How Income Levels Affect Health Outcomes in the Hispanic Population in Florida

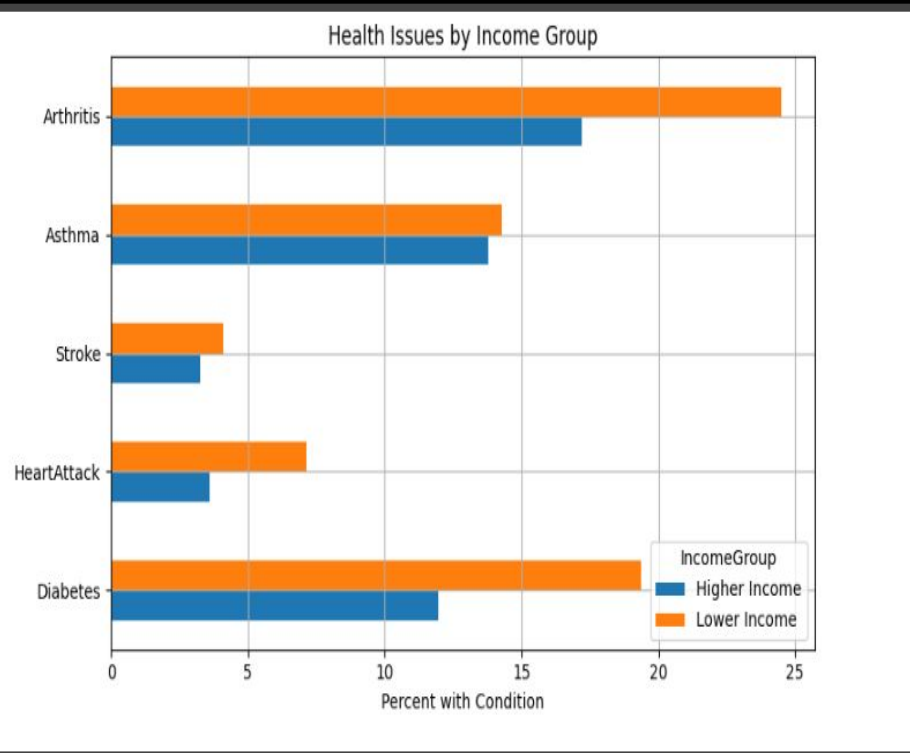By: Jocelyn Moran, Jacob Papesch, & Alex Moller

Why This Topic Matters

- Health disparities affect minority groups, especially those with lower income.

- Florida's Hispanic population is diverse, with wide income gaps.

- Income impacts access to care, insurance, and health outcomes.

- Studying this helps address healthcare gaps in this community.

Research Questions & Methodology

- What are the most common health issues in lower-income Hispanic individuals, and how do they compare with higher-income groups?-Jocelyn Moran

- How does income level correlate with access to healthcare services among the Hispanic population in Florida? - Alex Moller

- Does income predict the likelihood of having health insurance in the Hispanic community?- Jacob Papesch

- Dataset: 2023 BRFSS(**Behavioral Risk Factor Surveillance System**), filtered for Florida's Hispanic population from CDC

- Tools: Descriptive statistics, correlation, regression, hypothesis testing

- Software: Python, pandas, seaborn, scipy

What are the Most Common Health Issues?

Health Issues by Income Group

How do they compare with higher-income groups?

- Diabetes and arthritis are significantly more common in lower-income Hispanic individuals

- Heart attacks, strokes, and asthma show small differences, but not statistically significant

- Lower-income individuals often face more limited access to healthcare and insurance

Analysis

- This suggests that income level plays a role in physical health outcomes, especially for chronic conditions like diabetes and arthritis.

