
Health and Economic Benefits of Public Health Modernization

David Solet and Myde Boles
Program Design and Evaluation Services
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Project Objectives

- Estimate benefit of implementing Foundational Public Health Services (FPHS)
- Evidence base: peer-reviewed studies
- Extrapolate study results to Oregon





Topic Selection

Major areas

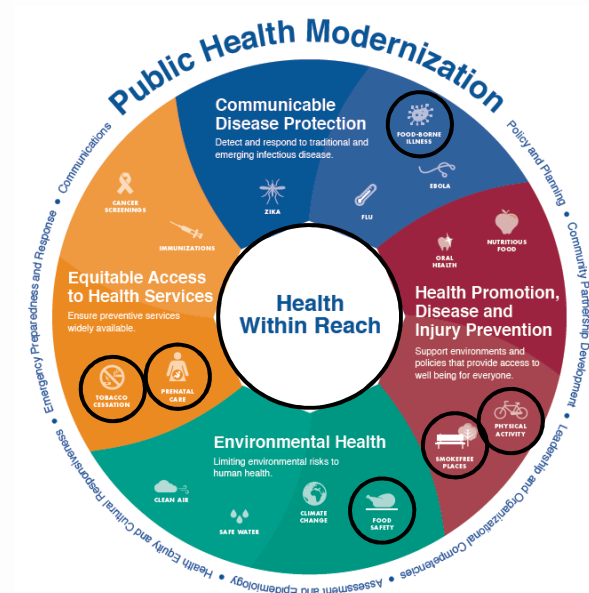
- Benefits of public health spending
- Economic burden of conditions related to FPHS

Criteria

- Results of peer-reviewed studies could be applied to Oregon

Priorities

- Public Health Advisory Board priorities for 2017 biennium **or**
- Included in 2015 State Health Improvement Plan **or**
- Recommended for inclusion by Public Health Leadership



Results

Part 1: The benefits of public health spending

Part 2: Disease burden compared to modernization investment

Part 1

The Benefits of Public Health Spending



County-level Spending I

Study: Total public health spending

Spending: Local health department (LHD) total spending

Outcome: Mortality

Study findings

- 10% increase in per capita spending linked to
 - **6.8%** decrease in infant mortality
 - **3.2%** decrease in heart disease mortality
 - **1.4%** decrease in diabetes mortality
 - **1.1%** decrease in cancer mortality

Oregon
Health
Authority



County-level Spending I

A **10% increase** in total public health spending in Oregon is linked to:

15 fewer infants deaths per year

16 fewer diabetes deaths per year

202 fewer heart disease deaths per year

88 fewer cancer deaths per year

Oregon
Health
Authority



County-level Spending II

Study: Maternal and child health program spending

Spending: LHD spending on maternal/child health

Outcome: Percent of low birthweight (LBW) births

Study findings

Spending increase of **\$3.52 per capita** is linked to a **1 percentage point decrease** in LBW in Washington state's high poverty counties



County-level Spending II

An annual investment of **\$2.4 million** in high-poverty Oregon counties is linked to:

