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Low Uptake of Rapid and Early ART Initiation in Latin America and the Caribbean and Associated Factors

Yanink Caro-Vega[1], Anna K. Person[2], Bryan Shepherd[2], Rodrigo Ville[1], Serena Koenig[3], Carina Cesar[4], Claudia P Cortes[5], Beatriz Grinztjein[6], Eduardo Gotuzzo[7], Marco Tulio Luque[8], Brenda Crabtree-Ramírez[1]

1) Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán, Mexico City, Mexico; 2) Vanderbilt University, Nashville, TN, USA; 3) Harvard Medical School, Boston, MA, USA, 4) Fundación Huésped, Buenos Aires, Argentina; 5) University of Chile, Santiago, Chile; 6) Oswaldo Cruz Foundation – Fiocruz, Rio de Janeiro, Brazil; 7) Universidad Peruana Cayetano Heredia, Lima, Peru; 8) Instituto Hondureño de Seguridad Social, Tegucigalpa, Honduras

BACKGROUND

- WHO has recommended ART in all people living with HIV (PWH) regardless of CD4 count since 2015.
- Same day ART has been the standard of care in Haiti since 2017 for PWH without TB symptoms.
- Same day ART is feasible and effective in low-resource settings, but implementation may be challenging in some countries.
- We aimed to evaluate the proportion of PWH with rapid and early ART initiation and factors associated in Latin America.

METHODS

Inclusion criteria:

- Adult (≥18 years old) PWH in care at the Caribbean, Central and South America network for HIV epidemiology (CCASAnet) sites in Brazil, Mexico, Honduras, Argentina, Chile, Haiti and Peru, diagnosed from 2017 to 2024.

Outcomes:

- We estimated the proportion of PWH who started rapid ART (≤7days; R-ART) and early ART (≤14 days; E-ART) after HIV diagnosis overall, and within each site.
- We analyzed factors associated with E-ART (age, sex at birth, education level, mode of HIV acquisition, site, calendar year and CD4 cell count).
- A survey to address barriers to implementing E-ART was completed by each participating site.

Statistical analysis:

- Logistic regression for factors associated with E-ART (Except in Haiti).
- Adjusted Cox models for association of E-ART with overall survival.

Ethics statement: Institutional review board approval was obtained locally for each participating site and the CCASAnet data coordinating center at Vanderbilt University Medical Center, Nashville, TN, USA.

RESULTS

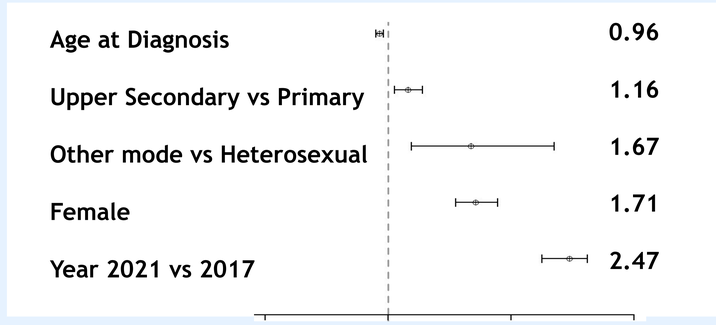
- 9173 PWH were included; 8507 (97%) initiated ART, of whom 4237 (49%) were E-ART and 3146 (37%) R-ART. 74% of E-ART were R-ART.
- Most of R-ART and E-ART starters were from Haiti: 2759 (88%) and 3532 (83%), respectively.
- E-ART was not associated with higher survival aHR: 0.93 [95%CI:0.87-1.00], p=0.05 including Haiti and aHR: 0.90 [95%CI:0.77-1.05], p=0.19 excluding Haiti.
- In the survery, 5/7 sites considered the population they serve is somewhat or completely representative of the national population in their countries.

Characteristics of E-ART vs. Non-E/R-ART initiators

Characteristics	Early-ART* (N=4237)	Non rapid/early-ART initiators (N=4270)
Age in years - mean	36.6	34.2
Sex assigned at birth - number (%)		
Male	2128 (50)	3332 (78)
Female	2109 (49)	938 (22)
Transmission risk- number (%)		
Heterosexual	3000 (71)	1686 (39)
Men who have sex with men	461 (11)	2234 (52)
Other	19 (<1)	27 (<1)
Unknown	757 (17)	323 (8)
Site - number (%)		
CD4 at ART initiation (cells/mL) – mean	622	319
Year of HIV diagnosis - number (%)		
2017	1120 (26)	1407 (33)
2018	1171 (28)	1255 (29)
2019	843 (20)	941 (22)
2020	615 (14)	347 (8)
2021	488 (12)	320 (8)
Days from HIV diagnosis to ART initiation median (IQR)	2 (0-8)	51 (29-98)
Deaths during follow-up - number (%)	290 (7)	144 (3)
Proportion of E-ART within each site		
Argentina	3 / 83 (3.6%)	
Brazil	370 / 1001 (36.9%)	
Chile	74 / 1303 (5.6%)	
Haiti	3532 / 4458 (79.2%)	
Honduras	82 / 114 (71.9%)	
Mexico	53 / 198 (22.7%)	
Peru	123 / 1350 (9.1%)	

*The Early-ART group (N=4237) includes the Rapid-ART initiators (N=3146)

Factors associated with E-ART:



Survey results: reported barriers to E-ART

- Administrative (3 sites)
- Lack of health coverage & out-of-pocket expense s (2 sites)
- Lack of clear guidance (1 site)
- Reduced physician knowledge (2 sites)
- Reluctance to ART (from patient ot families) (2 sites)
- Centralization of laboratories (1 Site)

TAKE HOME MESSAGES

- Despite the recommendation to start R-ART, Haiti is the only site to initiate early ART in most patients.
- Women, younger and more educated people were more likely to initiate E-ART.
- Heterogeneity between health systems, policies and linkage to care are contributors to these results.

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brenda.crabtree@infecto.mx