Photo credit: Mubeen Siddiqui, MCSP, India FP 2017

Selected Findings: Family Planning

Half of countries report PPFP; few report PAFP

- Usually a recent addition
- Not consistent definition or how/where recorded
- Few disaggregate by method
- Some countries collect but don't report

	Postpartum FP		Post-abortion FP	
	# Clients	Disaggregate by method	# Clients	Disaggregate by method
Afghanistan	⚠			
Bangladesh DGFP				
Bangladesh DGHS				
DR Congo	✓		✓	
Ethiopia	✓	all methods	⚠	
Haiti				
India	✓	IUD, TL (only)	⚠	
Kenya	⚠			
Liberia				
Madagascar				
Malawi	✓			
Mali				
Mozambique	✓	IUD vs other	⚠	
Nigeria	soon			
Pakistan DOH	✓	IUD, implants (only)		
Pakistan PWD				
Rwanda	✓	all methods		
Tanzania	✓	jadelle, implanon, other	✓	jadelle, implanon, other
Uganda	⚠		⚠	
Zambia	✓		⚠	
Total	**9**		**2**	
	✓	In register & summary form		
	⚠	In register only		

"New users" are confusing our counting: Recent paper described terminology issues

- "New User" and "Acceptor" are often used terms but not clearly defined
- May refer to:
  - First-time user
  - New to provider
  - New to method
  - Lapsed user

Source: Dasgupta, A., Weinberger, M., Bellows, B., Brown, W. (2017). *"New Users" Are Confusing Our Counting: Reaching Consensus on How to Measure "Additional Users" of Family Planning.* Global Health: Science and Practice, 5(1):6-14

Paper proposed standard terms

Adopter		Provider-Continuer	Provider-Changer
Not using a modern contraceptive method at the time of her visit			
First-time User	**Lapsed User**		
Starts using modern contraception for the first time in her life	Has used a modern method at any time in the past, but is not currently using one at time of visit	Already using a modern method-returns to same provider for another FP service (resupply or switch methods)	Already using a modern method - new to the provider

Source: Dasgupta, A., Weinberger, M., Bellows, B., Brown, W. (2017). *"New Users" Are Confusing Our Counting: Reaching Consensus on How to Measure "Additional Users" of Family Planning.* Global Health: Science and Practice, 5(1):6-14

Countries still use variation of new user/ acceptor

Next webinar will look at country definitions of new/old to see if countries *effectively* use proposed categories

	New	Old
Afghanistan	New case	Re-attendance
Bangladesh DGFP	New	Old
Bangladesh DGHS		
DRC	New acceptors	Renewals
Ethiopia	New acceptors	Repeat acceptors
Haiti	Acceptors	
India		
Kenya	New	Re-visit
Liberia	New acceptors	
Madagascar	New users	Regular users
Malawi	New clients	Restarting & Subsequent
Mali	New users	
Mozambique	New users	Continuers
Nigeria	New acceptors	
Pakistan DOH	New clients	Follow-up clients
Pakistan PWD	New case	Old case
Rwanda	New acceptors & New users	
Tanzania	New clients	Revisit
Uganda	New user	Revisit
Zambia	New acceptors	Continuing & Restart

Nearly half of countries report adolescents/ youth receiving FP services

	10-19 yrs*	20-24 yrs	< 25 yrs
Afghanistan			
Bangladesh DGFP			
Bangladesh DGHS			
DR Congo	✓		
Ethiopia	✓	✓	
Haiti			✓
India			
Kenya	✓		
Liberia			
Madagascar	✓	✓	
Malawi	✓	✓	
Mali			
Mozambique			
Nigeria			
Pakistan DOH			
Pakistan PWD			
Rwanda	✓	✓	
Tanzania	✓	✓	
Uganda	✓	✓	
Zambia			
Total	8	6	1

*Ethiopia, Madagascar, Tanzania separate 10-14 & 15-19; Rwanda only reports 15-19

