

AGENDA

PUBLIC HEALTH ADVISORY BOARD

July 11, 2024, 3:00-4:30 pm

Join ZoomGov Meeting

<https://www.zoomgov.com/j/1603086166?pwd=aGgvUIFENXdadzZvLzZZZStWKzR6QT09>

Meeting ID: 160 308 6166

Passcode: 955876

One tap mobile

+16692545252,,1603086166#

Meeting objectives:

- Approve June meeting minutes
- Discuss health issues, assets and challenges in rural areas of Oregon
- Plan for a fall in-person retreat

3:00-3:10 pm Welcome, board updates, shared agreements, agenda review

- Welcome, board member introductions
- Share group agreements and the Health Equity Policy and Procedure
- OHA staff updates
- **ACTION:** Approve June meeting minutes

Veronica Irvin,
PHAB Chair

3:10-4:00 pm Public health in rural areas of Oregon

- Learn about health issues, assets and challenges in rural areas of Oregon and complexities of providing public health services
- Discuss opportunities for PHAB to incorporate this information into priorities and decisions

Mike Baker,
PHAB member

All

4:00-4:15 PHAB retreat planning**pm**

- Finalize date and location
- Discuss goals and agenda

Sara
Beaudrault,
OHA

4:15-4:25 Public comment**pm**

Veronica Irvin,
PHAB Chair

Next meeting agenda items and adjourn

- Tribal public health modernization
- Public health accountability metrics
- Public health modernization cost and capacity assessment
- Member-identified topics

Veronica Irvin,
PHAB Chair

Everyone has a right to know about and use Oregon Health Authority (OHA) programs and services. OHA provides free help. Some examples of the free help OHA can provide are:

- Sign language and spoken language interpreters.
- Written materials in other languages.
- Braille.
- Large print.
- Audio and other formats.

If you need help or have questions, please contact Sara Beaudrault: at 971-645-5766, 711 TTY, or publichealth.policy@odhsoha.oregon.gov at least 48 hours before the meeting.

PHAB Public Health Modernization Funding Workgroup Group agreements

- Learn from previous experiences and focus on moving forward
- **Slow down to support full participation by all group members**
- Stay engaged
- Speak your truth and hear the truth of others
- Expect and accept non-closure
- Experience discomfort
- Name and account for power dynamics
- Move up, move back
- Confidentiality
- Acknowledge intent but center impact: ouch / oops
- Hold grace around the challenges of working in a virtual space
- Remember our interdependence and interconnectedness
- Share responsibility for the success of our work together

Public Health Advisory Board 2024 Workplan Priorities and Calendar

This document provides a framework for PHAB priorities and meeting agendas in 2024.

2024 PHAB Priorities

Oregon's public health system demonstrates and acts on its commitment to health equity

- Public health system improvements and funding
- Statewide population health priorities
- OHPB and health system alignment
- PHAB structure, business and member support

Go to the last page of the work plan for a list of topics related to each priority.

Meeting calendar

Meeting date	Agenda items	Priority	Action
January 11	Cancelled		
February 8	New member orientation and member connections	■	Discuss
	Legislative update	■	Discuss
	Evaluation of public health modernization investments for 2023-25	■	Inform
	2024 work plan and subcommittee/workgroup assignments	■	Discuss
March 14	Discussion with OHA Director, Dr. Sejal Hathi	■ ■ ■	Discuss
	Public health modernization funding for community-based organizations	■	Discuss
	CCO incentive metrics	■ ■	Discuss
	Public Health Director recruitment	■	Inform
	PHAB Chair appointment	■	Decide
April 11	Workgroup and subcommittee updates	■	Discuss
	Oregon Health Policy Board 2024 priorities	■ ■ ■	Discuss
	Public health modernization implementation (placeholder)	■ ■ ■	Discuss
	PHAB public health modernization priorities for 2023-25	■ ■ ■	Discuss
May 9	Preventive Health and Health Services Block Grant, 2023-24 work plan	■	Discuss
	Public health modernization funding formula	■	Approve
	OHPB Health Equity Committee overview and connections	■ ■	Discuss
	Public health modernization implementation	■ ■ ■	Discuss
June 13	Preventive Health and Health Services Block Grant, 2024-25 work plan	■	Approve
	Public health modernization implementation: OHA budget and COVID-19 impacts	■ ■ ■	Discuss
	Public health modernization funding formula	■	Approve
	Public Health System Workforce Report, Milestone #1	■ ■ ■	Inform
July 11	Public health in rural Oregon	■ ■	Discuss

	Retreat planning	■ ■ ■ ■ ■	Inform
August 8	Meeting cancelled – summer break		
September 12	Public health accountability metrics, process measure data	■ ■ ■ ■ ■	Approve
	Public health modernization cost and capacity assessment results	■ ■ ■ ■ ■	Discuss
	Tribal public health modernization	■ ■ ■ ■ ■	Discuss
October 10	Health Equity Framework workgroup, Milestone #2	■ ■ ■ ■ ■	Inform
	PHAB Strategic Data Plan annual update	■ ■ ■ ■ ■	Discuss
	Public Health Modernization Funding Report, 2024	■ ■ ■ ■ ■	Approve
November 14	Health Equity Framework workgroup, Milestone #3 and role map deliverable	■ ■ ■ ■ ■	Approve
December 12	Public Health System Workforce Report, Milestone #2, findings and recommendations	■ ■ ■ ■ ■	Approve



Priorities and topics (★ Indicates decision or deliverable)

<p>■ Public health system improvements and funding</p> <ul style="list-style-type: none"> - Make recommendations related to future public health modernization investments ★ - Hear about implementation of current investments - Update public health modernization funding formula for LPHAs ★ - Approve the 2024 Public Health Modernization Funding Report ★ - Approve Public Health Equity Framework ★ - Approve Public Health System Workforce recommendations ★ - Approve Public Health Accountability Metrics Report, and use of accountability metrics ★ - Inform Public Health Modernization Evaluation - Discuss community-led data initiatives, including PHAB Strategic Data Plan - Member-initiated topics 	<p>■ Statewide population health priorities</p> <ul style="list-style-type: none"> - State Health Assessment - Healthier Together Oregon - Legislative policy impacts - Public health and education - Preventive Health and Health Services Block Grant ★ - Member-initiated topics
<p>■ OHPB and health system alignment</p> <ul style="list-style-type: none"> - Opportunities for health system and public health alignment - CCO metrics program - Opportunities for aligned work with OHPB - Member-initiated topics 	<p>■ PHAB structure, business and member support</p> <ul style="list-style-type: none"> - Update Charter and Bylaws ★ - Elect a Chair for a two-year term or postpone election until 2025 ★ - Ensure use of PHAB HE P&P throughout development of deliverables - Trainings - Annual retreat



Public Health Advisory Board meeting minutes
June 13th, 2024, 3:00-5:00 pm

Attendance

Board members present: Tameka Brazile Miles, Veronica Irvin, Ana Gonzalez, Heather Kaisner, Jackie Leung, Mike Baker, Jenny Withycombe, Mary Engrav, Meghan Chancey, Sarah Present, Kelly Gonzales, Brenda Johnson, Cara Biddlecom, Kelle Little.

Board members excused: Dean Sidelinger, Nic Powers, Jawad Khan, Bob Dannenhoffer, Rya Petteway, Dianna Hansen, Marie Boman-Davis

OHA Staff for PHAB: Sara Beaudrault, Tamby Moore, Steven Fiala

Introductions; board updates

Presented by Sara Beaudrault

- Public health director recruitment process update: it was projected that OHA leadership would be conducting interviews with the final candidates by the end of June.
- OHA strategic plan update: OHA has submitted their strategic plan to the governor's office for review.

- Policy option package update: OHA is continuing to work on funding requests for public health modernization.
- PHAB retreat update: a survey will be sent out on June 14th to gather potential dates and locations.
- An update was given on a previous meeting (May 9th) agenda item with Alex Freedman and Maria Castro, regarding collaboration between PHAB and the OHPB Health Equity committee
- It was noted that the meeting discussion highlighted some areas where PHAB and the Health Equity committee could collaborate on such as alignment on work for the Health Equity Framework.
- There was mention that at the end of this meeting, there would be an ask through email for a PHAB member to potentially join a Health Equity committee meeting.

April and May meeting minutes vote

- April and May meeting minutes were review with corrections being made to the April meeting minutes.
- Jackie Leung made a motion to approve both meeting minutes with corrections; Heather Kaisner seconded the motion.
- Both April and May meeting minutes were approved by vote.

Public health modernization funding formula vote

Presented by Steven Fiala

- An update on the PHAB Incentive and Funding Subcommittee was provided. This presentation is available on page 27-44 of the meeting packet.
- This presentation highlighted the finalized recommendations for the public health modernization funding formula. It was noted that at the end of the presentation there would be a vote to approve the recommendations put forth.
- Base Component (Floor Funding) Recommendations:
 - The subcommittee recommends not changing the base component funding for the 2025-2027 biennium.
 - Rationale: The floor funding was increased in the last biennium to \$400,000 for all local public health authorities, ensuring equitable distribution.
 - It was noted that survey results indicated positive outcomes from the increase.
- Matching Funds Recommendations:
 - Implement matching funds only if there is an increase in funding going to local public health authorities (5% or an additional \$2.35 million).
 - Counties will receive matching funds if they maintain their local investment (not requiring an increase).
 - Redistribution of “left-on-the-table” funds based on population.
- Incentive Funds Recommendations:

- Maintain at 1% total funds (about \$470k at current funding level).
- Implement the incentive component of the funding formula regardless of funding increase.
- Proportional allocation based on population size and number of process measures met.
- “Left-on-the-table” funds redistributed based on counties above average process measures met. The funded are to be allocated to qualifying counties based on the proportion of the population among qualifying counties.
- After the presentation, a vote to approve the recommendations was called.
- Sarah Present motioned to approve all recommendations; Jackie Leung seconded the motion.
- Roll call votes:
 - Tameka Brazile Miles: Yes
 - Veronica Irvin: Yes
 - Ana Gonzalez: Yes
 - Heather Kaisner: Yes
 - Jackie Leung: Yes
 - Mike Baker: Yes
 - Jenny Withycombe: Yes
 - Mary Engrav: Yes
 - Meghan Chancey: Yes
 - Sarah Present: Yes
 - Kelly Gonzales: Yes

Preventive Health and Health Services Block Grant vote

Presented by Sara Beaudrault

- The proposed October 2024 – September 2025 workplan for the Preventive Health and Health Services Block Grant was presented to members.
- It was noted that there would be a vote to approve the workplan at the end of the presentation.
- The key areas of focus for the work plan are:
 - Supporting SHIP development and implementation.
 - Supporting public health modernization.
 - Sexual violence primary prevention.
- A public hearing was held to gain additional feedback on the workplan. Members who joined the hearing asked about funding for CBOs and LPHAs. There were also comments related to the role of volunteers, long term planning challenges and the need to shift from data collection to data usage.
- Overall, it was noted that members of the public who joined the hearing had no concerns about the workplan and block grant.
- After the presentation, a motion to approve the workplan and proposed allocations of funds from the block grant was called.
- Roll call votes:
 - Tameka Brazile Miles: Yes
 - Veronica Irvin: Yes

- Ana Gonzalez: Yes
- Heather Kaisner: Yes
- Jackie Leung: Yes
- Mike Baker: Yes
- Jenny Withycombe: Yes
- Mary Engrav: Yes
- Meghan Chancey: Yes
- Sarah Present: Yes
- Kelly Gonzales: Yes

Public Health System Workforce Report updates

Presented by Wendy Polulech

- A small presentation about the progress of the Public Health System Workforce Report and the Public Health Workforce Workgroup was shared. This presentation is available on pages 51-65 on the meeting packet.
- This presentation highlighted the purpose of the workgroup and the deliverables that the workgroup has been working on. A project timeline highlighting these deliverables was shared
- Additionally, the workgroup has compiled a report based on existing assessments, evaluations, and additional reports related to the public health system workforce.
- This report was a collaborative effort between WYSAC (Wyoming Survey and Analysis Center) and the workforce workgroup to help identify gaps and needs which were then prioritized by the workgroup. It was noted that WYSAC's need assessment recommendations were available in the meeting packet.
- The presentation concluded with a promise of future updates in the fall after community engagement meetings.

PHAB Health Equity Framework Workgroup updates

Presented by Larry Hill, Vanessa Cardona

- An update on PHAB's Health Equity Framework Workgroup was presented. This presentation is reflected on pages 66-68 of the meeting packet
- The work group aims to develop resources that describe how all parts of the public health system (both governmental and community partners) can collectively work to eliminate health inequities. Challenges faced by the work group included common understanding of government entities, terminology, and acronyms used in public health.
- Deliverables include a companion document and recommendations for incorporating health equity into decision-making.
- It was noted that the workgroup is not rewriting the public health modernization manual but aims to create a complementary document that allows community input.
- PHAB members were invited to join the workgroup. It was also mentioned that the workgroup is seeking members to help present the Health Equity Framework to the OPHB's Health Equity Committee.
- A small discussion about how this work engages with tribes and addresses colonialism and settler colonial ideologies concluded the presentation.

OHA Budget and Impacts of COVID-19 funding

Presented by Nadia Davidson

- A presentation on OHA's budget was shared. This presentation is reflected on pages 69-78 of the meeting packet.

- The legislatively approved budget is approximately \$1.5 billion, with 51% federally funded, less than 20% from general funds, and a little over 20% from other funds. General funds have seen significant increases over the past biennium, with a focus on community-specific strategies.
- New investments for the biennium included POP's investigation into the consumption of contaminated fish, JUUL settlement funds, and SB1530 (Healthy Homes repair funds). Some potential funding for the 2025-27 biennium included additional funds for the Lead Service Line Replacement and Emerging Contaminants for Drinking Water Services.
- Funding drivers included federal categorical funding for poly-substance use, climate change, and public health infrastructure. Some risks that were mentioned were core public health infrastructure sustainability challenges, COVID-19 funding cliffs, and worsening health outcomes.
- Specific challenges included decreased state and federal funding for sexually transmitted infection prevention and TB programs, flat funding for immunization despite increased vaccination efforts, and sustainability issues for various programs.
- A discussion around the impact of funding changes on core public health services and programs concluded the presentation.

Public Comment

- No public comment

Meeting adjourned at 5:00PM

Public health in rural areas of Oregon

1. How can PHAB use information shared today into its decision-making and deliverables?
2. What actions can PHAB take to ensure that its decisions and recommendations support a public health system that works for all people in Oregon, including those in rural and urban areas?



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Oregon's Rural Public Health



Oregon
Health
Authority

**Public Health
Advisory Board**

Thursday, July 11, 2024

Today's Objectives

- 1) Level Settings
- 2) Public Health 101
- 3) Oregon Public Health System
- 4) Barriers for Rural Public Health
- 5) Opportunities for Rural Public Health
- 6) Rural Health Outcomes and Public Health



Disclaimers

If you've seen one Public Health agency... You've seen one Public Health agency!



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NORTH CENTRAL PUBLIC HEALTH DISTRICT



**MORROW COUNTY
HEALTH DISTRICT**
Excellence in Healthcare

Jefferson County



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Lincoln County

CHD **Center for Human
Development, Inc.**



**DOUGLAS
PUBLIC HEALTH
NETWORK**



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Coos Health & Wellness
Together, Inspiring Healthier Communities



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Harney County



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UCo
HEALTH
Building a Healthy Community



Disclaimers

Rural \neq Rural \neq Rural



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Disclaimers



Skimming the Surface!



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Disclaimer



Totally Biased Presentation



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Defining Rural

Common Definitions Currently in Use by Federal Programs

**RUCA Adjustment to OMB Metropolitan
and Nonmetropolitan Definition**

**US Department of Agriculture Economic
Research Service Urban Influence Codes**

**ERS's Economic Typology of
Nonmetropolitan Counties**

Census Bureau Rural and Urban

**ERS'S Rural-Urban Commuting Areas
(RUCAs)**

ERS's Rural-Urban Continuum Codes

**OMB Metropolitan and
Nonmetropolitan Taxonomy**

"Frontier Areas"

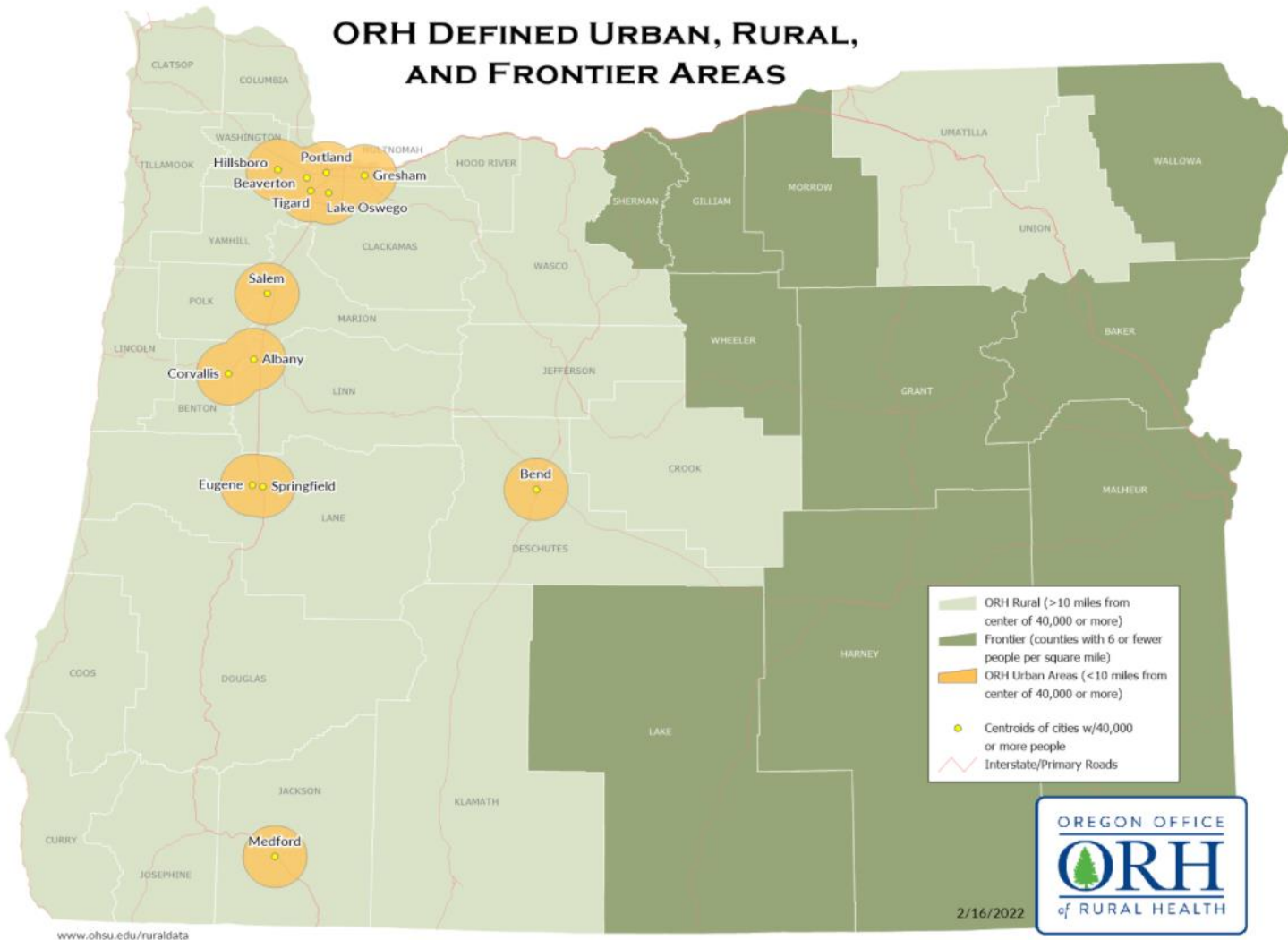


ERS'S Urban Influence Codes

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Defining Rural

ORH DEFINED URBAN, RURAL, AND FRONTIER AREAS



www.ohsu.edu/ruraldata

2/16/2022



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Rural
Geographic areas in Oregon that are ten or more miles from a population center of 40,000 people or more.

What is Public Health?



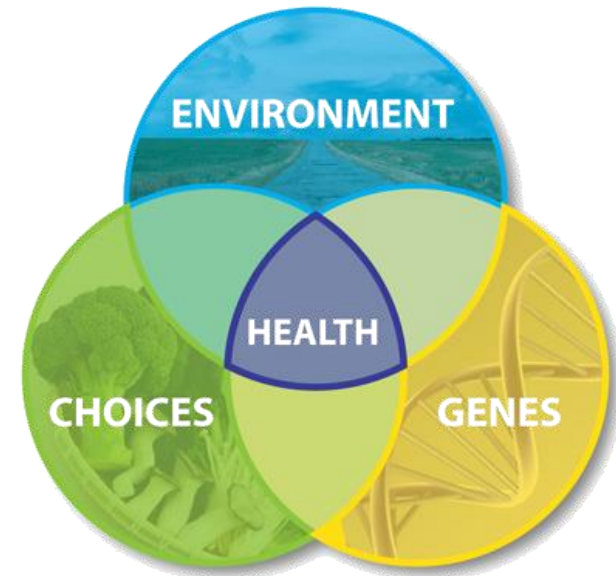
Depends on who you ask!

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Public Health Defined?