Chi square test to see if differences Statistically Significant

Significant results:
- Diabetes (p = 0.0138)
- Arthritis (p = 0.034)

Not Significant results:
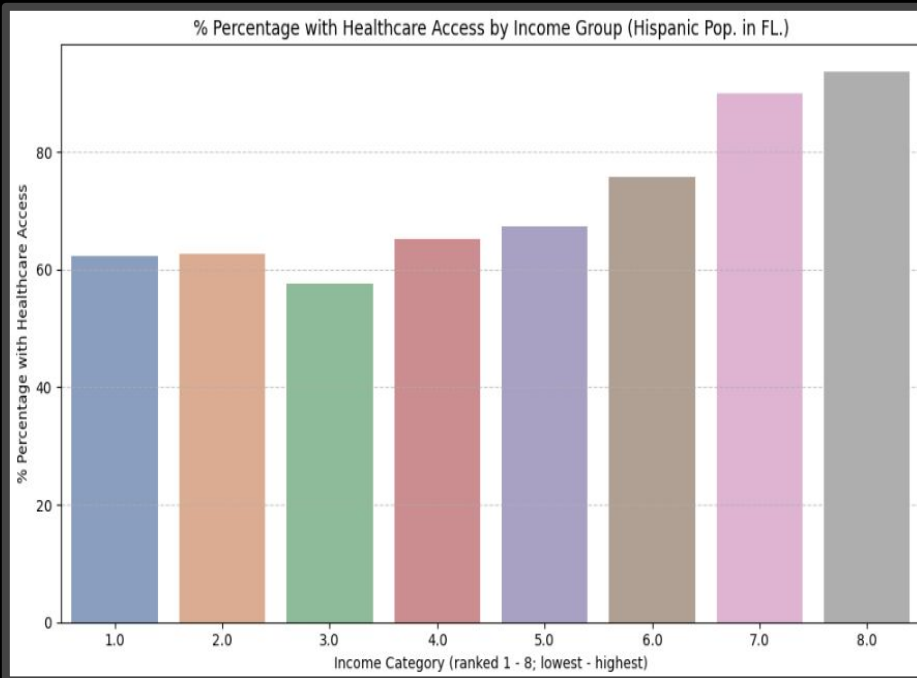- Heart Attack (p = 0.067)
- Stroke (p = 0.755)
- Asthma (p = 0.952)

What It Means
- P value tests for diabetes and arthritis show statistically significant results (0.013 and 0.034 < 0.05)

Are These Differences Real or Due to Chance?

How does income level correlate with access to healthcare services among the Hispanic population in Florida?

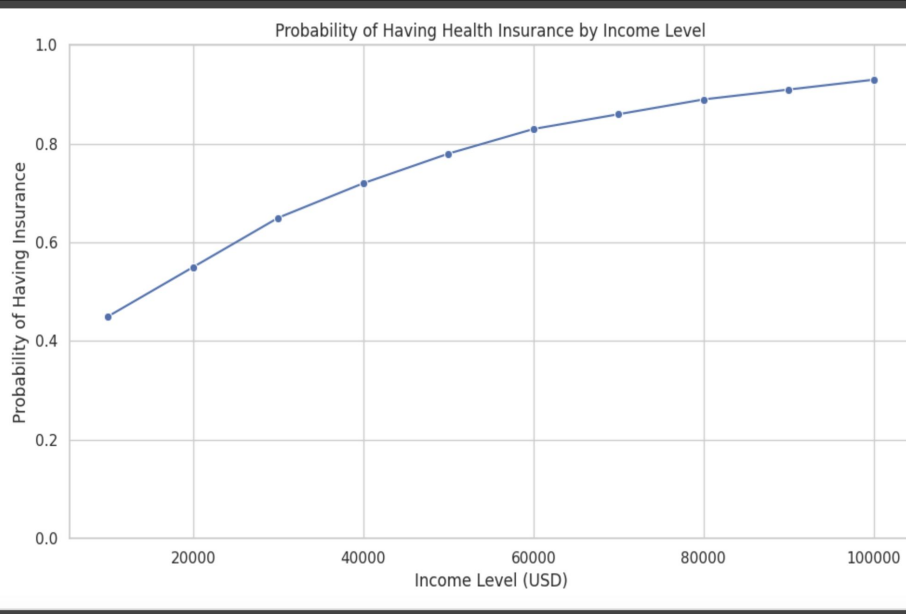% Percentage with Healthcare Access by Income Group (Hispanic Pop. in FL.)

How does the variability in healthcare access differ between low-income and high-income Hispanic communities in Florida

- Higher-income (6-8): Consistent healthcare access
- Lower-income (1-3): Lower percentage of healthcare access
- Between the groups (5-6) show an significant economic difference where the graph starts to show a trend in the data, increasing.

