California Healthography through a web-based dissemination tool

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UCLA Center for Health Policy Research
Presenter disclosure

- David Grant

- The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

  No relationships to disclose
AskCHIS Neighborhood Edition Launch

Today’s presentation

- Introduction, Concept, and Implementation
- The Science: Small Area Estimation
- Putting it all together: A live demonstration of AskCHIS Neighborhood Edition
AskCHIS NE: sponsorship

- Funded by
  - Kaiser Permanente
- The California Wellness Foundation
- With support from
  - The California Endowment (supporting CHIS dissemination)
  - The California HealthCare Foundation (supporting AskCHIS Neighborhood Edition community trainings)
What is AskCHIS Neighborhood Edition?

- A new health information dissemination tool
- Powered by data from the California Health Interview Survey (CHIS) and other sources (ACS)
- Provides health estimates at multiple, granular levels of geography including zip codes, cities, and legislative districts
- Includes powerful visualization tools
AskCHIS NE

- Part of the UCLA Center for Health Policy Research’s dissemination strategy—democratizing access to health data and information

- AskCHIS Neighborhood Edition complements:
  - Publications—fact sheets, policy briefs, and reports
  - Public use files (PUFs)—statewide microdata files
  - Health profiles—county level PDFs of key health indicators
  - AskCHIS query system—custom queries at the county level
    - More than 40K registered users
    - Nearly 1M queries
AskCHIS NE: implementation

- Fall 2012—Concept shopped to several organizations
- Funding provided by Kaiser Permanente and The California Wellness Foundation
- Project kickoff in June 2013
- Beta system testing began in March 2014
- Public launch November 12, 2014
AskCHIS NE: borrowing strength

- Estimates based on a statistical technique called small area estimation (SAE)
- Do not rely on survey data confined to a specific area
- “Borrowing strength”:
  - Cross-sectionally—from respondents or areas with similar characteristics
  - With Auxiliary data—population data, contextual data from other sources
  - Spatially from larger and neighboring areas
  - Temporally from past CHIS cycles
AskCHIS NE: Producing SAEs

- Semi-parametric generalized linear mixed model
- Models built using survey data (CHIS) and contextual data (ACS) for each specific health indicator
- Model coefficients applied to population data to obtain predicted value for everyone in the indicator universe
- Predicted values summarized to target areas
- Variance of the estimates generated through replication
- Quality check, calibration and validation
AskCHIS NE: how does it work?

- SAEs based on modeled CHIS data
  - 13 health topics, with 22 separate health related indicators (CHIS)
  - 9 demographic topics, with 30 separate indicators (ACS)

- SAEs were generated in California for every:
  - Zip code (ZCTA)
  - City
  - Legislative district
    - State Assembly
    - State Senate
    - US Congressional
AskCHIS NE: how does it work?

- Displays estimates, confidence intervals, and populations for geographic units with an indicator universe of 15,000 or greater
  - Smaller areas can be combined or “pooled”
- An easy to use web-based interface allows the user to select health indicators (unlimited), select geography (up to 5), and display the results:
  - Table
  - Choropleth map
  - Bar chart
  - Histogram
AskCHIS NE: compatibility

- Internet Explorer 9+
- Most recent versions of Google Chrome, Safari, and Mozilla Firefox

More information and in-depth live demo of AskCHIS NE
Booth # 1043 – UCLA Center for Health Policy Research
Tomorrow (Wed) morning at 9am
AskCHIS Neighborhood Edition is an online data dissemination and visualization platform that provides health estimates at sub-county geographic regions. With AskCHIS NE, you can access and visualize authoritative health data at zip code, city, county, and legislative district levels.

Health estimates are powered by data from the California Health Interview Survey (CHIS) and are created through a sophisticated modeling technique called small area estimation (SAE). For more information about the methodology behind our data, click here.
AskCHIS Neighborhood Edition is an online data dissemination and visualization platform that provides health estimates at sub-county geographic regions. With AskCHIS NE, you can access and visualize authoritative health data at zip code, city, county, and legislative district levels.

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### Ever diagnosed with diabetes (18+)

Adult respondents ages 18+ who were ever diagnosed with diabetes by a doctor.

<table>
<thead>
<tr>
<th>Health Condition</th>
<th>California</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair or poor health (18-64)</td>
<td>17.9% (17.2% - 18.6%), 23,392,900</td>
</tr>
<tr>
<td>Ever diagnosed with heart disease (18+)</td>
<td>6.3% (6.0% - 6.7%), 27,796,500</td>
</tr>
<tr>
<td>Obese (BMI ≥ 30) (18+)</td>
<td>24.8% (24.1% - 25.5%), 27,796,500</td>
</tr>
<tr>
<td>Walked at least 150 minutes (18+)</td>
<td>33.3% (32.5% - 34.1%), 27,796,500</td>
</tr>
<tr>
<td>Ever diagnosed with diabetes (18+)</td>
<td>8.4% (7.9% - 8.8%), 27,796,500</td>
</tr>
<tr>
<td>Health Topic</td>
<td>State</td>
</tr>
<tr>
<td>-------------------------------------------------</td>
<td>-------------</td>
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**Ever diagnosed with diabetes (18+)**

Adult respondents ages 18+ who were ever diagnosed with diabetes by a doctor.
Ever diagnosed with diabetes (18+)

Adult respondents ages 18+ who were ever diagnosed with diabetes by a doctor.
### Health Topic Summary