The art and science of preventing disease, prolonging life, and promoting health through the organized efforts and informed choices...of society, organizations, public and private, communities, and individuals. ***The focus of public health is to prevent disease rather than treating it.***

– Charles Edward A. Winslow (1920)



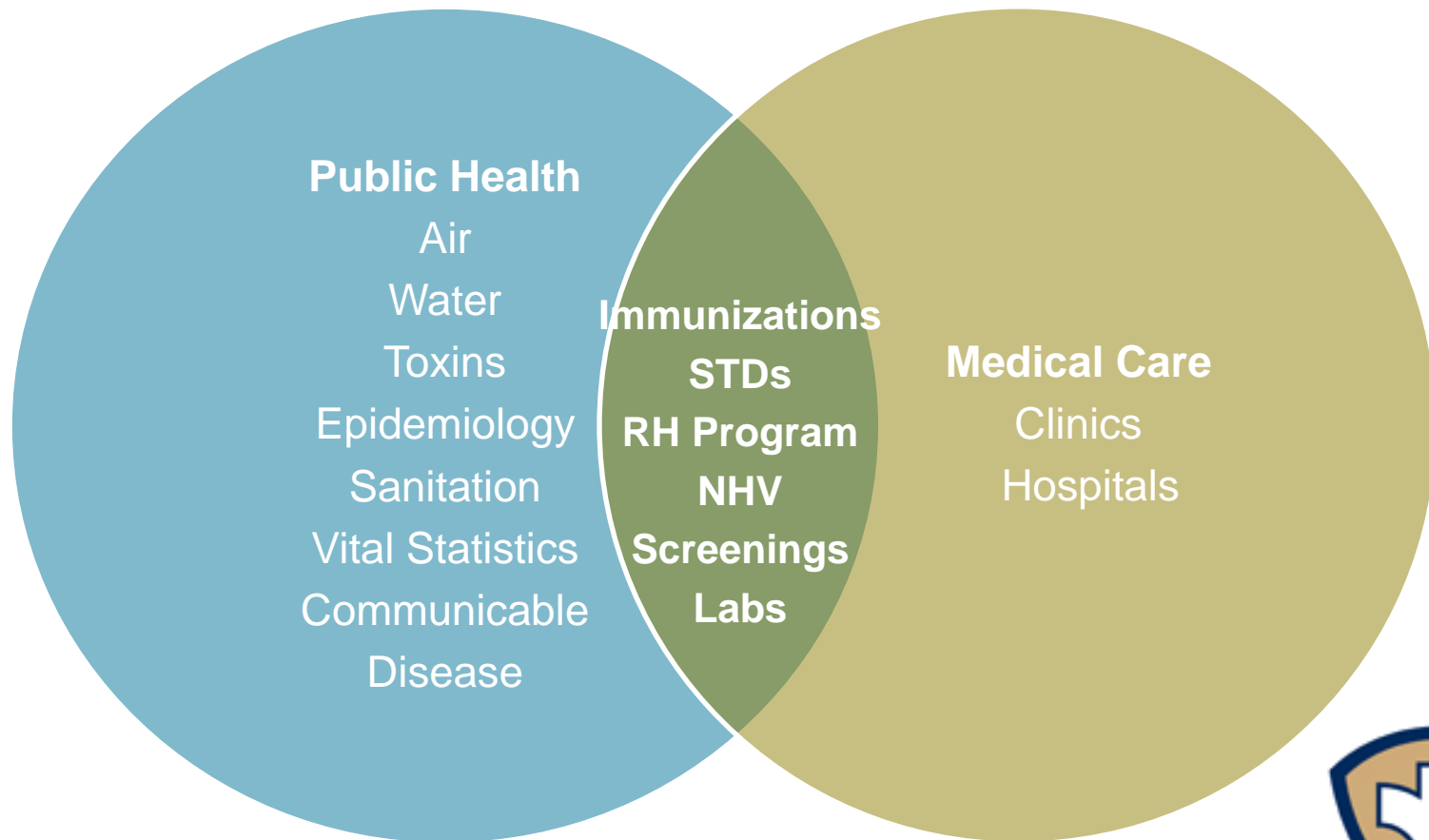
Activities that society undertakes to assure the conditions in which people can be healthy. These include organized community efforts to prevent, identify, and counter threats to the health of the public.

- Bernard Turnock, (2004)



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Public Health/Medical Care



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Brief History of Oregon Public Health

1870

Quarantine of Astoria, Coos Bay, Gardiner, and Yaquina. Health Officer Approval.



1922

First county-based Public Health Department founded in Coos County

1935

Title V- Maternal/Child Health



1905

Establishment of a bacteriology laboratory and a system for vital statistics.

1893

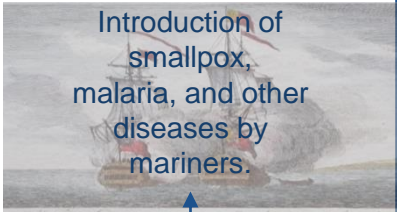
Office of State Dairy and Food Commission

1915

City water and sewer authority

1770

Introduction of smallpox, malaria, and other diseases by mariners.



1938

Regulate pollution of rivers, streams, lakes, watersheds and coastal areas



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1914

Ability to quarantine vessels, trains, stages & passenger vehicle during epidemic

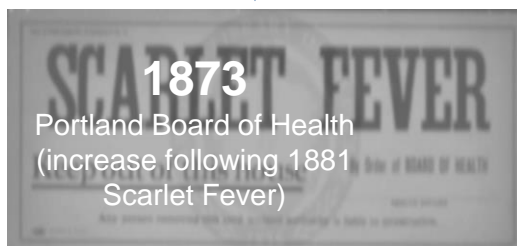


1913

Hospitals, sanatoria, poor farms, institutions subjected to inspection and certification

1903

Creation of State and Local Boards of Health



1873

Portland Board of Health (increase following 1881 Scarlet Fever)

1862

Portland ordinance placed health matters under the supervision of health and police

Brief History of Oregon Public Health



1945

Regulations for food and drink service

1965

Committee on Public Health
Mental Health Division



1969

Department of Environmental Quality Created

1971

Creation of the Health Division

1993

Office of the Oregon Health Plan Administrator (OHPA)

1994

Oregon Death with Dignity Act

1999

Department of Human Services

1998

Oregon Medical Marijuana Act



2006

DHS reorganized by Public Health Division



Oregon Department of Human Services

2009

Creation of Oregon Health Authority

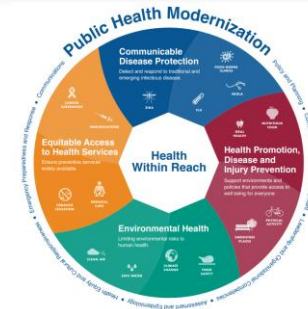


2020

February 28, 2020.
First confirmed case of COVID-19 reported for Oregon



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2015

Public Health Modernization
HB 3100

Public Health's Top 10

Ten Great Public Health Achievements - United States
~From CDC, Morbidity and Mortality Weekly Report, May 20, 2011.

Top 10 Achievements in Public Health



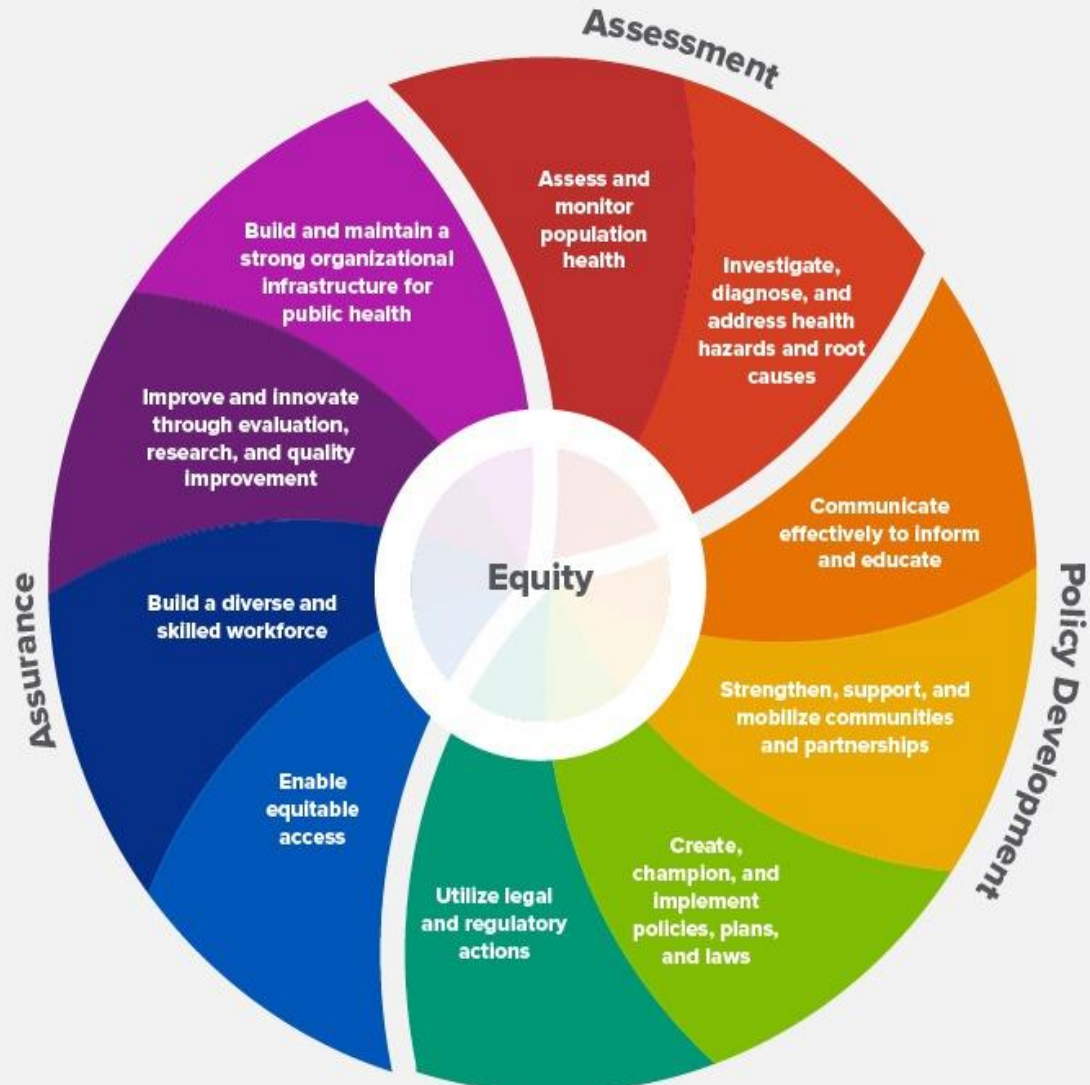
1. Vaccination
2. Motor-vehicle safety
3. Safer workplaces
4. Control of infectious diseases
5. Decline in deaths from coronary heart disease and stroke
6. Safer and healthier foods
7. Healthier mothers and babies
8. Family planning
9. Fluoridation of drinking water
10. Recognition of tobacco use as a health hazard



“Essential Services” of Public Health

THE **10** ESSENTIAL PUBLIC HEALTH SERVICES

To protect and promote the health of all people in all communities

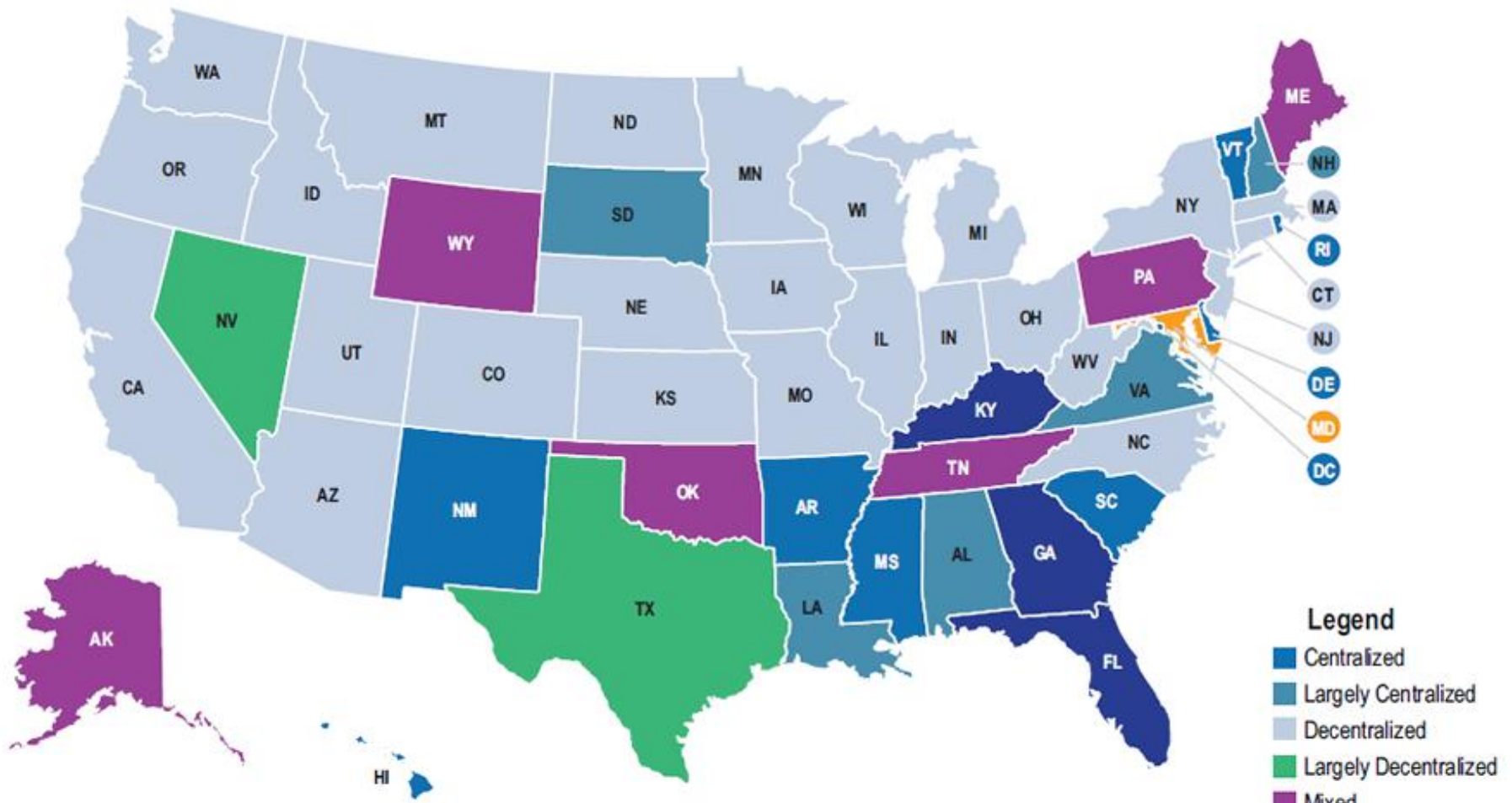


The Work of Public Health



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Public Health Governance



<https://www.cdc.gov/publichealthgateway/sitesgovernance/index.html>

As of September 2020

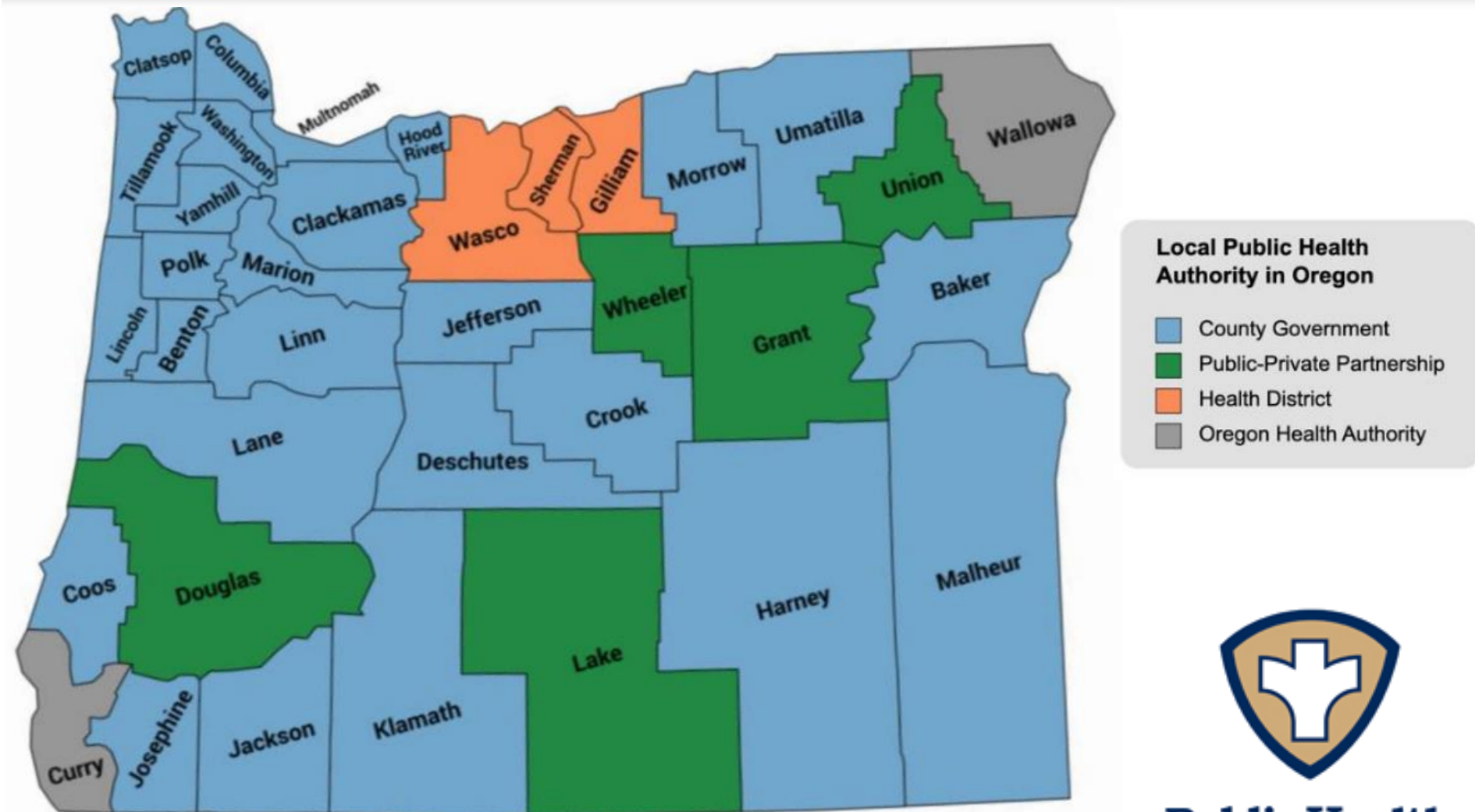
Oregon Public Health

**KEEP Oregon Public Health
WEIRD!**



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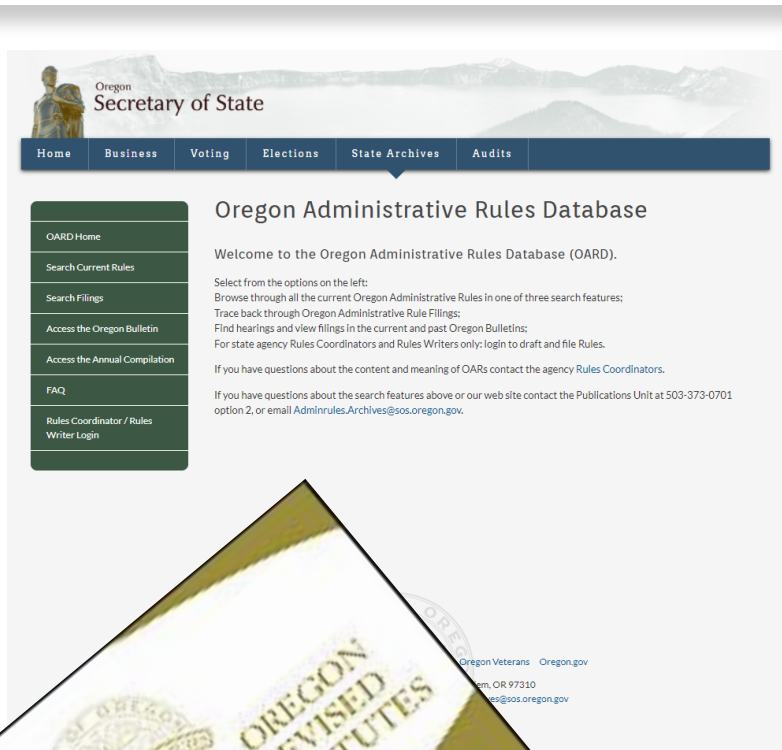
Oregon Public Health Governance



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From Oregon Coalition of Health Officials (CLHO)

Local Public Health in Oregon



Oregon statute gives the authority of local public health to the local governing body, usually Board of County Commissioners or County Court.

- ✓ 27 Counties
- ✓ 5 Public/Private Partnerships
- ✓ 1 District (2 Counties)
- ✓ 2 OHA
 - ✓ Wallowa (May 1, 2018)
 - ✓ Curry (May 2, 2021)

As identified by the Coalition of Local Health Officials (2014), while counties are granted this authority by statute, “counties remain agents of the state and must carry out duties imposed upon counties by state laws”.



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Required Partnerships

Bridging Local and State Public Health

(ORS 431.330) The Oregon Health Authority shall solicit input from the Conference of Local Health Officials and local public health authorities in:

- a) Establishing the foundational capabilities and programs
- b) Adopting and updating a statewide public health modernization assessment
- c) Developing and modifying a statewide public health modernization plan under subsection
- d) Developing and modifying plans for the distribution of funds



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Oregon's Public Health Responsibilities

Local Public Health Authority Statutory Responsibilities

- (a) Reportable disease, disease outbreak or epidemic
- (b) Isolation and quarantine orders
- (c) Review of immunization records and exclusions
- (d) Making immunizations available
- (e) The Indoor Clean Air Act
- (f) Access to family planning and birth control
- (g) License tourist accommodations
- (h) License pools and spas
- (i) Restaurant licensure and inspections
- (j) Regulation of public water systems
- (k) Enforcement of public health laws under ORS 431.150.
- (l) The duties specified in ORS 431.413.



<https://www.boardeffect.com/blog/common-501c3-rules-regulations/>



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OHA/Local Health



“Local public health authority” means:

- (a)** A county government;
- (b)** A health district; or
- (c)** An intergovernmental entity that provides public health services by an agreement



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Health Administrator Responsibilities

Duties of the administrator (ORS 431.418(3):

- Appoint staff
- Supervise the officers and employees appointed
- Update the LPHA (BoCC) information concerning the LPHA's activities,
- Submit an annual budget for the approval of the LPHA (BoCC)
- Act as the agent of OHA in enforcing state public health laws and rules
- Perform any other duty required by law.



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Health Officer Responsibilities



Duties of the Health Officer (ORS 431.045):

- Reviewing and signing standing orders and protocols, and
- Providing medical direction and consultation to Public Health programs
- Providing medical guidance during outbreaks.



