The Sub-County Assessment of Life Expectancy (SCALE) project
We spend more on healthcare with worse outcomes

**Spending on Health Care**

- United States: $8,233
- Norway
- Switzerland
- Netherlands
- Luxembourg
- Denmark
- Canada
- Austria
- Germany
- France
- Belgium
- Sweden
- Ireland
- Australia
- United Kingdom
- Iceland
- Finland
- Spain
- Japan
- New Zealand
- Italy
- Greece
- Portugal
- Slovenia
- Israel
- Korea
- Chile

**LE at Birth**

- Japan
- Switzerland
- Spain
- Italy
- Australia
- Israel
- Iceland
- Sweden
- France
- Norway
- Ireland
- New Zealand
- Canada
- Netherlands
- Austria
- Korea
- Luxembourg
- Greece
- United Kingdom
- Germany
- Belgium
- Finland
- Portugal
- Slovenia
- Denmark
- Chile
- United States: 78.7 years

Public Health
Seattle & King County
Assessment, Policy Development, & Evaluation
Why use Life Expectancy at Birth?

- Average number of years a newborn can be expected to live if mortality rates remained the same as they are currently
- Reliable indicator of overall population health; frequently used as a general measure
- The general public “understands” LE
- Data originates from sources that many health departments could have available (death certificate, population, life tables)
- Because of the relationship between LE and health, inequities in LE usually signal inequities in social determinants of health (wealth, economic opportunity, healthcare, environment, housing, built environment and/or education) or in mortality patterns.
LE by county varied by 21 years in 2014
Increasing National Interest

SUBCOMMITTEE HEARING
Dying Young: Why Your Social and Economic Status May Be a Death Sentence in America

Subcommittee on Primary Health and Aging
Date: Wednesday, November 20, 2013
Time: 10:00 AM
Location: 430 Dirksen Senate Office Building

U.S.

Life Spans Shrink for Least-Educated Whites in the U.S.

By SABRINA TAVERNISE  SEPT. 20, 2012

LONGEVITY
Life Expectancy: Another Way New Yorkers Are Better
New Yorkers aren't exactly known for their zen, health-promoting lifestyles, but new data show that life expectancy for city residents now surpasses the rest of the U.S. How did that happen?

By Alice Park @aliceparkny  | Dec. 28, 2011

Bernie Sanders website; NYT; Time
Early leaders in LE at birth work showed county level data hid a lot of disparities
LA County

Life Expectancy in LA County
How long do we live and why?
A Cities and Community Health Report, 2010
Miami LE varies by 15 years by ZIP code

https://societyhealth.vcu.edu/work/the-projects/mapsmiami.html, last accessed 6/2018
Life Expectancy in King County by Census Tract

- Difference of 25 years! (Low of 71; High of 96)
- King County Average: 81.6
National Environmental Public Health Tracking Network

Better information for better health
The National Environmental Public Health Tracking Network (Tracking Network) brings together health data and environment data from national, state, and city sources and provides supporting information to make the data easier to understand. The Tracking Network has data and information on environments and hazards, health effects, and population health.

On the Tracking Network, you can:

- Use the Data Explorer to view interactive maps, tables, and charts
- View Info by Location for county level data snapshots
- Visit state & local tracking websites

CDC's National Environmental Public Health Tracking Program created and maintains the Tracking Network. Learn more about Tracking.
Life Expectancy by Census Tract

Life Expectancy at Birth
- 84.4 - 89.3
- 81.4 - 84.3
- 77.6 - 81.3
- 68.0 - 77.5
- Low stability (SE 2.0 - 3.0)
- No data or data suppressed

Alameda County: 82.0 years

Source: CAPE, with data from Alameda County vital statistics files, 2010-2014.
The SCALE Project
SCALE: A collaborative LE project

- Began in 2014
  - CDC, Council for State and Tribal Epidemiologists, 8 Health Departments