1% decrease in the low birthweight rate

96 fewer low birthweight births per year

\$4.9M savings in prenatal care and delivery hospital costs

\$3M savings in Medicaid spending



Part 2

**Disease Burden Compared to
Modernization Investment**



**Topics: Disease burden compared to
modernization investment**



Tobacco Use



Physical Inactivity



Foodborne Illness

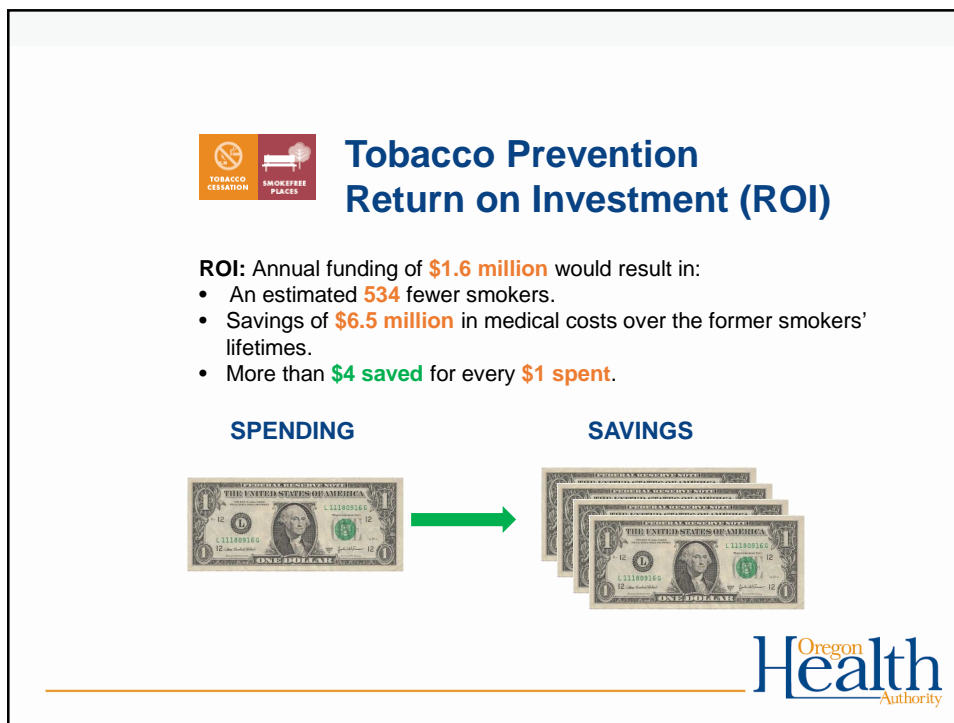
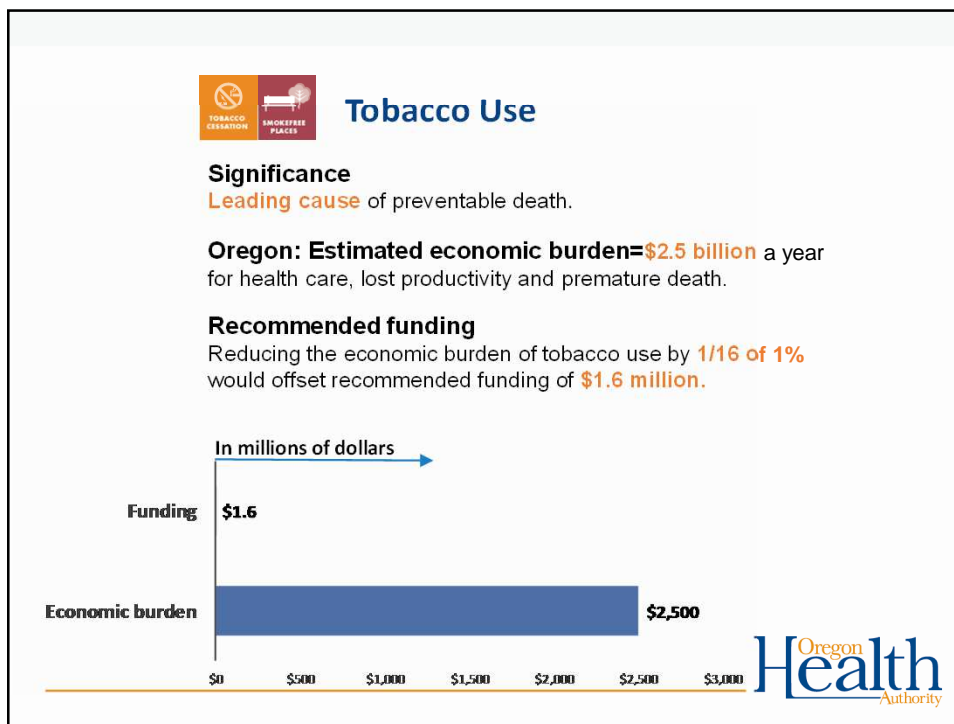



**Births from
Unintended Pregnancies**



Health Inequality








Tobacco Prevention

Return on Investment: Medicaid

ROI: Annual funding of **\$342,000 to the Medicaid population** would result in:


- An estimated **202** fewer smokers.
- Savings of **\$2.5 million** in medical costs over the former smokers' lifetimes.
- More than **\$7 saved** for every **\$1 spent**.


SPENDING




→

SAVINGS





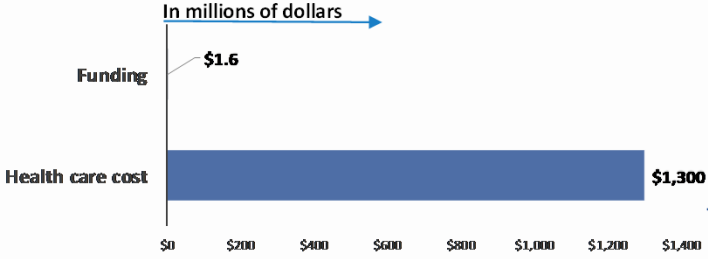


Physical Inactivity


Oregon: Estimated health care cost=\$1.3 billion overall and **\$360 million** in Medicaid costs a year.

Recommended funding
Reducing physical inactivity health care costs by **1/8 of 1%** would offset recommended funding of **\$1.6 million**.