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Barriers for Rural Public Health

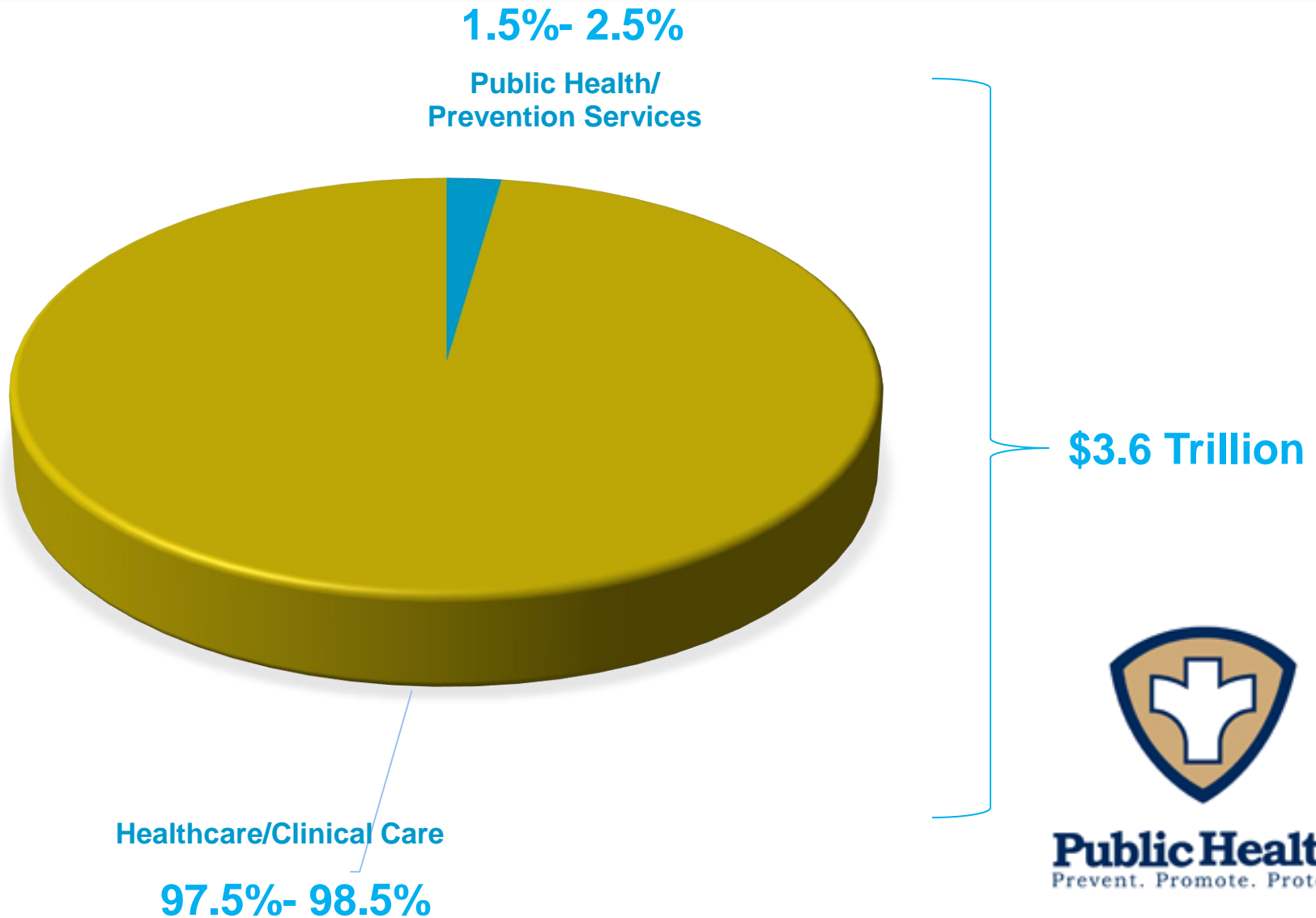


<https://medcitynews.com/2022/07/5-actionable-steps-health-care-professionals-can-take-right-now-to-remove-barriers-improve-patient-care/>

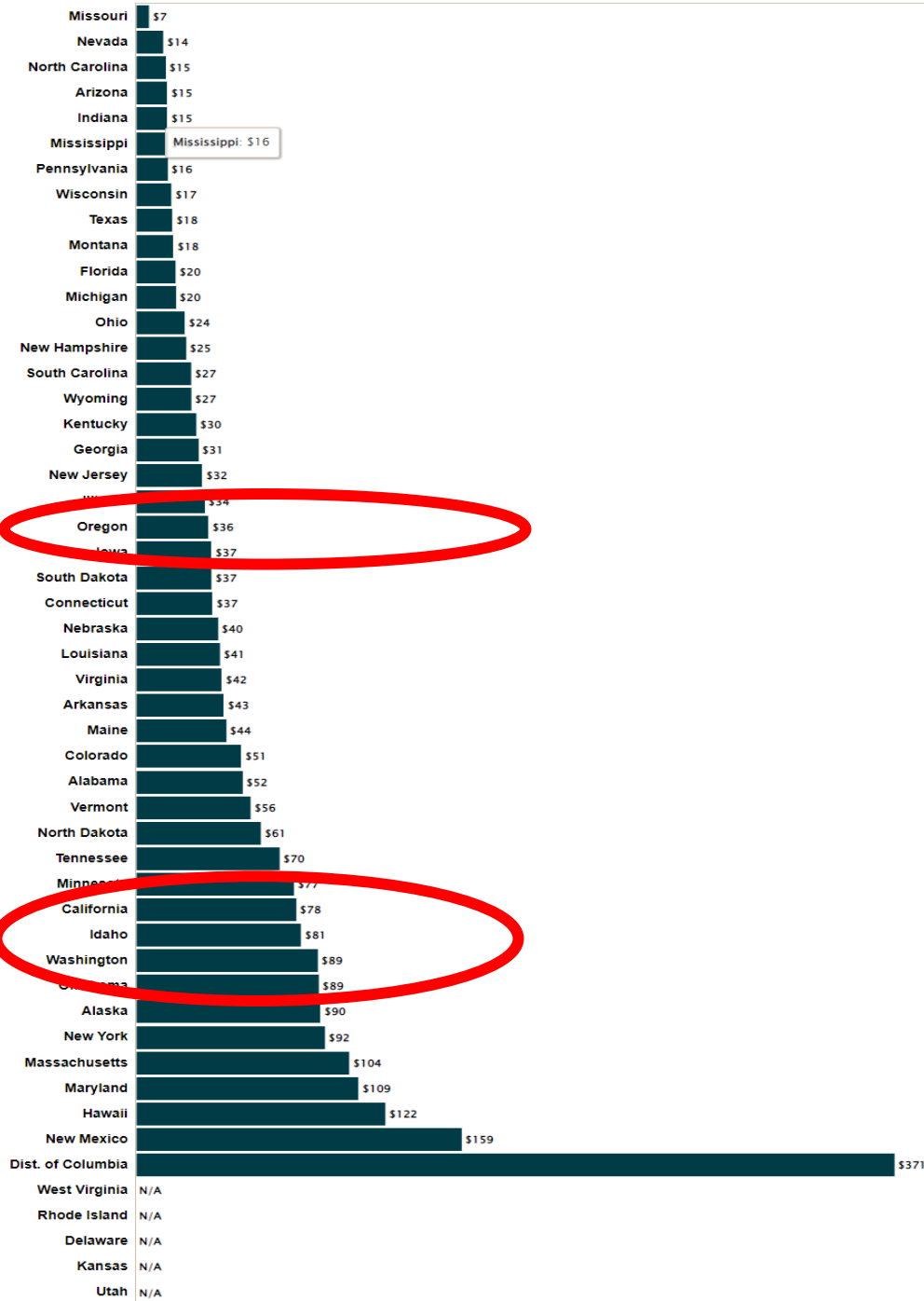


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Healthcare Expenditures

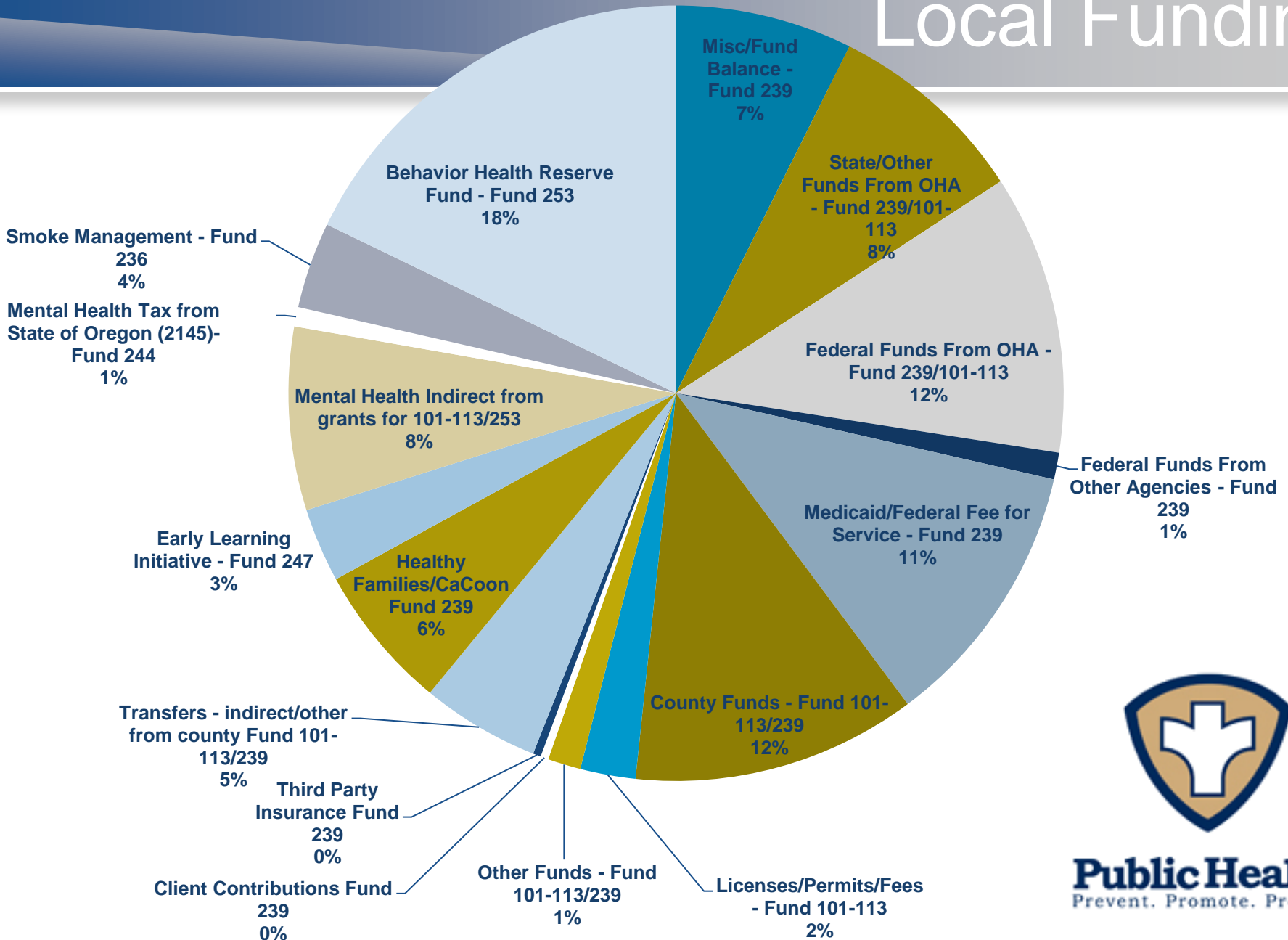


Funding by State



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Local Funding



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Identity Crisis in Rural Public Health



Clinical Services



Activism



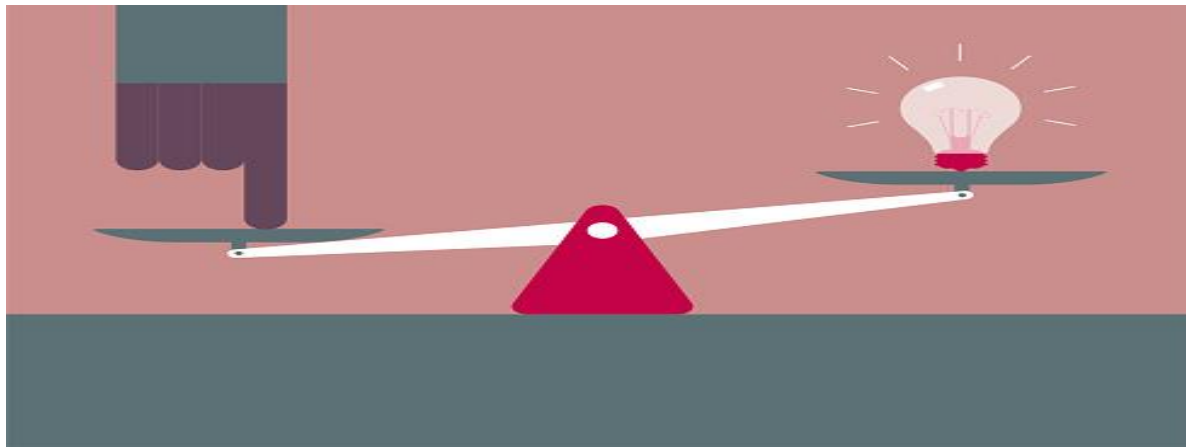
Policy Development

<https://pamplnmedia.com/pl9-news/545764-436896-abortion-rights-rally-proceeds-peacefully-in-portland>



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“Governmental” Public Health



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Opportunities for Rural Public Health

Dictionary

Definitions from [Oxford Languages](#) · [Learn more](#)

opportunities



op·por·tu·nity

/ˌɒpərˈt(y)ʊnədē/

noun

plural noun: **opportunities**

a set of circumstances that makes it possible to do something.

"we may see increased **opportunities** for export"

Similar:

chance

lucky chance

good time

golden opportunity

time

occasion



- a chance for employment or promotion.
"career opportunities in our New York headquarters"

Origin



late Middle English: from Old French *opportune*, from Latin *opportunitas*, from *opportunus* (see [opportune](#)).

Translate opportunities to

Spanish

1. oportunidades

Use over time for: opportunities



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Learn from the Past!

The Future of Public Health

INSTITUTE OF MEDICINE

<https://nap.nationalacademies.org/read/1091/chapter/1>

In 1988, the Institute of Medicine (IOM) report *The Future of Public Health* highlighted governmental public health infrastructure that was (and remains) in disarray.



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TRUST MEANS *Everything* !



Let Everybody Know!

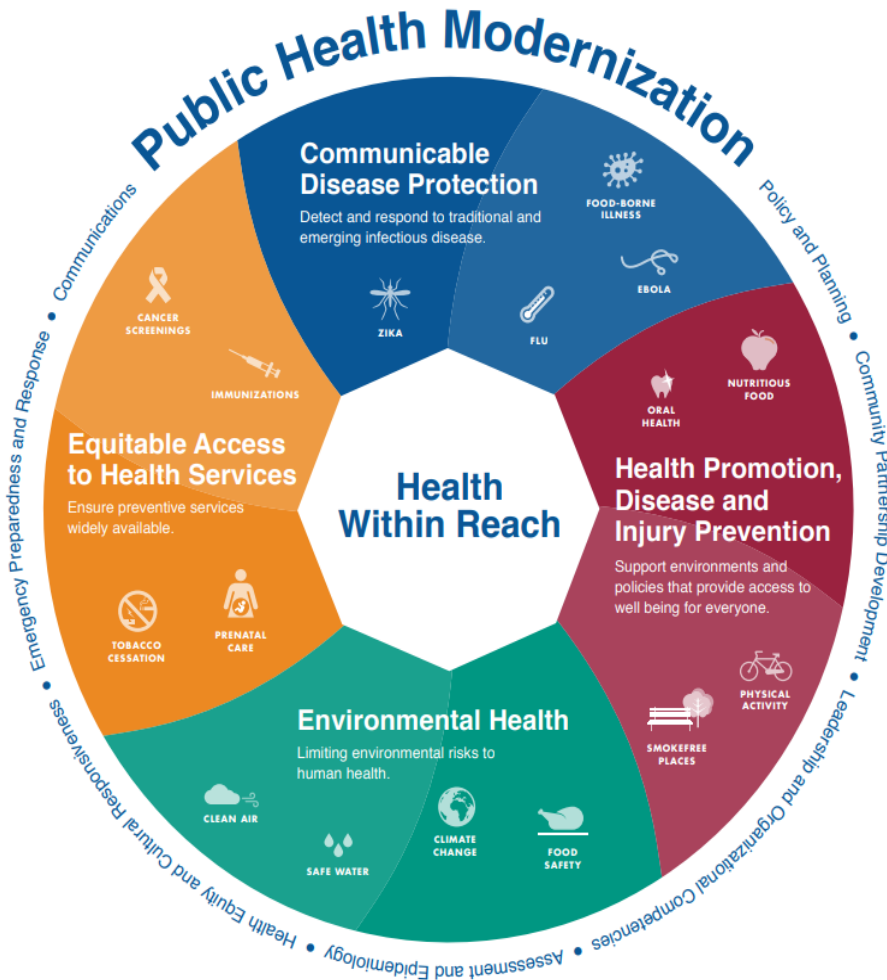


I AM HERE.



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Modernization



4 Foundational Programs:

- 1) Communicable disease control,
- 2) Prevention and health promotion,
- 3) Environmental health, and
- 4) Access to clinical preventive services

7 Foundational Capabilities:

- Leadership and organizational competencies
- Health equity and cultural responsiveness
- Community partnership development
- Emergency preparedness and response
- Assessment and epidemiology
- Policy and planning
- Communications



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*Advancing
public health
performance*

Public Health Accreditation Board



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Staff Engagement

WIC Staff Kudos!

Tami Kepa'a, WIC Coordinator, named as National WIC Association's Local Agency Representative for the Western Region (Alaska, Hawai'i, Idaho, Nevada, Oregon, Washington, Guam, American Samoa)

A2 madraspioneer.com 541-475-2275

NEWSUP FRONT

Kepa'a appointed to national board

JCPH employee to chair WIC Assoc. Western Region

Tami Kepa'a, Women, Infants, and Children coordinator for Jefferson County Public Health has been appointed to be the Oregon representative to the National WIC association and has been elected the chair of the Western region.

The National WIC Association is a national organization that focuses on providing tools and leadership to expand and sustain effective nutrition services for mothers and young children. They offer programming and support for expecting mothers and those with young children.

Kepa'a's role includes managing and interfacing with the western region and national level to address the region's issues.



TAMI KEPA'A

The chair is chosen by the other members, and Kepa'a was elected last Friday. She will represent the Western region which includes health services in Alaska, American Samoa, California, Guam, Hawaii, Idaho, the Mariana Islands, Nevada, Oregon and Washington.

"I am honored to participate in NWA as the Primary NWA Representative for Oregon and look forward to meeting the Western Region team," said Kepa'a.

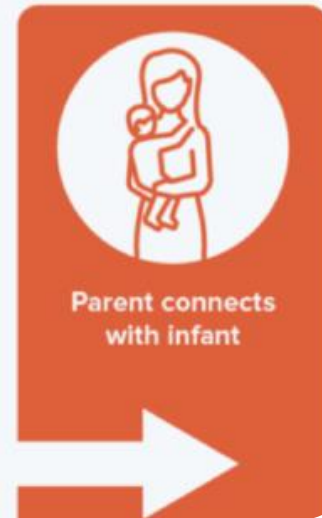
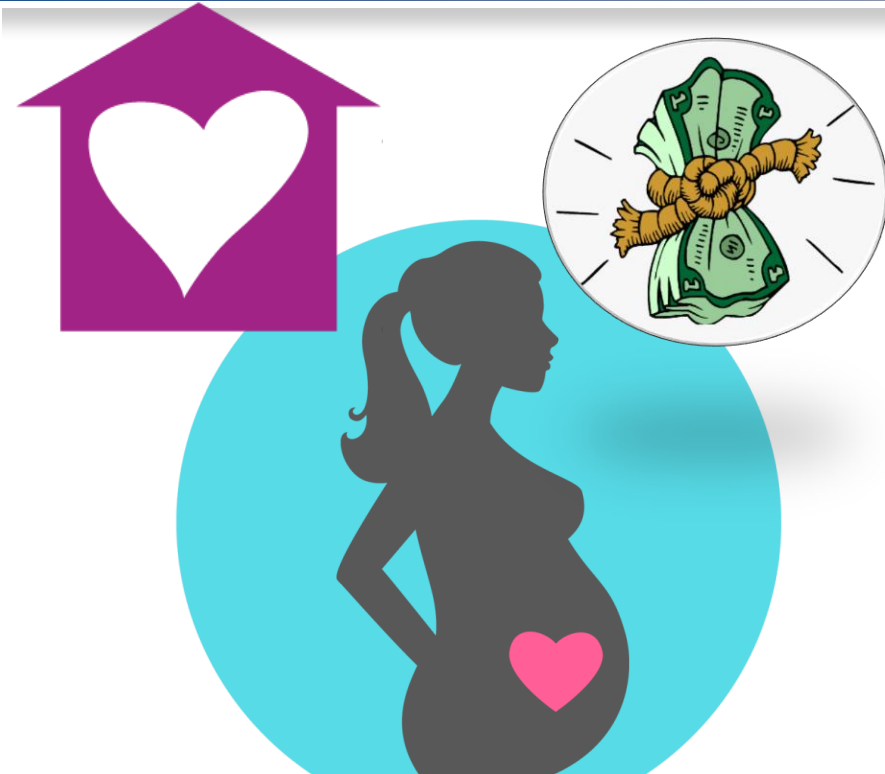
IF YOU
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2275

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Programs for Strong Starts



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Passions for Strong Starts

THE *Baby* AND THE Seed

A PRIMER ON GOOD PARENTING
A BOOK FOR THE ENTIRE FAMILY



LELAND “BUD” BEAMER, MD

Illustrations

Kirk Charlton

Portraits by Paul Lanquist



Dr. Leland “Bud” Beamer
Jefferson County Health Officer



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Data and Research

Research focus on Rural Public Health and not exclusively Rural Health.

Data systems that allow cross-sector sharing of real-time local data.



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Higher Education Partnerships



CENTRAL OREGON
community college
MADRAS CAMPUS



Oregon State University
Extension Service



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High School Internships



OHSU Knight Scholars Program

Youth Career Connects



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Engaging Youth in Public Health



Youth Advisory Council



The Youth Advisory/Teen Health Liaisons:

- ✓ Interacts with peers to inform them of relevant health concerns, inspire healthy decision-making, educating on regional health care service providers.
- ✓ Supporting public health staff during outreach, events, meeting trainings, or other department activities.
- ✓ Showing initiative in identifying new, or improving strategies for youth health promotion, prevention, and service introduction.