Many countries cannot calculate CYP using HMIS

	Method-specific information reported					CYP can be calculated
	Type of IUD	Type of Injectable	Type of Implant	# pills distributed	# condoms distributed	
Afghanistan				✓	✓	
Bangladesh DGFP						
Bangladesh DGHS						
DR Congo	✓	✓	✓	✓	✓	✓
Ethiopia						
Haiti		✓		✓	✓	
India				✓	✓	
Kenya						
Liberia		✓	✓	✓	✓	
Madagascar	✓	✓	✓	✓		
Malawi		✓	✓	✓	✓	
Mali				✓	✓	
Mozambique		✓	✓	✓	✓	
Nigeria				✓	✓	
Pakistan DOH	✓	✓				
Pakistan PWD				✓	✓	
Rwanda		✓	✓	✓	✓	
Tanzania				✓	✓	
Uganda			✓	✓	✓	
Zambia		✓		✓	✓	
Total	3	9	7	15	14	1

Photo credit: Karen Kasmauski/MCSP. Kogi State, Nigeria 2018

Selected Findings: Child Health and Nutrition

What percentage of countries collect and report on malnutrition screening (weighed or MUAC) at community level?

43%

(9/21)

Number of children with severe acute malnutrition (SAM) *(MUAC<110 or <3SD WFH)*

Child screened (MUAC/weighed & measured)

Number of children seen

% SAM in children 0-5 yrs. of age

% of children screened for malnutrition

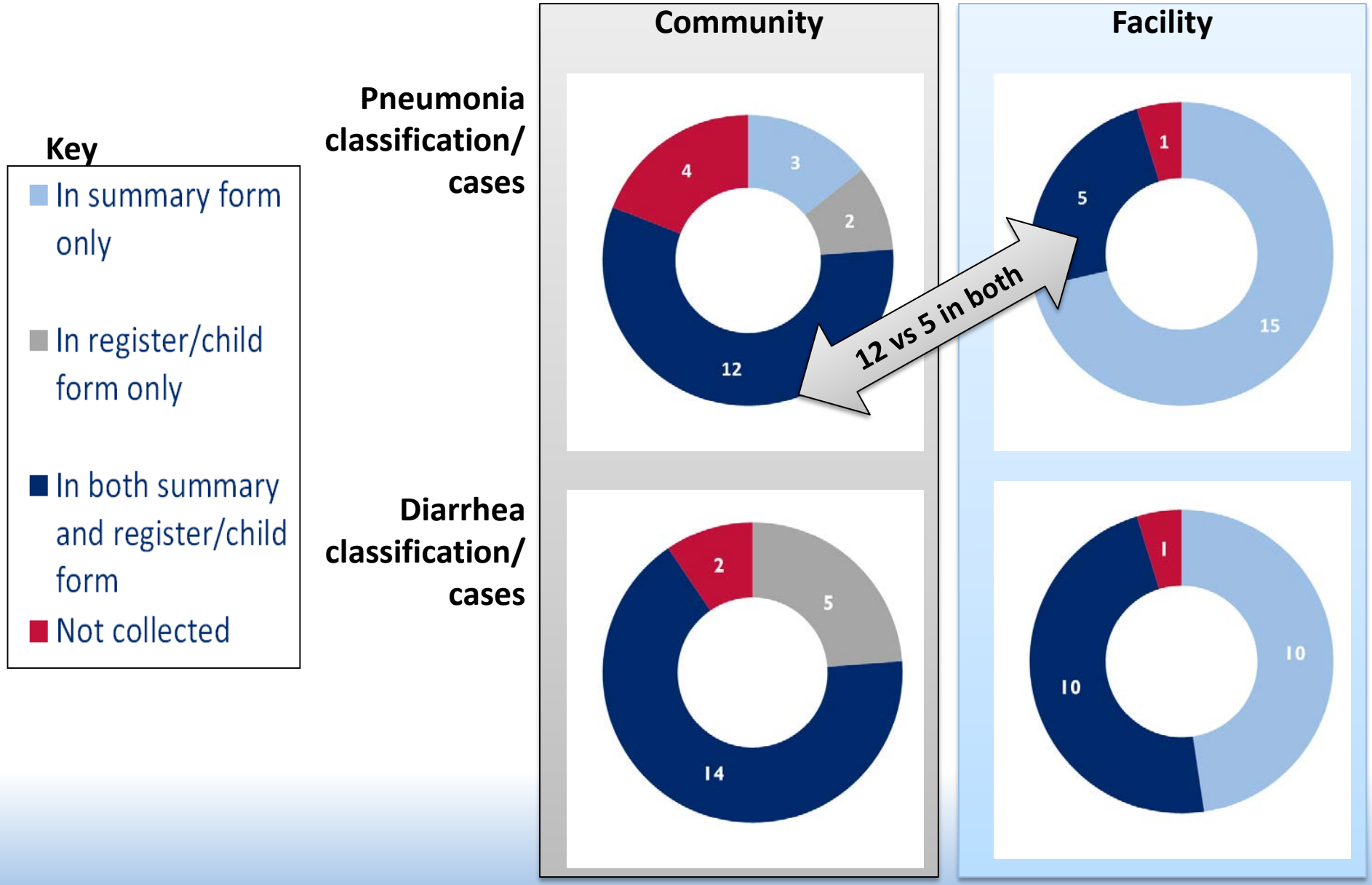
How many ways is suspected childhood pneumonia recorded across forms and countries?