- Goals:
  - Guide for Calculating and Visualizing Life Expectancy Estimates at the Census Tract Level for any LHJ to be able to calculate LE
  - Enhance: Public health practice and research applications
    - Examine the degree to which LE and associated contributing factors vary across populations and geographies.
    - Identify and monitor community hot spots of health disparities
    - Once hot spots are identified: investigate behavioral, social and environmental factors
    - Raise public awareness on the importance of multi-sector place based factors (i.e., education, transportation, community development, and business) in improving health and reducing health disparities.
SCALE Accomplishments

- Phase II included
  - 17 more states/locals to pilot tested the tool
  - Additional states/locals continue to add
- 2015, 2016, 2017, 2018 CSTE Pre-conference Workshop Training and presentations
- NACCHO presentations, 2016
- CSTE SCALE Website Launched (8/16)
- Joint SCALE and Environmental Public Health Tracking Workshop (EPHTN) (10/16)
- SCALE Guide v1.0 released; v 2.0 (3/18); v 3.0 due out in a few months
- Evaluation of Phase I
- Group meeting, involving Public Health England (3/2018)
SCALE Accomplishments, c’td

- Papers:
  - Sub-County Life Expectancy: A Tool to Improve Community Health Equity; Vickie Boothe
  - Calculating census tract-based life expectancy in New York state: A generalizable approach; Tom Talbot
  - Seeing is Believing: Patterns of Life Expectancy, Poverty, Equity & Health; David Sweat
- EPHTN Content Workgroup (complete; items under review)
Who has participated in SCALE?

**SCALE Phase I Participants**
- Florida
- Los Angeles County
- Massachusetts
- California

**SCALE Phase II Participants**
- Alabama
- Alamance Co., NC
- Alameda Co., CA
- Caswell Co., NC
- Chatham Co., NC
- Cleveland, OH
- Cook Co., IL
- DC

**Additional Participants**
- Durham Co., NC
- Erie Co., PA
- Houston, TX
- Johnson Co., KS
- Maricopa Co., AZ
- Metro Area Planning Council, MA
- Minnesota
- Montana
- New Hampshire
- Orange Co., NC
- Salt Lake Co., UT
- Shelby Co., TN
- Virginia
- Washington Co., MN
- Washington
- Wisconsin
- Portland, OR
Other LE work around the country continues to gain traction

- RWJF continues to fund some life expectancy work, such as the LE maps that Virginia Commonwealth University is producing.
- USALEEP project: a LE project that will return geocoded data back to states as well as LE estimates (more on this project this afternoon): due to states in 2018!
- Institute for Health Metrics and Evaluation produces LE maps at a county level.
- Interest in tracking LE trends at a state and local level as LE is decreasing in some groups and in different places around the country.
- Public Health England has produced some useful tools and SCALE will be considering how to adopt/adapt them for our work.
Next SCALE objectives

- Expand health department SCALE participants for increased ability to show LE
- Identify visualization and messaging best practices
  - Simplification vs detail
  - Choosing how to map the data
- Write up lessons learned from Public Health England meeting
- Comparison of USALEEP results to SCALE results
- Identify related indicators for concurrent release
  - Key Social Determinants of Health (SDOH) and mortality indicators (e.g., leading causes of death)
  - Other measures representing mortality, morbidity, and quality of life (Economic Hardship Index (EHI))
- Evaluate the public health utility and impact of community health improvement initiatives supported with LE
Interested in joining SCALE?

- Necessary data items (we can help discuss how to get this information)
  - Death data with address
  - Population at the census tract level or ability to use death data from 2008-2012 (around the 2010 Census)
  - Ability to participate in monthly phone calls to discuss progress and roadblocks
- Contact Vickie Boothe (veb6@cdc.gov), Amy Laurent (amy.Laurent@kingcounty.gov), or Hayleigh McCall (HMCall@cste.org) for more information
- https://www.cste.org/general/custom.asp?page=SCALE
“Life expectancy would grow by leaps and bounds if green vegetables smelled as good as bacon.”
~Doug Larson