Quality of health facility data in the PMTCT cascade in Côte d'Ivoire

S. Adam Granato, Health Alliance International

14 February 2015

14th World Congress on Public Health

HIVCore background

- Improve the efficiency, effectiveness, scale, and quality of HIV treatment, care, and support, and prevention of mother-to-child HIV transmission (PMTCT) programs by:
  - Conducting operations research and program evaluations
  - Promoting use of research and program results to enhance decision-making
  - Building local capacity to conduct operations research
- 5-year project (Oct 2011-Sep 2016), 19 studies in portfolio
- Funded by USAID
- Led by Population Council in partnership with University of Washington (UW), Futures Group, and the Elizabeth Glaser Pediatric AIDS Foundation.

Cote d'Ivoire study background

- Help inform the rollout of the WHO "Option B" treatment regimen in Côte d'Ivoire, conducted assessment of a nationally representative sample of existing PMTCT programs in Côte d'Ivoire.
- Intended to stimulate discussion of testable interventions to improve the PMTCT cascade as Option B is rolled out.
- 2011–2015 National Strategic Information Plan:

"A routine evaluation of the health information system [in Côte d'Ivoire] in 2008 revealed weaknesses in the quality and application of data."

Primary objectives

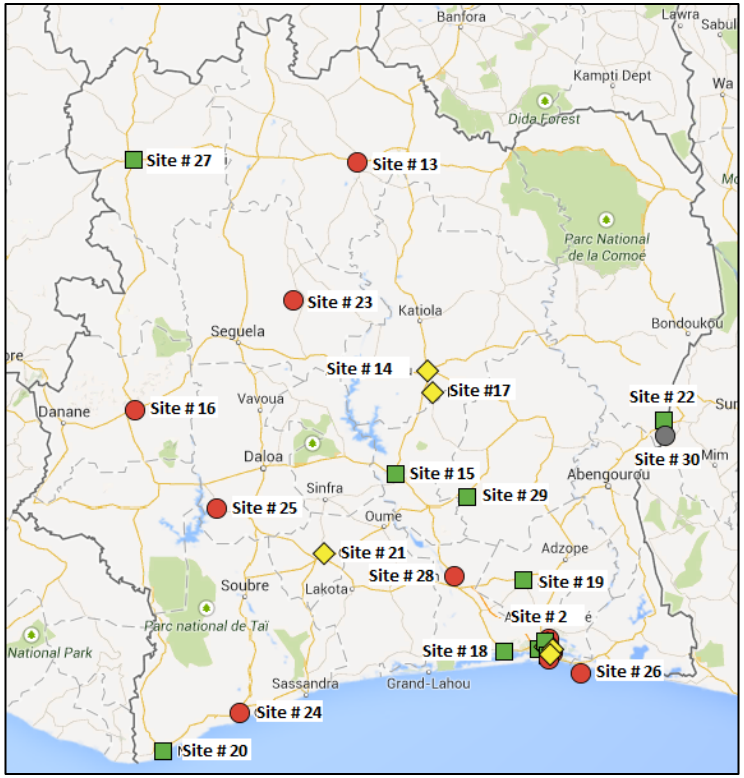
Among HIV+ pregnant women in 30 randomly selected antenatal care (ANC) clinics in Côte d'Ivoire providing PMTCT:

1) What is the **distribution of time delays and/or loss-to-follow up (LTFU)** among ANC clinics between the various stages of the PMTCT treatment cascade?
2) What are the **differences in levels of time delays and/or LTFU** along the treatment cascade among the **10 highest performing** and **10 lowest performing** ANC sites selected in the study?
3) What are the **principal factors** associated with care and treatment delays and/or LTFU in the PMTCT cascade?
4) What are the **perceived facilitators and barriers** to carrying out each PMTCT cascade step, and potential interventions to improve PMTCT effectiveness?

Study methods

- PPS sampling among health facilities providing PMTCT services that reported ≥10 HIV+ patients in 2011.
- Data collection by 7 two-person teams comprised of MOH, INSP (National Public Health Institute), and HAI staff over a 12-day period in March 2013.
- Quantitative
  - On-site health facility registries and data records (15 indicators)
  - Patient charts (up to 20 per facility—9 indicators)
  - Mother-child booklets (*carnets*) (up to 20 per facility—26 indicators)
  - Cross-checking all data sources
- Qualitative
  - Semi-structured interview with 1 key informant per facility
  - Direct observation and informal conversations with other providers
  - Perceived facilitators and barriers of PMTCT services

