Antiretroviral Treatment Continuity Among Pregnant Women with HIV in Côte d'Ivoire

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BACKGROUND

- In Côte d'Ivoire, an estimated 84% of pregnant and breastfeeding women (PBFW) with HIV receive ART; the vertical HIV transmission rate is estimated to be 10.5% (UNAIDS, 2023).
- Sustained antiretroviral treatment (ART) for PBFW is critical to prevent vertical transmission to infants and preserve maternal health.
  - ART engagement is often noncontinuous, with disengagement and re-engagement (Euvrard, 2024).
  - Continuity of ART engagement among PBFW is not widely understood.
- We characterized noncontinuity of ART across the 12 mos. following ART initiation among PBFW in Côte d'Ivoire

METHODS

- Routinely collected electronic medical record data for pregnant women (PW) initiating ART between 2017-22 at 42 health facilities (HF) in Cote d'Ivoire.
  - ART services were integrated into maternal-child care in HF; visits were typically scheduled monthly.
- PW who initiated ART at least 12 months prior to the end of the observed period (extending though pregnancy into the breastfeeding period) were included; PW with documented transfers-out from a HF were excluded.
- We defined two types of **noncontinuity (Fig 1)**:
  1) **late** (no visit ≤28 days following missed appointment)
  2) **disengaged** (no visit >28 days after appointment)
- Using definition of disengaged, we classified PW into groups:
  1) No disengagement
  2) Disengaged and returned by 12 months
  3) Disengaged at 12 months
- We summarized total days late or disengaged by group and visualized weekly continuity status using heat maps

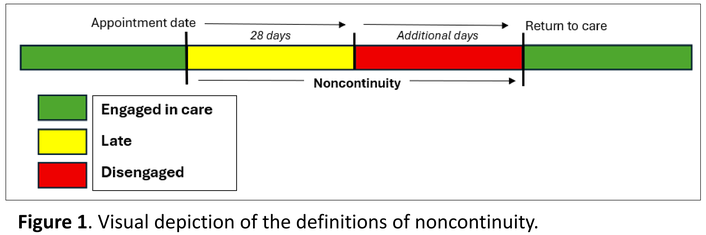


Figure 1. Visual depiction of the definitions of noncontinuity.

LIMITATIONS

- Undocumented transfers of ART care are reflected here as noncontinuity, likely overestimating the magnitude of this outcome.

Over ***60% of pregnant women*** in Côte d'Ivoire who started ART during pregnancy in 2017-22 ***disengaged*** within 12 months. Women who ***returned to care*** by 12 months accumulated a median of more than ***3 months of noncontinuity of ART*** during this first year, increasing risks of morbidity and vertical transmission.

RESULTS

- Among 679 PW initiating ART, 187 (27%) were disengaged from treatment at 12 months, 228 (34%), had disengaged and returned, and 264 (39%) had no disengagement.
- Across the 12 months, women disengaged at 12 months had a median of 279 (IQR: 201-334) days of noncontinuity; disengaged and returning PW had a median of 105 (75-154) days of noncontinuity; and women with no disengagement had a median of 18 (8-33) days of noncontinuity **(Fig 2)**.
- Both groups of PW with disengagement often experienced short 1-4-week intervals of lateness, returning to care before 28 days late **(Fig 3).** PW with no disengagement had far fewer occurrences of late return.

