Cameroon Early Infant Diagnosis Quality Improvement Collaborative
Outline

• The Cameroon HIV Exposed Infants (HEI) Early Infant Diagnosis (EID) Quality Challenge
• QI Collaborative (QIC) Approach
• QIC Design
• QIC Process
• QIC Results
• Conclusion
The Quality Challenge

• EID is standard practice in many of Cameroon’s health facilities, but performance and compliance with national guidelines is often suboptimal.
• At many health facilities, fewer than half of children are tested.
• This is due to programmatic barriers, such as workload, staff training, availability of test kits, and other service delivery challenges.
The Quality Challenge

• A 2012 Ministry of Health (MOH) National AIDS Control Committee (NACC) survey reported that follow-up of HEI was weak countrywide.

• A survey found that only 12% of HEI had appropriate HIV testing by the recommended six weeks of age.

• A November 2015 ICAP assessment at 54 health facilities revealed that the average turnaround time (TAT) for DNA PCR test exceeded six weeks at 73% of sites.

• Median TAT was 3-4 months, far longer than the national standard of four weeks
The “Know-Do” Gap

The gap between what we can do and what we actually do
Through the PEPFAR HRSA QICIP Mechanism, in 2015, ICAP supported the launch of a QI collaborative focused on improving EID at 17 health facilities in the Centre and Littoral regions of Cameroon.
What is the QI Collaborative Approach?

An organized network of sites (districts, facilities, or communities) that work together on a focused program topic area using QI methods and tools

• Limited time; typically 12 to 18 months
• Share aim statements, indicators, and measurement processes
• Regular (quarterly) forums for data review, shared learning, and spreading successful changes
• Final “harvest” meeting of successful interventions, tools and resources
Select Improvement Aim

- Convene expert meeting
- Identify best practices
- Develop aim statement, indicators, data SOPs
- Select/prepare sites

QI Collaborative Approach
Adapted from IHI Breakthrough Series

Learning Session 1
- Action Period 1

Learning Session 2
- Action Period 2

Learning Session 3
- Action Period 3

“Harvest” of successful interventions, tools, resources

Learning Session 4

Learning Session 5
Designing the QI Collaborative

- Site selection
- Selecting the quality challenge
- Aim statement development
- Indicator selection
- Data management system
- Baseline data collection and analysis
- Baseline stakeholders’ meeting
17 PEPFAR priority health facilities
EID QIC Aim Statements

March 2016 to March 2017

(1) To improve EID testing from baseline to ≥ 50% of HEI tested with results shared with caregiver within 12 months of sample collection (testing coverage)

(2) To reduce the average time of test to results shared with the caregiver to under 6 weeks (42 days) (TAT reduction)

April 2017 to June 2017

Aim Statement Adjustments

(1) At least 90% of HEI will have EID DBS PCR test results documented and shared with the caregivers

(2) Each participating facility will achieve a mean PCR TAT of 2 weeks or less
Baby arrives at clinic and is identified as HEI

DBS sample taken

Sample sent to lab

Results received from lab

Results shared with caregiver

HIV-positive result

Infant initiated on ART

QIC2: 1st test done < 8 weeks of age
QIC3: 1st test done > 2 months of age

QIC10: TAT from DBS sample taken to sample sent to referral lab

QIC11: TAT from DBS sample sent to sample received back from lab

QIC12: TAT from results received to caregiver notification of results
QIC Data Management System: DHIS2

Data entry

Automated Dashboards

Automated Validation

Validation

Validation Result ⚠️

The data entry screen has the following validation error, please correct

Validation rule

Number of sample results returned to facility lab ≤ Number of DBS samples sent to referral Lab

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Implementing the QI Collaborative

- Designing baseline training package
- Training site-level QI teams (Learning Session One)
- Launching QI activities at each site
- Monthly supportive supervision visits
- Quarterly learning sessions
Quarterly Learning Sessions

Learning sessions conducted February 2016, June 2016, October 2016, February 2017, and July 2017

- Review of site level data from each of the 17 health facilities
- Exchange of change ideas and successful interventions, tools, and resources
- Refresher training on QI methods
Monthly Supportive Supervision

- Monthly visits routinely include MOH staff
- QIC team record change intervention activities on PDSA worksheets and run chart worksheets
- ICAP in CM team compiles site visit report and shares with ICAP NY each month
EID QIC Achievements

- QI teams conducted 146 PDSA cycles and identified approximately 30 successful change interventions.
- ICAP staff made 272 supportive supervision visits to provide coaching and mentorship to the site-level QI teams.
- High participation in learning sessions (between 56 and 59 participants in each meeting).
Results: Proportion of Eligible HEI Tested by Age Category

Baseline Data

Proportion of eligible HEI tested with DBS PCR < 8 weeks of age

Proportion of eligible HEI tested with DBS PCR > 2 months of age

Learning Sessions
Results: Proportion of HEI tested and DBS PCR Results Documented and Shared with Caregiver

Baseline Data

% of HEI

% of HEI with DBS tests results shared with care giver this month

Learning sessions
Results: Turn Around Time Cascade
Number of days from sample collection to results shared with caregiver
EID QIC Results

Sustained improvement achieved for:

• Proportion of EID tested with results returned to caregiver (coverage)
  – 16 of the 17 sites reached the coverage target of >50% and on average this took 2.6 months to achieve

• Turnaround time
  – All of the 17 sites reached and sustained the TAT target of <42 days; the target was revised downward to <14 days in April 2017
Conclusion

• The QIC addressed a critical quality challenge
  – Aligned with national and PEPFAR priorities
  – Directly relevant to the first 90
  – Aligned with MER indicators and SIMS CEE
• Approach was systematic and rigorous
  – Inclusive of multiple stakeholders
  – Robust M&E and DQA processes
  – Innovative use of DHIS2
• Improvements were sustained over time
“Thanks to ICAP’s support, our nurses are more available to patients, there’s reinforced capacity, and we have stronger ties with our community.”

-Dr. Nomo Etene Martial
Director, Ayos Regional Hospital
Acknowledgements

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