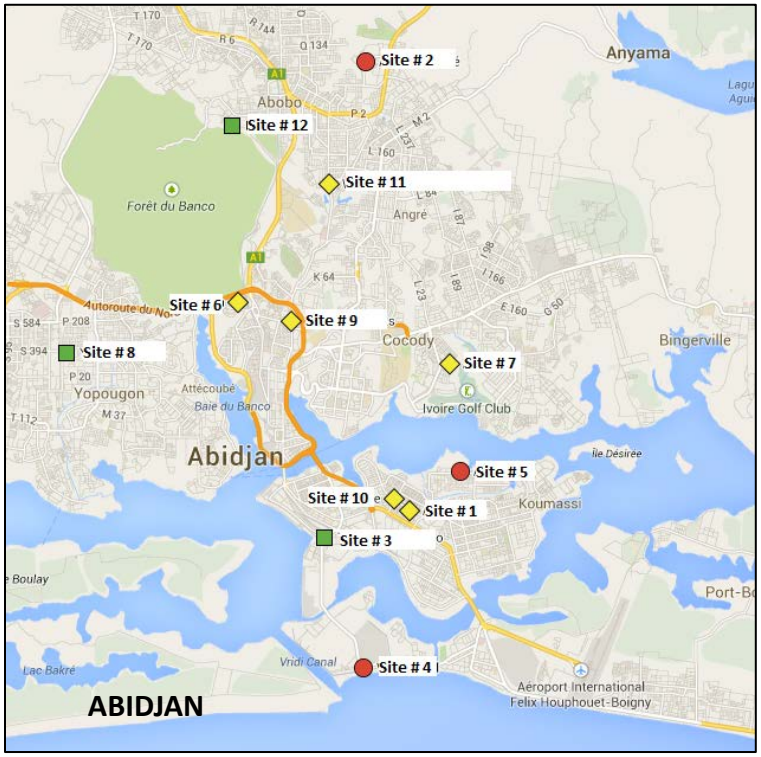
Distribution of 30 study sites



- High performing site
- Medium performing site
- Low performing
- Site excluded from registry-based analyses

PPS sampling was used to identify 30 sites (12 in Abidjan & 18 outside of Abidjan).

We expected 2,461 HIV+ women at the 30 sites (actual = 1,741).



Data sources

Available data sources

Registries, reports and other data sources	# of facilities
Patient Charts	29
ANC Registry	29
Offer of HIV Test Registry	29
PMTCT Registry	28
ARV Disbursement Registry	27
VCT Registry	26
Birth Registry	25
PMTCT Monthly Report	24
Health Facility Monthly Report	23
HIV Care Registry	21
ART Registry	21
PCR Registry	8
Birth Registry for HIV+ Women	2
Monthly NGO-partner Report	2
DBS Registry	2
Laboratory Registry	1
Community Advisor Folder	1
Patient Management Registry	1

- 18 different official registries, reports and other unofficial data sources related to PMTCT noted across the 30-site sample on the date of data collection.

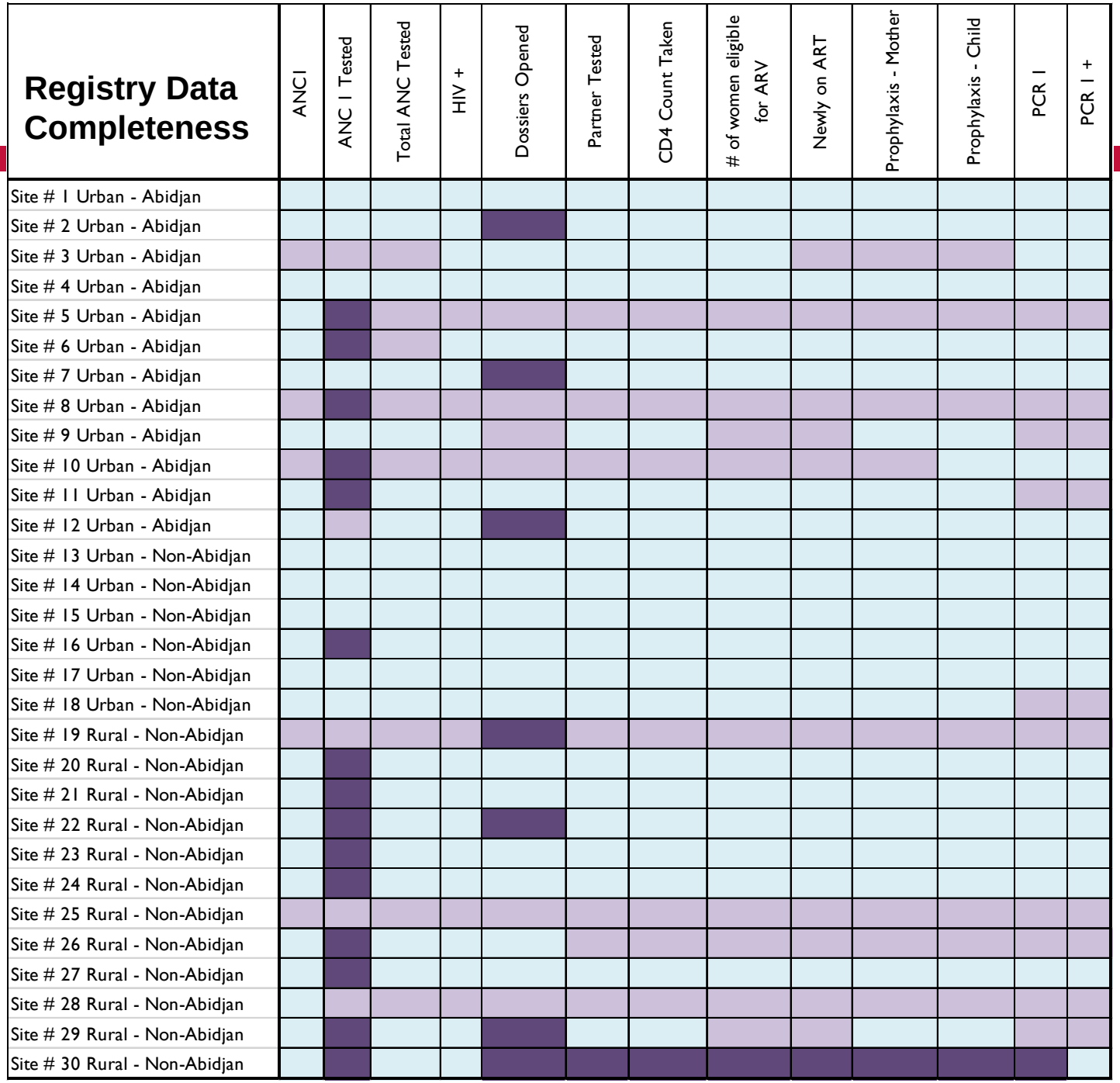
- Maximum at 1 site: 18
- Minimum at 1 site: 4
- Median at all 30 sites: 11