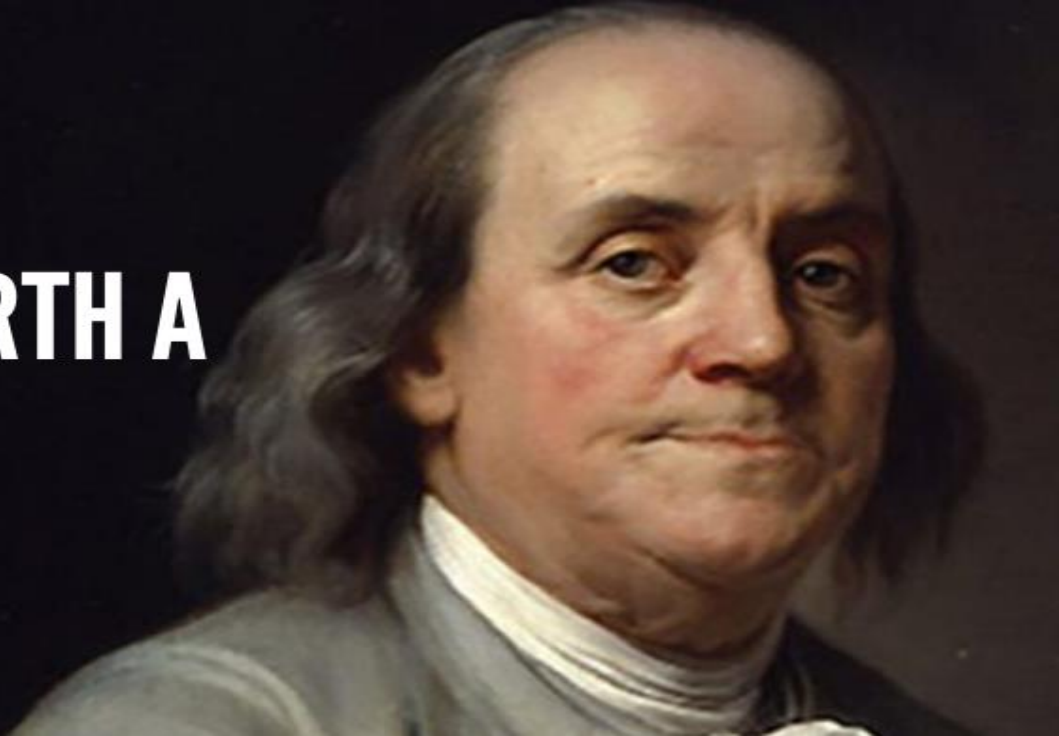


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Return on Investment

**AN OUNCE OF
PREVENTION IS WORTH A
POUND IN CURE**

Benjamin Franklin

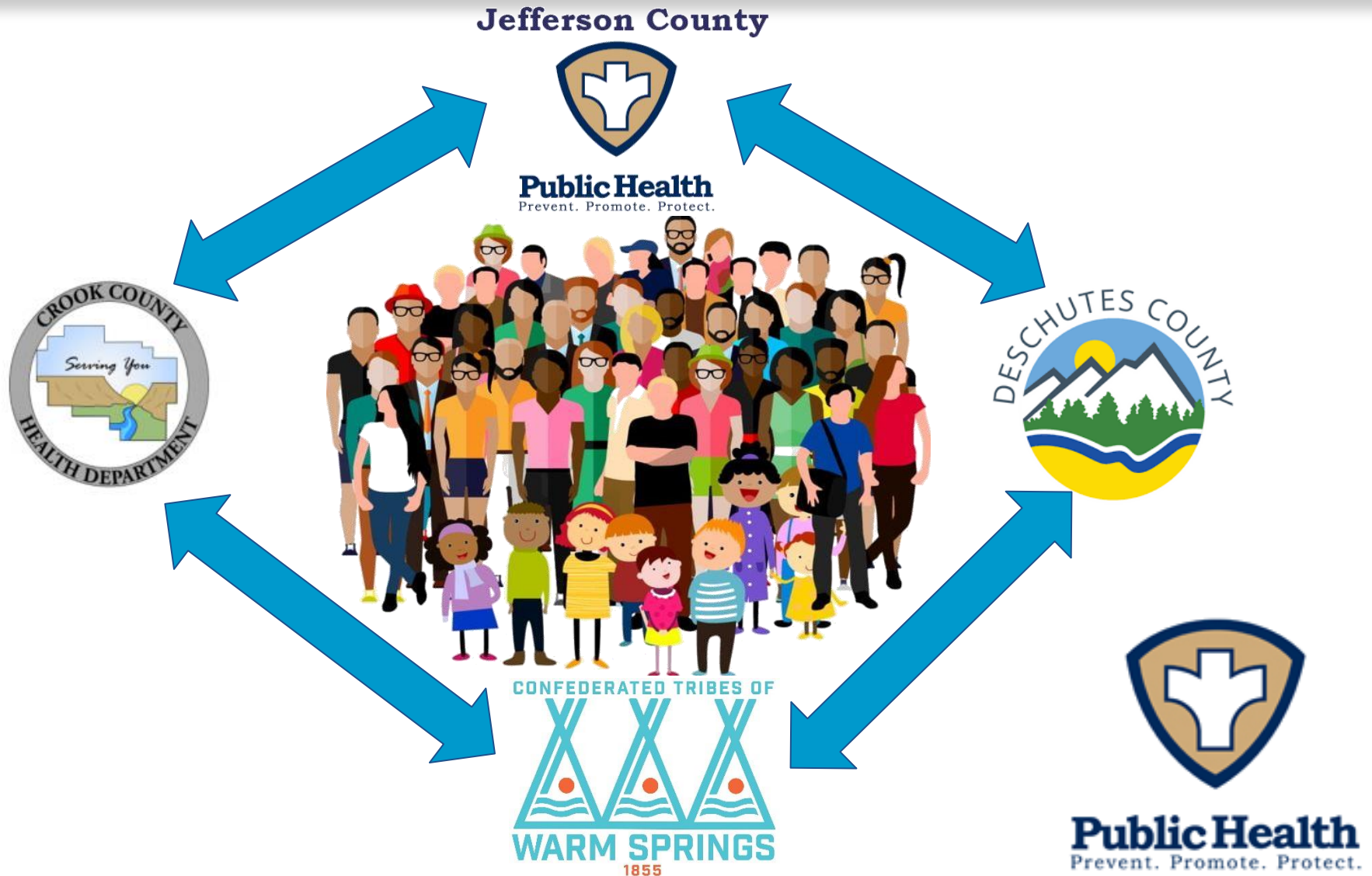


- ❑ 4.1 to 1 ratio for ROI at the local level
- ❑ 27.2 to 1 ratio at national level

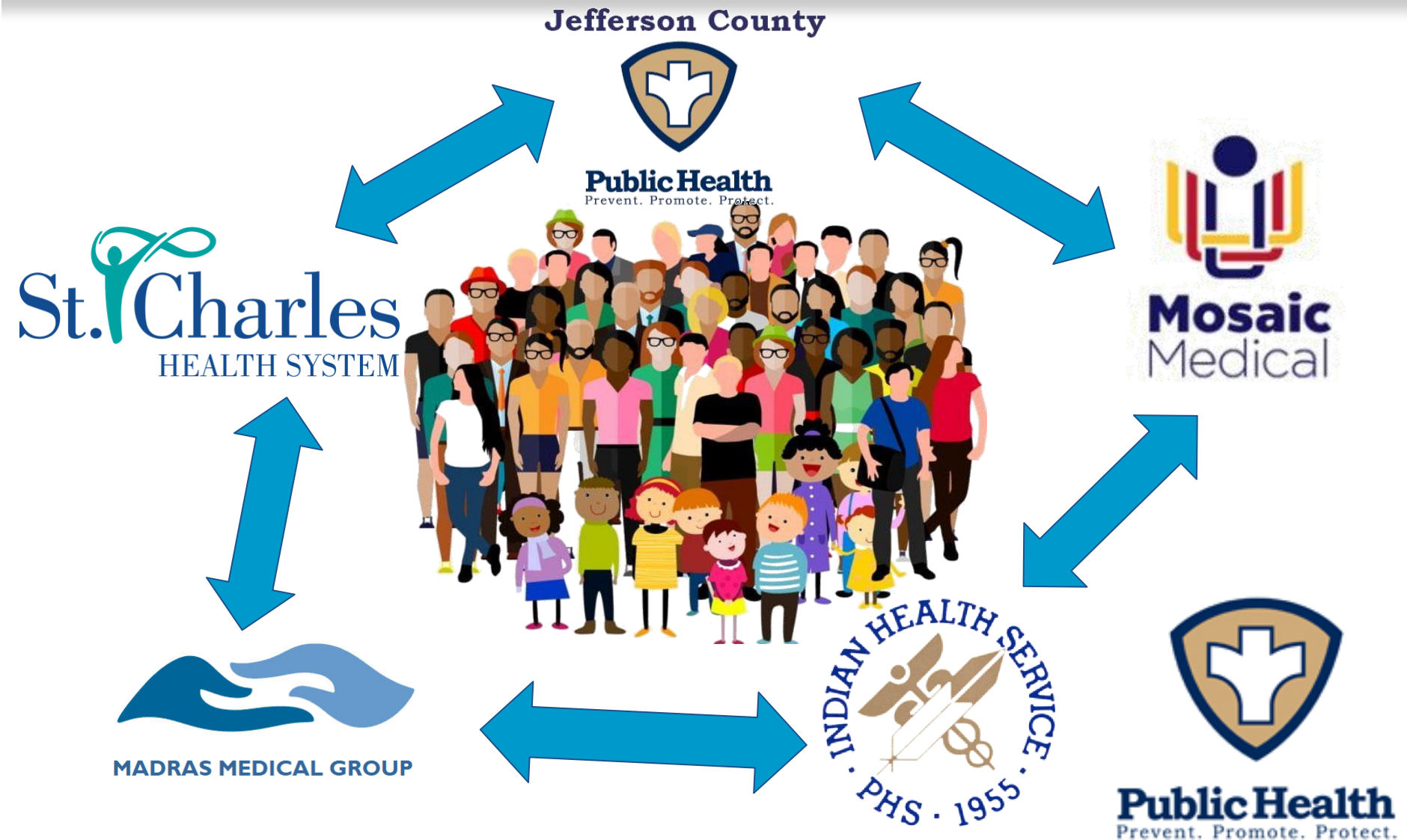


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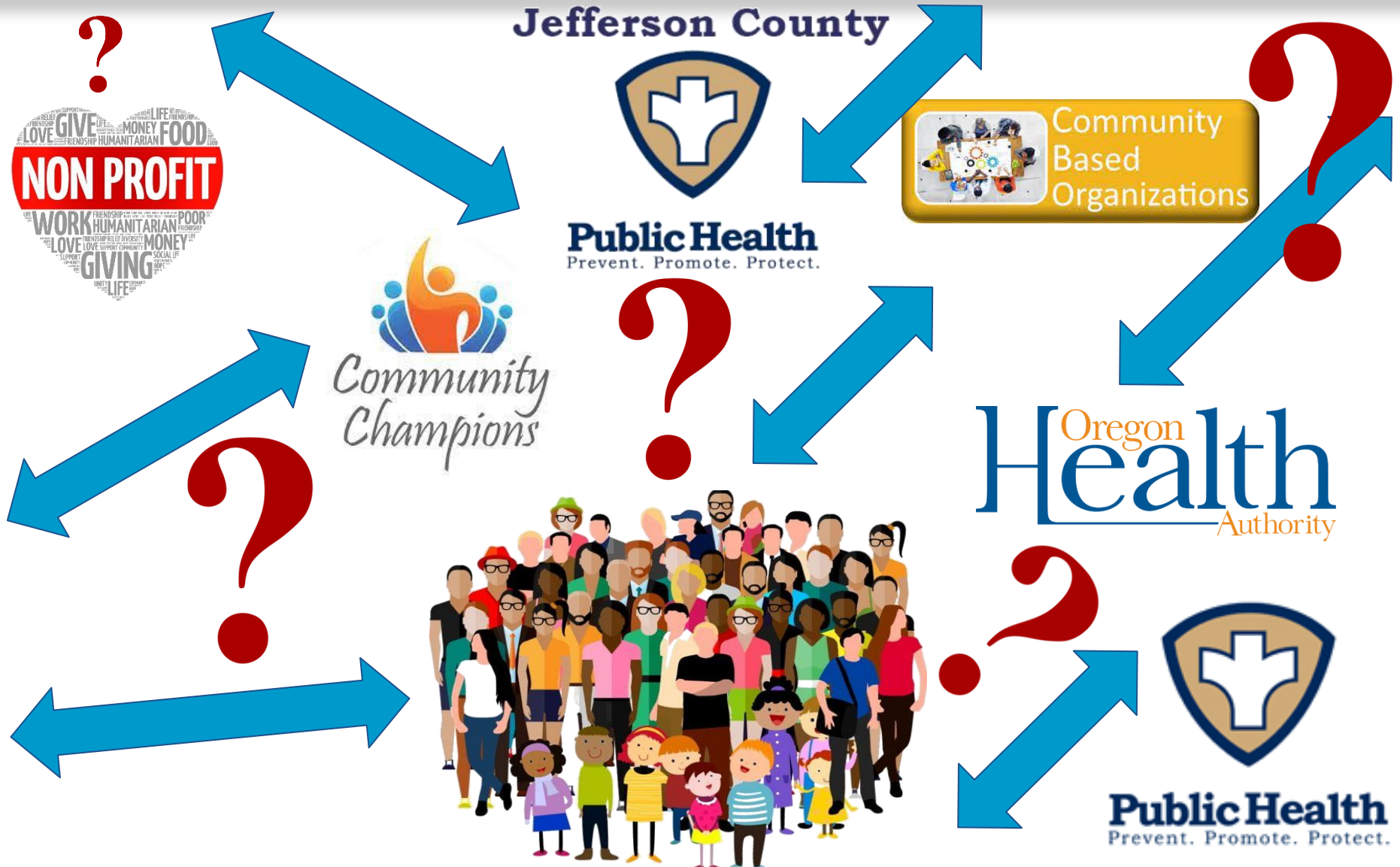
Shared Services



Shared Services



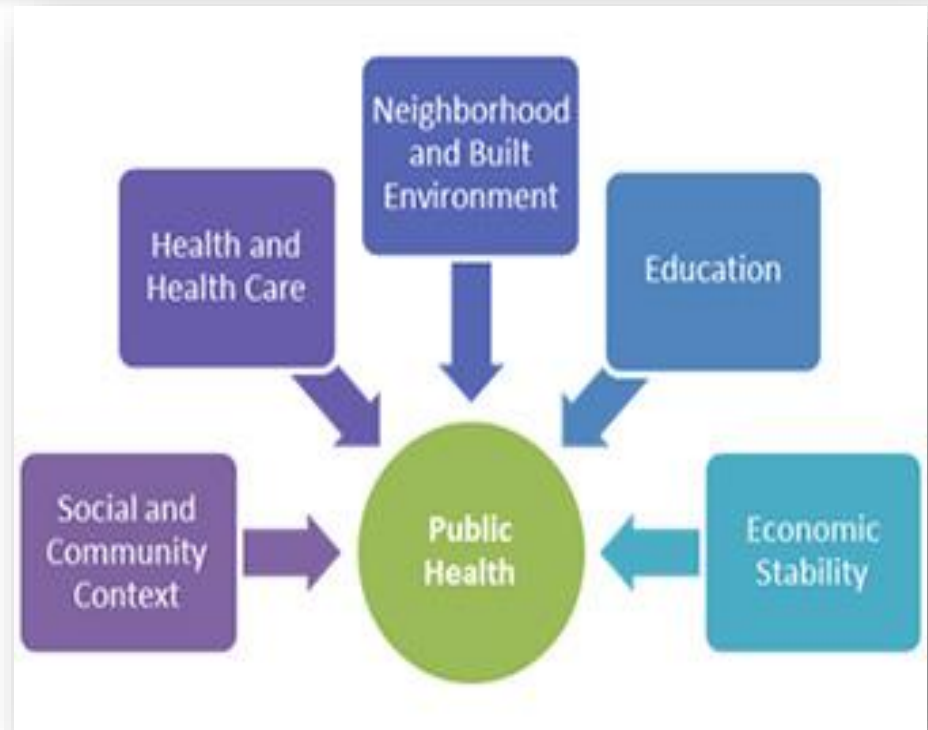
Shared Services



Public Health Partnerships

Collaboration with community partners to ensure that public health programs are effective.

- ✓ Schools, churches, businesses, nonprofits, and medical professionals are all partners who have a fundamental interest and role in maintaining a healthy community.
- ✓ Local Public Health serves at the core of coordinating these collaborations.
- ✓ Continued commitment from every level of government to support the mission of local public health.
- ✓ Strong support and coordination must be prioritized if local public health is to continue providing many of the programs and services that are needed in our community.



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Built for Partnerships



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Health and Wellness Campus

**Regional
Hospital System**

**Regional
FQHC**

**Public
Health**



**Award-Winning
Partnership!**



Warm Handoffs!

**No Wrong Door for
Health Care Services!**



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Public Health Partners are Everywhere!



WE WANT YOU!



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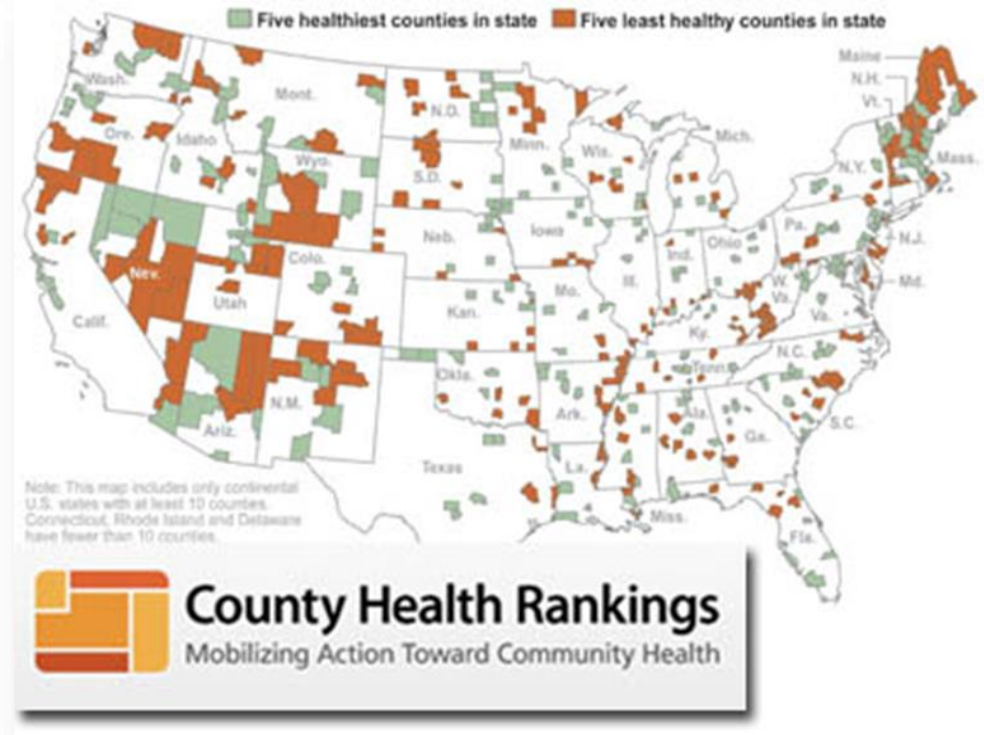
COOL STORY...

A cartoon illustration of Spider-Man in his classic red and blue suit. He is standing on a wooden balcony with a railing, shrugging his shoulders with a slightly exasperated or dismissive expression. His right hand is resting on the railing, and his left hand is held out with fingers spread. The background is a plain, light brown wall.

**BUT WHAT'S YOUR POINT
EXACTLY?**

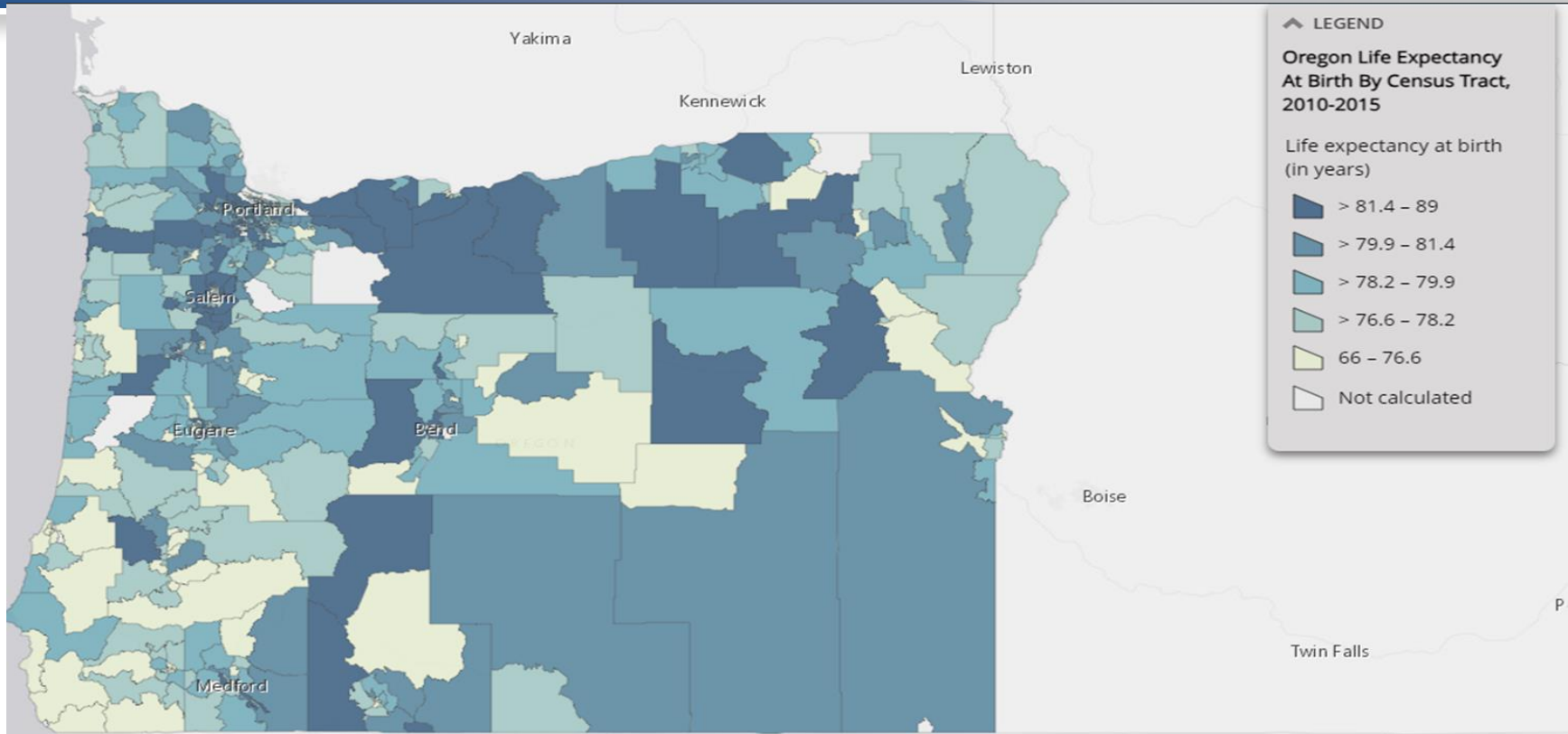
Geography is Health

- Where we live matters to our health
 - *Geography is destiny*
- One of the greatest disparities in the US is the variation of health between communities
- There has been little attention to these disparities... now is the time to change that!



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Zip Code as Health Determinant



- Zip codes are a better predictor of health outcomes than genetic code!
- Average life expectancies in certain communities can be 20–30 years shorter than those just miles away.
- Where you live affects how you live.
- It impacts whether you have access to healthy food, places to exercise or health services when needed.



