

Challenges in HAND Diagnosis: Health Disparities & Social Determinants of Health – Experience in a Hispanic/Latina Women Cohort

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Nothing to disclose.

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Areas to discuss

Define health disparities and social determinants of health

Discuss the role of health disparities and social determinants of health in HAND

Share our experience in the Hispanic/Latino Longitudinal Cohort of Women

Suggest possible recommendations

Health Disparities - Definition

“**Health disparities** are differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups in the United States.” Oct 7, 2014
crchd.cancer.gov/about/defined.html

Health Disparities can be defined as inequalities that exist when members of certain population groups do not benefit from the same health status as other groups. - See more at:
<http://www.fccc.edu/prevention/hchd/what-is-hchd.html#sthash.kxKh5JtE.dpuf>

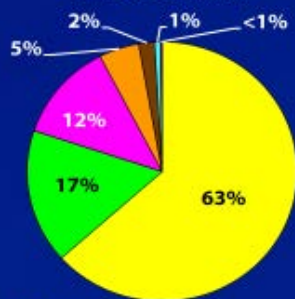
HIV Statistics by Race/Ethnicity and Gender

Diagnoses of HIV Infection and Population by Race/Ethnicity, 2012—United States

Diagnoses of HIV infection
N = 47,989



Population, United States
N = 313,914,040



■ American Indian/Alaska Native
■ Asian
■ Black/African American
■ Hispanic/Latino^a
■ Native Hawaiian/other Pacific Islander
■ White
■ Multiple races

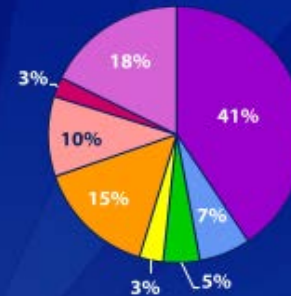
Note. Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data have been statistically adjusted to account for reporting delays, but not for incomplete reporting.

^a Hispanics/Latinos can be of any race.

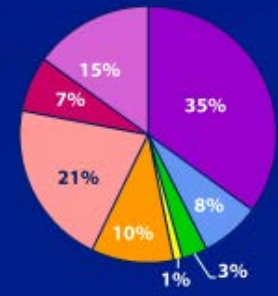


Diagnoses of HIV Infection among Adult and Adolescent Hispanics/Latinos^a, by Sex and Place of Birth 2012—United States and 6 Dependent Areas

Males
N = 9,168



Females
N = 1,526



■ United States
■ Central America
■ South America
■ Cuba
■ Mexico
■ Puerto Rico
■ Other
■ Unknown

Note. Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data have been statistically adjusted to account for reporting delays, but not for incomplete reporting.

^a Hispanics/Latinos can be of any race.



Health Disparities in HIV

Some populations continue to be disproportionately affected by HIV/AIDS

Some factors have been identified as contributors affecting an individual's ability to achieve good health

These groups may be characterized by:

1. Age
2. Gender
3. Geographic location
4. Race/ethnicity
5. Socio-economic status
6. Education
7. Sexual orientation



HAND Diagnosis¹

Is heavily based in the neuropsychological (NP) tests and functional performance

| Evaluation | Problems |
|--|--|
| NP performance varies according to culture, language, education, gender, and socioeconomic factors | In most of the cases we do not have the adequate NP tests for evaluation |
| Functional performance usually is performed by a self administered questionnaire | Most patients arrive alone for their evaluation. Therefore, it is difficult to assess reliability of information. Some standard tests are available but need validation. |

Challenges in the HAND Diagnosis in a Spanish Speaking Cohort of Women

SPANISH NP TESTS BATTERY

Design a neuropsychological battery to evaluate cognitive impairment

- Choosing the instruments
- Normalizing the data

Translate and validate a questionnaire

- HDS Spanish translation

ACCURATE FUNCTIONAL ASSESSMENT

There is limited scales validated in Spanish to test functional assessment

IADL are very gross and includes activities that many of our patients do not perform