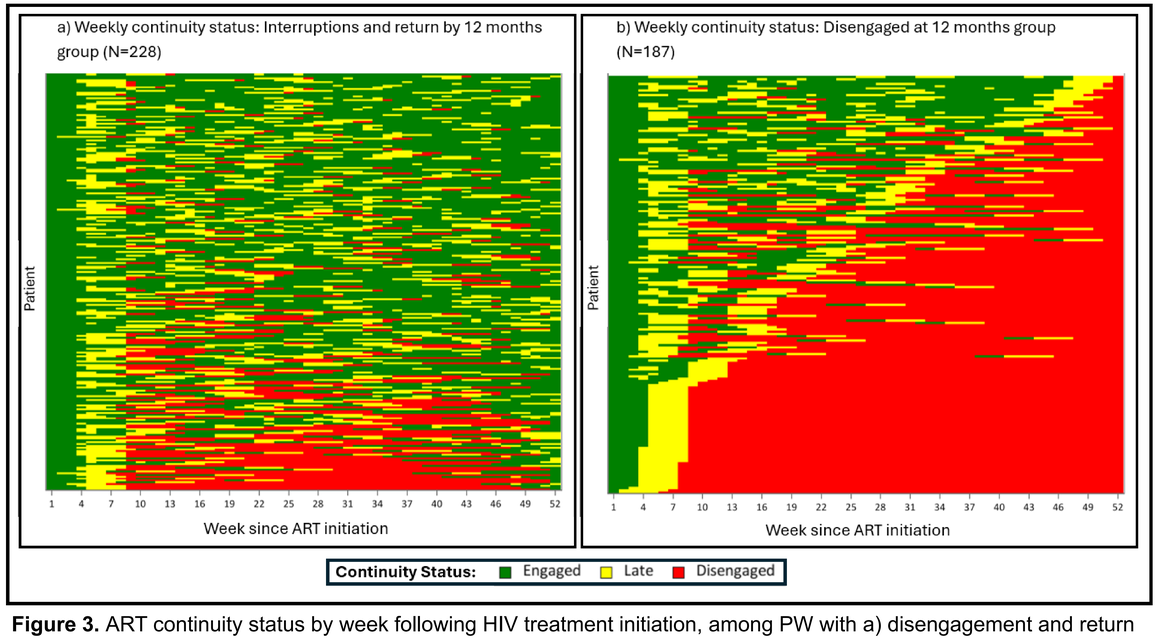
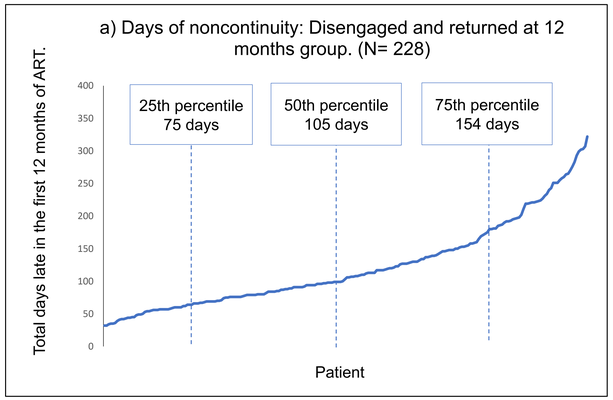


Figure 3. ART continuity status by week following HIV treatment initiation, among PW with a) disengagement and return by 12 months following initiation; and b) PW who were disengaged at 12 months.



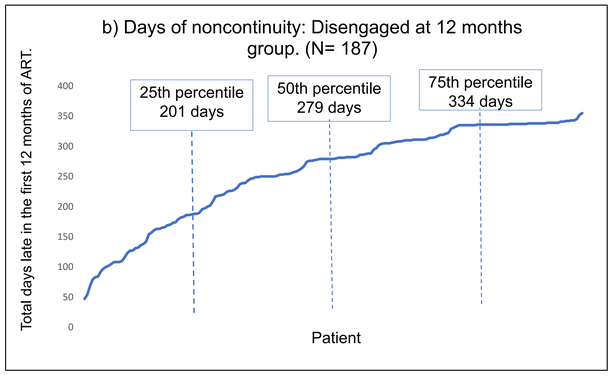


Figure 2. Number of days late or disengaged from HIV treatment in the 12 months following ART initiation by group: a) PW who disengaged and returned; b) PW who were disengaged at 12 months.

CONCLUSIONS

- The substantial numbers of total days late among the disengaged and returned group was primarily due to frequent late returns and short periods of disengagement.
- Interventions such as person-centered, differentiated ART models for PW are needed to improve continuity.

PLAIN LANGUAGE SUMMARY

- Many women who started HIV medication during pregnancy experienced gaps in care or stopped engaging completely within the first 12 months. Women who returned to care at 12 months typically had at least 3 months of gaps in care, which increases health risks for mothers and children.

ADDITIONAL INFORMATION

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SOURCES

UNAIDS, Côte d'Ivoire. (2023).https://www.unaids.org/en/regionscountries/countries/ctedivoire

Euvrard, J., Timmerman, V., Keene, C. M., Phelanyane, F., Heekes, A., Rice, B. D., Grimsrud, A., Ehrenkranz, P., & Boulle, A. (2024). The cyclical cascade of HIV care: Temporal care engagement trends within a population-wide cohort. PLoS medicine, 21(5), e1004407. https://doi.org/10.1371/journal.pmed.1004407