8

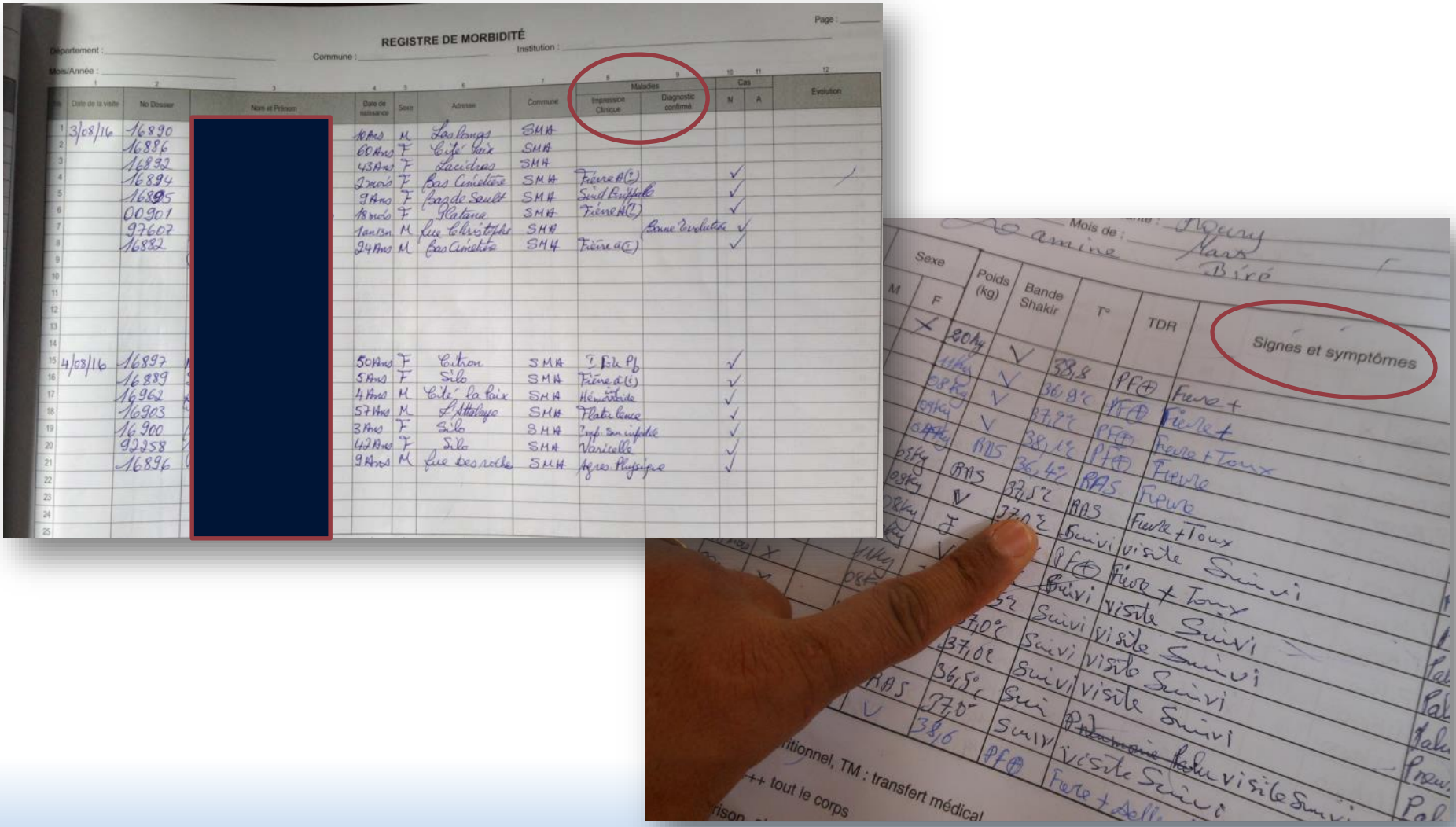
Variations	Examples
1. Suspected Pneumonia	Nigeria-c
2. Pneumonia	DRC-c&f, Liberia-f, Tanzania-f, Madagascar-c&f
3. ALRI	Mali-f
4. ARI	Haiti-c&f, Pakistan-c, Nepal-c, Afghanistan-c
5. Fast breathing	Ghana-c, Malawi-c
6. Fast breathing/pneumonia	Liberia-c, Uganda-c
7. Cough and fast breathing	Kenya-c
8. Cough and respiratory problems	Pakistan-c

