COMPOUNDING POVERTY AND HOUSING STRESS IN MILWAUKEE COUNTY

An Intersectional Analysis Using Census Microdata

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Contents

Project Purpose

Nonprofit service providers and county agencies are increasingly asked to demonstrate that programs funded through **state and federal grants** are reaching populations with the greatest need. While publicly available Census tables provide useful high-level indicators, they often obscure how **multiple risk factors overlap** at the household and individual level.

This project demonstrates how **Census microdata** can be used to support **equity-focused planning, grant justification, and program targeting** by identifying populations experiencing *compounding disadvantage* in Milwaukee County.

Key Question

Which populations in Milwaukee County experience the highest levels of poverty and housing cost burden when race, disability, and nativity are considered together?

Why Microdata Was Used

Most equity analyses rely on pre-tabulated American Community Survey (ACS) tables. While appropriate for many uses, tables are limited to **one or two characteristics at a time**.

This analysis uses the **ACS Public Use Microdata Sample (PUMS)**, which allows individual and household characteristics to be analyzed simultaneously. This makes it possible to examine intersections such as:

- Disabled renters
- Foreign-born households of color
- Groups near eligibility thresholds for assistance programs

Microdata enables analysis that aligns more closely with how real households experience economic stress — and how programs are administered on the ground.

Geographic Methodology (Milwaukee County)

Public Use Microdata Areas (PUMAs)

To protect privacy, Census microdata is released at the **Public Use Microdata Area (PUMA)** level rather than at county or neighborhood scales. PUMAs are Census-defined areas containing approximately 100,000 or more residents.

Milwaukee County intersects multiple PUMAs rather than aligning with a single unit.

County-Level Estimation

To produce Milwaukee County–specific estimates, this project applies **official geographic allocation factors** from the Missouri Census Data Center (Geocorr). These factors identify the share of each PUMA's population that falls within Milwaukee County.

Survey weights were adjusted accordingly to generate **county-level estimates** suitable for planning and equity analysis.

Results should be interpreted as statistically robust estimates that identify patterns and disparities, rather than exact administrative counts.

Analytical Approach

Population Groups

Individuals and households were categorized using an **intersectional framework** based on:

- Race and ethnicity
- Disability status
- Nativity (U.S.-born vs. foreign-born)

This approach reflects how eligibility, service access, and vulnerability often compound across characteristics.

Outcomes Examined

- **Poverty status** (based on Census poverty thresholds)
- **Housing cost burden**, defined as:
    - Spending **30% or more** of household income on rent
    - Spending **50% or more** of household income on rent (severe burden)

Housing cost burden was calculated correctly using **annual income and annualized housing costs**, consistent with HUD and Census guidance.

Key Findings (Summary)

- **Disability status is a strong driver of both poverty and housing cost burden**, particularly when combined with race and ethnicity.
- **Black and Hispanic/Latino residents with disabilities** experience substantially higher poverty rates than other groups.
- **Disabled renter households** show the highest rates of severe housing cost burden, indicating heightened risk of housing instability.
- Intersectional analysis reveals disparities that are **not visible in single-characteristic summaries**, underscoring the importance of using microdata for equity planning.

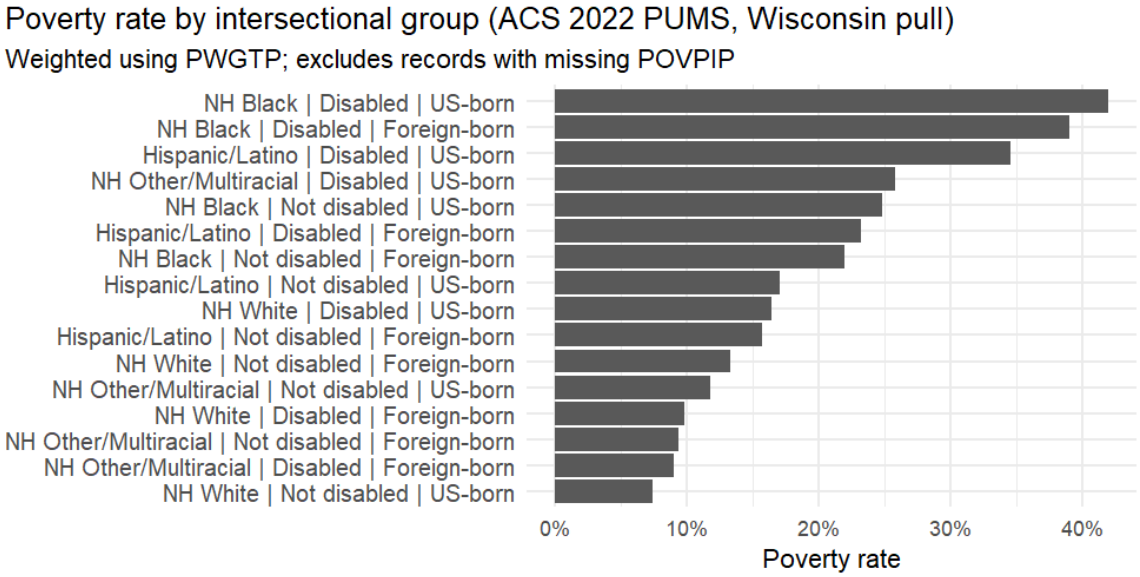
(See figures and tables for detailed results.)

