Forecasted demand for current and new ARV medicines in low and middle income countries, 2014-2025

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(Avenir Health, CDC, CHAI, GFATM, MPP, PfSCM, UNAIDS, UNICEF, USAID, WHO)
Observed trends and projected number of people on ART according to Linear, Fast Track, Country Target Projections, and Average of 4 Projections

Million people on ART

- Observed trend
- Linear
- Fast Track
- Country targets
- CHAI
- Average
Millions of Adults Treated in MPP and CHAI scenarios

- MPP First Line
- MPP Second Line
- MPP Salvage
- MPP Total
- CHAI First Line
- CHAI Second Line
- CHAI Total
Uptake curves

WHO/MPP

CHAI

Uptake Curves for new products

Percentage Market Share

Years from Introduction

Uptake Curve for new products

Percentage Market Share

Years from introduction
Drugs included

Backbone:
- TDF+ XTC
- TAF+ XTC
- ZDV+XTC
- DTG

Companion:
- EFV, NVP
- DTG
- LPV/r
- ATV/r
- DRV/r
TDF+XTC % market share in backbone of treatment regimens

Survey CHAI GPRM SCMS GF Average

27% 53% 62% 67% 71% 71%

DATA PROJECTION
Percent of people on first line treatment taking TAF, TDF and ZDV

MPP-WHO

2015: 62% AZT, 32% TDF, 0% TAF
2016: 63% AZT, 23% TDF, 13% TAF
2017: 66% AZT, 15% TDF, 8% TAF
2018: 55% AZT, 8% TDF, 31% TAF
2019: 44% AZT, 1% TDF, 49% TAF
2020: 29% AZT, 0% TDF, 65% TAF
2021: 31% AZT, 0% TDF, 69% TAF
2022: 26% AZT, 0% TDF, 74% TAF
2023: 25% AZT, 0% TDF, 56% TAF
2024: 25% AZT, 0% TDF, 22% TAF
2025: 25% AZT, 0% TDF, 8% TAF

CHAI

2015: 31% AZT, 26% TDF, 4% TAF
2016: 25% AZT, 25% TDF, 25% TAF
2017: 25% AZT, 25% TDF, 25% TAF
2018: 25% AZT, 25% TDF, 25% TAF
2019: 25% AZT, 25% TDF, 25% TAF
2020: 25% AZT, 25% TDF, 25% TAF
2021: 25% AZT, 25% TDF, 25% TAF
2022: 25% AZT, 25% TDF, 25% TAF
2023: 25% AZT, 25% TDF, 25% TAF
2024: 25% AZT, 25% TDF, 25% TAF
2025: 25% AZT, 25% TDF, 25% TAF
Percent of people on first-line treatment taking DTG vs. EFV vs. NVP

### MPP-WHO

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<tr>
<th>Year</th>
<th>NVP</th>
<th>EFV</th>
<th>DTG</th>
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<td>63%</td>
<td>8%</td>
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<tr>
<td>2020</td>
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<td>22%</td>
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### CHAI

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DTG, AZT, TDF, and TAF/XTC in backbone of second-line treatment

MPP-WHO

CHAI

AZT  TDF  TAF  DTG


0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Protease inhibitors and DTG as companion drugs in second-line treatment

Note: DRV/r uptake highly dependent on reaching “at-scale” pricing parity with LPV/r, and likely cost offsets for (re)launch prices
Main products used in salvage treatment

Usage in Resistant Patients: 2015
N = 25,900

- DRV
- RAL
- ETV
- Others

Usage in Resistant Patients: 2025
N = 506,700

- DRV
- RAL
- DTG
- ETV
- Others
ARV use in 2015 - Million People by Active Ingredient

- TAF: 9.8
- TDF: 8.8
- AZT: 4.8
- NVP: 3.9
- EFV: 5.1
- LPV: 5.0
- ATV: 8.9
- DRV: 8.1
- DTG: 0.4
- RAL: 0.4

2015 MPP/WHO vs 2015 CHAI
ARV use in 2020 - Million People by Active Ingredient

Note: EFV includes both 600mg and 400mg formulations
ARV use in 2025 - Million People by Active Ingredient

Note: EFV includes both 600mg and 400mg formulations.
Conclusion

- Our forecasts include a mix of judgement and data
- Areas of convergence are useful to inform action
- Until more data become available, production of the current generation of ARVs needs to continue, and increase, to ensure that all necessary drugs will remain available.