Introduction

Introducing the third edition of CHAI’s HIV Mid-Year Market Memo, a brief that covers the latest trends in the HIV space in LMICs since the publication of CHAI’s annual HIV Market Report in September 2018.

Data Sources for the Memo:
1. CHAI’s annual data request to 25+ LMICs
2. Articles from journals and news outlets
3. Supplier and partner market intelligence
4. Major conferences and meetings

Acronyms Used

- 3HP: 12-week isoniazid-rifampentine
- 3TC: Lamivudine
- ABC: Abacavir
- APWG: ARV Procurement Working Group
- ART: Antiretroviral therapy
- ARV: Antiretroviral
- CrAg: Cryptococcal antigen
- DRV/r: Darunavir/ritonavir
- DTG: Dolutegravir
- EID: Early Infant Diagnosis
- FTC: Emtricitabine
- INSTI: Integrase inhibitor
- LMIC: Low- and middle-income country
- LPV/r: Lopinavir/ritonavir
- NNRTI: Non-nucleoside reverse transcriptase inhibitor
- PrEP: Pre-exposure prophylaxis
- RFP: Request for proposal

WHO Guidelines were updated in December 2018 to emphasize a woman-centered approach to healthcare, and highlight the importance of informed choice for use of DTG by women.

TDF + 3TC + DTG (TLD) Market Overview

- TLD orders in 2018 exceeded 35M packs
- TLD is included in the guidelines of 60+ countries
- The FDA has tentatively approved 5 suppliers

Informed Choice

WHO Guidelines were updated in December 2018 to emphasize a woman-centered approach to healthcare, and highlight the importance of informed choice for use of DTG by women.

TLD Research Developments

1. WHO guidelines expected to be released in July 2019 based on data from Tsepamo cohort and other data sources on risk of neural tube defects
2. DTG used with 3HP found to prevent TB effectively without necessary DTG dose adjustment or any serious adverse events
3. Data presented at CROI 2019 suggest modest weight gain with DTG use (Abs. 669, 670)
4. The FDA approved ViiV’s Dovato (DTG/3TC) dual therapy for treatment-naïve patients

NVP Phase-Out

- Adult nevirapine (NVP) is no longer listed as first-line preferred or alternate by the WHO
- PEPFAR aims to phase out adult NVP use and has ceased procurement
- In 2017, NVP accounted for ~15% of the adult NNRTI/INSTI market

South Africa Tender

The results of the South African tender were released in Feb. 2019.

Price Highlights (USD)*

<table>
<thead>
<tr>
<th>Product</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLD</td>
<td>$6.03</td>
</tr>
<tr>
<td>TDF+FTC+EFV (TEE)</td>
<td>$6.39</td>
</tr>
<tr>
<td>LPV/r (200/50 mg)</td>
<td>$14.61</td>
</tr>
</tbody>
</table>

*Average prices weighted by volumes across suppliers, on delivered basis, inclusive of 15% VAT, converted to USD from ZAR using the forex exchange rate of 14.35 ZAR (Dec. 31st, 2018).

Advanced HIV Disease (AHD)

- WHO Definition of AHD
  - Adults and Children (Ages 5+)
    - CD4 < 200 or WHO stage 3 or 4
  - Children (Ages <5)
    - All children under 5 living with HIV

~33% of people initiating ART in Sub-Saharan Africa have AHD

Unitaid and CHAI are collaborating to improve access to AHD commodities to reduce morbidity and mortality.
Pediatric ARV Market

Pediatric Optimization

% of Peds Product Procurements Considered “Optimal” of those monitored by the APWG

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>53%</td>
<td>70%</td>
<td>77%</td>
</tr>
</tbody>
</table>

Source: 2019 APWG KPI Analysis

- DTG (50 mg)
  - The WHO has updated their treatment guidelines and now recommends the adult dose and formulation of DTG (50 mg) for children ≥ 20kg
  - Cipla and Mylan are planning on increasing production of pellets/granules, such that there should be significantly more supply available by early 2020

- LPV/r (40/10 mg)
  - PEPFAR and the Global Fund are phasing out peds NVP procurement (for treatment) given high rates of pre-treatment drug resistance and lower efficacy than other ARVs

- Pediatric NVP
  - PEPFAR’s COP2019 guidance supports CrAg and TB urine LAM testing for advanced HIV disease monitoring

2018 PADO 4 Priority Products

- DTG (10 mg) Disp. Scored
- ABC/3TC/DTG (60/30/5 mg) Disp.
- DRV/r (120/20 mg)
- TAF/3TC (or FTC)
- TAF/(3TC or FTC)/DTG

- Generic development supported by a financial incentive award from Unitaid via CHAI, as well as the technical expertise of Viiv Healthcare
- For use by children 3-19.9 kg (50 mg adult tablet can be used for those ≥ 20kg)
- Viiv expected to file 5mg disp. tablet by Dec. 2019
- Commitments from generics as part of the incentive program to file in Q1 2020

- Would provide WHO-recommended treatment as a convenient FDC
- Efforts underway to accelerate rapid development and commercial availability

Prevention

- The Phase III Discover trial demonstrated that TAF/FTC is non-inferior to TDF/FTC for daily oral PrEP amongst men who have sex with men; Gilead submitted an application for FDA approval in April 2019

- In Q3 2018, the Biomedical Prevention Implementation Collaborative (BioPIC) was launched, bringing together 80+ organizations to develop a comprehensive, coordinated product introduction agenda and access strategy for long-acting cabotegravir for prevention

- The dapivirine vaginal ring is currently under review by the European Medicines Agency; The International Partnership for Microbicides is working to develop a rollout strategy pending approval

Increase in Oral PrEP Initiations


Diagnostics

Point of Care (POC)

- Abbott’s m-PIMA received WHO PQ for POC VL testing in Apr. 2019, making it the first true POC VL offering in the market
- PEPFAR’s COP2019 guidance supports the use of POC VL testing for pregnant and breastfeeding mothers
- Integrated TB & HIV VL/EID testing on the GeneXpert platform has been found to be feasible and to not negatively impact TB services

Pricing

- All-inclusive pricing continues to move forward, with PEPFAR launching a global RFP for HIV VL and EID requiring suppliers to make all-inclusive bids, and Abbott announcing an all-inclusive price for m-PIMA at the Vatican in Dec. 2018
- Cepheid’s surcharge (rather than the usual warranty) has been offered to the market with countries beginning to opt in

PEPFAR’s COP2019 guidance supports CrAg and TB urine LAM testing for advanced HIV disease monitoring

BioLytical’s INSTI HIV self-test received WHO PQ approval in Nov. 2018, becoming the second self-test with this designation

This memo was made possible through the generous support of Unitaid, with complementary support from the UK Department for International Development and the Bill & Melinda Gates Foundation.