Sub-County Assessment of Life Expectancy (SCALE): The Maine Experience

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Presentation Overview

• About Maine, briefly

• SCALE method, Maine style
  • Mortality data
    • Limitations
    • Decisions
  • Population data
    • Limitations
    • Decisions

• LE results, current challenges, and next steps
Where is Maine, again?
Population and Geographic Characteristics

Population:
- 1.3 million
- 94.4% non-Hispanic White

Geographic Units:
- 16 counties
- 28 Healthy Maine Partnerships (HMPs)
- >500 Minor Civil Divisions (MCDs)

Population Distribution:
- HMPs
- Range
- MCDs
  - Largest = Portland, 67,000
  - 2nd largest = Lewiston, 36,000
  - 3rd largest = Bangor, 32,000
  - 11th largest = Augusta (capital), 18,000

Maine beat out Vermont as the most rural state, changing places over the last decade. According to the Census Bureau, 61.1 percent of Vermont's population lived in rural areas in 2010. In 2000, Vermont was the most rural state at 61.8 percent and Maine was second at 59.8 percent. Mar 26, 2012

Census: Maine most rural state in 2010 as urban centers grow ... 
bangordailynews.com/.../census-maine-most-rural-state-in-2010-as-u... Bangor Daily News
SCALE Participation

- Phase I participant
  - Motivations:
    - County-level life expectancy estimates not exciting, but sub-county?
    - Possible measure for Maine’s EPHT portal
• Data available (already in-house):
  • Annual estimates through 2013
  • By MCD
  • By sex, race/ethnicity

• Challenges:
  • Small populations!
    • What sub-county geography?
    • How many years to aggregate (goal > 5,000 population-years)?
    • Stratify by sex?
    • Geographic aggregation?
• Data request:
  • 2001-most recent
  • Address-level place of residence (not place of death)
  • Include sex, race/ethnicity

• What we received:
  • 2001-2012
  • Town-level 2001-2010, address level from 2011-2012
  • Sex, race/ethnicity (but 94% White)

• Challenges:
  • Data cleaning, matching to population data
    • No 5-digit geocode provided  matched on town name
      if resident_town in ('Brownville Jct', 'Brownville Jct.', 'Brownville Junction') then resident_town = "brownville";
  • Mix of townships (>900) and towns (>500)
    • Sequential merging of township/town look-up spreadsheets, manual coding
SCALE Method: Maine Modifications

Analytical approach: County → Healthy Maine Partnership (HMP) → Town
Aggregate 5-years, then more?
Stratify by sex, if possible

LE by HMP (1st sub-county calculations)

1. HMP–level
3. By sex

Figure adapted from Source: Tom Talbot, NYS Dept. of Health
SCALE Method: Maine Modifications

1. Town-level
2. 10 years of data (2001-2010)
3. No sex

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Results

LE by HMP, 2006-2010

LE by Town, 2001-2010
SE<2 or >60 deaths

LE by GAT area, 2001-2010
Population-years > 10,000
Actions, Applications, Next Steps

- Dissemination of Maine LE results
  - Shared internally
    1. EPHT group
    2. Tracking Advisory Group, including MeCDC upper management and colleagues from other departments

- Public health actions (to date) in response to Maine LE results

- Next steps
  - Continue working to garner support, resources
    - White paper for broader distribution
    - Meet with MEHAF
  - Consider adding LE results to Maine EPHT portal as stand-alone indicator
  - Identify and perform additional analyses to paint fuller picture, provide context
Thanks!

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