c=community f=facility c&f=community and facility

Number of countries with pneumonia and diarrhea classification/cases



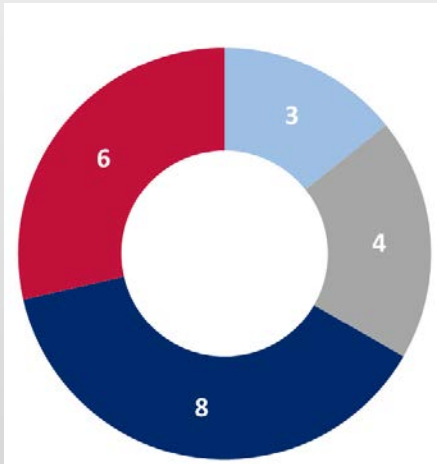
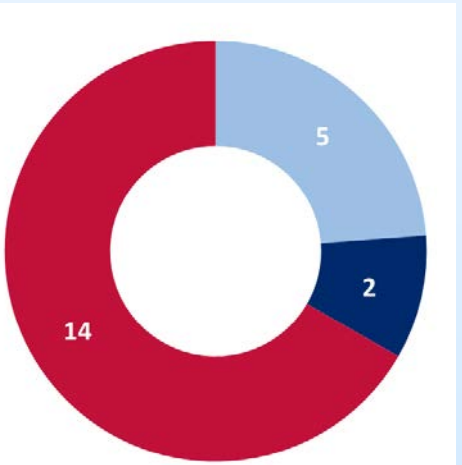
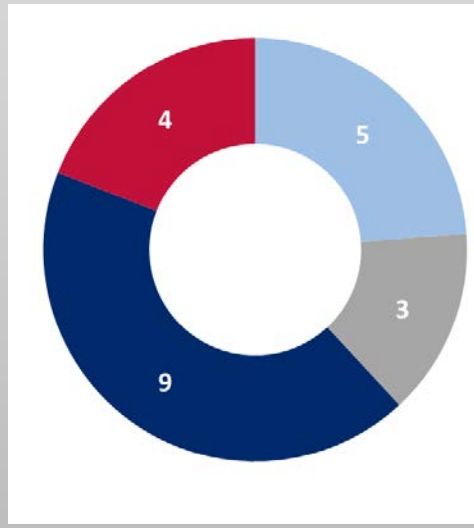
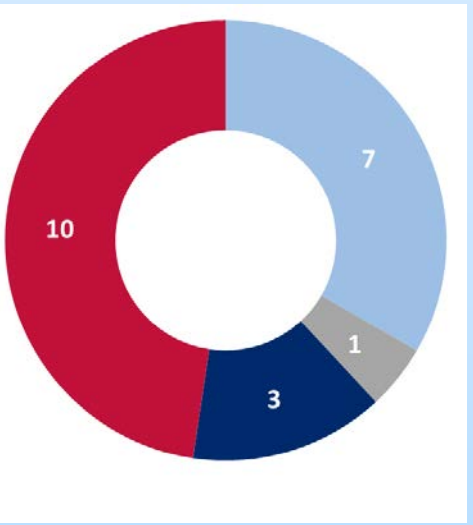
Example: Non-specific columns in registers



