



Community Health Assessment Using Modified CASPER Approach in Travis County (2017)

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Learning Objectives

1. Describe how modified CASPER approach can be used in urban vs. rural geographic areas
2. Describe how a modified CASPER has been used in a non-disaster setting
3. Identify the resources, training, and partnerships needed to increase readiness and institutionalize CASPER as part of the Community Health Assessment/Community Health Improvement Plan (CHA/CHIP) process

Community Health Assessment CASPER Goals

1. To describe household perceptions of health needs and strengths in Travis County
2. To describe household perceptions of quality of life in Travis County
3. To evaluate access and barriers to healthcare, access to healthy food, and transportation options
4. To describe basic household preparedness planning

Why use and modify CASPER?

- Interest in assessing household perceptions of health in city and county geographical areas
 - Austin Public Health provides public health services to city and county
 - Community Health Assessment (CHA) included city and county
- APH Leadership and CHA Steering Committee sought representation from county geographical areas
- County blocks not within City Limits are rural, lower number of households per census block
- Probability proportional to size sampling methodology less likely to select clusters in county/rural geographic areas
- Decision: stratify and over-sample rural area Travis County
 - 10 clusters in County and 20 clusters in City

Questionnaire Development and Implementation

- Utilized Community Health Assessment (CHA) Steering Committee to guide question development and survey design
- Researched CHA CASPERs conducted by other health departments for survey development and question selection/wording
- Multiple entities (community health organizations, other City of Austin departments, and Austin Public Health staff) contributed to the topic areas and questions
- 2-page questionnaire developed
- Use of department knowledge from past CASPER experiences to implement this CASPER:
 - Zika CASPER 2016 – Assess mosquito knowledge and prevention measures, household preparedness
 - Flood Response 2013 – Assess household needs post-flood disaster

Sampling Frame

Modified traditional 30x7 CASPER to oversample county (rural) areas and to fit the needs of the CHA

Used multistage stratified cluster sampling:

- First stage: stratified our sampling frame into City of Austin (urban) and Travis County (rural) areas based on 2010 US Census data
 - 344,049 City of Austin and 77,296 Travis County housing units
 - City of Austin blocks were defined as census blocks within the City of Austin boundary
 - The remaining blocks were assigned to Travis County blocks
 - Census blocks that crossed the City of Austin boundary were assigned to the area based upon the centroid of each census block

Map of Centroid in Travis County

Census blocks that crossed the City of Austin boundary were assigned to the area based upon the centroid of each census block. For example, if a census block centroid fell outside of the City of Austin boundary, it was considered a Travis County block in our sampling frame.



Second Stage: Cluster Selection

Using ArcGIS CASPER tool:
20 clusters in City of Austin
10 clusters in Travis County

