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CONTRIBUTION OF ENGAGEMENT IN HIV CARE ON DISPARITIES IN VIRAL LOAD SUPPRESSION AMONG LATINOS, FLORIDA, 2015

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Background

- National HIV/AIDS Strategy aims to reduce HIV-related disparities and health inequities[1]
- Retention in care and viral suppression among Latinos
  - Latinos with HIV who are consistently retained in care has been shown to be higher than for non-Latino Blacks and Whites
  - The proportion of Latinos in the US in care who are virally suppressed has been shown to be similar to that of non-Latino Whites[2]
- Previous studies have reported disparities within racial and birth country subgroups of Latinos with respect to HIV risk, delayed HIV diagnosis, and [HIV] survival [3–6]

Sources: 1.The White House National HIV/AIDS Strategy for the United States: Updated to 2020. 2015. https://www.aids.gov/federal-resources/national-hiv-aids-strategy/nhas-update.pdf.; 2.Dasgupta S., Oster A.M., Li J., Hall H.I. Disparities in Consistent Retention in HIV Care—11 States and the District of Columbia, 2011–2013. MMWR 2016;65:77–82; 3.Sheehan D.M., Trepka M.J., Fennie K.P., Maddox L.M. Rate of new HIV diagnoses among Latinos living in Florida: Disparities by country/region of birth. AIDS Care. 2015;27:507–511; 4.Espinoza L., Hall H.I., Selik R.M., Hu K. Characteristics of HIV infection among Hispanics, United States 2003–2006. J. Acquir. Immune Defic. Syndr. 2008;49:94–101.; 5.Wohl A.R., Tejero J., Frye D.M. Factors associated with late HIV testing for Latinos diagnosed with AIDS in Los Angeles. AIDS Care. 2009;21:1203–1210.;6.Sheehan D.M., Trepka M.J., Fennie K.P., Prado G., Madhivanan P., Dillon F.R., Maddox L.M. Individual and neighborhood determinants of late HIV diagnosis among Latinos, Florida, 2007–2011. J. Immigr. Minor. Health. 2016

Background

- Latinos differ in SEP. Black Latinos, and Mexican and Central American Latinos are more likely to experience poverty, low educational attainment, and unemployment compared to White and US born Latinos[1–2]
- Differences in these factors likely create disparities in exposure to neighborhood disadvantage
- It is important to assess whether disparities exist within Latino racial and birth country subgroups in order to identify areas for targeted intervention

Sources: 1. Logan J.R. How Race Accounts for Hispanic Americans. Lewis Mumford Center for Comparative Urban and Regional Research. 2003. http://mumford.albany.edu/census/BlackLatinoReport/BlackLatinoReport.pdf; 2. Motel S., Patten E. Pew Research Center; 2012. The 10 Largest Hispanic Origin Groups: Characteristics, Rankings, Top Counties. Available online: http://www.pewhispanic.org/files/2012/06/The-10-Largest-Hispanic-Origin-Groups.pdf.

Background

- Florida
  - Third highest rate of HIV diagnoses in 2015 (24.0 per 100,000) after District of Columbia and Louisiana
  - Highest number of HIV diagnosis in 2015 with 4864 diagnosis

Source: HIV Surveillance Report, 2015;. 2016; 27. http://www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-report-2015-vol-27.pdf.

Study purpose

- To identify disparities in HIV viral load suppression among Latinos engaged and not engaged in HIV care

Datasets

- De-identified data from the Florida DOH enhanced HIV/AIDS Reporting System **(eHARS)**
- 2007-2011 American Community **(ACS)** Survey 5-year estimates
- Rural/urban designation:
  - Version 2.0 of Rural-Urban Commuting Area **(RUCA)** codes
  - University of Washington WWAMI Rural Research Center
  - Categorization C: Combines large rural cities, small rural towns, and isolated small rural towns
- Merged data using ZCTAs

Inclusion/exclusion criteria

- Inclusion:
  - Hispanics/Latinos
  - Aged 13 and older
  - Current Florida resident
  - Diagnosed with HIV 2000–2014
- Exclusion:
  - Died before January 1st 2016
  - Diagnosed in prison
  - Missing data for current ZIP code
  - Current ZIP code in an area with zero population

Operational Definitions

Engagement in care during 2015 was defined as evidence of at least 1 viral load or CD4 laboratory test, a physician visit, or antiretroviral therapy prescription fill