Analysis

- The visualization presents data that corresponds with higher income groups with a greater % of healthcare access
- Groups (1-5) do not show any significant difference in coverage
- Since the P value is 0.00 < 0.05, the values are statistically significant

Does income predict the likelihood of having health insurance in the Hispanic community?

How do they compare with higher-income groups?

- Based on the data, higher income households have up to about a 93% probability of having health insurance
- There is a probability disparity of probability of about 50% between the highest and lowest recorded income levels.

Analysis

- There is a consistent positive correlation in income and probability of having health insurance
- The most dramatic probability increase happens in income values up to 60 thousand
- The probability difference at income values of 60 thousands and above, while still a positive correlation, being to plateau

Conclusion

Summary of Findings:

- Lower-income groups have less access to healthcare and insurance

- Higher rates of chronic illnesses like diabetes and arthritis

- Income level strongly affects health outcomes in Florida's Hispanic community
Recommendations:
- Expand affordable and comprehensive health insurance

- Increase preventive care access in low-income communities

- Invest in affordable housing so families can prioritize health needs

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References

Behavioral Risk Factor Surveillance System. (2023). Annual survey data 2023. Centers for
  Disease Control and Prevention. https://www.cdc.gov/brfss/annual_data/annual_2023.html

County Health Rankings & Roadmaps. (2025). Florida health data: Uninsured population. University of
  Wisconsin Population Health Institute.
  https://www.countyhealthrankings.org/health-data/florida?year=2025&measure=Uninsured&tab1

Florida Department of Health. (n.d.). Health indicators dashboard. Florida Health Charts.
  https://www.flhealthcharts.gov/ChartsDashboards/rdPage.aspx?rdReport=NonVitalInd.Datavieer&cid=294

Kaiser Family Foundation. (n.d.). Poverty rate by race/ethnicity: Florida.
  https://www.kff.org/other/state-indicator/poverty-rate-by-raceethnicity/?activeTab=graph&currn
  Timeframe=0&startTimeframe=9&selectedDistributions=hispanic&selectedRows=%7B%22states%22:%7B%22florida%22:%7B%
  7D%7D%7D&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D

LinkedIn. (n.d.). Healthcare disparity illustration [Image]. LinkedIn.
  https://media.licdn.com/dms/image/v2/C5612AQHozjsuJCqTHQ/article-cover_image-shrink_720_1280/article-cover_image-shrink
  720_1280/0/1525967511289?e=2147483647&v=beta&t=y0iRLswe4V7SWcSTsY6sBd1sZSb6NeU3KUppeHkgfLU

Neilsberg. (n.d.). Florida median household income by race. https://www.neilsberg.com/insights/florida-median-household-income-by-race/

References

Northwestern Medicine. (n.d.). Common Hispanic health issues. https://www.nm.org/healthbeat/healthy-tips/common-hispanic-health-issues

Pew Research Center. (2022, June 14). Hispanic Americans' experiences with health care.
https://www.pewresearch.org/science/2022/06/14/hispanic-americans-experiences-with-health-care/

Russo, S. (2024, February 26). Florida demographics: Cities with most, least Latino population according to U.S. Census. Palm Beach Post.
https://www.palmbeachpost.com/story/news/2024/02/26/florida-demographics-latino-population-most-least-ethnically-diverse-citie
us-hialeah-miami/72701571007/

SHADAC. (n.d.). Health insurance coverage type by family income: Florida. State Health Compare.
https://statehealthcompare.shadac.org/table/16/health-insurance-coverage-type-by-family-income#11/5,4,1,10,86,9,8,6,26,27,28,29/
2/31,32

TechTarget. (n.d.). Telehealth access [Image]. TechTarget. https://www.techtarget.com/rms/xt/features/telehealth-access.jpg

U.S. Census Bureau. (n.d.). Florida profile. https://data.census.gov/profile/Florida?g=040XX00US12

University of Central Florida College of Medicine. (n.d.). Making a difference in Hispanic healthcare disparities.
https://med.ucf.edu/news/making-a-difference-in-hispanic-healthcare-disparities/