Data sources

Archive of patient charts

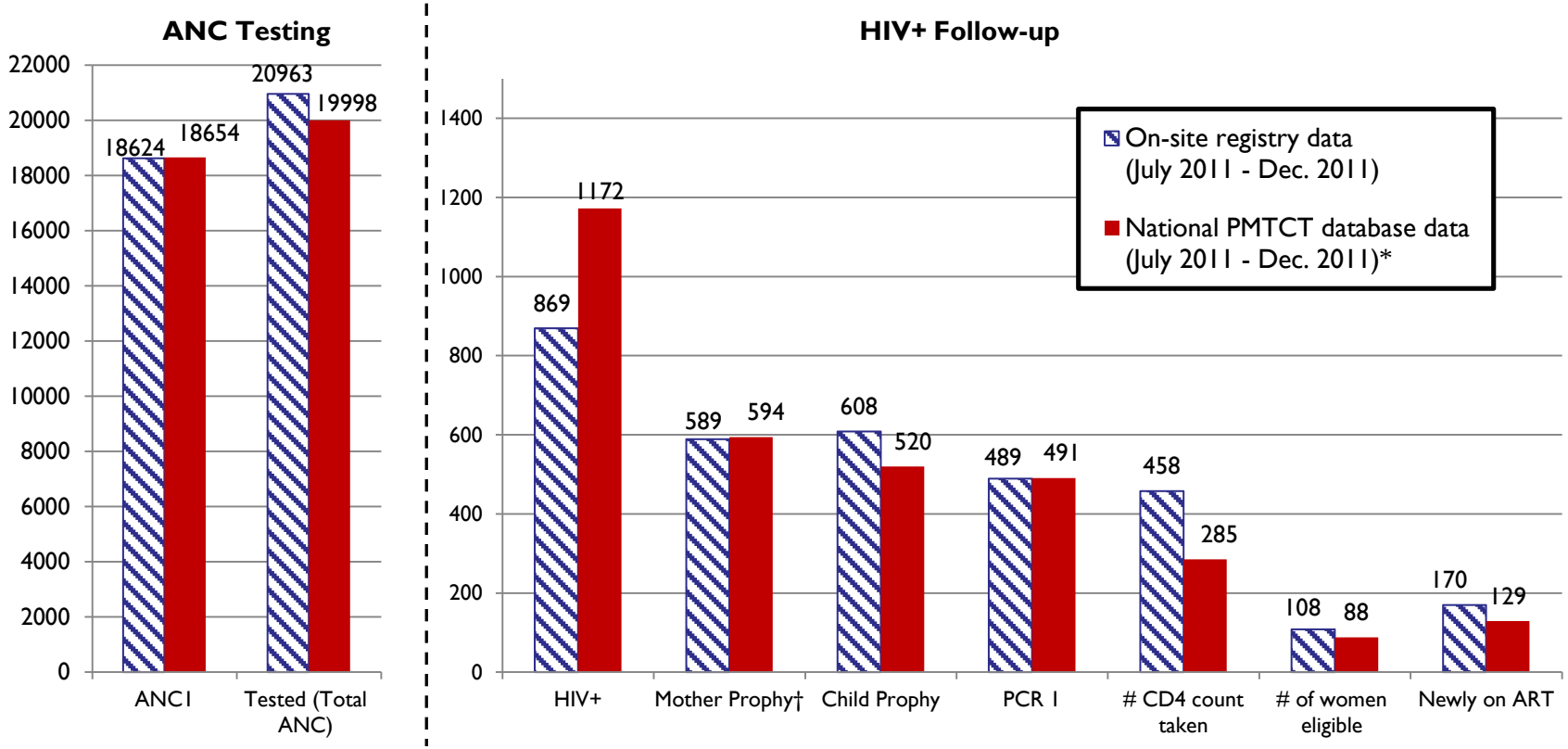
Data sources

Data availability (Non-collection; Non-reporting)