- **Ever diagnosed with diabetes (18+)**
  - California: 8.4% (7.9% - 8.8%)
  - Los Angeles County: 8.8% (8.0% - 9.5%)
  - Los Angeles: 8.8% (7.9% - 9.7%)
  - Zip Codes: 12.8% (10.5% - 15.0%)
  - 90001: 3.3% (2.1% - 4.5%)
  - 90024: 3.3% (2.1% - 4.5%)

- **Fair or poor health (18-64)**
  - California: 17.9% (17.2% - 18.6%)
  - Los Angeles County: 21.4% (20.2% - 22.7%)
  - Los Angeles: 21.7% (20.0% - 23.4%)
  - Zip Codes: 31.5% (28.3% - 34.8%)
  - 90001: 7.8% (5.3% - 10.3%)
  - 90024: 7.8% (5.3% - 10.3%)

- **Ever diagnosed with heart disease (18+)**
  - California: 6.3% (6.0% - 6.7%)
  - Los Angeles County: 5.9% (5.4% - 6.3%)
  - Los Angeles: 5.7% (5.1% - 6.2%)
  - Zip Codes: 4.8% (3.6% - 5.8%)
  - 90001: 5.5% (4.7% - 6.2%)
  - 90024: 5.5% (4.7% - 6.2%)

- **Obese (BMI ≥ 30) (18+)**
  - California: 24.8% (24.1% - 25.5%)
  - Los Angeles County: 24.7% (23.5% - 26.0%)
  - Los Angeles: 23.5% (21.9% - 25.2%)
  - Zip Codes: 37.1% (33.0% - 41.1%)
  - 90001: 9.7% (7.0% - 12.4%)
  - 90024: 9.7% (7.0% - 12.4%)

- **Walked at least 150 minutes (18+)**
  - California: 33.3% (32.5% - 34.1%)
  - Los Angeles County: 35.0% (33.5% - 36.4%)
  - Los Angeles: 37.3% (35.2% - 39.4%)
  - Zip Codes: 34.6% (30.5% - 38.6%)
  - 90001: 42.8% (35.5% - 50.1%)
  - 90024: 42.8% (35.5% - 50.1%)

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**Walked at least 150 minutes (18+)**

Adults ages 18+ who walked for transportation or leisure for at least 150 minutes in the past week.
Obese (BMI ≥ 30) (18+)

Adult respondents ages 18+ who had a body mass index (BMI) of 30.0 or above. BMI was calculated using respondent's self-reported weight and height.
Obese (BMI ≥ 30) (18+)

Adult respondents ages 18+ who had a body mass index (BMI) of 30.0 or above. BMI was calculated using respondent's self-reported weight and height.
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Enter your full address or 9-digit zip code (ex. 90024-3702) to find your legislative districts and specific legislators for State Assembly, State Senate, and US Congressional Districts.

<table>
<thead>
<tr>
<th>Location</th>
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<tbody>
<tr>
<td>10960 Wilshire Blvd, Los Angeles, CA 90024</td>
<td></td>
</tr>
<tr>
<td><strong>Assembly District 54</strong></td>
<td><img src="https://example.com" alt="Add to Table" /></td>
</tr>
<tr>
<td><strong>State Senate District 26</strong></td>
<td><img src="https://example.com" alt="Add to Table" /></td>
</tr>
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**Current Selection (max. 5)**

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Create Table Close
Enter your full address or 9-digit zip code (ex. 90024-3702) to find your legislative districts and specific legislators for State Assembly, State Senate, and US Congressional Districts.

10960 Wilshire Blvd, Los Angeles, CA 90024

**Assembly District 54**

Assembly Member Sebastian Ridley-Thomas (Democrat)

**Office Address**
California State Assembly
P.O. Box 942849 Room 3149
Sacramento, CA 94249-0054

**Contact Information**
Primary Phone: (916) 319-2054
Primary Fax: (916) 319-2154
Visit Website
Visit Website

**State Senate District 26**

**33rd Congressional District**

Current Selection (max. 5)
### Obese (BMI \(\geq 30\)) (18+)

Adult respondents ages 18+ who had a body mass index (BMI) of 30.0 or above. BMI was calculated using respondent's self-reported weight and height.

#### Chart

**State**
- Obese (BMI \(\geq 30\)) (18+): 24.8% (21.2% - 25.9%)
- Obese (BMI \(\geq 30\)) (18+): 23.5% (18.8% - 17.3%)
- Obese (BMI \(\geq 30\)) (18+): 39.0% (36.5% - 41.6%)

**Assembly**
- Obese (BMI \(\geq 30\)) (18+): 8.1% (7.0% - 9.2%)
- Obese (BMI \(\geq 30\)) (18+): 5.7% (5.1% - 6.4%)
- Obese (BMI \(\geq 30\)) (18+): 37.5% (34.4% - 40.5%

**Senate**
- Obese (BMI \(\geq 30\)) (18+): 6.0% (5.1% - 6.8%)
- Obese (BMI \(\geq 30\)) (18+): 6.7% (6.1% - 7.4%)
- Obese (BMI \(\geq 30\)) (18+): 39.0% (36.5% - 41.6%)

**Congressional District**
- Obese (BMI \(\geq 30\)) (18+): 6.1% (5.2% - 6.9%)
- Obese (BMI \(\geq 30\)) (18+): 7.1% (6.4% - 7.8%)
- Obese (BMI \(\geq 30\)) (18+): 15.7% (13.9% - 17.4%)

**Note:** The table and chart provide state-level data on the prevalence of obesity among adults aged 18 and older, calculated using self-reported weight and height data.

**Sort by:**
- US Congressional Districts

**Map:**
- Highlighted areas correspond to the prevalence of obesity in the specified districts.