Detailed Findings

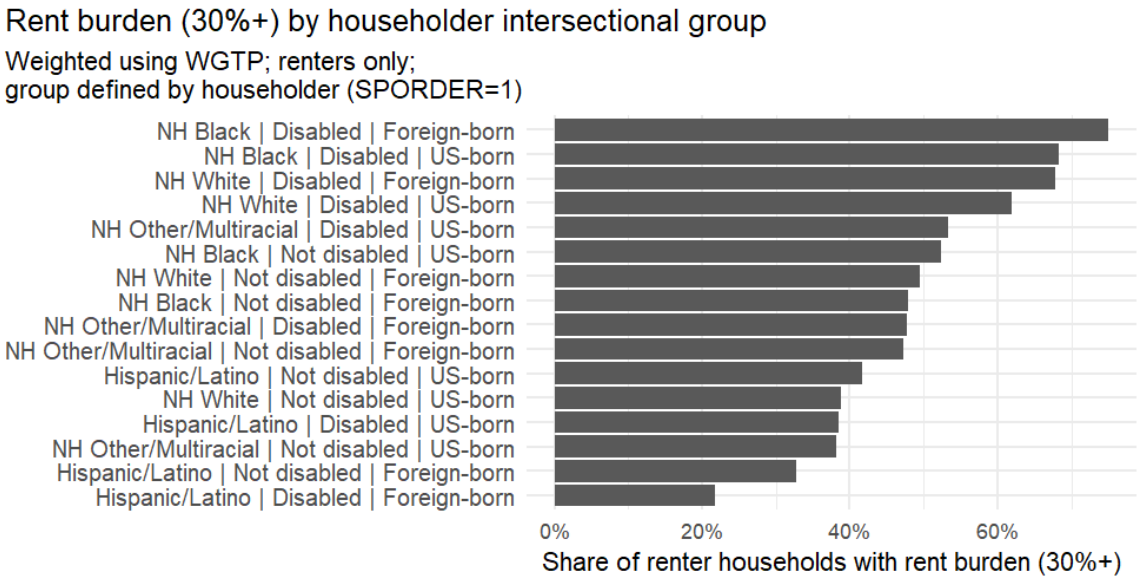
- **Disability status is the strongest and most consistent driver of economic vulnerability.** Across all racial and nativity groups, individuals and households that include a person with a disability experience substantially higher rates of poverty and housing cost burden than their non-disabled counterparts.
- **Race and ethnicity compound poverty risk when combined with disability.** Poverty rates are highest among **Black and Hispanic/Latino residents with disabilities**, indicating that single-characteristic analyses understate the depth of disadvantage faced by these populations.
- **Housing cost burden is widespread among renter households and most severe among disabled householders.** A majority of renter households headed by individuals with disabilities experience housing cost burdens exceeding 30 percent of income, with a significant share facing severe burden (50 percent or more).
- **Intersectional analysis reveals disparities not visible in standard Census tables.** Groups that appear similar in aggregate poverty or rent burden statistics diverge sharply once race, disability, and nativity are considered together, underscoring the importance of microdata-based analysis for equity planning.
- **These patterns have direct implications for program targeting and administration.** State-funded, county-administered programs and nonprofit service providers may unintentionally under-serve populations experiencing the greatest compounded risk if eligibility and outreach strategies rely solely on single-factor indicators.