Key	
Incomplete Data	
Complete Data	
Missing Data	

PMTCT cascade—abstracted on-site registry data vs national PMTCT database

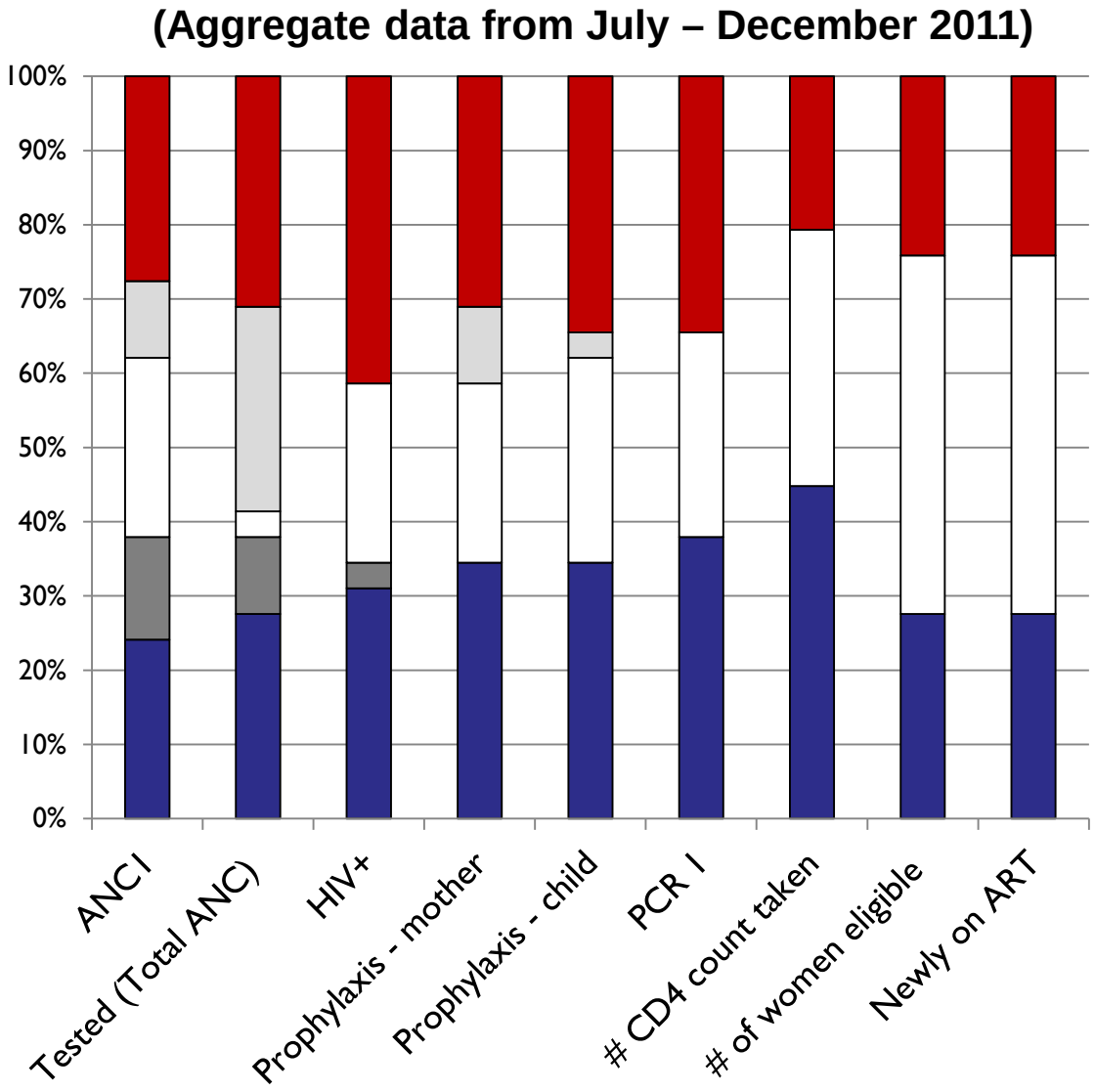


Data from July 2011 to December 2011 – 6 month period available with site-specific national data and study-abstracted facility-level data

Proportion of sites (n=29) whose data at a national level either exceeds or is less than data abstracted from site-level registries