Since the information is self-reported, there is lack of confirmation

HIV+ Women Cohort Recruitment & Inclusion/Exclusion Criteria



Recruitment - Women are recruited from primary HIV clinics

Inclusion criteria

HIV-seropositive women >18 years old

CD4 cell count or nadir ≤ 500 cells/mm³, or viral load $\geq 1,000$ copies/mL despite cART

No active drug abusers

Exclusion criteria

Hx of CNS OI, neurologic and/or neuropsychiatric disorders, and/or head trauma

Active systemic infection

Evaluation

Evaluated every 6 mo with questionnaires, macroneurological exam, and NP tests

Laboratory tests, toxicology, and spinal tap procedure

Cohort Characteristics

Hispanic Longitudinal
Women Cohort (2001-2014)

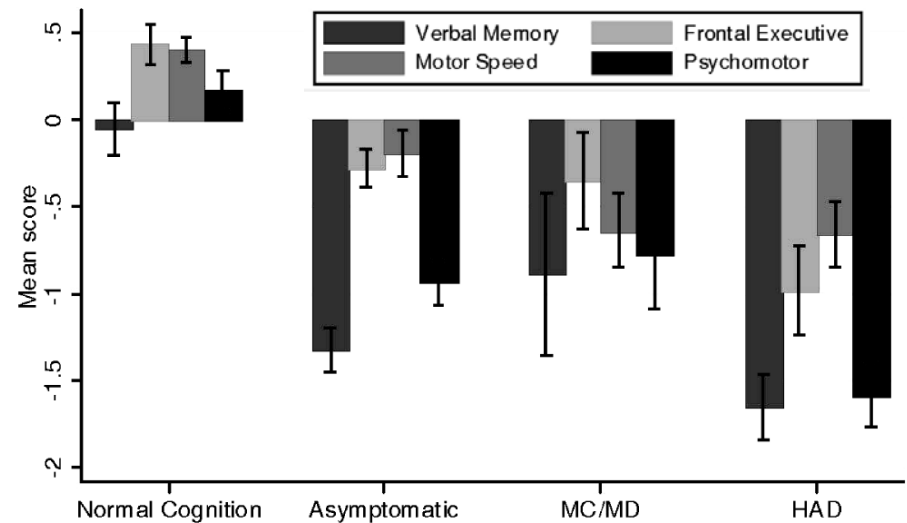
| | HIV+ | Controls |
|---------------------------|-------------|-----------------|
| Total Recruited | 183 | 103 |
| Discontinued by PI | 20 | 2 |
| Deaths | 6 | 0 |
| Pregnancy | 3 | 0 |

Hispanic Longitudinal
Women Cohort

| | HIV + | Controls |
|--|----------------------|-----------------|
| Mean Age Mean(SD) | 39.4(8) | 35(7) |
| Mode of Transmission <i>Heterosexual IVDA</i> | 76% 15% | |
| Nadir CD4 | 247.9 (165.7) | Normal |
| CD4 cell count | 427.9 (291.0) | |
| Treatment <i>HAART ART</i> | 79% 15% | |
| HCV Co-infection | 32/141(22%) | 0 |
| Toxicology | 16/142 | 0 |
| Log₁₀ Plasma HIV RNA | 2.75(1.1) | |
| Log₁₀ CSF HIV RNA | 1.93(0.5) | |
| TOTAL | 151 | 103 |

Cognitive Impairment is Common Among HIV+ Hispanic Women in PR

- 49 women with a nadir CD4+ count of $\leq 500/\text{mm}^3$ were assessed with standardized NP testing
- Cognitive impairment was present in 78%
 - ANI 33%, MND 16%, and HAD in 29%
- Cognitive impairment did not correlate with age, CD4 count, viral load, or treatment