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Rural Health Disparities: Access

An estimated **80% of rural America** is “medically underserved,” (AHA, 2023)



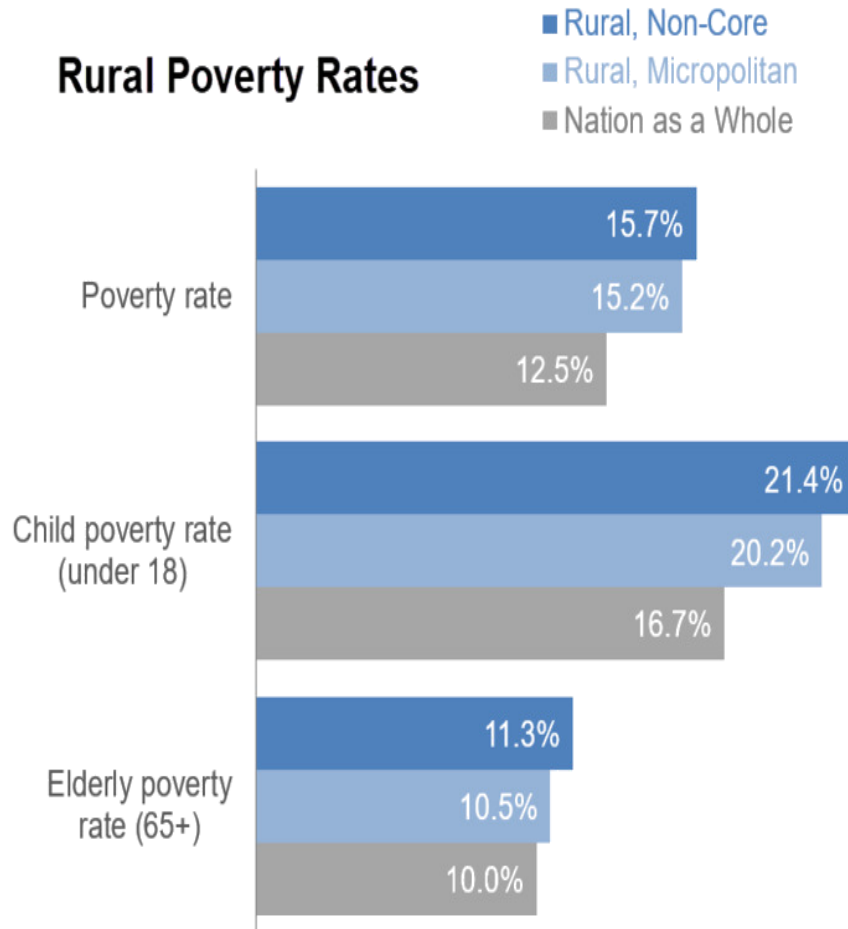
- Overall physical, social, and mental health status
- Disease prevention
- Detection, diagnosis, and treatment of illness
- Quality of life
- Avoiding preventable deaths
- Life expectancy



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Rural Health Disparities: Income

Rural Poverty Rates



Education Rates & Income

Annual Median Earnings, Age 25 and Older, by Education Level

	Rural	Nation as a Whole
All education levels	\$45,851	\$48,747
Less than high school graduate	\$30,984	\$29,706
High school graduate	\$38,363	\$36,931
Some college or associate's degree	\$44,151	\$43,988
Bachelor's degree	\$59,469	\$64,982
Graduate or professional degree	\$75,137	\$85,680

Source: Table [B20004](#), 2018-2022 American Community Survey 5-Year Estimates



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Rural Health Disparities: Insurance



- Lowest rate of private insurance coverage,
- Highest rates of public coverage, and
- Highest uninsured status.



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Rural Health Disparities: Behaviors

Prevalence of Health-Related Behaviors Among Adults, 2013

Behavior	Large metro center	Large fringe metro	Medium metro	Small metro	Micropolitan	Noncore
Current nonsmoking	83.9%	82.3%	80.5%	77.5%	76.5%	74.9%
Non- or moderate drinking	61.1%	59.9%	63.3%	64.3%	67.3%	68.6%
Maintaining normal body weight	36.5%	35.3%	33.3%	32.9%	30.6%	28.9%
Meeting aerobic activity recommendations	51.4%	51.4%	51.1%	50.7%	49.2%	46.7%
Sufficient sleep	62.4%	61.7%	62.4%	62.1%	61.1%	61.5%
Reported 4 or 5 of these health-related behaviors	31.7%	30.2%	30.5%	29.5%	28.8%	27.0%

Source: [Health-Related Behaviors by Urban-Rural County Classification — United States, 2013](#), CDC Morbidity and Mortality Weekly Report

Rural areas are recognized as a health disparity population because the prevalence of disease and rate of premature death are higher than for the overall population of the United States.



Rural Health

15% OF ALL AMERICANS LIVE IN RURAL AREAS

Rural Americans are at **greater risk of death** from 5 leading causes than urban Americans

- Heart Disease
- Cancer
- Unintentional Injury
- Chronic Lower Respiratory Disease
- Stroke

PROTECT YOURSELF

Be physically active | Eat right | Don't smoke
Wear your seat belt | See your doctor regularly



The percentages of deaths that were potentially preventable were higher in rural areas than in urban areas.

Residents of rural areas tend to be older and sicker.

Residents of rural areas have higher rates of cigarette smoking, high blood pressure, and obesity.



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Rural Health Behaviors

**15% OF ALL AMERICANS
LIVE IN RURAL AREAS**

ONLY 1 IN 4

rural adults practice at least 4 of 5
health-related behaviors

- Not smoking
- Maintaining normal body weight
- Being active
- Nondrinking or moderate drinking
- Sufficient sleep

**PRACTICE HEALTH-RELATED BEHAVIORS THAT
CAN PREVENT CHRONIC DISEASE.**



Number of Health Behaviors

0= 1.6%

1= 10.3%

2= 26.1%

3= 35.0%


4= 22.0%

5= 5.0%



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CDC- Office of Rural Health


 Centers for Disease Control and Prevention
CDC 24/7: Saving Lives. Protecting People™

Español | Other Languages

Search


Rural Health

CDC




Print

Drug Overdose in Rural America




Drug overdoses are the leading cause of injury death in the United States, resulting in approximately 52,000 deaths in 2015.

Suicide in Rural America



In the United States, suicide was responsible for nearly 46,000 deaths in 2020, which is approximately one suicide every 11 minutes.


Leading Causes of Death in Rural America





Rural Americans are at greater risk of death from 5 leading causes than urban Americans.


A-Z Health Topics Impacting Rural Americans


Antibiotic Use	Drug Overdose
Arthritis	Health Behaviors
Cancer	Motor Vehicle Safety
Child Health	Suicide
Chronic Obstructive Pulmonary Disease (COPD)	Seat belt Use
Death (Leading Causes)	Vaccination in Rural Communities
Diabetes	Zoonotic Diseases

 Success Stories





 Featured Resources

 Science on Rural Health








 About Rural Health

 Rural Emergency Preparedness and Response Toolkit

Last Reviewed: July 6, 2023
Source: Public Health Infrastructure Center

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To lead CDC's rural public health strategy and coordinate across agency programs and with partners to improve the health and well-being of rural communities throughout the U.S.



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Place Matters

Place Matters

Places ▾ Blog About Us 🔍

Together, we can make Oregon a healthier place for all

Everyone needs certain basic things to be healthy

Healthy food

Space to move and play

A safe place to sleep

Today in Oregon, these fundamental parts of a healthy life are out of reach for too many people. At the same time, we are surrounded by unhealthy products—from e-cigarettes and tobacco to alcohol and sugary drinks—and nonstop marketing messages that urge us to use them.

As a result, some groups of Oregonians live sicker and die younger than others. They experience more chronic diseases, like cancer, heart disease, diabetes and addiction.

It's about more than personal choices.

The causes of these health disparities run deeper than personal choices. These differences are driven by inequities that are woven into every place and part of our lives.

SHARE

Where we Live

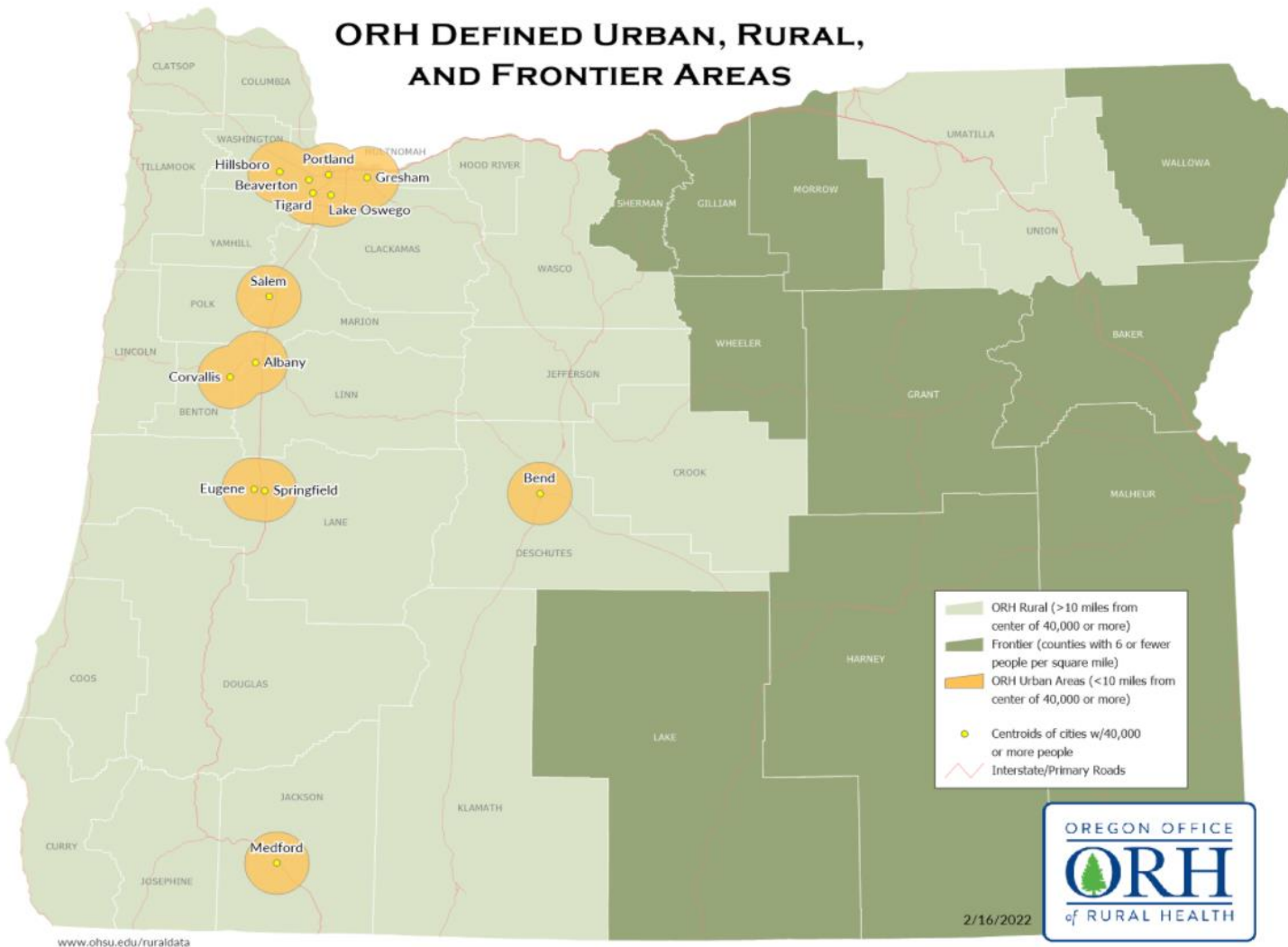
We live in homes, neighborhoods and communities. We also live in our own skin, each of us a unique mix of attributes: Gender, age, ability, race, ethnicity, sexual orientation, among others. Based on these factors, society may treat us differently—making it easier for some people to live a healthy life and harder for others.



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Rural

ORH DEFINED URBAN, RURAL, AND FRONTIER AREAS

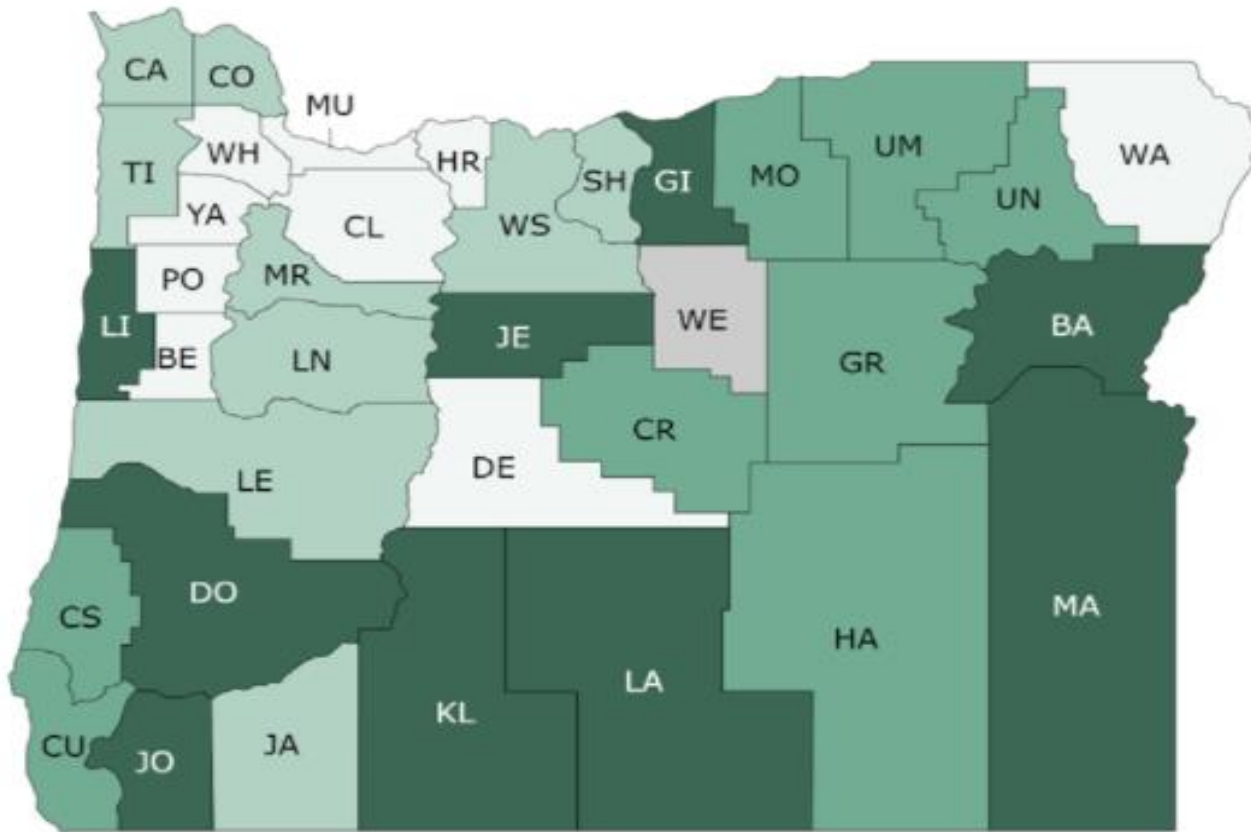


Rural
Geographic areas in Oregon that are ten or more miles from a population center of 40,000 people or more.



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Rural Health Outcomes

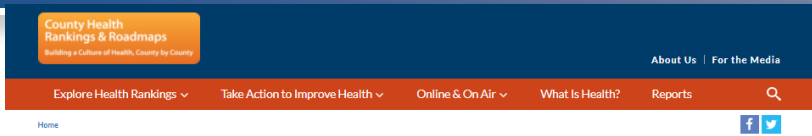


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Health Outcome Ranks

Rank Range	Color
1 to 9	Light Green
10 to 18	Medium Green
19 to 26	Dark Green
27 to 35	Very Dark Green

2024 County Health Rankings



The County Health Rankings & Roadmaps program is a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute



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Oregon 2022 Select another state

The 2022 Rankings include deaths attributable to COVID-19 from 2020. See our FAQs for more information on COVID-specific data.

Overview Rankings Measures Downloads Compare Counties Select a county Print Help Español

Back To Map

HEALTH OUTCOMES
OVERALL RANK

Why is my rank hidden?

Hide Rankings

Rank County

31 Baker (BA)
1 Benton (BE)
4 Clackamas (CL)
13 Clatsop (CA)
11 Columbia (CO)
21 Coos (CS)
20 Crook (CR)
19 Curry (CU)
5 Deschutes (DE)
30 Douglas (DO)
29 Gilliam (GI)
26 Grant (GR)
23 Harney (HA)
3 Hood River (HR)
15 Jackson (JA)
34 Jefferson (JE)
32 Josephine (JO)
33 Klamath (KL)
35 Lake (LA)
12 Lane (LE)
27 Lincoln (LI)
16 Linn (LN)
28 Malheur (MA)
10 Marion (MR)
25 Morrow (MO)
6 Multnomah (MU)
7 Polk (PO)
18 Sherman (SH)
14 Tillamook (TI)
22 Umatilla (UM)
24 Union (UN)
9 Wallowa (WA)
17 Wasco (WS)
2 Washington (WH)
NR Wheeler (WE)
8 Yamhill (YA)

Jefferson (JE)

Least Healthy 0% 25% 50% 75% 100% Healthiest

Least Healthy 0% 25% 50% 75% 100% Healthiest

Least Healthy 0% 25% 50% 75% 100% Healthiest

Least Healthy 0% 25% 50% 75% 100% Healthiest

Least Healthy 0% 25% 50% 75% 100% Healthiest

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Least Healthy 0% 25% 50% 75% 100% Healthiest

Health Outcomes

Jefferson (JE) is ranked among the least healthy counties in Oregon (Lowest 0%-25%)

Health Factors

Jefferson (JE) is ranked among the least healthy counties in Oregon (Lowest 0%-25%)

Download Oregon Rankings Data

Show areas to explore Show areas of strength

County Demographics

Jefferson (JE) County Trend Error Margin Top U.S. Performers Oregon

Health Outcomes

Length of Life

Premature death 10,700 9,100-12,400 5,600 6,100

Quality of Life

Poor or fair health 22% 20-25% 15% 17%

Poor physical health days 4.6 4.3-4.8 3.4 3.9

Poor mental health days 4.9 4.7-5.1 4.0 4.6

Low birthweight 7% 6-9% 6% 7%

Additional Health Outcomes (not included in overall ranking)

Health Factors

Health Behaviors

Adult smoking 19% 17-20% 15% 15%

Adult obesity 33% 32-34% 30% 29%

Food environment index 7.7 8.8 8.1

Physical inactivity 29% 27-32% 23% 24%

Access to exercise opportunities 49% 86% 84%

Excessive drinking 20% 19-20% 15% 21%

Alcohol-impaired driving deaths 31% 22-39% 10% 28%

Sexually transmitted infections 669.2 161.8 457.1

Teen births 31 26-36 11 15

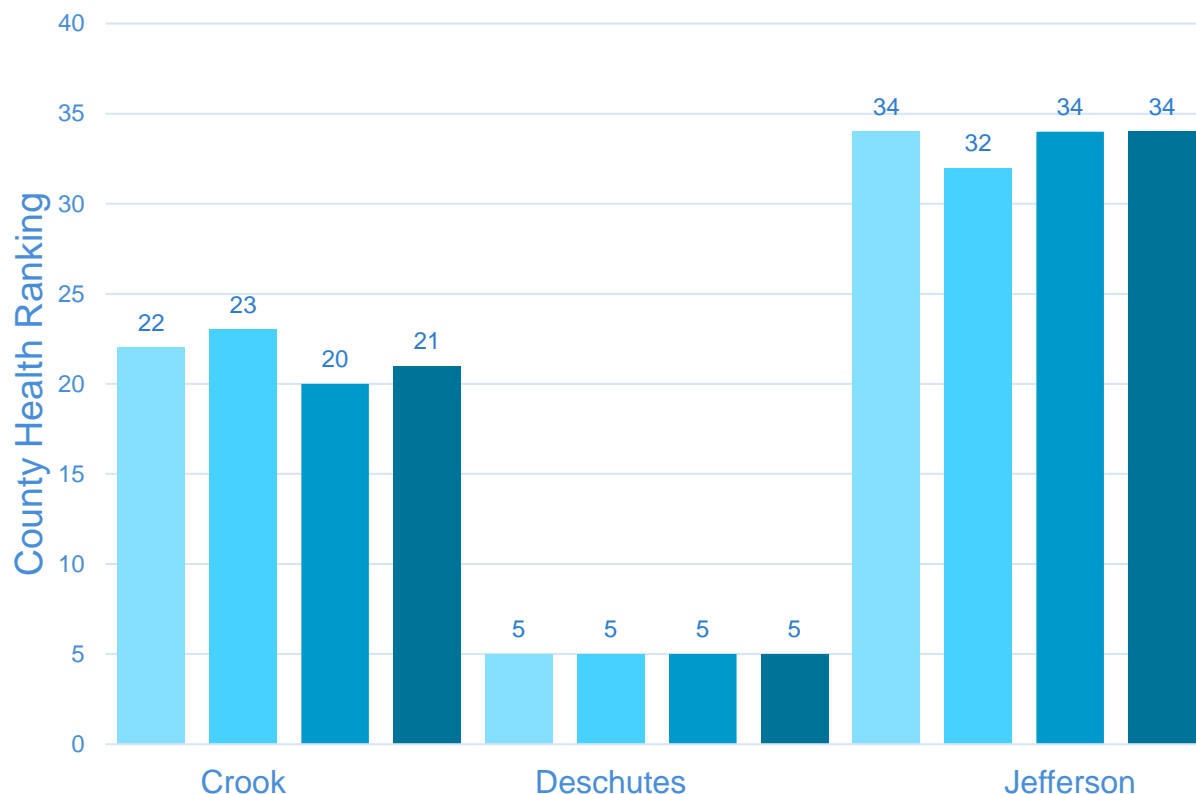
Additional Health Behaviors (not included in overall ranking)

Clinical Care

Uninsured 12% 11-14% 6% 9%

Español

Health Outcomes 2020-2024



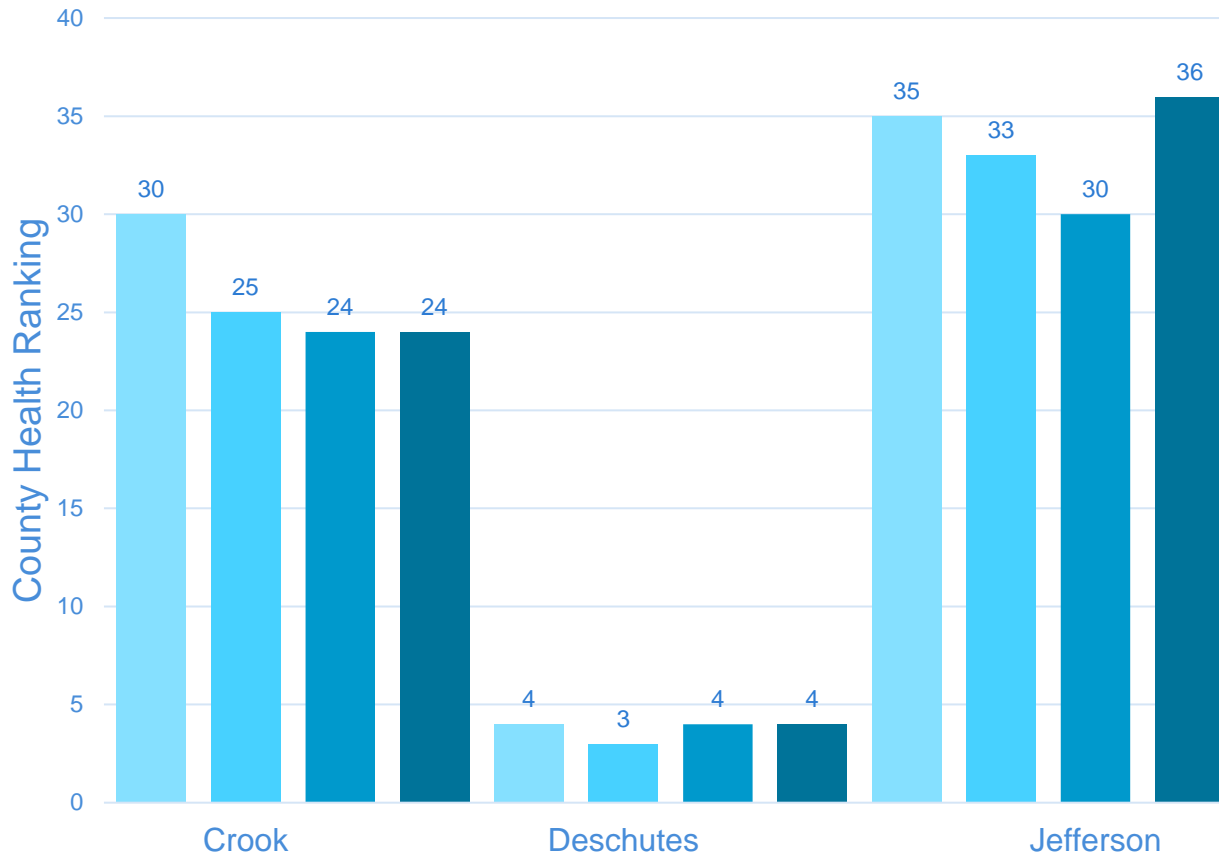
- Physical and mental well-being of residents that represent the length of life and quality of life.