Compared to on-site registry data, data in the national level PMTCT database was:

- Higher
- Higher within range (5%)
- Equal
- Lower within range (5%)
- Lower



Degree of disparity between on-site registry data and national level PMTCT database for 29 sites

ANC1	Tested (Total ANC)	HIV+	Prophylaxis - mother	Prophylaxis - child	PCR 1	# CD4 count taken	# of women eligible	Newly on ART
320%	229%	300%	450%	500%	150%	-7%	300%	150%
-47%	-69%	-49%	-79%	-69%	6%	-48%	-58%	-75%
-48%	-48%	19%	-30%	-30%	-12%	-100%	100%	1000%
57%	27%	41%	86%	63%	-37%	-100%	100%	-76%
42%	39%	167%	-33%	0%	11%	-33%	200%	1500%
2%	111%	10%	83%	130%	33%	53%	200%	75%
-81%	-87%	-93%	-69%	-69%	0%	-86%	-75%	-75%
32%	17%	-13%	0%	117%	0%	20%	40%	-28%
-15%	-10%	8%	4%	4%	23%	-35%	300%	300%
-2%	-29%	0%	15%	0%	1725%	800%	-60%	-20%
20%	-4%	-26%	-31%	25%	-65%	-33%	0%	0%
-12%	-7%	907%	3%	-41%	-33%	33%	0%	0%
28%	3%	0%	27%	27%	-48%	-86%	0%	67%
0%	0%	16%	59%	61%	-13%	-61%	-38%	0%
21%	25%	-9%	5%	-17%	-13%	7%	0%	0%
-2%	20%	0%	-38%	-41%	-100%	-18%	0%	0%
0%	-2%	-41%	0%	-33%	-21%	0%	-53%	-65%
0%	1%	-11%	0%	-100%	167%	0%	-100%	-100%
5%	5%	-15%	20%	0%	300%	133%	0%	0%
-17%	-20%	0%	-100%	-78%	0%	-67%	0%	0%
9%	4%	31%	-50%	100%	-100%	0%	0%	0%
-4%	-1%	136%	37%	37%	0%	0%	-50%	200%
1%	4%	100%	100%	100%	0%	-25%	0%	0%
0%	0%	0%	-59%	-79%	12%	0%	-18%	0%
0%	-37%	-2%	0%	0%	7%	0%	0%	-100%
0%	1%	29%	-26%	0%	-13%	0%	0%	0%
0%	5%	-9%	0%	0%	0%	0%	0%	0%
-1%	9%	0%	0%	0%	0%	0%	0%	0%
-35%	0%	0%	0%	0%	0%	0%	0%	0%