Number of countries with pneumonia and diarrhea treatment/cases treated

Key

- In summary form only
- In register/child form only
- In both summary and register/child form
- Not collected

	Community	Facility
Pneumonia treatment/ cases treated		
Diarrhea treatment/ cases treated		

How do countries report/summarize diarrhea treatment at the facility level?

14% (3/21) disaggregate zinc treatment separately from ORS/diarrhea treatment

33% (7/21) report diarrhea "treated"; ORS and zinc treatment; or ORS/zinc treatment

52% (11/21) ***do not report on any diarrhea treatment*** in their facility summary forms

- Gap in data to ensure service delivery includes zinc
- Proxy of "cases seen" likely used for global treatment indicators

Photo credit: Primary Health Centre, Nigeria, Abimbola Olayemi, MCSP, 2017

Summary

Strengths and limitations of the reviews

Strengths

- Reviewed large number of data elements many in countries across RMNCAH and nutrition technical areas
- Has and will continue to inform HMIS revisions at country level
- Has informed global level metrics initiatives, such as PPFP, ENAP metrics group, MONITOR, QED and Every Breath Counts

Limitations

- Some data elements may be collected in other registers forms that were not reviewed
- Only included nationally endorsed forms, but these may not be used in every facility or in private sector
- Did not include any information on data quality or completeness

Observations across reviews

- Many countries can report on selected, globally recommended and tested indicators
- Gaps do remain in data elements included and indicator definitions
- Ambiguous terminology and definitions of data elements across levels and forms
- Disconnect between registers (source data) and summary forms that can affect data quality
- Technical updates and revisions to countries' HMIS are on-going, with progress on inclusion of globally recommended indicators