Viral load suppression during 2015 was defined as a viral load of <200 copies/mL

Socioeconomic Position operationalized as index of seven normalized SEP indicators selected by conducting reliability and principle component analyses

Latino ethnic composition is based on percent of the area population who identified as Latino categorized into <25%, 25–49%, and ≥ 50%

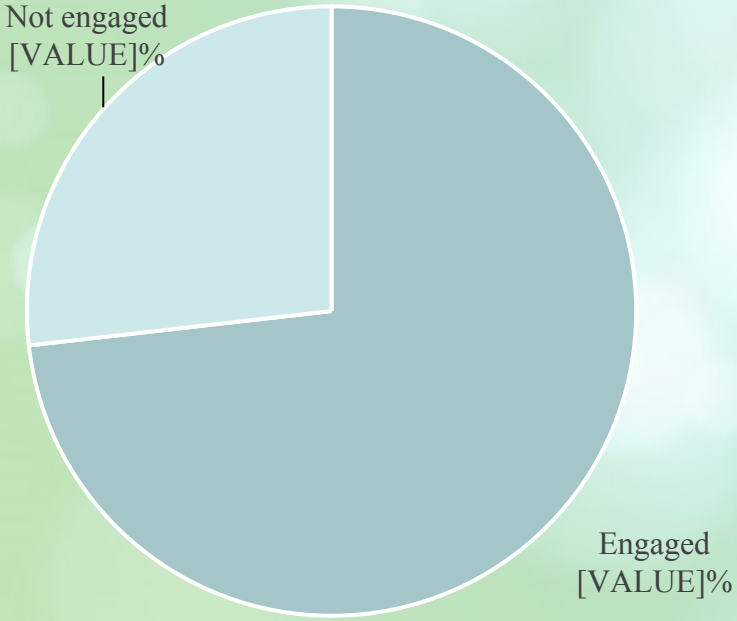
Puerto Rican born Latinos, while US citizens, are considered a subgroup in these analyses due to distinct cultural characteristics

Statistical analysis

- Multilevel (level 1: individual; level 2: ZCTA) modeling used to account for correlation among cases living in the same ZCTA (ZIP code)
- SAS GLIMMIX procedure
- Calculated adjusted odds ratios and 95% confidence intervals for viral load suppression
- Adjusted for:
  - Individual-level variables: Race, year of diagnosis, gender, age, transmission mode, and AIDS
  - Neighborhood-level variables: Socioeconomic status, rural/urban status, Latino ethnic composition
- Stratified by engagement in HIV care

Results

Engagement in HIV care in 2015 among **all Latinos** aged 13 years and older diagnosed with HIV 2000–2014**,** Florida (N=12,166)

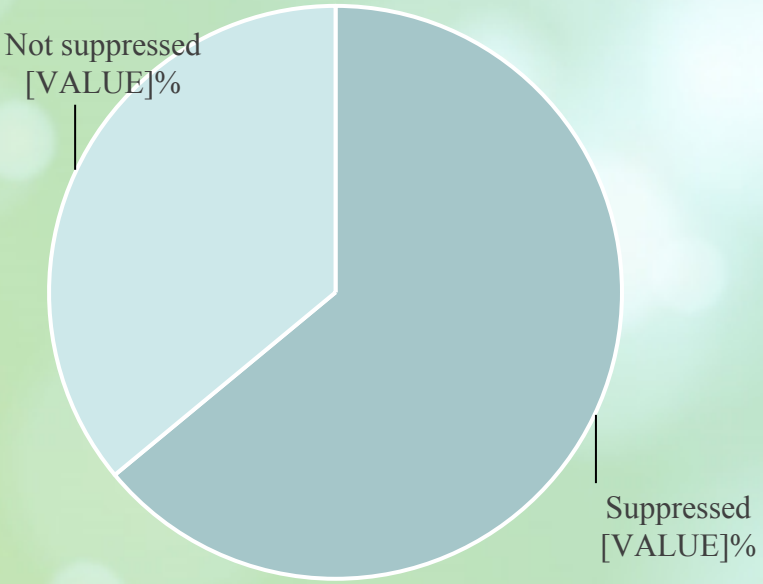


Country/region of birth	Total	Engaged n(%)
Mainland US	4,293	3,192 (74.4)
Puerto Rico	1,157	854 (73.8)
Cuba	2,628	2,253 (85.7)
Mexico	847	447 (52.8)
Central America	1,300	831 (62.9)
South America	1,941	1,324 (68.2)