Legend

Red
>5%

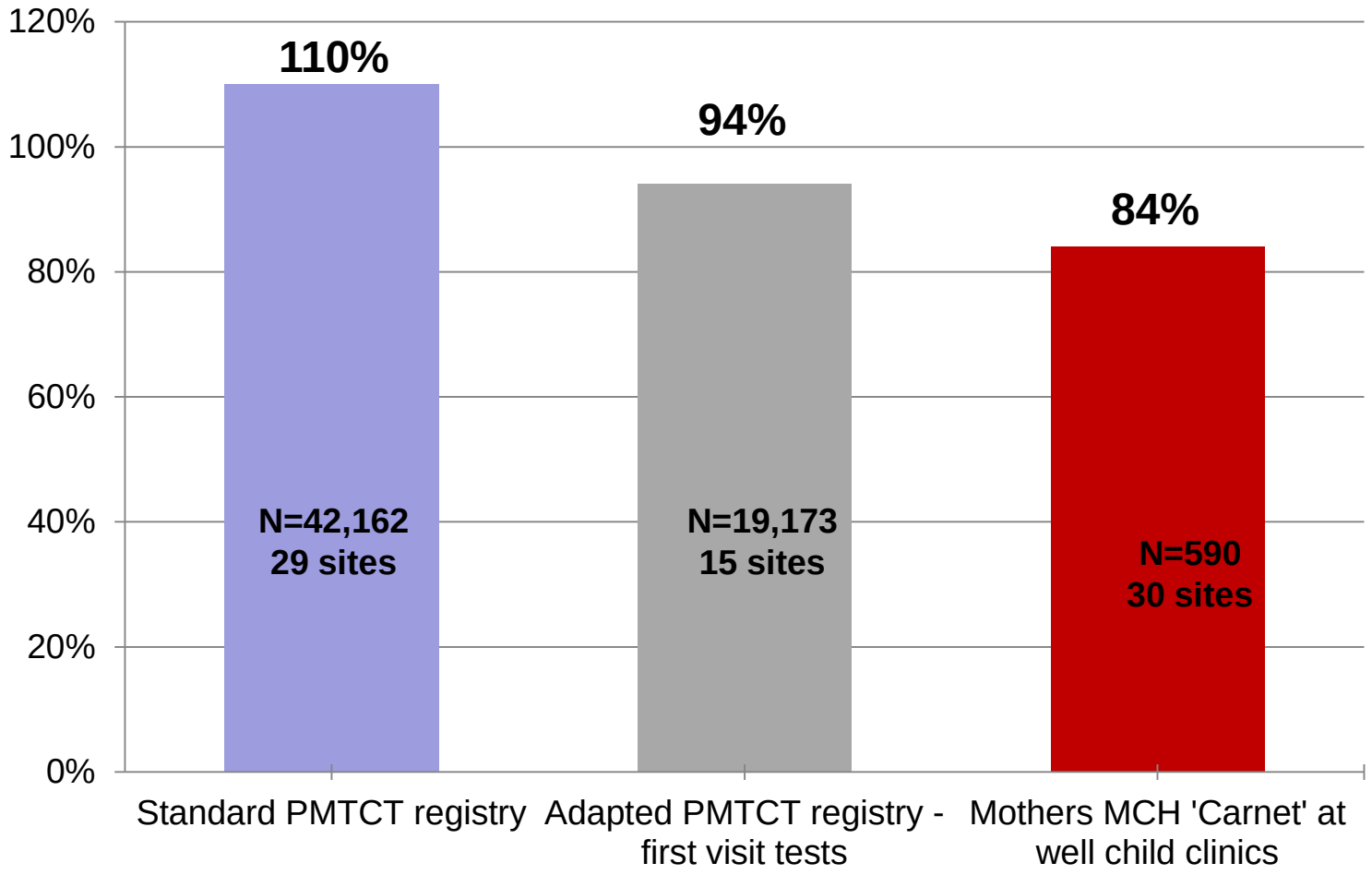
Grey
5% to -5%

Blue
< -5%

Data collection method disparity

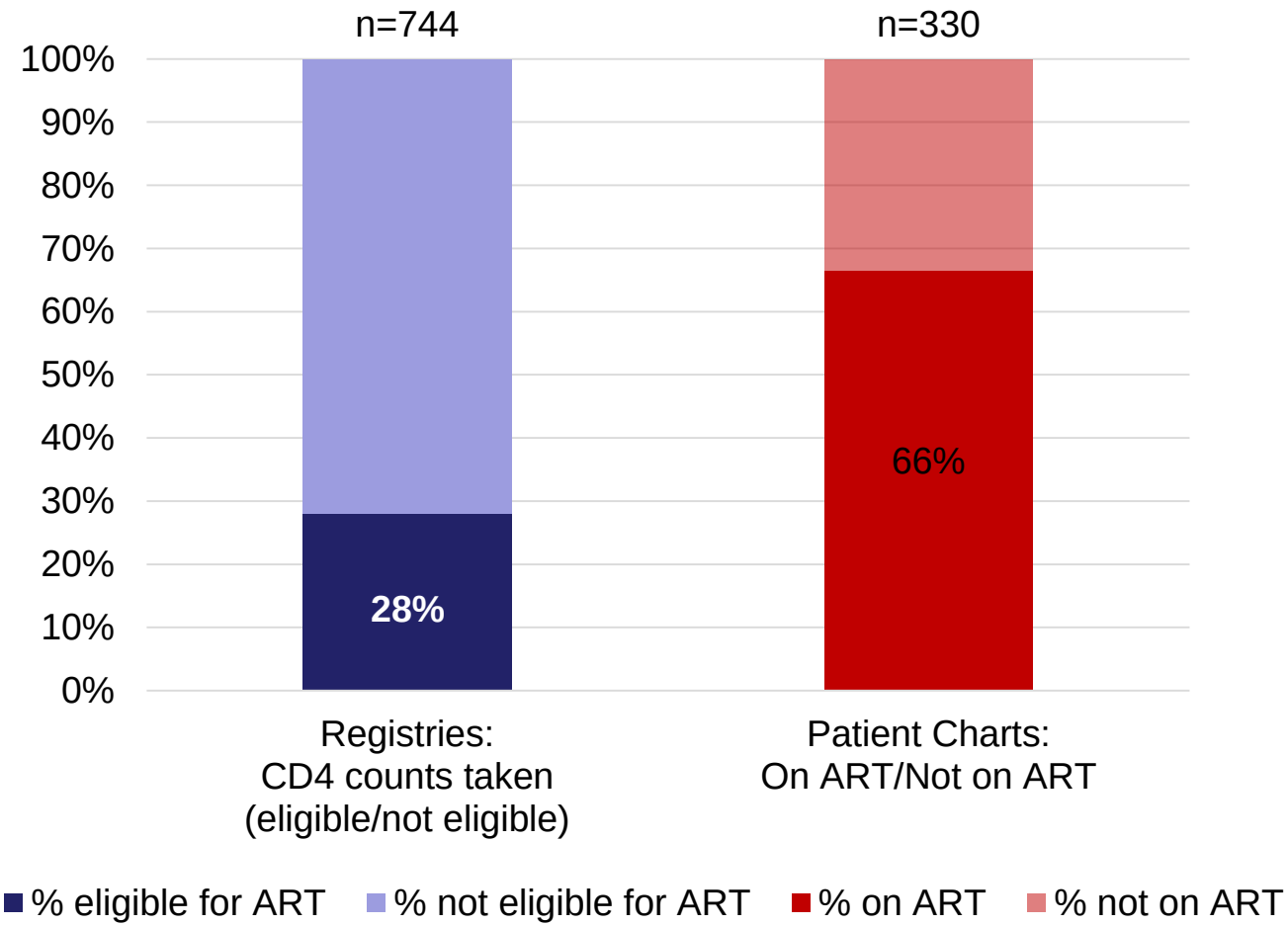
- Indicators:
  - PEPFAR data (627 indicators; 33 for PMTCT)
  - Changing indicators
    - Tracking over time
  - Numerator/denominator issues
    - HIV testing at ANC1 vs. HIV testing at any ANC

