Evidence to Action (E2A) Webinar Series:
Multimonth ART:
What Do Patient Care and Outcomes Look Like Within the First Year?
Results from Studies in Cote d’Ivoire, Mozambique, and Eswatini

Monday, February 13, 2023 | 9:00–10:00 AM ET
Housekeeping

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- This E2A is being live streamed and recorded, and EGPAF will share the recording at the conclusion of the webinar
Agenda

Welcome and Opening Remarks (9:00 — 9:10 AM ET)
  Appolinaire Tiam, MD, PhD, Vice President, Technical Strategies and Innovation, EGPAF

Panelist Presentations (9:10 — 9:40 AM ET)
  Marc N’Goran, MD, MPH, Director, INILI Project, EGPAF in Cote d’Ivoire
  Marie-Huguette Kingbo, MD, MPH, Technical Advisor for Program Evaluation, EGPAF in Cote d’Ivoire
  Lauren Greenberg, MPH, Senior Research Officer, EGPAF
  Lydia Mpango, MBchB, MSc, Senior Clinical Advisor, EGPAF in Eswatini
  Mahoudo Bonou, MD, MPH, Technical Director, EGPAF in Mozambique

Q&A (9:40 — 10:00 AM ET)
Elizabeth Glaser
Pediatric AIDS Foundation
Fighting for an AIDS-free generation
Multimonth Dispensing

- Multimonth dispensing (MMD) of antiretroviral therapy (ART): a strategy to reduce the burden on both clients and healthcare facilities, particularly after the introduction of “test and treat”

- Large increase in the number of clients receiving ART through a MMD model in 2020, both globally and within EGPAF programs

- Expanded eligibility for MMD, particularly for children as young as 2 years, pregnant and breastfeeding women, and patients not classified as clinically stable

Study: Evaluation of Viral Suppression in the Context of Differentiated Care in Côte d'Ivoire

- **Purpose**: Review client charts to understand how many clients — and which clients — had already been transitioned to MMD, and follow a cohort of clients newly transitioning to MMD for 18-24 months to better understand outcomes on MMD (viral load coverage/viral suppression) and whether they continued to receive multi-month ART.

- **Sites**: 29 sites across Côte d’Ivoire (16 supported by EGPAF, 13 supported by other CDC Implementing Partners).

- **Cohort study population**: ART clients aged 1 year and older, newly transitioned to MMD model (first receipt of at least 90 days of ART no earlier than January 2020).

- **Enrollment**: March 2020-January 2021.

- **Data collection**: March 2020-August 2022.
Results: Chart Review

• Records reviewed for **41,542** clients
• 90% of clients already received MMD, most (>80%) for more than one year
• 78% of children <15 years had ever received MMD
• Clients first receiving MMD during the COVID-19 pandemic were:
  • younger
  • more recently initiated on ART
  • less likely to have had a viral load test
  • more likely to have been unsuppressed at their last viral load test
  • more likely to have had a history of opportunistic infection
Cohort Study: Participant Characteristics (Children and Adolescents <18 Years)

- 52 participants
  - 17 (33 %): <5 years
  - 19 (37 %): 5-9 years
  - 5 (10 %): 10-14 years
  - 11 (21%): 15-17 years
- 54% male
- 77% had other household members on ART
- 35% had at least one deceased parent (two were orphans)
- 40% had been on ART at least two years at first receipt of MMD
- 20% had missed ART at least once in the last seven days
Cohort Study: Participant Characteristics (Adults)

- Median age 41 years
- 70% female
- 30% had no formal education
- 47% married/cohabiting
- 34% reported other household members on ART
- 36% had been on ART <6 months at first MMD; 23% had been on ART at least two years
- 15% reported missing at least one dose of ART in the past seven days
Consistent Receipt of MMD

Enrolled
N=711

≥ 3 ART pickups
N=654 (92%)

Consistent receipt of
≥ 3 months of ART
N=492 (75%)

Inconsistent receipt of
≥ 3 months of ART
N=162 (25%)

78% consistent MMD among adults
38% consistent MMD among youth
Cohort Study: Reasons for Discontinuation of MMD

Adults

- Most common reason cited: provider decision (N=46), followed by participant having a high VL (N=28)
- Other reasons included stockouts, pregnancy, concerns about adherence, and the need to return sooner for viral load monitoring

Children/Adolescents

- Most common reason for MMD discontinuation: provider decision, followed by high VL, adherence issues, and stockouts
Viral Load (VL) Coverage

Adults
N=659

≥ 12 months follow-up
N=610 (95%)

≥ 1 VL within first 12 months on MMD
N=572 (94%)

Children/Adolescents
N=52

≥ 12 months follow-up
N=48 (92%)

≥ 1 VL within first 12 months on MMD
N=48 (100%)
VL Results

Adults
N=659

VL ≥ 6 months after the first MMD
N=602 (91%)

VL suppressed
N=530 (88%)

≥ 1 VL not suppressed
N=72 (12%)

Children
N=52

VL ≥ 6 months after the first MMD
N=50 (96%)

VL suppressed
N=36 (72%)

≥ 1 VL not suppressed
N=14 (28%)
Evaluations of Pediatric MMD: Mozambique and Eswatini

• Design:
  • Secondary analysis of existing data from electronic and paper-based records

• Population:
  • All children ages <15 with clinical visit to a study site between September 2019-August 2020 (Mozambique) or July-December 2020 (Eswatini) at 16 facilities in two provinces in Mozambique and 31 facilities in two regions in Eswatini
  • Data collected on patient outcomes and care through August 2021 (Mozambique) or March 2022 (Eswatini)
  • Data items included date of ART pickups and number of months of ART received, as well as viral load specimen collection dates and results
Pediatric MMD Evaluation Objectives

• How many children were transitioned to MMD, when were they transitioned, and how did they differ from children who were not transitioned?