Wojna et al, J Neurovirol. 2006 Oct;12(5):356-64

HAND is associated with

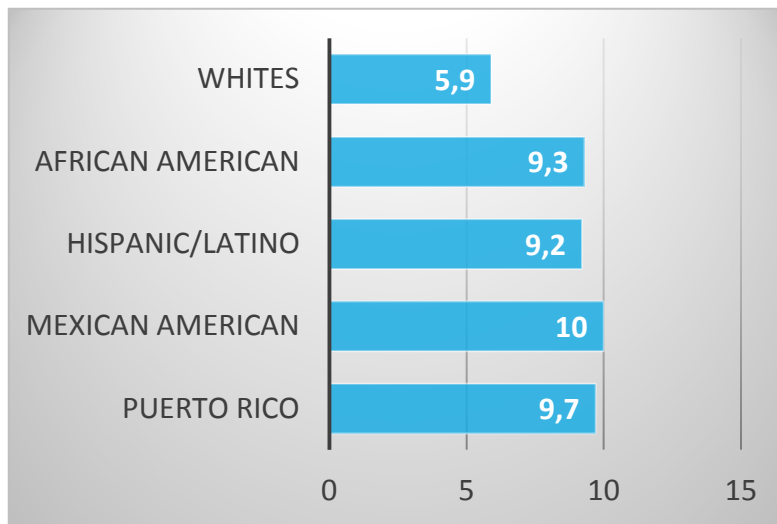
Lower nadir CD4, aging, drug abuse, co-infections (HCV, syphilis), and genetic factors

Age related co-morbidities

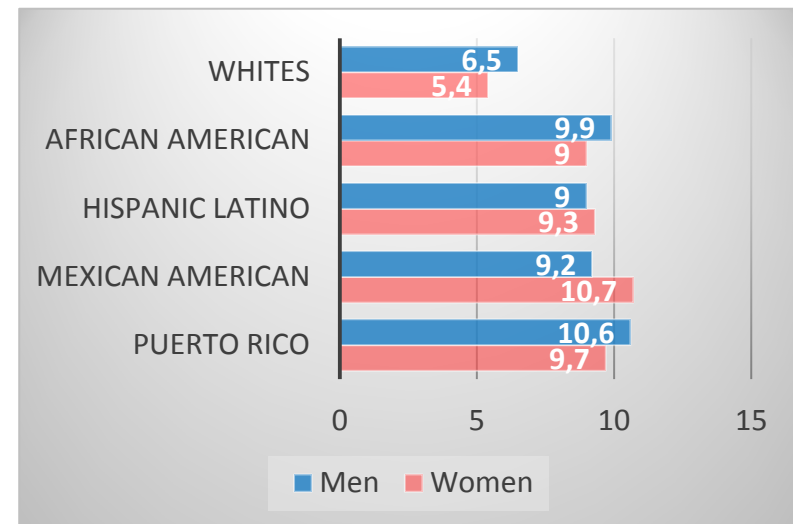
- Diabetes
- High blood pressure
- Dyslipidaemia

Diabetes by Race/Ethnicity and Gender

DIABETES BY RACE/ETHNICITY¹



DIABETES BY GENDER & RACE/ETHNICITY¹



¹age adjusted percentage, http://www.cdc.gov/diabetes/statistics/prevalence_national.htm

Extended Family



The extended family structure consists of two or more adults who are related, either by blood or marriage, living in the same home. This family includes many relatives living together and working toward common goals, such as raising the children and keeping up with the household duties. Many extended families include cousins, aunts or uncles and grandparents living together. This type of family structure may form due to financial difficulties or because older relatives are unable to care for themselves alone. Extended families are becoming increasingly common all over the world.

¡Ay Bendito!



Oh, Blessed!



Oh, Blessed! Is a phrase [Puerto Rican](#) , shorthand for "*Oh, God be praised!*". It is sometimes abbreviated further, as *Blessed!*, Or even "*Dito!*"

Specifically, the phrase *blessed Ay* (denoted) is defined by:

- An *expression* of sympathy, pity, empathy, grief or sadness over an adverse situation (and the man who suffers), or
- The *act* of feel such compassion, and / or aiding or assisting the suffering such a situation.