Photo credit: Karen Kasmauski/MCSP. Brickaville, Madagascar 2018

The way forward

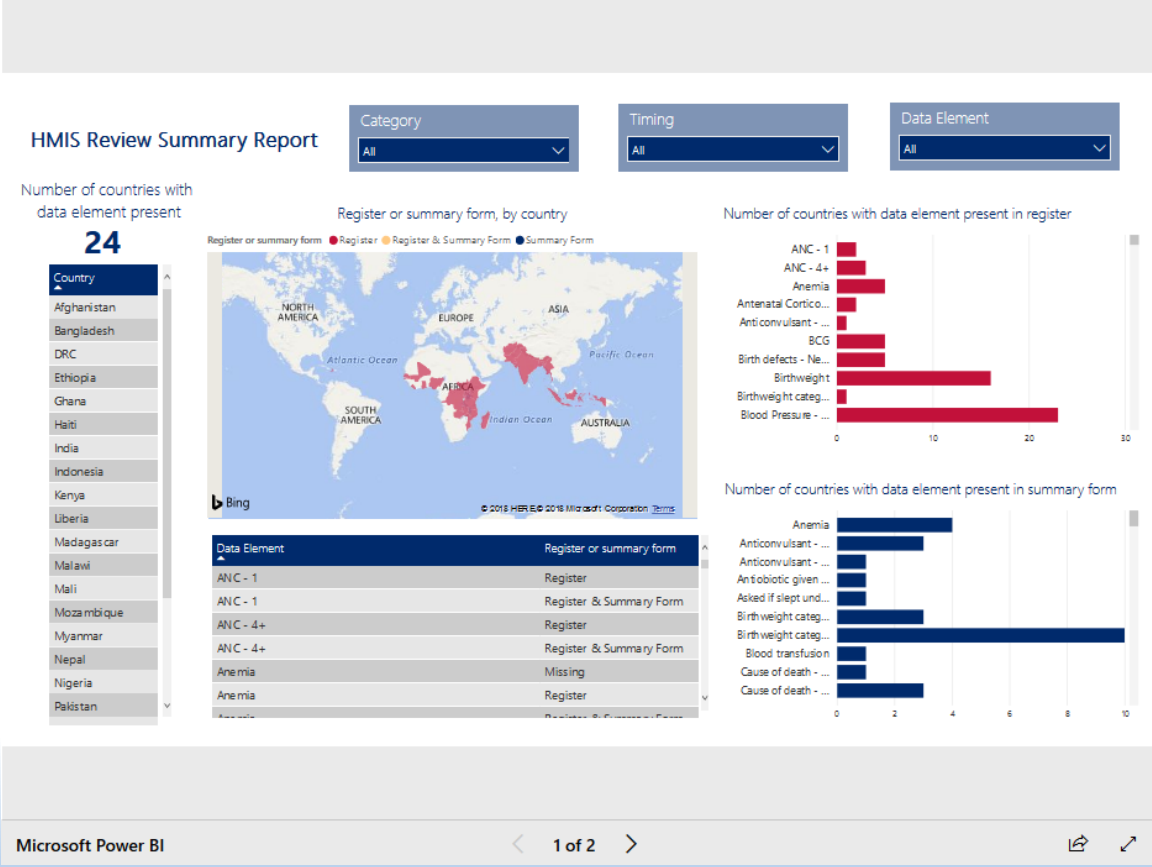
- Strategic investments are needed to ensure priority data elements and indicators are captured in national HMIS

- Global and country level consensus is needed about what priority data should be collected and available at each level of the HMIS for data use

Photo credit: Kate Holt/MCSP. Nondwe Iganga, Uganda 2017

For the full MNH report and access to the data and a dashboard, you can visit: https://www.mcsprogram.org/resource/hmis-review/

(other reports/data coming soon)



Acknowledgements

MCSP Washington, DC

***Maternal and Newborn health**:* Vikas Dwivedi, Kathleen Hill, Edward Kenyi, Neena Khadka , Katherine Lilly, Scott Merritt , Yordanos Molla, Tanvi Monga, Marya Plotkin, Barbara Rawlins, Lauren Spigel, Molly Strachan, Erin Sullivan, and Emma Williams.

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Child health and nutrition: Kate Gilroy, Elizabeth Hourani, Tamah Kamlen, Sarah Lackert, Michel Pacque, and Emily Stammer

MCSP country staff who shared forms and answered questions

Ministry of Health and other partners who shared forms and answered questions

Upcoming webinars in this series

Maternal and Newborn Health and Family Planning
Wednesday, September 26 | 9:00 a.m. EDT

Child Health and Nutrition
Wednesday, October 3, 2018 | 9:00 a.m. EDT

For more information, please visit

www.mcsprogram.org

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