• Did children who ever received MMD continue to receive MMD for the next year?

• Did children on MMD continue to receive viral load monitoring according to guidelines, and were they able to maintain or achieve viral suppression?
## Client Characteristics and Receipt of MMD

<table>
<thead>
<tr>
<th>Age group</th>
<th>Mozambique</th>
<th></th>
<th>Eswatini</th>
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</thead>
<tbody>
<tr>
<td>&lt;5</td>
<td>1,183 (27%)</td>
<td></td>
<td>196 (13%)</td>
<td></td>
</tr>
<tr>
<td>5-9</td>
<td>1,699 (39%)</td>
<td></td>
<td>505 (32%)</td>
<td></td>
</tr>
<tr>
<td>10-14</td>
<td>1,501 (34%)</td>
<td></td>
<td>858 (55%)</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>On ART &lt;6 months at the time of study enrollment</th>
<th>Mozambique</th>
<th></th>
<th>Eswatini</th>
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<tbody>
<tr>
<td></td>
<td>858 (20%)</td>
<td></td>
<td>83 (5%)</td>
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<thead>
<tr>
<th>Ever received a multimonth supply of ART during study follow-up</th>
<th>Mozambique</th>
<th></th>
<th>Eswatini</th>
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<tbody>
<tr>
<td></td>
<td>3,609 (82%)</td>
<td></td>
<td>1,041 (67%)</td>
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Receipt of MMD

• Highly correlated with age: from 63% for those ages ≤5 up to 93% of those ages 10-14 in Mozambique, and 41% of those ages ≤ 5 up to 75% of those ages 10-14 in Eswatini.

• In Mozambique, receipt of MMD was also correlated with time on ART and time in follow-up at the site. Children with record of opportunistic infection, malnutrition, or unsuppressed VL less likely to receive MMD during the study period.

• In Eswatini, children attending facilities in Shiselweni region were also significantly more likely to have ever received MMD compared to children receiving care at facilities in Hhohho. Significant variation by site: of 33 sites, 11 sites recorded over 85% of children on MMD, while five sites reported fewer than 25% of children ever receiving MMD.
Timing of First Receipt of MMD

First receipt of multi-month ART: Mozambique

First receipt of multi-month ART: Eswatini

First COVID-19 case in Mozambique

First COVID-19 case in Eswatini
Retention on the MMD model

<table>
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<th>% of children receiving consistent MMD</th>
<th>Mozambique</th>
<th>Eswatini</th>
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</thead>
<tbody>
<tr>
<td>Age &lt;5 years</td>
<td>29%</td>
<td>7%</td>
</tr>
<tr>
<td>Age 5-9 years</td>
<td>36%</td>
<td>17%</td>
</tr>
<tr>
<td>Age 10-14</td>
<td>48%</td>
<td>41%</td>
</tr>
<tr>
<td>Overall</td>
<td>40%</td>
<td>31%</td>
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*Age* was the strongest predictor of consistent MMD receipt, but children with an elevated VL (>1,000 copies/mL), children with suboptimal adherence to ART pickups, and children with a regimen switch after first MMD were less likely to receive consistent MMD.
Viral Load Coverage and Suppression Among Children on MMD

• In Mozambique, 40% of children had a VL within the 12 months after first MMD (lowest among children ages 10-14 at 35%). In adjusted analysis, children who received consistent multimonth supplies of ART were significantly less likely to have a viral load in that 12-month period.

• 79% of children were suppressed at least six months after first MMD, while 21% had an unsuppressed VL at least six months after first MMD. Younger children were significantly less likely to be suppressed.

• In Eswatini, 87% of children had a VL within the 12 months after first MMD: no significant difference by age or consistent receipt of MMD.

• 93% of children were suppressed at all VLs 6-12 months after first MMD; this was lower among children under age 5 (86%)
Acknowledgements:

Côte d’Ivoire
• Appolinaire Tiam
• Kouadio Marc N’goran
• Lauren Greenberg
• Marie-Huguette Kingbo
• Ban Ignace Tosseu
• Yannick Meless
• Nicole Herrera
• Ministry of Health and Public Hygiene (MSHP)
• Study participants
• Support from: CDC/PEPFAR

Mozambique
• Nilesh Bhatt
• Michelle Gill
• Lauren Greenberg
• Rui Guilaze
• Abdul Mussa
• Nicole Herrera
• Ivete Meque
• Ana Tambo
• Amancio Vicente Nhangave (Provincial MOH)
• Jaciara Mussá (Provincial MOH)
• Rebecca Bailey
• Aneta Dvorakova
• Study participants
• Support from: Clinton Health Access Initiative

Eswatini
• Philisiwe Khumalo
• Lauren Greenberg
• Mthokozisi Kunene
• Nicole Herrera
• Vincent Tukei
• Tony Isavwa
• Thabile Dlamini
• Sibongile Wusumani
• MOH Data Management Team/HMIS (Fortune Mhlanga, Sayeed Dlamini)
• Rebecca Bailey
• Aneta Dvorakova
• Study participants
• Support from: Clinton Health Access Initiative
Elizabeth Glaser
Pediatric AIDS Foundation
Fighting for an AIDS-free generation
Q&A