The "*blessed Ay*" (in the second context) has traditionally been regarded as a desirable and defining feature of Puerto Rican collective psyche. The phrase is commonly used by Puerto Ricans as an interjection, with a similar "*often órale!*" [in Mexico](#) , for example. A Puerto Rican is known in [Latin America](#) as "*The village of Ay Bendito*", and even popular Puerto Rican song, called "*Those are not from here*" written by [Rafael Hernández Marín](#) makes explicit reference to this fact, in the lines "*Those who say 'Ay, Blessed' / Those yes, those together.*"

However, within the context [sociology](#) of Puerto Rico, the **blessed Ay** is sometimes defined as a concern (sometimes unhealthy) for the suffering that motivates offering support to *sacrifice* provided that the sufferer improve its situation. Therefore, the expression can sometimes take a pejorative connotation if the act of helping the suffering occurs in detriment of the party offering it. This connotation may also be evident who helps is considered a bossy or intrusive, or when the "suffered" really is not unreasonable and takes advantage of the help that is offered. (In this context, a pejorative term commonly used in Puerto Rico is: "*Oh, Blessed' is the cousin of 'Fuck you'*").

The expression is sometimes spelled incorrectly as "*no blessed*" (due to misuse of the [homophone](#) "no"). to have it more clear: there blessed is as poor or 'blessed be God' according to the situation in which the word is spoken

Social Determinants of Health

Are factors in the social environment that contribute to or detract from the health of individuals and communities

Increases the burden of disease through their influence in health promoting behaviors

Examples:

1. Socio-economic status
2. Transportation
3. Housing
4. Access to service
 - Health insurance
5. Discrimination by social grouping
 - Race, gender, class
6. Social or environment stressors
7. Health literacy

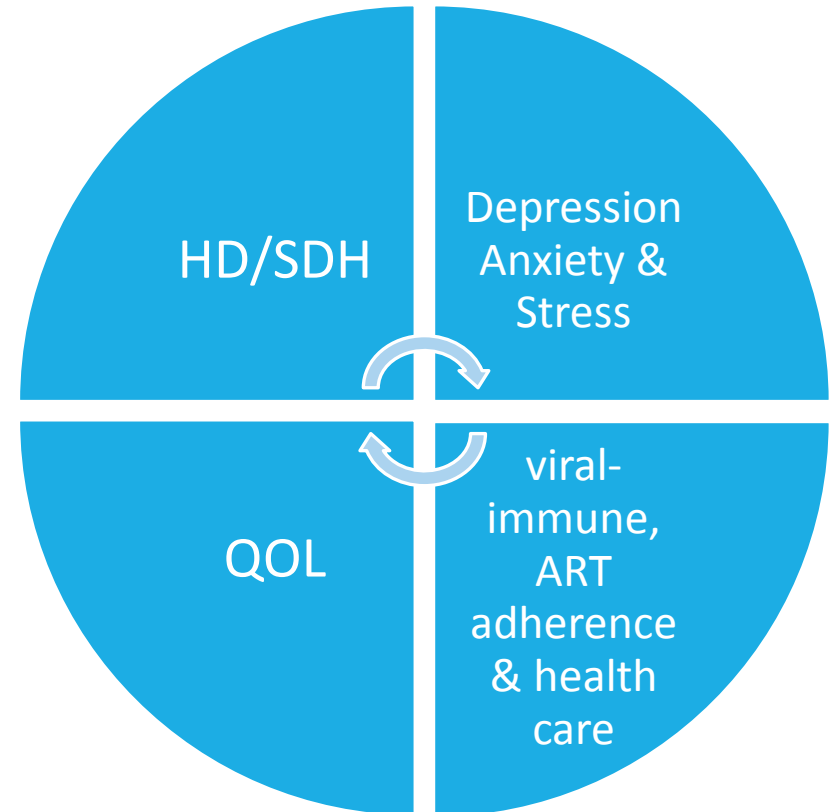
Summary

When evaluating HAND in our Cohort we need:

- Adequate evaluation tools for the diagnosis
- Sensitive to cultural and social environments
- Identify co-morbidities related to our population

Need to assess social determinants affecting HAND

- Accessibility & adherence to cART
- Health literacy
- Stigma
- Poverty



Recommendations

Develop and validate adequate evaluations for the diagnosis of HAND

Improve health literacy

Work in decreasing/eliminating stigma

Early identification of patients at risk for HAND for proper evaluation and treatment¹

Join efforts to create large longitudinal cohort

- Characterize HAND in our populations
- Evaluate inequities and disparities
- Create a database and samples repository for future studies

*Acknowledge our HIV-seropositive
Women in our Cohort*

*Thank you!
¡Gracias!*