Proportion of women tested for HIV in ANC— Different results depending on source of data

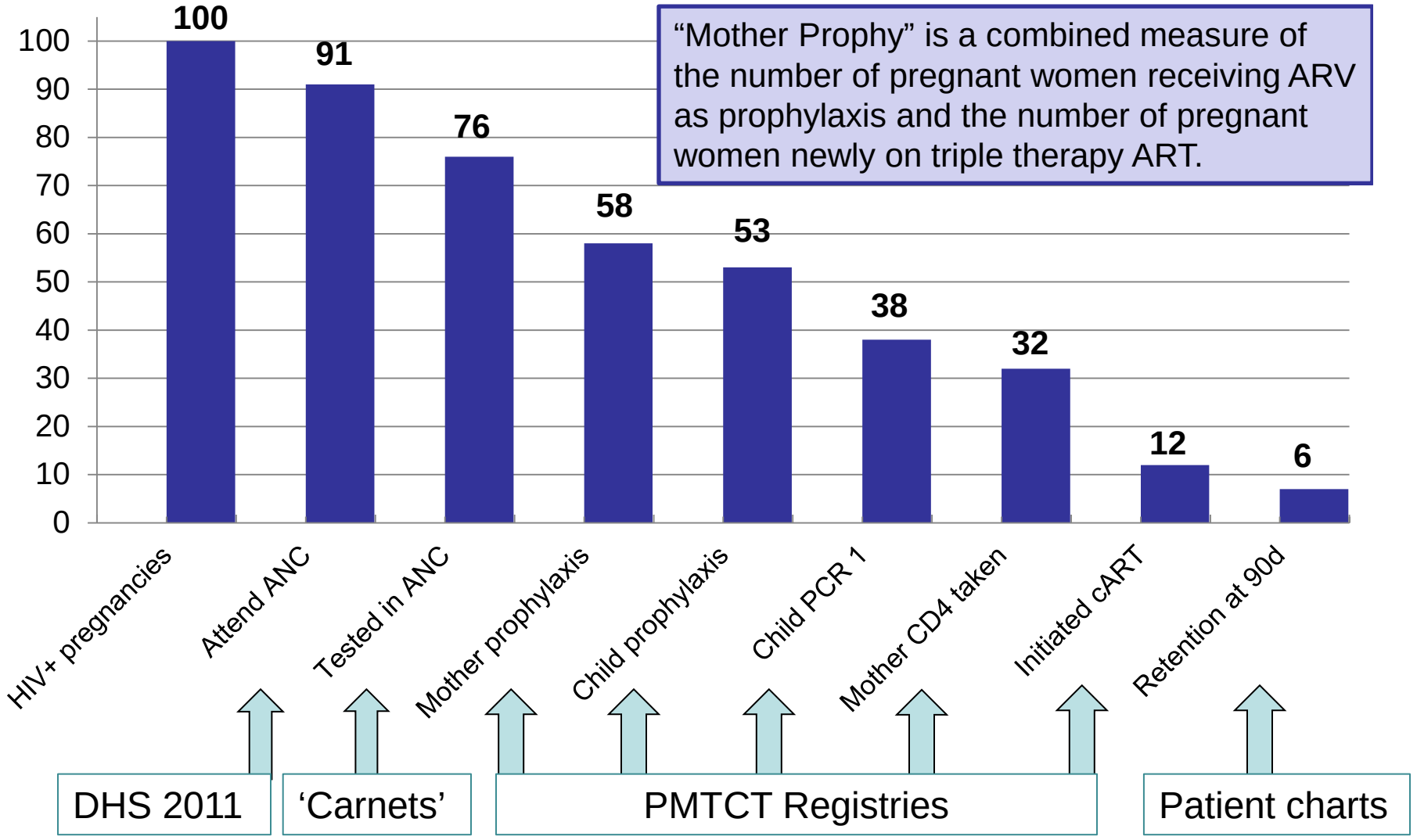


Proportion of HIV+s reported eligible for ART (from registries) compared with proportion on ART (from charts)

Note: National protocol stipulates that patient charts be opened directly following a positive HIV test result.