26 clusters selected overall

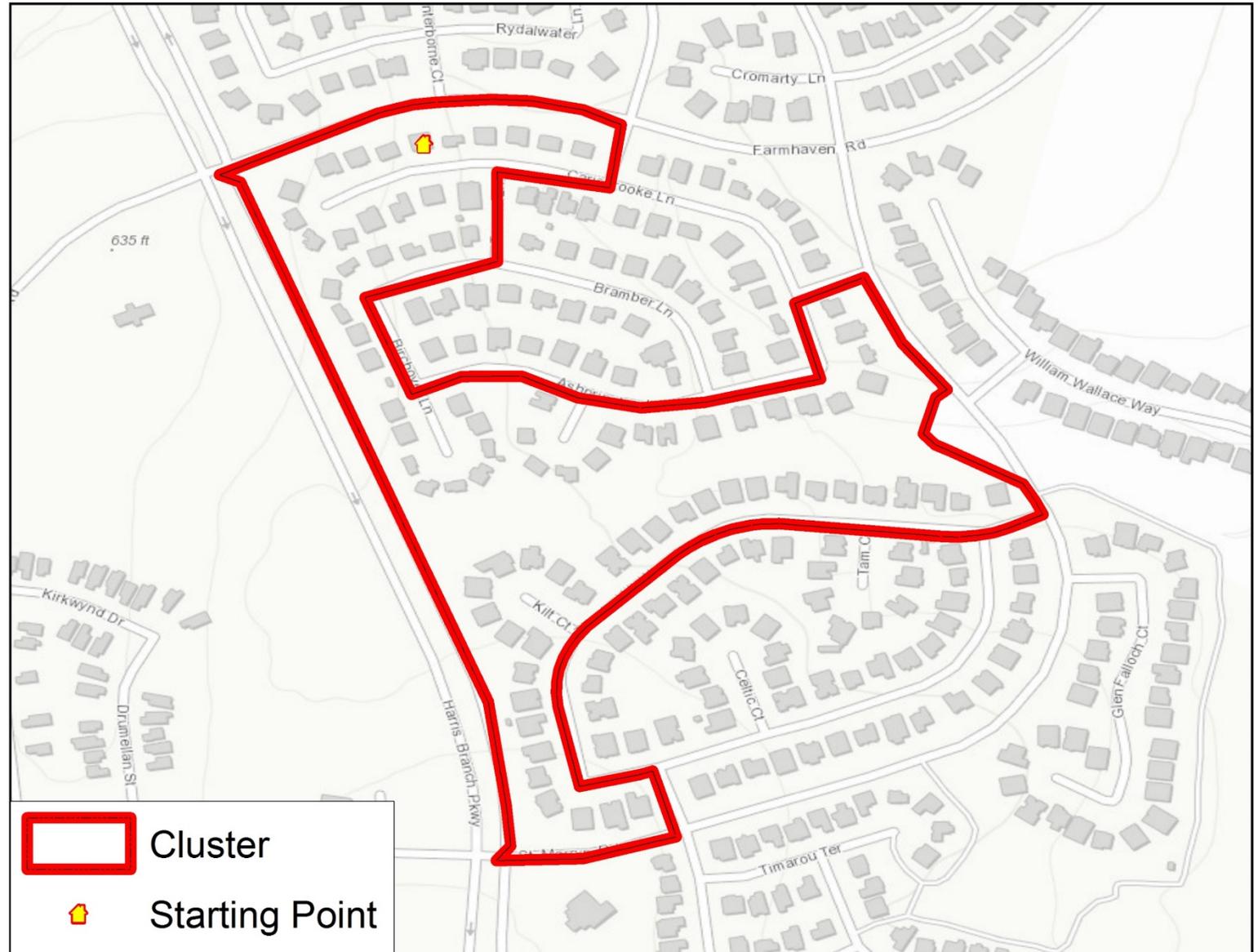
(2 clusters in Travis County
and 2 clusters in City of
Austin were selected twice)

Third Stage: Randomly Select 7 Households

Predetermined random starting point and go to every n^{th} house

7 households from each of the 22 clusters and 14 households from 4 clusters that were selected twice

Goal: 210 household interviews



Implementation

- April 7-8, 2017
- Just-in-time training provided on Day 1
- 15 interview teams with 2-3 members
- Data entry and analysis completed in EpiInfo
- In a 2-day period, interview teams:
 - Visited 743 households
 - Completed 168 interviews (210 goal)
 - 108 interviews in City
 - 60 interviews in County
 - 80% completion rate



Recommendations from Findings

- Austin/Travis County is a healthy place to live
- Continue efforts to maintain and improve access to health care, places for physical activity, and affordable housing that are perceived to contribute to quality of life of Travis County residents
- Explore opportunities to improve transportation options, address traffic problems and barriers to health care, and improve household preparedness
- Encourage households to have an emergency supply kit in their home
- Encourage households to have a working smoke detector in every bedroom

Limitations

- Used 2010 US Census data to estimate the number of housing units in each cluster
- Weighted projections took into account 2010 US Census data
- Minimum response rate (80%) achieved for generalizability
- Selection bias due to inaccessible housing units and interview refusals
- Low contact rate (22%) indicates field teams had to attempt interviews at many homes

Lessons Learned

- Good partnerships with community stakeholders and local universities enabled us to carry out this endeavor
 - Sampling frame
 - Survey development
 - Implementation
- More robust training on reading cluster maps and sampling every n^{th} household
 - Interview teams were confused when arriving in the field
- Established use of CASPER as a data source for the CHA/CHIP process and its use in non-disaster setting
- Working towards institutionalizing CASPER as part of the CHA process in the future
- 10% of workforce at APH is trained/experienced in CASPER methods