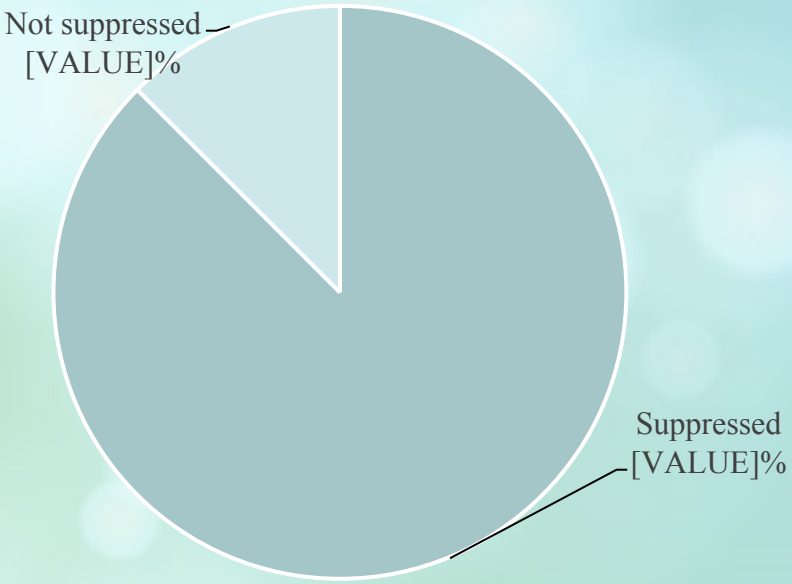
Results

Viral load suppression (<200copies/mL) in 2015 among aged 13 years and older diagnosed with HIV 2000–2014**,** Florida

All Latinos
(N=12,116)



Latinos engaged in care
(N=8,901)



Results

Odds ratios and 95 % confidence intervals **non-viral load suppression** (<200copies/mL) in 2015 among **all Latinos** aged 13 years and older diagnosed with HIV 2000–2014**,** Florida

Country/region of birth	**N (%)**	**aOR (95% CI)**
US	1,601 (37.3)	Referent
PR	440 (38.0)	1.02 (0.89–1.18)
Cuba	599 (22.8)	0.56 (0.50–0.64)
Mexico	448 (52.9)	1.85 (1.57–2.17)
Central America	567 (43.6)	1.28 (1.12–1.47)
South America	725 (37.4)	1.07 (0.95–1.21)

Results

Odds ratios and 95 % confidence intervals **non-viral load suppression** (<200copies/mL) in 2015 among Latinos aged 13 years and older diagnosed with HIV 2000–2014 who are **engaged in HIV care,** Florida

Country/region of birth	**N (%)**	**aOR (95% CI)**
US	500 (15.7)	Referent
PR	137 (16.0)	1.04 (0.84–1.29)
Cuba	224 (9.9)	0.72 (0.60–0.86)
Mexico	48 (10.7)	0.65 (0.47–0.89)
Central America	98 (11.8)	0.69 (0.55–0.88)
South America	108 (8.2)	0.57 (0.45–0.72)

Discussion

- Mexican and Central American born Latinos were more likely not to be virally suppressed compared to US born Latinos
- However, once engaged in care, Mexican and Central American born Latinos had a higher likelihood of viral suppression, beyond that of US born Latinos
- Cuban born Latinos were more likely to be virally suppressed regardless of whether engaged in care
- Length of time in United States among non-US born Latinos varies by country of birth

Limitations

- Latinos in dataset who do not have evidence of engagement in care may be getting care outside of the US
- Data on country of birth are self-reported or abstracted from medical records, possibly resulting in misclassification
- Lacking data on ethnic origin for US born Latinos
  - Possibly underestimating cultural ethnic differences
- Lacking data on number of years living in the US for foreign born Latinos
- Lacking data on individual SEP, health insurance, ART

Conclusions

- Disparities in viral load suppression among Latinos may be greatly reduced by focusing resources and effort to engage high-risk Latino subgroups in HIV care at least once per year
- Once engaged in care, Mexican born and Central American born Latinos have a higher likelihood of viral suppression, beyond that of US born Latinos
- Studies are needed to replicate the findings, and further explore disparities across Latino subgroups

Acknowledgements

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