In millions of dollars →



Category	Value (Millions of Dollars)
Funding	\$1.6
Health care cost	\$1,300

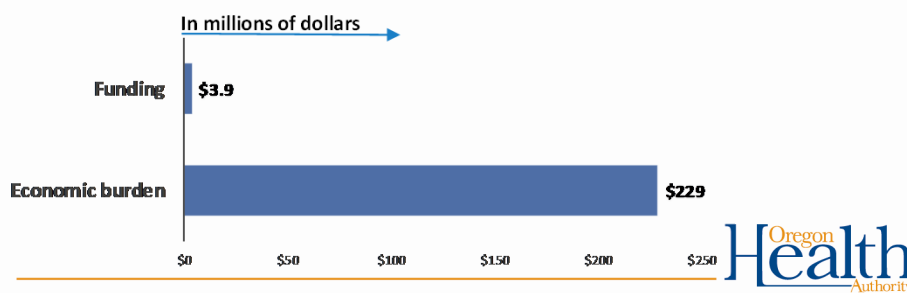




Foodborne Illness

Oregon: Estimated economic burden=\$229 million
a year for health care, lost productivity and premature death.

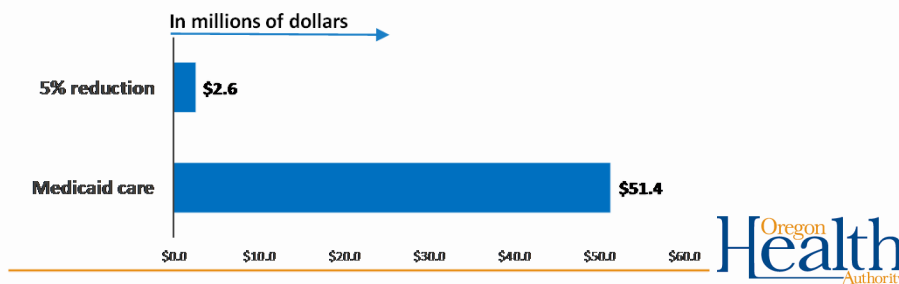
Recommended funding
Reducing the economic burden of foodborne illness by
2% would offset recommended funding of **\$3.9 million**.



Births from Unintended Pregnancies

Oregon: Estimated cost of Medicaid care=\$51.4 million
a year for prenatal care, delivery and the infant's first year of life.

Decrease of 5%
Reducing the Medicaid costs of births from unintended
pregnancies by 5% would save **\$2.6 million** in Medicaid costs.

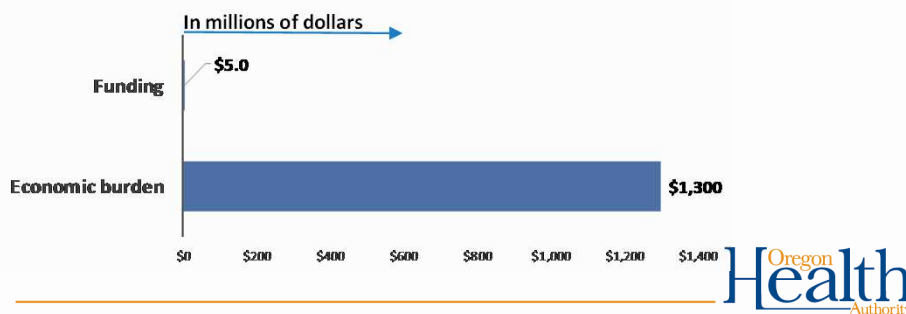


Health Inequality

Oregon: Estimated economic burden=\$1.3 billion a year in health care, lost productivity and premature mortality.

Funding

Reducing the economic burden of health inequality by **0.4%** would offset recommended funding of **\$5.0 million**.



Summary: Disease burden compared to modernization investment

- **Tobacco**
 - Estimated economic burden=\$2.5 billion a year
 - To offset funding: reduce economic burden of tobacco use by 1/16 of 1%
 - Overall ROI: for every \$1 spent, more than \$4 over former smokers' lifetimes
 - Medicaid ROI: for every \$1 spent, more than \$7 over former smokers' lifetimes
- **Physical inactivity**
 - Estimated health care cost=\$1.3 billion overall and \$360 million in Medicaid costs a year.
 - To offset funding: reduce physical inactivity health care costs by 1/8 of 1%
- **Foodborne illness**
 - Estimated economic burden=\$229 million a year
 - To offset funding: reduce the economic burden of foodborne illness by 2%
- **Births from unintended pregnancies**
 - Estimated cost of Medicaid care=\$51.4 million a year
 - Reducing the Medicaid costs by 5% would save \$2.6 million.
- **Health inequality**
 - Estimated economic burden=\$1.3 billion a year
 - To offset funding: reduce the economic burden of health inequality by 0.4%



Limitations

We assumed national models apply to Oregon.

- We adjusted results based on available local data.
- We made other conservative assumptions.
- We stated assumptions in the report for transparency.

The report does not include margin of error.

- Calculating margin of error was beyond the scope of the report.
- We rounded economic estimates in the results sections to reflect limitations in their precision.
- Economic and health figures are best estimates.

Focus on economic cost excludes other consequences of poor health.

- Strains on family budgets
- Restricted personal activities
- Emotional toll of pain and illness




Conclusion

The **economic burden** of population health conditions **far exceeds the additional spending** required to fund foundational public health services associated with those conditions.

Public spending on **evidence-based public health interventions** offers the best opportunity for achieving this benefit.

