

Bridging Representation Gaps: Community-Driven and Probability Sampling Approaches in the UACC Catchment Area



THE UNIVERSITY OF ARIZONA
Cancer Center
 Community Outreach & Engagement

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CASA
 Community Assessment of
 Southern Arizona

BACKGROUND

- Population health assessments offer insight into underserved communities across catchment areas.
- Recruitment strategies influence participation and observed patterns.
- Comparing probability-based and community-driven sampling informs interpretation of cancer-related behaviors.

PURPOSE

Compare how two recruitment strategies shape observed cancer prevention patterns

METHODS/APPROACH

Dual Recruitment and Analytic Workflow

1 Dual Recruitment

Probability Sample

- Mailed Survey Invitations
- Unique Access Codes

Convenience Sample

- Community Health Workers
- Trusted Networks
- Community Events
- Bilingual Outreach

2 Survey Weighting

- Survey-Weighted Analyses
- Accounts for Sampling Design

3 Statistical Analysis

- Chi-Square Tests (Categorical Variables)
- Two-Proportion Z-Tests (Screening & Behavioral Outcomes)

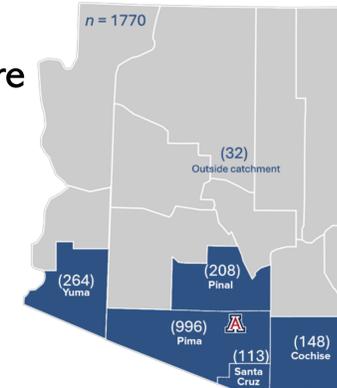
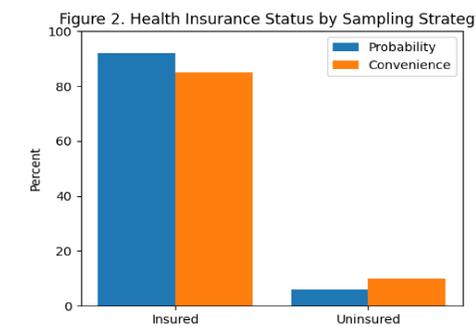
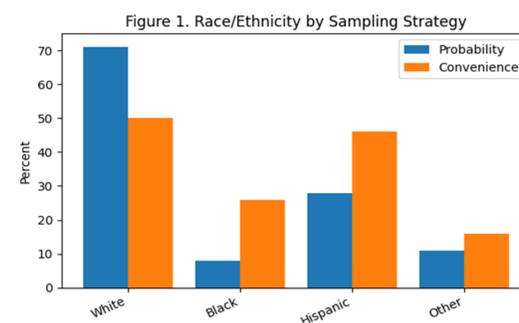
Participants were recruited through probability-based mailed surveys and CHW-led community convenience sampling.

Participants were recruited through probability-based mailed surveys and CHW-led community convenience sampling; analyses accounted for sampling design.

RESULTS

Sampling strategy strongly influenced who was reached.

The convenience sample was younger, more racially and ethnically diverse, more likely to be employed, and less likely to be insured (all $p < 0.05$; Figures 1–2).



Screening rates were selective, with lower colon and skin screening and higher lung screening in the convenience sample, while breast and cervical screening were similar (Figure 3). Other screening behaviors and risk factors showed minimal differences (Table 1).

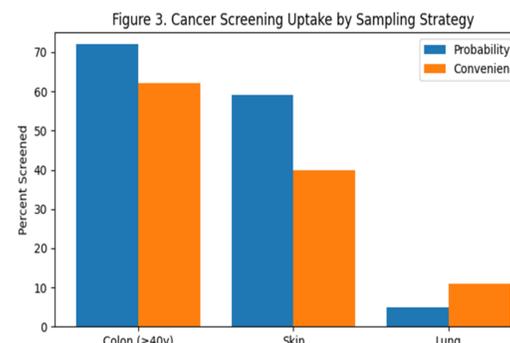


Table 1. Variables With No Significant Differences by Sampling Strategy

Domain	Variables (All $p \geq 0.05$)
Socioeconomic	Household income; income stability
Health status	BMI category
Cancer screening	Cervical screening; breast screening; HPV vaccination
Health behaviors	Smoking status
Cancer risk beliefs	Alcohol use; overweight as cancer risk factors

Footnote: All estimates survey-weighted; age- and sex-eligible subpopulations applied.

KEY TAKEAWAYS

Recruitment context influences observed disparities, which may be selective rather than global

Sampling strategy shapes who are represented and which cancer prevention patterns are observed

Cancer prevention data must be interpreted within recruitment context

Equity-focused cancer control planning depends on understanding who was reached

FUTURE DIRECTIONS

- Examine how access barriers interact with recruitment context
- Use mixed recruitment approaches to inform equity-focused cancer control planning

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