- A snapshot of health status today.



Health Factors

Health Factors 2020-2024



County Health Rankings & Roadmaps

Building a Culture of Health, County by County

A Robert Wood Johnson Foundation program

- The things we can modify to improve the length and quality of life.
- What our health status looks like in the future.



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Patient to Provider Ratios

County Health Rankings & Roadmaps

Building a Culture of Health, County by County

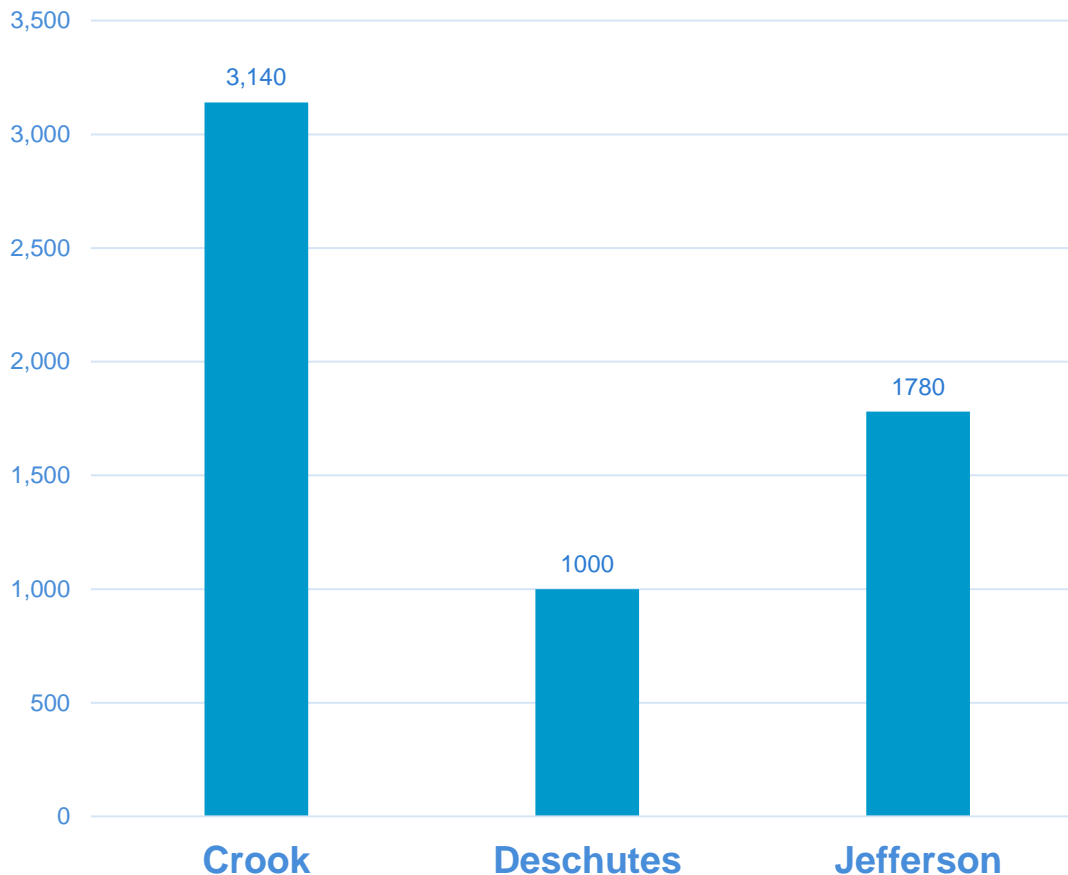
A Robert Wood Johnson Foundation program

- Oregon Average= 1,060:1
- US Tops= 1,010:1
- 2023 Data
 - Crook= 3,140:1
 - Deschutes= 100:1
 - Jefferson= 1,780:1



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Patient to Provider Ratios



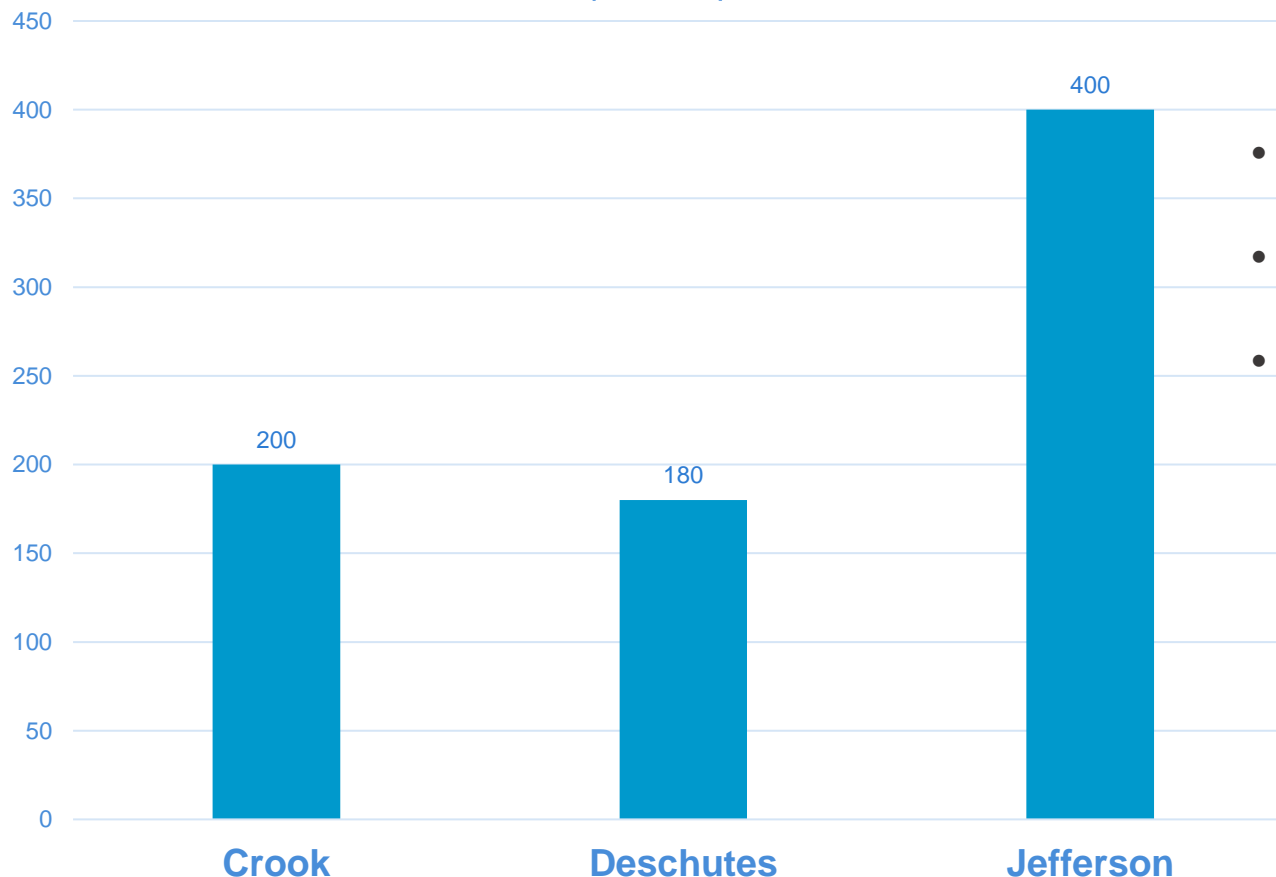
Patient to Mental Provider Ratios

County Health Rankings & Roadmaps

Building a Culture of Health, County by County

A Robert Wood Johnson Foundation program

Patient to Mental Health Provider Ratios (2023)

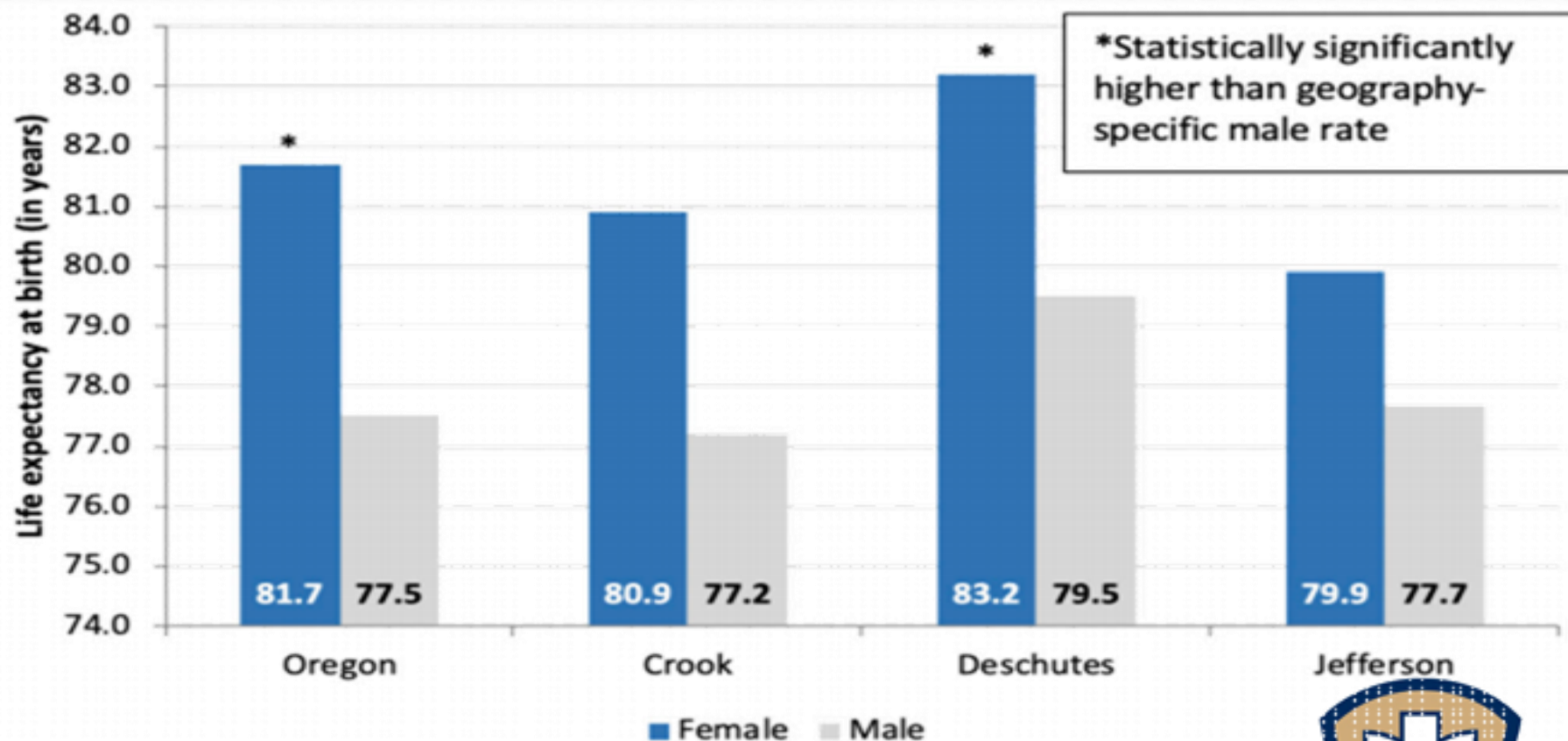


- Oregon Considered 2nd best in US
- Oregon Average= 190:1
- 2023 Data
 - Benton County= 80:1
 - Gilliam County= 670:1



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Life Expectancy



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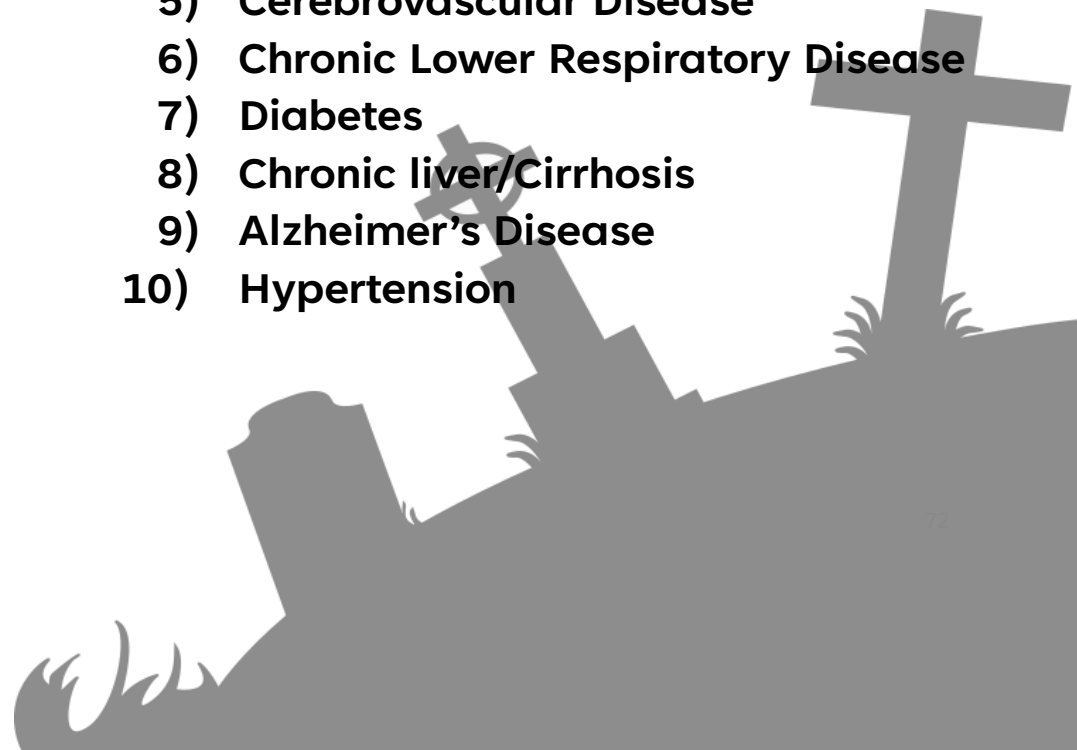
THE LEADING CAUSES OF DEATH

Oregon

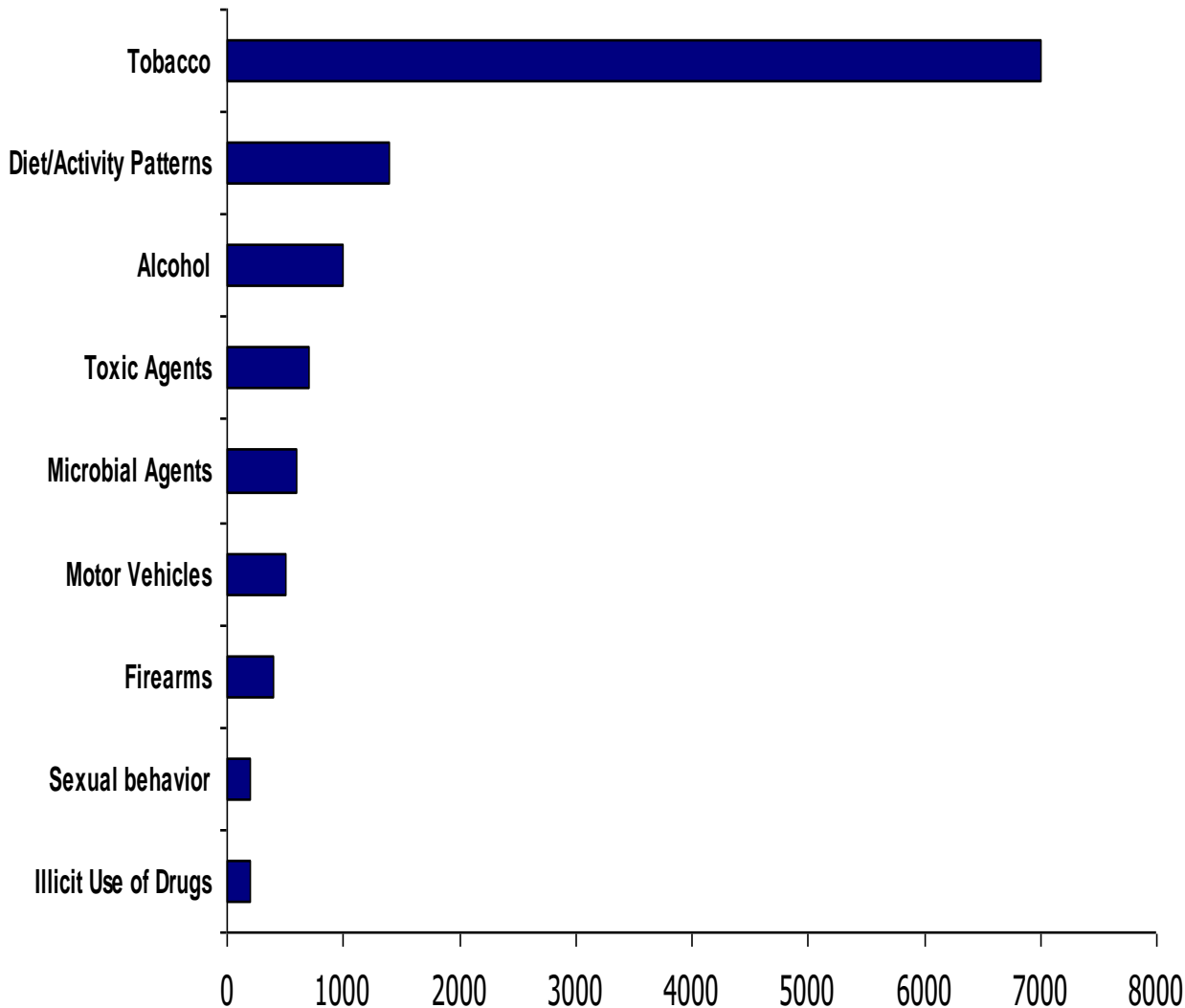
1. Cancer
2. Heart Disease
3. COVID-19
4. Chronic Lower Respiratory Disease
5. Cerebrovascular Disease
6. Unintentional Injuries
7. Alzheimer's Disease
8. Diabetes
9. Alcohol Related
10. Suicide

Jefferson County

- 1) Cancer
- 2) Heart Disease
- 3) Unintentional Injuries
- 4) COVID-19
- 5) Cerebrovascular Disease
- 6) Chronic Lower Respiratory Disease
- 7) Diabetes
- 8) Chronic liver/Cirrhosis
- 9) Alzheimer's Disease
- 10) Hypertension



WHAT'S REALLY KILLING OREGON RESIDENTS?