Estimated PMTCT cascade of 100 HIV+ pregnant women in Côte d'Ivoire



Summary of results

- Large number of PMTCT-related registries (18) & indicators, with confusion regarding meaning of and changes to indicators.
- Inconsistent availability of registry data and patient charts.
- Substantial—and largely similar over-reporting, under-reporting (including non-reporting)—not clear at which level it happens
- Inconsistent patient charting (including ART follow-up).
- Infrequent review of data at facilities.
- Cascade can be constructed by combining data sources and cross-checking data.
- Substantial loss of HIV+ women at each step of cascade.

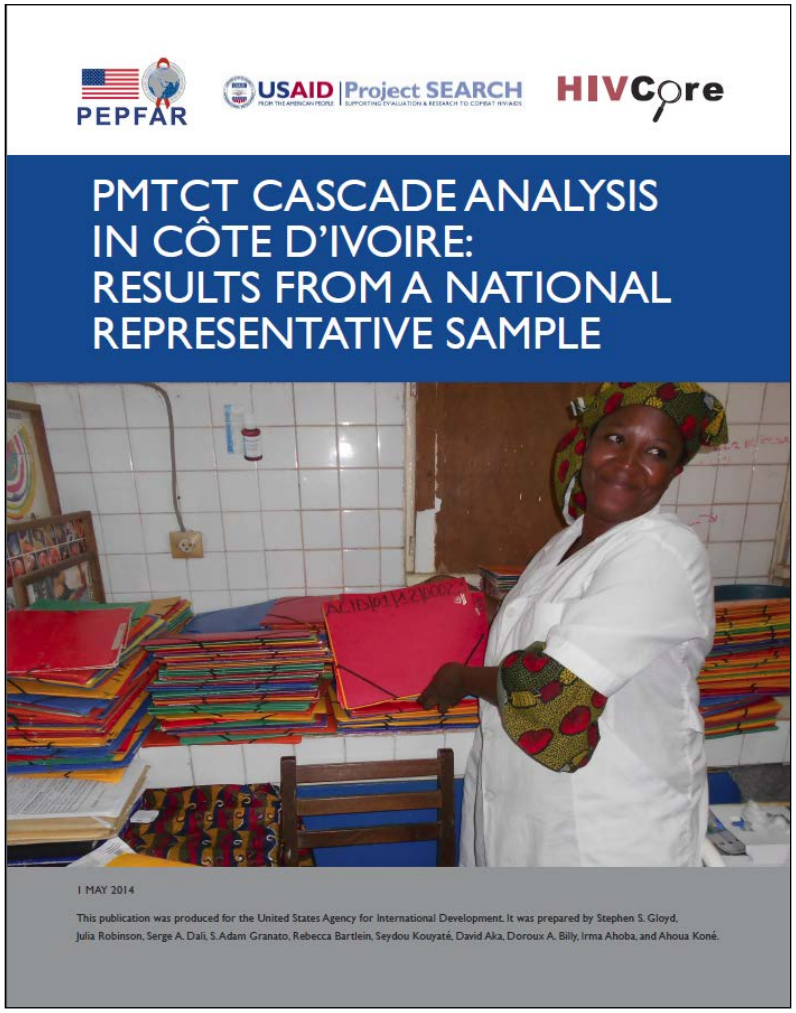
Discussion and recommendations

- **Simplify** data collection & reduce number of PEPFAR indicators.
- Encourage **facility providers** to routinely review, analyze, & utilize data.
- Engage **district managers** to jointly analyze data with facility providers/managers and hold them accountable for completeness and validity of data.
- Provide adequate **training & coaching** for health workers, managers, & community-based staff involved with patient tracking.
- Reinforce national protocols for **opening patient charts**.
- Strengthen a **systems focus** on PMTCT service delivery in ANC.

Acknowledgements

- Principal Investigator
  - Prof. Stephen S. Gloyd, MD, MPH, Department of Global Health, University of Washington, Seattle
- Co-Principal Investigator
  - Ahoua Kone, MPH, JD, Country Director-Côte d'Ivoire Program, Health Alliance International (HAI), Seattle
- Co-Investigators
  - Dr. Kouyate Seydou, Program Director, HAI-CI, Bouaké
  - Dr. Virginie Ettiegne-Traore, Director-Coordinator, PNPEC, Abidjan
  - Prof. Dinard Kouassi, Director, INSP, Abidjan
  - Prof. Méliane N'Dhatz-Sanogo, Vice-Dean, Université Alassane Ouattara School of Medicine, Bouaké
  - Dr. Billy Aristide, Country Director, HAI-CI, Bouaké
  - Julia Robinson, Technical Advisor, HAI, Seattle
- MOH PMTCT providers & data managers at national, regional, district, and facility levels

Thank you!



To read the full report, please visit www.hivcore.org