Overall, the findings suggest that **disability-inclusive, equity-focused approaches** are critical for addressing poverty and housing instability in Milwaukee County. Analyses that consider overlapping characteristics provide a more accurate foundation for program design, funding decisions, and accountability.

Poverty Rate by Intersectional Group



Rent Burden by Intersectional Group (30%+)



Why This Matters for Counties and Non-profits

This analysis demonstrates how microdata can support:

- **Targeted program design**
  Identifying which populations face the greatest compounded risk helps align services with actual need.
- **Grant applications and reporting**
  Results provide defensible, transparent evidence to support funding requests and demonstrate equity impact.
- **Intergovernmental coordination**
  State-funded programs administered at the county level benefit from analyses that reflect local conditions while maintaining methodological rigor.
- **Equity-centered decision-making**
  Moving beyond averages helps prevent under-serving populations that fall through traditional analytic categories.

Limitations

- **This analysis does not produce exact counts of individuals or households.**
  Results are based on survey microdata and are presented as statistically robust estimates intended to identify patterns and disparities, not to serve as administrative totals.
- **This analysis does not provide neighborhood- or tract-level results.**
  To protect privacy, Census microdata is released at broader geographic levels. The findings are appropriate for county-level planning and program design, but not for block-level targeting.
- **This analysis does not imply causation.**
  Observed disparities reflect associations between characteristics such as race, disability, nativity, poverty, and housing cost burden. The analysis does not attribute outcomes to specific policies or programs.
- **This analysis does not replace administrative or program data.**
  Census microdata complements, rather than substitutes for, administrative datasets. The findings are best used to inform strategy, outreach, and resource allocation in combination with local program data.
- **This analysis does not suggest that all members of a group experience the same outcomes.**
  Intersectional categories highlight aggregate patterns, not uniform experiences. Individual circumstances vary within each group.
- **These findings are intended to support equity-focused planning and decision-making**, not to function as compliance metrics or performance evaluations.

How This Analysis Should Be Used

To inform equity-focused planning and prioritization.
The analysis is well suited for identifying populations experiencing compounded economic and housing vulnerability and for guiding decisions about where additional attention, resources, or outreach may be warranted.

To support grant applications and funding narratives.
Results provide defensible, transparent evidence that can be used to justify program need, demonstrate equity considerations, and strengthen applications for state and federal funding administered at the county level.

To complement administrative and program data.
Census microdata offers a broader contextual view that can help interpret trends observed in local administrative datasets, particularly where program participation data alone may not capture unmet need.

To guide program design and outreach strategies.
Understanding how race, disability, and nativity intersect can inform service delivery models, accessibility considerations, and communication strategies tailored to populations at higher risk.

To establish baseline conditions for future evaluation.
The findings can serve as a benchmark for tracking changes over time or for assessing how program investments align with identified patterns of need.

Tools and Data Sources

Data Sources

This analysis is based on the following publicly available data sources:

- **American Community Survey (ACS) 2022 Public Use Microdata Sample (PUMS)**
  U.S. Census Bureau. The PUMS dataset provides anonymized person- and household-level records that enable analysis of overlapping demographic, economic, and housing characteristics.
- **Geographic Correspondence Data (PUMA to County)**
  Missouri Census Data Center (Geocorr 2022). Official geographic allocation factors were used to estimate Milwaukee County–specific results from PUMA-level microdata.

All data sources are publicly available and widely used in demographic, housing, and equity research.

Analytical Tools

The analysis was conducted using **open-source statistical and data visualization tools**, including:

- **R** — for data processing, statistical analysis, and visualization
- **tidycensus** — for accessing Census Bureau microdata through the Census API
- **tidyverse** — for data cleaning, transformation, and analysis
- **ggplot2** — for creating publication-ready charts
- **here** — for reproducible file path management

All analysis steps — including data acquisition, cleaning, weighting, and visualization — were completed using open-source tools. This report was prepared using American Community Survey Public Use Microdata (PUMS) and official Census geographic allocation methods.

The full analytic pipeline and automation scripts are maintained privately as part of a consulting workflow and can be reviewed in a scoped engagement if needed.