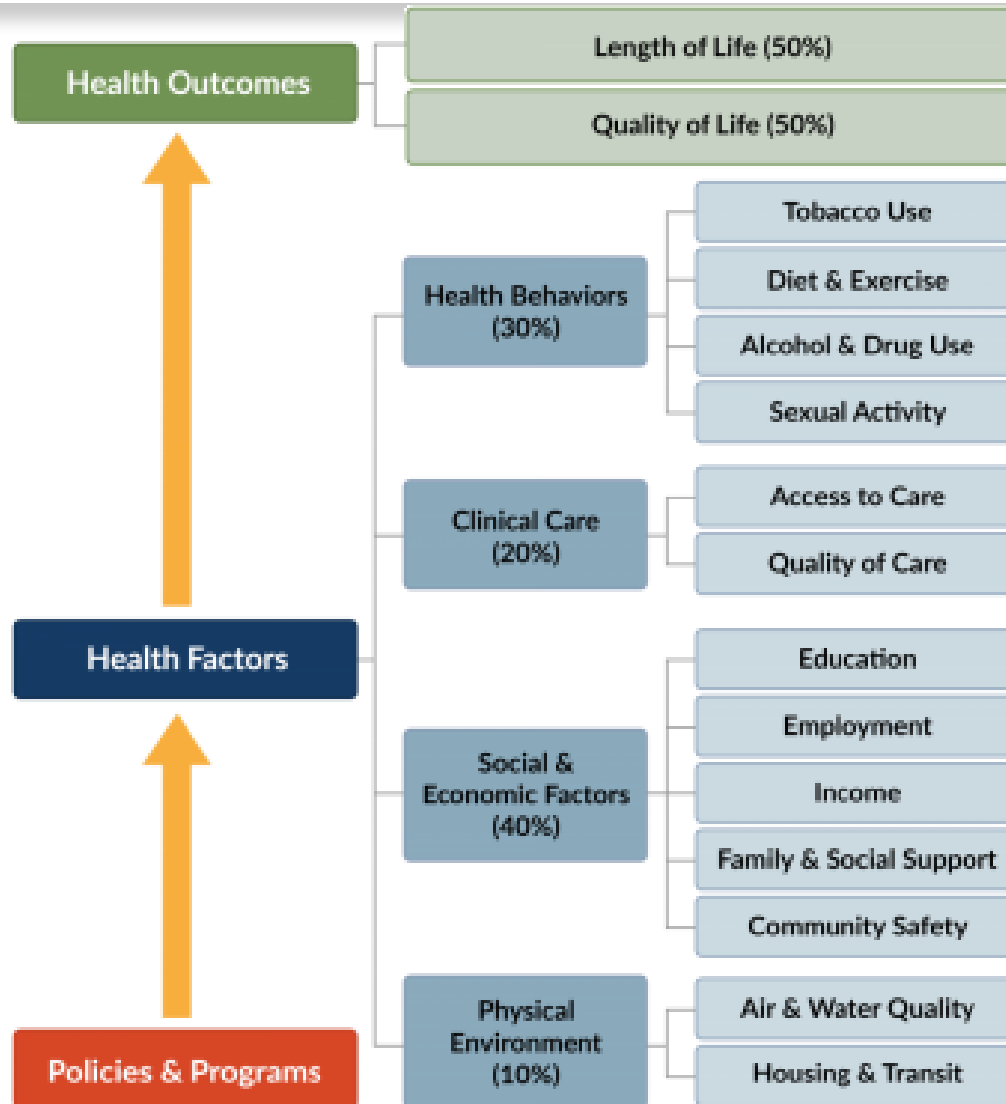


40% of deaths were directly attributable to behavioral causes



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Public Health & Health Outcomes



Rural Public Health
Can Support Efforts
That Impact Local
Health Outcomes



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Rural Public Health Areas to Explore

Health Behaviors



Rural Public Health Areas to Explore

Social & Economic Factors



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Rural Public Health Areas to Explore

Physical Environment



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Rural Public Health Areas to Explore

Clinical Care

“A public health approach that fosters ongoing collaboration between clinical and public health professionals in the face of complex health threats will have greater impact than the sum of the parts.” Choi, et al., 2022



**FAMILY
CONNECTS**
OREGON
Central Oregon



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"Health care matters
to all of us some of
the time, public
health matters to all
of us all of the time."

(Former) Surgeon General C. Everett Koop



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Objectives Met??

- ✓ Level Settings
- ✓ Public Health 101
- ✓ Oregon Public Health System
- ✓ Barriers for Rural Public Health
- ✓ Opportunities for Rural Public Health
- ✓ Rural Health Outcomes and Public Health



CONTACT



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Jefferson County Public Health

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Website: www.JeffCo.net/PublicHealth

Facebook: [JeffersonCountyOrPublicHealth](https://www.facebook.com/JeffersonCountyOrPublicHealth)



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Morbidity and Mortality Weekly Report (MMWR)

Preventable Premature Deaths from the Five Leading Causes of Death in Nonmetropolitan and Metropolitan Counties, United States, 2010–2022

Surveillance Summaries / May 2, 2024 / 73(2);1–11

Abstract

Problem/Condition: A 2019 report quantified the higher percentage of potentially excess (preventable) deaths in U.S. nonmetropolitan areas compared with metropolitan areas during 2010–2017. In that report, CDC compared national, regional, and state estimates of preventable premature deaths from the five leading causes of death in nonmetropolitan and metropolitan counties during 2010–2017. This report provides estimates of preventable premature deaths for additional years (2010–2022).

Period Covered: 2010–2022.

Description of System: Mortality data for U.S. residents from the National Vital Statistics System were used to calculate preventable premature deaths from the five leading causes of death among persons aged <80 years. CDC's National Center for Health Statistics urban-rural classification scheme for counties was used to categorize the deaths according to the urban-rural county classification level of the decedent's county of residence (1: large central metropolitan [most urban], 2: large fringe metropolitan, 3: medium metropolitan, 4: small metropolitan, 5: micropolitan, and 6: noncore [most rural]). Preventable premature deaths were defined as deaths among persons aged <80 years that exceeded the number expected if the death rates for each cause in all states were equivalent to those in the benchmark states (i.e., the three states with the lowest rates). Preventable premature deaths were calculated separately for the six urban-rural county categories nationally, the 10 U.S. Department of Health and Human Services public health regions, and the 50 states and the District of Columbia.

Results: During 2010–2022, the percentage of preventable premature deaths among persons aged <80 years in the United States increased for unintentional injury (e.g., unintentional poisoning including drug overdose, unintentional motor vehicle traffic crash, unintentional drowning, and unintentional fall) and stroke, decreased for cancer and chronic lower respiratory disease (CLRD), and remained stable for heart disease. The percentages of preventable premature deaths from the five leading causes of death were higher in rural counties in all years during 2010–2022. When assessed by the six urban-rural county classifications, percentages of preventable premature deaths in the most rural counties (noncore) were consistently higher than in the most urban counties (large central metropolitan and fringe metropolitan) for the five leading causes of death during the study period.


During 2010–2022, preventable premature deaths from heart disease increased most in noncore (+9.5%) and micropolitan counties (+9.1%) and decreased most in large central metropolitan counties (–10.2%). Preventable premature deaths from cancer decreased in all county categories, with the largest decreases in large central metropolitan and large fringe metropolitan counties (–100.0%; benchmark achieved in both county categories in 2019). In all county categories, preventable premature deaths from unintentional injury increased, with the largest increases occurring in large central metropolitan (+147.5%) and large fringe metropolitan (+97.5%) counties. Preventable premature deaths from CLRD decreased most in large central metropolitan counties where the benchmark was achieved in 2019 and increased slightly in noncore counties (+0.8%). In all county categories, preventable premature


deaths from stroke decreased from 2010 to 2013, remained constant from 2013 to 2019, and then increased in 2020 at the start of the COVID-19 pandemic. Percentages of preventable premature deaths varied across states by urban-rural county classification during 2010–2022.

Interpretation: During 2010–2022, nonmetropolitan counties had higher percentages of preventable premature deaths from the five leading causes of death than did metropolitan counties nationwide, across public health regions, and in most states. The gap between the most rural and most urban counties for preventable premature deaths increased during 2010–2022 for four causes of death (cancer, heart disease, CLRD, and stroke) and decreased for unintentional injury. Urban and suburban counties (large central metropolitan, large fringe metropolitan, medium metropolitan, and small metropolitan) experienced increases in preventable premature deaths from unintentional injury during 2010–2022, leading to a narrower gap between the already high (approximately 69% in 2022) percentage of preventable premature deaths in noncore and micropolitan counties. Sharp increases in preventable premature deaths from unintentional injury, heart disease, and stroke were observed in 2020, whereas preventable premature deaths from CLRD and cancer continued to decline. CLRD deaths decreased during 2017–2020 but increased in 2022. An increase in the percentage of preventable premature deaths for multiple leading causes of death was observed in 2020 and was likely associated with COVID-19–related conditions that contributed to increased mortality from heart disease and stroke.

Public Health Action: Routine tracking of preventable premature deaths based on urban-rural county classification might enable public health departments to identify and monitor geographic disparities in health outcomes. These disparities might be related to different levels of access to health care, social determinants of health, and other risk factors. Identifying areas with a high prevalence of potentially preventable mortality might be informative for interventions.

Related Materials

[Article PDF](#) 

[Rural reinvestment: A path forward to addressing geographic health inequities](#) 

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[Top](#)



 [View Larger](#)

Introduction

Premature deaths, all-cause mortality, and poor health outcomes are greater among residents of rural counties than of urban counties in the United States (1). In 2021, the all-cause age-adjusted death rate in the United States was 841.6 per 100,000 population. The gap in all-cause mortality between rural (nonmetropolitan) and urban (metropolitan) areas of the United States continues to widen. In 1999, the death rate in rural areas was 7% higher than in urban areas; by 2019, it was 20% higher (2). Describing premature mortality rates from the five leading causes of death (cancer, unintentional injury [e.g., unintentional poisoning including drug overdose, unintentional motor vehicle traffic crash, unintentional drowning, and unintentional fall], heart disease, stroke, and chronic lower respiratory disease [CLRD]) and related rural disparities might help guide public health messaging and interventions.

The risk for premature death is associated with modifiable factors that vary by disease (3). Four of the five leading risk factors for premature death are more prevalent in rural areas of the United States: using tobacco, obesity, physical inactivity, and drinking alcohol or drinking in excess (4,5). Extensive literature on social determinants of health has established the importance of community context in shaping all aspects of health (6). Structural factors (e.g., lower socioeconomic status, limited access to health care professionals, and limited job opportunities) increase the risk for premature death among rural residents (7).

Multiple factors influence the rural-urban gap in preventable premature deaths. Because each of the five leading causes of death is age related, these conditions are more prevalent in rural areas of the United States where residents typically are older than their urban counterparts. Working-age adults might leave rural areas to seek better economic opportunities elsewhere (8), and older persons might be more likely to retire in rural areas (9). However, the population's age structure alone does not explain the disparity in mortality. Instead, differences in social circumstances, socioeconomic characteristics, health-related behaviors, and access to health care services affect mortality and potentially contribute to approximately half of all preventable premature deaths (10). County-level disparities in all-cause premature deaths by rurality, race, and ethnicity have been documented (11). Data on cause-specific preventable premature deaths from the leading causes of death by rurality, sex, race, and ethnicity are limited, and direct comparisons accounted for by these factors will be reported in subsequent analyses.

Rural public health needs and sociodemographic characteristics of rural populations are changing (12). Although the proportion of the U.S. population that lives in rural areas is gradually declining, any rural population growth can be attributed to in-migration, which might require sensitivity to cultural differences (13,14). With gradual declines in population, the wealth and tax bases of rural counties also are decreasing, resulting in reduced funding for social and health services (15).

In this analysis, mortality data were used to estimate the number and percentage of deaths from each of the five leading causes of death that could have been prevented if all states had similarly low death rates. Disparities in premature mortality from the five leading causes of death in rural areas in the United States during 2010–2022 also were estimated. The results of this analysis are intended to serve as a critical resource for policymakers, public health officials, and researchers striving to understand and address the root causes of preventable premature deaths.

[Top](#)

Methods

This analysis used mortality data for U.S. residents from the National Vital Statistics System (<https://www.cdc.gov/nchs/index.htm>) to calculate preventable premature deaths by urban-rural county classification from the five leading causes of death during 2010–2022 (heart disease, cancer, unintentional injury, CLRD, and stroke). Deaths from COVID-19 were excluded to maintain consistency and facilitate the assessment of trends over time. Data for 2022 are provisional counts from January through June and were annualized for comparability with previous years.

The number of preventable premature deaths for a specific cause (also described as potentially preventable premature or excess deaths) is equal to the difference in the number of observed deaths among persons aged <80 years and the number of deaths expected if the mortality rate in all states were equivalent to the average rate of the three states with the lowest mortality. Rates in the three states define the benchmarks. The benchmark for each cause of death is derived from a unique set of three states.

Rural and urban categories were identified using the National Center for Health Statistics 2013 urban-rural classification scheme for counties (16). County of residence of the decedent was used to determine urban-rural county classification. The categories are 1: large central metropolitan (most urban), 2: large fringe metropolitan, 3: medium metropolitan, 4: small metropolitan, 5: micropolitan, and 6: noncore (most rural).

Preventable premature deaths were calculated individually for the two nonmetropolitan categories (micropolitan and noncore) and the four metropolitan categories (large central metropolitan, large fringe metropolitan, medium metropolitan, and small metropolitan) as well as for the broader categories of metropolitan and nonmetropolitan. Analyses were restricted to deaths with an underlying cause of death from the five leading causes of death based on the *International Classification of Diseases, 10th Revision* (ICD-10): heart disease (I00–I09, I11, I13, and I20–I51), cancer (C00–C97), unintentional injury (V01–X59 and Y85–Y86), CLRD (J40–J47), and stroke (I60–I69). The analysis of preventable premature deaths during 2010–2022 was restricted to persons aged <80 years at the time of death. The age restriction is consistent with the average life expectancy for the U.S. population in 2010, which was approximately 79 years (17).

Age-specific mortality rates for each of the five leading causes of death were used to derive the number of preventable premature deaths using methods described elsewhere (18). Age groupings varied by cause of death. (Most were 10-year age groups; however, the size of the youngest age group ranged from 0 to 9 years for unintentional injury to 0 to 49 years for CLRD and cerebrovascular disease because deaths from those causes are rare among younger persons.) For each age group and cause of death, the death rates of the three states with the lowest rates during 2008–2010 (benchmark states) were averaged to produce benchmark rates (18) (<https://stacks.cdc.gov/view/cdc/42342>). These benchmarks were chosen to represent the lowest death rates achievable by states at the beginning of the study period and did not vary by year to allow for the examination of trends over time. Although using time-varying benchmarks would better account for potential improvements over time in the benchmark rates, time-varying benchmarks also would make temporal and geographic comparisons more difficult. The same benchmarks were applied to both nonmetropolitan and metropolitan counties, and benchmarks were not adjusted for other characteristics that might affect death rates (e.g., race, ethnicity, socioeconomic status, and urbanicity). Deaths attributed to COVID-19 from 2020 through June 2022 were excluded from this study.

The numbers of preventable premature deaths for each cause of death were assumed to follow a Poisson distribution. SEs were calculated using standard formulas that incorporated the variance around both the observed and the expected counts (18), and pairwise z-tests were performed to determine whether the differences during 2010–2022 were statistically significant ($p < 0.05$). All differences during 2010–2022 are statistically significant unless otherwise noted. The percentage of preventable premature deaths was calculated by dividing the number of preventable premature deaths by the total observed number of premature deaths.

[Top](#)

Results

The percentage of preventable premature deaths from cancer decreased from 2010 through June 2022 (from 21% to 0.3%) (Figure 1). Regardless of urban-rural classification, all county categories experienced decreases (Figure 2). However, the decreases in urban counties were larger than those in rural counties, which widened the rural-urban disparities in preventable premature deaths from cancer (Figure 2) (Table). The percentage of preventable premature deaths from cancer in noncore counties in 2022 (18.1%) was similar to the percentage in large central metropolitan counties in 2010 (17.9%).

The percentage of preventable premature deaths from heart disease decreased from 2010 through 2019 (from 33.5% to 28.8%), followed by a steep increase to 33.6% from 2020 through June 2022 (Figure 1). Increases from 2020 through June 2022 occurred across all rural-urban categories except for large central metropolitan counties, which experienced a decrease from 32.9% in 2020 to 30.1% in 2021 (Figure 2) (Table). Rural counties had the highest percentage of preventable premature deaths from heart disease in 2022 (45.8% in micropolitan counties and 49.4% in noncore counties) (Figure 2) (Table). Most states experienced an increase in preventable early deaths from heart disease and stroke (96% and 88% of states, respectively) from 2019 through June 2022 (Supplementary Table, <https://stacks.cdc.gov/view/cdc/147842>).

The percentage of preventable premature deaths from unintentional injury increased from 2010 to 2019 (from 38.8% to 53.8%), followed by a steep increase from 2019 to 2021 and a slight decrease through June 2022 to 63.5% (Figure 1). Increases in preventable premature deaths from unintentional injury during 2010–2022 were statistically significant for all

metropolitan categories except micropolitan. Rural percentages were higher than in urban areas, but the gap narrowed (Figure 2). The percentages increased in all states except Wyoming, but the increase varied widely at the state level (Supplementary Table, <https://stacks.cdc.gov/view/cdc/147842>).

The percentage of preventable premature deaths from CLRD decreased from 2010 through 2022 (from 38.6% to 25.5%) (Figure 1). The percentage of preventable premature deaths varied widely when stratified by rural-urban county category, but all county categories except for noncore counties experienced decreases. Rural-urban disparities widened when large central metropolitan percentages decreased from 23.4% in 2010 to 0% in 2022, whereas the rural percentages hovered between 50.7% and 54.8% in 2022 (Figure 2) (Table).

The percentage of preventable premature deaths from stroke decreased slightly from 2010 through 2019 (32.4% to 26.4%), followed by an increase to 33.9% through June 2022 (Figure 1). Each rural-urban category experienced steep increases from 2019 to June 2022, except for noncore counties that experienced a slight decrease from 2021 to June 2022; rural counties had the highest percentages from January to June 2022 (42.0% in micropolitan counties and 40.9% in noncore counties) (Figure 2) (Table). The highest percentages of preventable premature deaths from stroke in 2022 were in southern states (Supplementary Table, <https://stacks.cdc.gov/view/cdc/147842>).

[Top](#)

Discussion

Rural residents, particularly those in noncore counties, experienced high percentages of preventable premature deaths during the study period. The rural-urban disparities in premature deaths varied by cause of death. However, disparities were not limited to place of residence. Disparities in all-cause premature deaths also were associated with other demographic factors (e.g., sex, race, and ethnicity) (11). For example, the highest rates of premature deaths were observed in rural counties where a majority of the population was Black, African American, American Indian, or Alaska Native (11). To address disparities in preventable premature deaths across rural and urban counties, data on disparities in cause-specific premature deaths from the five leading causes by rural-urban county category, race, and ethnicity are needed to inform interventions and health care policies for specific racial and ethnic groups. A follow-up of this analysis stratified by race and ethnicity will be published in subsequent reports, further contributing evidence to guide existing and new programs and policies.

Cancer

Overall, the decrease in preventable premature deaths from cancer was substantial and was greatest in urban counties where access to preventive services, treatment, survivor care, and specialty care is much higher than in rural counties (19). Large central metropolitan and fringe metropolitan areas achieved the benchmark rates in 2019. This is consistent with overall declines in cancer mortality, which decreased 27% between 2001 and 2020 (20). The decrease in preventable premature deaths likely reflects multiple factors. Increases in recommended screening for the leading causes of deaths from cancer (e.g., lung, colon, cervical, and female breast) have led to earlier detection, when treatment is more effective, and prevention by detecting cellular changes before they turn into cancer, as in the case of colorectal cancer (21). Increases in vaccination rates for cancer-causing viruses and decreases in prevalence of risk factors (e.g., combustible tobacco use) also have driven cancer mortality downward (22). Access to these cancer prevention and early detection strategies was increased with the expansion of Medicaid (23). New cancer treatments and therapies, specifically for lung cancer and melanoma, also have led to longer survival for those with a cancer diagnosis (24). CDC conducted a demonstration project on how to best provide care for persons living in rural areas who had cancer diagnosed (25). Although cancer is categorized as a single disease group in this analysis, each cancer site has different risk factors, has varying treatment methods, and can manifest itself in different ways among groups by sex, age, race, and ethnicity. Preventable premature death might vary depending on the cancer site and might not have decreased for cancers with increasing prevalence of risk factors (e.g., obesity), no recommended screening modalities, or therapies that have not changed. Lung cancer, the leading cause of cancer mortality, accounted for 23% of all cancer deaths in 2020 (20). Geographic differences in combustible tobacco use and use of lung cancer screening likely partially drive differences in lung cancer mortality. Access to lung cancer screening facilities is more limited in rural counties than in urban counties (26). Despite overall reductions in preventable premature deaths from cancer, premature deaths surpass the national average in micropolitan and noncore counties, highlighting the need in rural areas to reduce cancer-related premature deaths. Because more urban areas surpassed the 2010 benchmarks for cancer death rates in 2019, future updates to the cancer-specific benchmarks using more recent years of data might better reflect the lowest achievable death rates.

Unintentional Injury

The worsening and expanding drug overdose epidemic, increases in motor vehicle traffic fatalities, and falls drive the growth in preventable premature deaths from unintentional injury (27). Narrowing rural-urban disparities in the percentage of preventable premature deaths from unintentional injury were driven by worsening rates of preventable mortality in more urban areas, with the percentage more than doubling in large central metropolitan areas over the study period. For drug overdoses, access to medications for opioid use disorder continues to be more limited in rural counties, as evidenced by low buprenorphine dispensing rates and reduced treatment capacity (28). For motor vehicle traffic crashes, rural residents have an increased risk for death and are less likely than urban residents to wear seat belts (29). Evidence-based interventions reduce rural-urban disparities in seat belt use and motor vehicle death rates (30). Many fall risk factors are modifiable, implying that many falls can be prevented (31).

Heart Disease and Stroke

Disparities in preventable premature deaths from heart disease and stroke between rural and urban areas existed across the study period. These gaps increased from 2019 to June 2022, except in large central metropolitan counties where a decrease of three percentage points was observed from 2020 to 2021. Increases in preventable premature deaths from heart disease and stroke in 2020 and 2021 were likely associated with COVID-19–related conditions that contributed to risk-associated increased mortality from heart disease and stroke (32). Increases in systolic and diastolic blood pressure, a leading risk factor for heart disease and stroke, were observed among all age groups when comparing 2020 with 2019 (33). Inequities in control of hypertension (i.e., systolic blood pressure values of ≥ 130 mm Hg, diastolic blood pressure of >80 mm Hg, or both) were observed during the COVID-19 pandemic and are related to insufficient health care access, medication adherence, and monitoring (34). Patients might have delayed or avoided seeking emergency care when experiencing a life-threatening event during the height of the COVID-19 pandemic (35). Emergency department visits for heart attack and stroke decreased by 20% during the weeks after the declaration of COVID-19 as a national emergency on March 13, 2020, and hospital admissions for heart attack and stroke decreased during the pandemic (35). In addition, COVID-19 was associated with an increased risk for stroke and heart disease (36,37).

Chronic Lower Respiratory Disease

Despite the overall decrease during 2010–2020 (because of decreases observed in larger urban areas), the percentage of preventable premature deaths from CLRD was relatively stable in medium and small urban counties and rural counties during 2010–2015. During 2010–2022, the sharpest decline in preventable premature death from CLRD in urban areas occurred from 2019 through 2021 and could be the result of deaths from COVID-19 that otherwise would have been attributable to CLRD. Persons with CLRD (e.g., chronic obstructive pulmonary disease) are at increased risk for death from COVID-19 (38).

