Challenges of Sub-County Life Expectancy in Maine

Jessica Bonthius, MPH
and Chris Paulu, ScD

Maine CDC’s Environmental and Occupational Health Programs
and
University of Southern Maine’s Muskie School for Public Service

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Overview

Maine population and geographies

Data and Method

Results
  – Case study

Lessons learned/next steps

Image: South Moat Mtn, October 10, 2016
Population and Geographies

Population
• 1.3 million
• 94.4% non-Hispanic White

Geographies
• Counties (16)
  • Smallest = 17,000
• MCDs (533)
  • Largest = Portland, 67,000
  • 2nd largest = Lewiston, 36,000
  • 11th largest = Augusta (capital), 18,000
**Data and Method**

### Vital Statistics Data - *Data provided by Maine’s ODRVS*
- **Death:** MCD (town)-level
- **Population:** Annual intercensal, postcensal town-level estimates

### Method
- **SEPHO (Chiang II, Adjusted)**
- **County-level → town-level**
  - Exploratory analyses

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**LE Estimate – Stable?**

- **Yes**
- **No**

**Display Results**

**Suppress or Aggregate?**
~3% (n~400) of Maine resident deaths (~16,000) each year occur out-of-state.

Percent of Out-of-State Deaths by Place of Occurrence:
- New Hampshire, 34%
- Massachusetts, 28%
- Florida, 16%
- Canada, 0.3%
- Other, 22%

Other = 46 states, international, unknown
Life Expectancy by Town, 2001-2010

LE by Town (MCD), 2001-2010
Difference from state (yrs)
-38.7 to -15.3
-15.2 to -8.1
-8.0 to -2.1
-2.0 to +2.0
2.1 to 5.0
5.1 to 8.0
8.1 to 17.7

SE >=3

SE >=3

SE >=2 or Deaths <60
GAT Results

- LE range ~ 15 years (Low = 71.6, High = 86.6)
- Assessing Stability
  - SE range: Min = 0.2, Max = 2.4

Life Expectancy, Maine 2001-2010
By GAT Area

n = 310
Aggregated to 10,000 Population-years

LE by Area, 2001-2010

Difference from state (yrs)

-6.9 to -5.0
-4.9 to -3.0
-2.9 to -2.1
-2.0 to +2.0
2.1 to 3.0
3.1 to 5.0
5.1 to 8.1
Case Study: Assessing Results, 2001-2010

**Limington**
- Highest LE in Maine: **86.6**, SE = **2.4**
- 218 deaths
- 37,326 population-years

**Wayne**
- 3rd highest LE in Maine: **83.8**, SE = **1.6**
- 81 deaths
- 11,445 population-years

→ *Why is Limington’s SE >2?*
Case Study: Limington

- 4.8% in group quarters (2000) → <1% (2010)
- Low death rate in last age group, high interval width
Population of Limington, ME

Population of Limington, ME
Age Group: 85+
Discussion

- Lessons learned
  - Aggregation: temporal or geographic
  - Limitations of small-area population estimates

- Next steps
  - Town-level, 5-years combined
  - Environmental Public Health Tracking (EPHT) content workgroup for LE
  - Continue exploring challenges and solutions related to LE as a measure of health disparities
Thanks!

Jessica Bonthius, MPH
Epidemiologist, Maine CDC
jessica.bonthius@maine.gov
(207) 287-3364

Chris Paulu, ScD
Environmental Epidemiologist, Maine CDC
chris.paulu@maine.gov
(207) 287-9932