[Top](#)

Limitations

The findings in this report are subject to at least six limitations. First, applying benchmarks (e.g., the three states with the lowest rates) to all urban-rural county categories facilitates comparisons but might not represent the lowest death rates achievable by certain subgroups. For example, large metropolitan areas met the benchmarks for cancer in 2019 and, therefore, had negative estimates of preventable premature deaths during 2019–2022. In these instances, negative estimates were truncated at zero to indicate that the 2010 benchmarks had been achieved. Using urban-rural–specific benchmarks would likely result in larger numbers of preventable premature deaths in certain categories and larger rural-urban disparities in certain cases. However, using benchmarks specific to state, age, cause, and subgroup (e.g., urban-rural, sex, race, and ethnicity) also could lead to less stable estimates because of smaller numbers of deaths when stratifying by multiple demographic and geographic dimensions. Second, the differences cannot be attributed solely to population size and geographic location because risk factors do not occur randomly in populations and are related to well-known social, demographic, environmental, economic, and geographic attributes of the neighborhoods in which persons live and work (39). Third, estimates of preventable premature deaths using historical benchmarks (e.g., 2008–2010) might not reflect improvements in mortality that could have occurred in a later year. For example, the 2010 benchmarks for cancer are higher than if benchmarks were based on 2022 data because of decreases in cancer deaths during 2010–2022. Fourth, the numbers of preventable premature deaths by cause are not necessarily independent, and the numbers of potentially excess deaths from the five causes cannot be combined to generate a total. For example, the number of preventable premature

deaths from cancer might be lower because persons with cancer died from another cause (e.g., heart disease). Fifth, deaths from certain causes might have increased partly because of COVID-19 and the pandemic. Specifically, misclassification of deaths from COVID-19 that were attributed to other causes (because of lack of testing or reporting on the death certificate) could have contributed to a greater number of deaths across other causes and by rural and urban areas. In addition, certain causes of death might have increased because of indirect pandemic-related effects (e.g., reduced access to emergency care or life-saving treatments). Finally, data for 2022 were based on provisional data from the first half of the year, and results might differ when the final data for the full year are available.

[Top](#)

Future Directions

The findings in this report demonstrate the value of analyzing preventable premature deaths according to the six National Center for Health Statistics 2013 urban-rural county classifications. Reporting trends in preventable premature deaths over a 12-year period highlights differences over time and might aid in understanding underlying structural, environmental, and social risk factors. Because of increasing percentages of preventable premature deaths in recent years for specific causes of death and certain demographic groups, these data might augment traditional rate comparisons and help guide focused public health interventions. Comparing the findings in this report with data from tools such as the CDC Interactive Atlas of Heart Disease and Stroke (<https://www.cdc.gov/dhdsp/maps/atlas/index.htm>) might help identify social determinants of health, health care infrastructure, and public policies that could be related to increases or decreases in preventable premature deaths in specific nonmetropolitan areas. Detailed community-based evaluations might clarify how various risk factors and social determinants of health relate to premature mortality and related rural-urban disparities. In addition, other methods for developing benchmark rates might be helpful, including using benchmarks based on the nonmetropolitan areas with the lowest death rates, or updating benchmarks based on more recent data, especially for causes of death (e.g., cancer) that have decreased substantially over time. In addition, more detailed analyses by race, ethnicity, and age, along with examining preventable deaths among persons aged >80 years, and preventable premature deaths from other causes (especially causes that are more prevalent in rural counties) might be informative.

[Top](#)

Conclusion

Defining preventable premature deaths within the context of the five leading causes of death does not capture the full spectrum of preventable mortality. The degree to which these deaths could be prevented is related to various factors, including distinct prevention strategies, varying risk factors, and the availability of effective interventions, all of which vary by cause. Not all premature deaths are equally preventable among the leading causes or even within each specific leading cause category, as exemplified by certain types of cancer (40).

Routine tracking of preventable premature deaths by urban-rural county classification might facilitate the identification of areas with high prevalence of preventable premature mortality along with related geographic and urban-rural disparities in health outcomes. These disparities might be related to different levels of access to health care, social determinants of health, and other risk factors. Findings might help guide more focused interventions to reduce premature death from the five leading causes of death and reduce disparities by rural-urban residence and geographic region.

[Top](#)

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[Top](#)

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[Top](#)

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[Top](#)















Conflicts of Interest

All authors have completed and submitted the International Committee of Medical Journal Editors form for disclosure of potential conflicts of interest. No potential conflicts of interest were disclosed.

[Top](#)

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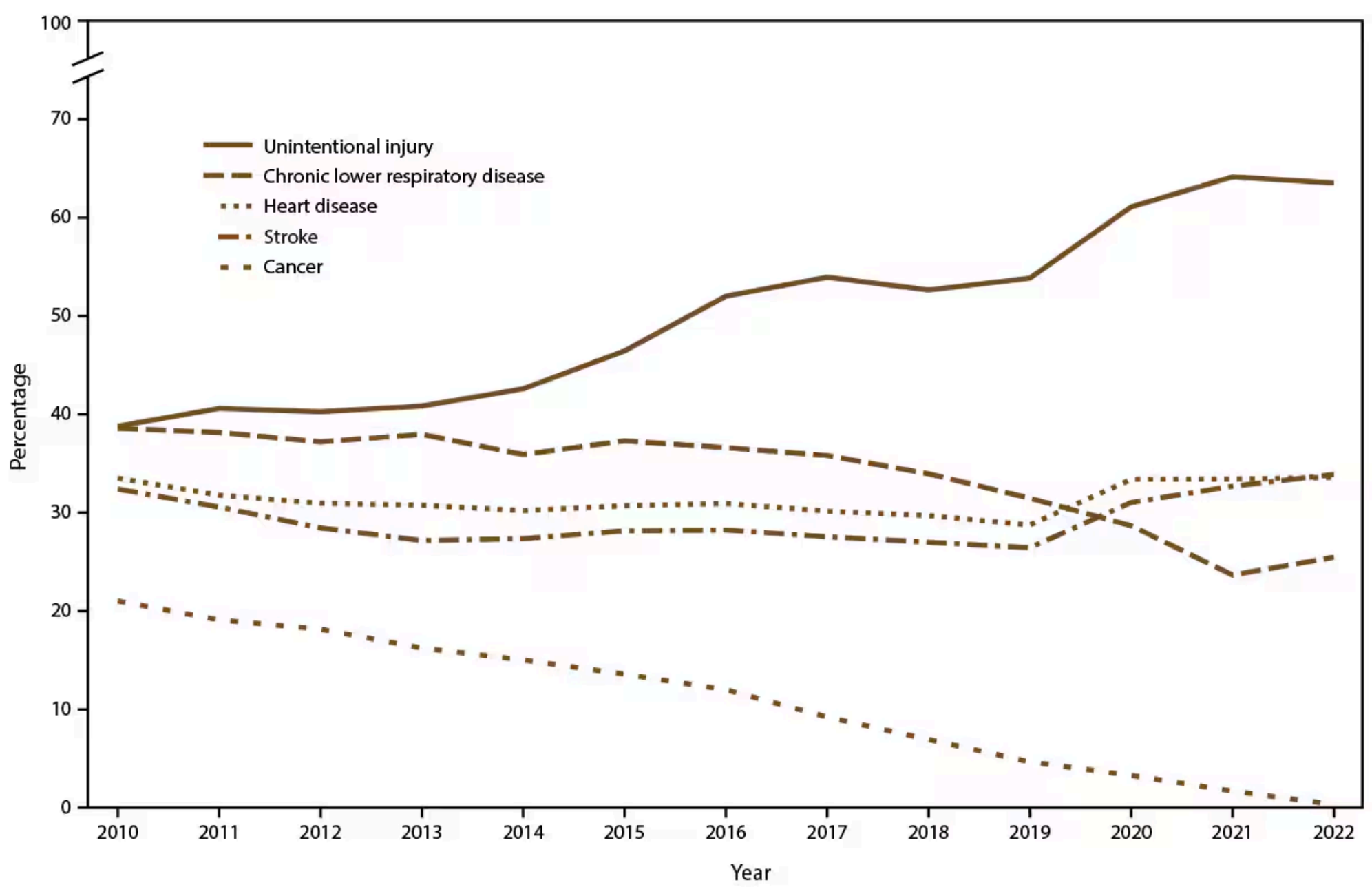
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[Top](#)

FIGURE 1. Percentages of preventable premature deaths* among persons aged <80 years from the five leading causes of death, by year — National Vital Statistics System, United States, 2010–2022†



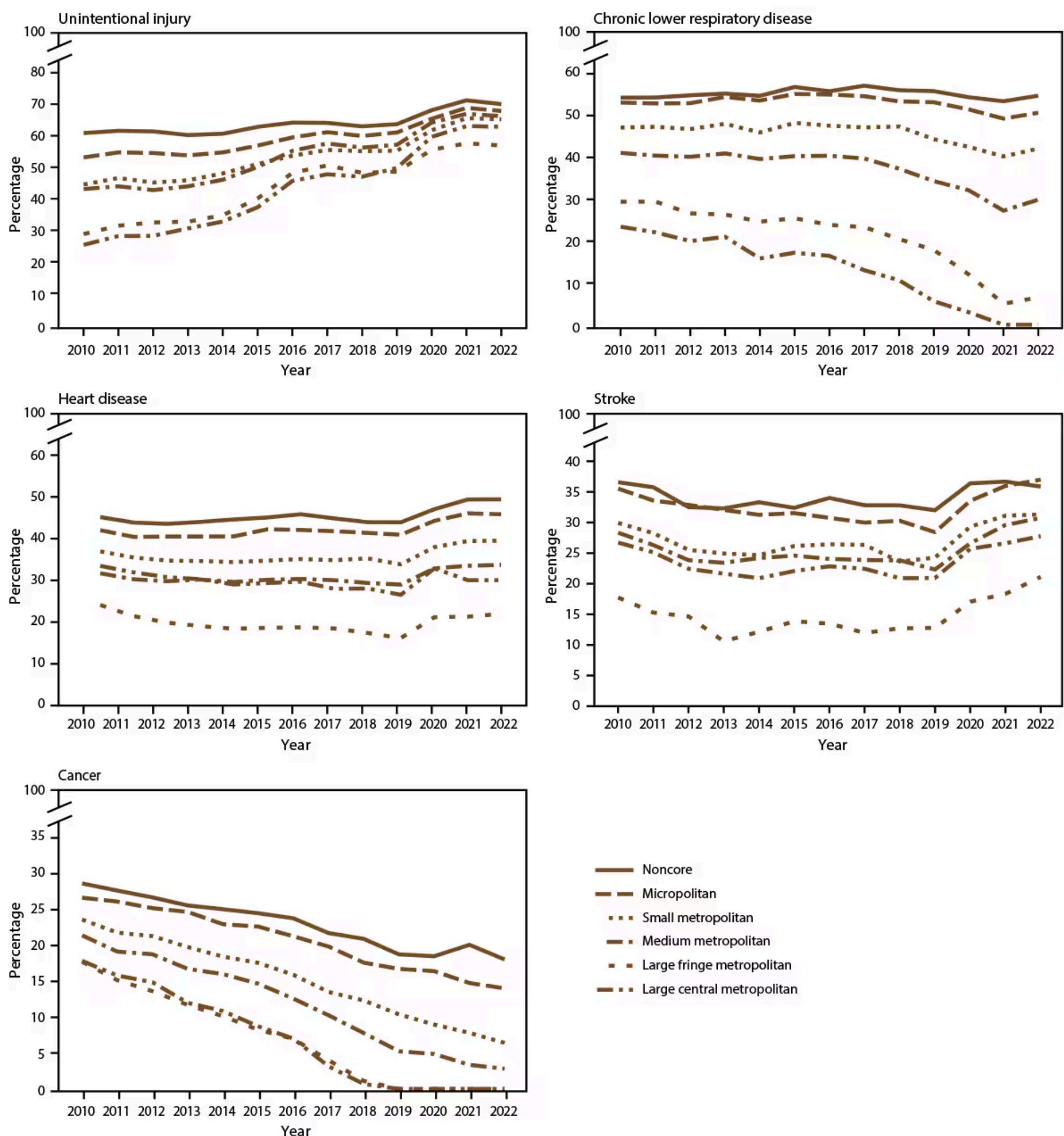
* Preventable premature deaths are defined as deaths among persons aged <80 years in excess of the number that would be expected if the death rates for each cause in all states were equivalent to those in the benchmark states (i.e., the three states with the lowest rates).

† Data for 2022 are provisional counts from January through June and were annualized for comparability with previous years.

[Top](#)

FIGURE 2. Percentages of preventable premature deaths* among persons aged <80 years from the five leading causes of death, by rural-urban county classification and year — National Vital Statistics System, United States, 2010–2022†





* Preventable premature deaths are defined as deaths among persons aged <80 years in excess of the number that would be expected if the death rates for each cause in all states were equivalent to those in the benchmark states (i.e., the three states with the lowest rates).

† Data for 2022 are provisional counts from January through June and were annualized for comparability with previous years.

[Top](#)

TABLE. Numbers and percentages of preventable premature deaths* among persons aged <80 years death, by rural-urban county classification — National Vital Statistics System, United States, 2010–20

Cause	2010 No. (%)	2011 No. (%)	2012 No. (%)	2013 No. (%)	2014 No. (%)	2015 No. (%)	2016 No. (%)	2017 No. (%)	2018 No. (%)	2019 No. (%)	2020 No. (%)
Heart disease											
Large central metropolitan	24,859 (33.5)	23,836 (31.9)	23,173 (30.8)	23,344 (30.3)	22,655 (29.0)	23,660 (29.4)	24,515 (29.7)	23,496 (28.0)	24,158 (28.1)	22,929 (26.6)	23,000 (26.6)
Large fringe metropolitan	13,945 (24.1)	12,360 (21.4)	11,574 (19.9)	11,358 (19.0)	11,261 (18.4)	11,762 (18.6)	12,159 (18.7)	12,399 (18.5)	11,887 (17.4)	11,184 (16.2)	11,200 (16.2)
Medium metropolitan	17,781 (31.7)	17,089 (30.3)	17,130 (29.8)	17,992 (30.2)	17,999 (29.6)	18,951 (30.1)	19,583 (30.3)	20,029 (30.1)	19,963 (29.4)	20,148 (29.0)	20,200 (29.0)
Small metropolitan	10,420 (36.9)	10,021 (35.5)	9,924 (34.7)	10,147 (34.7)	10,295 (34.4)	10,686 (34.7)	11,089 (35.1)	11,282 (34.8)	11,822 (35.2)	11,378 (33.8)	11,400 (33.8)
Micropolitan	12,913 (42.0)	12,320 (40.4)	12,585 (40.5)	12,861 (40.5)	13,139 (40.5)	14,326 (42.2)	14,445 (42.1)	14,611 (41.8)	14,686 (41.4)	14,711 (40.9)	14,800 (40.9)
Noncore	11,509 (45.1)	11,111 (43.9)	11,132 (43.5)	11,556 (44.0)	12,015 (44.6)	12,384 (45.1)	12,892 (45.8)	12,644 (44.9)	12,399 (43.9)	12,577 (43.9)	12,600 (43.9)
Cancer											
Large central metropolitan	18,754 (17.9)	16,709 (15.8)	15,945 (14.9)	12,844 (12.0)	11,830 (10.9)	9,546 (8.7)	7,693 (7.0)	3,443 (3.2)	736 (0.7)	0 (0)	0 (0)
Large fringe metropolitan	16,566 (17.7)	14,208 (15.2)	12,930 (13.6)	11,229 (11.7)	9,870 (10.1)	8,102 (8.3)	6,948 (7.0)	4,000 (4.0)	1,112 (1.1)	0 (0)	0 (0)
Medium metropolitan	18,252 (21.4)	16,330 (19.2)	16,337 (18.8)	14,635 (16.7)	14,282 (16.0)	13,232 (14.7)	11,366 (12.6)	9,328 (10.3)	7,057 (7.8)	4,761 (5.3)	4,800 (5.3)
Small metropolitan	9,606 (23.6)	8,883 (21.8)	8,836 (21.3)	8,263 (19.8)	7,773 (18.4)	7,500 (17.6)	6,798 (15.9)	5,766 (13.5)	5,322 (12.3)	4,497 (10.4)	4,500 (10.4)
Micropolitan	11,313 (26.7)	11,254 (26.1)	10,912 (25.2)	10,837 (24.7)	10,060 (23.0)	10,050 (22.6)	9,416 (21.3)	8,819 (19.9)	7,758 (17.6)	7,438 (16.7)	7,500 (16.7)
Noncore	9,806 (28.7)	9,503 (27.7)	9,192 (26.7)	8,831 (25.6)	8,723 (25.1)	8,563 (24.5)	8,321 (23.8)	7,538 (21.7)	7,291 (20.9)	6,456 (18.8)	6,500 (18.8)
Unintentional injury^s											
Large central metropolitan	5,924 (25.4)	6,941 (28.2)	7,072 (28.2)	8,024 (30.6)	9,021 (32.8)	11,168 (37.3)	15,900 (45.7)	17,580 (47.8)	17,140 (47.0)	19,258 (49.8)	20,000 (49.8)

Cause	2010 No. (%)	2011 No. (%)	2012 No. (%)	2013 No. (%)	2014 No. (%)	2015 No. (%)	2016 No. (%)	2017 No. (%)	2018 No. (%)	2019 No. (%)	2020 No. (%)
Large fringe metropolitan	5,765 (28.8)	6,645 (31.5)	7,059 (32.5)	7,229 (32.7)	8,049 (34.8)	10,236 (40.1)	14,422 (48.2)	16,118 (50.6)	14,814 (48.2)	15,219 (48.6)	20,100 (50.0)
Medium metropolitan	9,129 (43.1)	9,589 (43.9)	9,242 (42.8)	9,804 (43.9)	10,808 (46.0)	12,849 (50.1)	15,930 (55.2)	17,774 (57.6)	17,023 (56.2)	17,824 (57.1)	20,100 (50.0)
Small metropolitan	4,342 (44.5)	4,775 (46.6)	4,546 (45.1)	4,715 (45.9)	5,197 (48.0)	5,892 (51.0)	6,587 (53.6)	7,171 (55.5)	7,129 (55.1)	7,213 (55.2)	10,000 (50.0)
Micropolitan	5,865 (53.1)	6,293 (54.7)	6,263 (54.5)	6,107 (53.7)	6,375 (54.7)	6,973 (56.8)	7,786 (59.5)	8,376 (61.1)	8,007 (59.9)	8,418 (61.0)	10,000 (50.0)
Noncore	5,781 (60.9)	5,972 (61.6)	5,924 (61.4)	5,656 (60.2)	5,758 (60.6)	6,304 (62.8)	6,683 (64.2)	6,673 (64.1)	6,379 (63.0)	6,571 (63.6)	10,000 (50.0)
Chronic lower respiratory disease											
Large central metropolitan	3,756 (23.4)	3,587 (22.1)	3,250 (20.0)	3,581 (21.0)	2,627 (15.9)	2,986 (17.2)	2,906 (16.5)	2,322 (13.0)	1,902 (10.7)	977 (5.6)	10,000 (50.0)
Large fringe metropolitan	4,546 (29.4)	4,717 (29.5)	4,244 (26.6)	4,357 (26.4)	4,136 (24.6)	4,472 (25.5)	4,237 (23.9)	4,314 (23.4)	3,787 (20.5)	3,305 (17.9)	10,000 (50.0)
Medium metropolitan	6,794 (41.1)	6,815 (40.4)	6,928 (40.1)	7,426 (41.0)	7,275 (39.6)	7,714 (40.3)	7,970 (40.4)	8,104 (39.8)	7,573 (37.3)	6,873 (34.3)	10,000 (50.0)
Small metropolitan	4,079 (47.1)	4,225 (47.3)	4,243 (46.8)	4,613 (48.1)	4,377 (46.0)	4,928 (48.3)	4,916 (47.6)	5,024 (47.2)	5,244 (47.4)	4,777 (44.4)	10,000 (50.0)
Micropolitan	5,203 (53.1)	5,284 (52.9)	5,413 (53.0)	5,906 (54.5)	5,843 (53.6)	6,355 (55.2)	6,441 (55.0)	6,538 (54.6)	6,394 (53.4)	6,491 (53.2)	10,000 (50.0)
Noncore	4,342 (54.3)	4,434 (54.3)	4,621 (54.9)	4,807 (55.3)	4,801 (54.7)	5,307 (56.8)	5,153 (55.8)	5,586 (57.1)	5,469 (56.1)	5,524 (55.8)	10,000 (50.0)
Stroke											
Large central metropolitan	4,465 (31.7)	4,263 (30.1)	3,838 (27.5)	3,806 (26.7)	3,779 (25.9)	4,132 (27.1)	4,391 (27.9)	4,506 (27.4)	4,280 (25.9)	4,412 (26.0)	10,000 (50.0)
Large fringe metropolitan	2,494 (22.7)	2,227 (20.3)	2,209 (19.7)	1,732 (15.6)	2,009 (17.1)	2,333 (18.9)	2,345 (18.5)	2,209 (17.0)	2,406 (17.7)	2,494 (17.8)	10,000 (50.0)
Medium metropolitan	3,762 (33.3)	3,527 (31.3)	3,220 (28.9)	3,258 (28.4)	3,492 (29.2)	3,665 (29.6)	3,667 (29.1)	3,784 (28.9)	3,905 (28.8)	3,736 (27.3)	10,000 (50.0)

Cause	2010 No. (%)	2011 No. (%)	2012 No. (%)	2013 No. (%)	2014 No. (%)	2015 No. (%)	2016 No. (%)	2017 No. (%)	2018 No. (%)	2019 No. (%)	2020 No. (%)
Small metropolitan	1,886 (34.9)	1,795 (33.3)	1,623 (30.5)	1,625 (29.9)	1,651 (29.7)	1,817 (31.2)	1,882 (31.4)	1,941 (31.4)	1,760 (28.6)	1,866 (29.3)	1,866 (29.3)
Micropolitan	2,393 (40.5)	2,255 (38.6)	2,229 (37.9)	2,211 (37.1)	2,183 (36.3)	2,251 (36.5)	2,212 (35.8)	2,201 (35.0)	2,287 (35.3)	2,155 (33.4)	2,155 (33.4)
Noncore	1,970 (41.6)	1,939 (40.8)	1,723 (37.5)	1,745 (37.3)	1,854 (38.3)	1,808 (37.4)	1,956 (39.0)	1,906 (37.8)	1,944 (37.8)	1,914 (37.0)	1,914 (37.0)

* Preventable premature deaths are defined as deaths among persons aged <80 years in excess of the number that would be expected if the death rates for each cause in all states were equivalent to those in the benchmark states (i.e., the three states with the lowest rates). Estimates of potentially excess deaths that were negative were set to zero. These negative excess estimates occurred in cases where deaths were fewer than expected (i.e., mortality was lower than benchmark rates).

† Data for 2022 are provisional counts from January through June and were annualized for comparability with previous years.

§ Includes unintentional poisoning (e.g., drug overdose), unintentional motor vehicle traffic crash, unintentional drowning, and unintentional fall (<https://www.cdc.gov/injury/wisqars/animated-leading-causes.html>).

[Top](#)

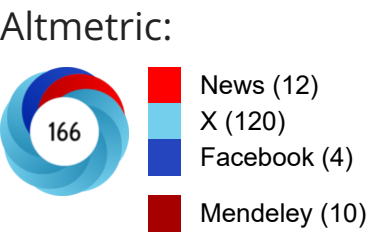
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