

# Healthy Transportation Policy and Vehicle Miles Traveled (VMT)

Mel Rader, MS, MS

Upstream Public Health

[mel@upstreampublichealth.org](mailto:mel@upstreampublichealth.org)

503-284-6390

# Overview of Presentation

- 1) Links between transportation and health
- 2) Suggestions for integrating health analysis into transportation and land use planning
- 3) Summarize health impacts of policies to reduce vehicle miles traveled

# Major Health Impacts of Transportation System

- Collisions  
(40 K deaths / year)
- Air Pollution  
(20 – 50 K deaths / year)
- Changes in Physical Activity

# Recommendations for Daily Physical Activity: 30 minutes

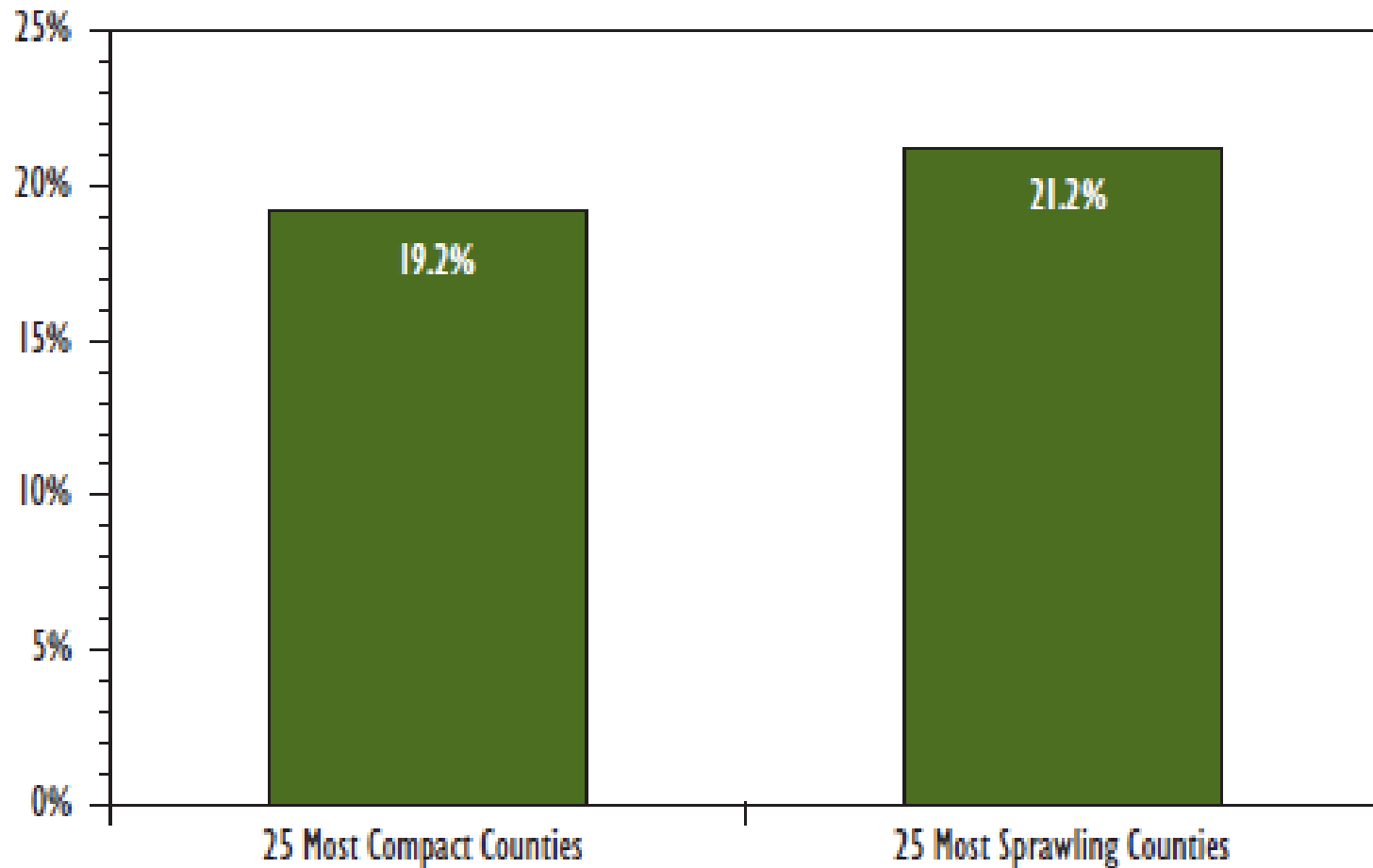
## Average Physical Activity During Commute

- Car Commute: 1.5 minutes
- Public Transit Commute: 16 minutes
- Bicycle Commute: 25 minutes

# Magnitude of the Transportation – Physical Activity Link

- Public Transit – would save \$5,500 per person in healthcare costs (or live at least six months longer)
- Patterns of sprawl - accounted for at least 6 pounds of weight gain (or \$206 million / year for Oregon)

**FIGURE 6. Sprawl and Obesity**  
Percent of Adult Population Who Are Obese



Source: BRFSS obesity rates, weighted by county (1998-2000).

# What does it mean: Planning with Health in Mind?



# Steps for Designing Health into Transportation and Planning

- 1) Pass policies that promote healthy design
- 2) Create agency plans that prioritize health
- 3) Build agency expertise in healthy design
- 4) Identify benchmarks to track success
- 5) Track progress and reassess goals and plans

# Challenges of Assessing Overall Impacts

- Climate Change Impact = Greenhouse gas emissions with policy versus without the policy
- Health Impact = Death and Disease with the policy versus without the policy

# Benchmarks for Active Transportation

- 1) Percent of population walking, biking or taking public transit to work
- 2) Ratio of miles of bike lanes and paths to miles of road
- 3) Proportion of sidewalks in neighborhoods
- 4) Coverage of existing transit systems (train, tram, bus) and time (every 10/15/30 minutes, for example)

# Benchmarks for Healthy Land Use Planning

- 1) Retail Food Environment Index (# of fast food and convenience stores divided by grocery stores and farmers markets) More info at [www.publichealthadvocacy.org](http://www.publichealthadvocacy.org)
- 2) Distance and safety of access to K-12 schools

# Definition

**Health Impact Assessment (HIA)** is a combination of procedures, methods and tools by which a policy, program or project may be judged for its potential health effects on a population, and the distribution of those effects within the population.

- World Health Organization (WHO), 1999

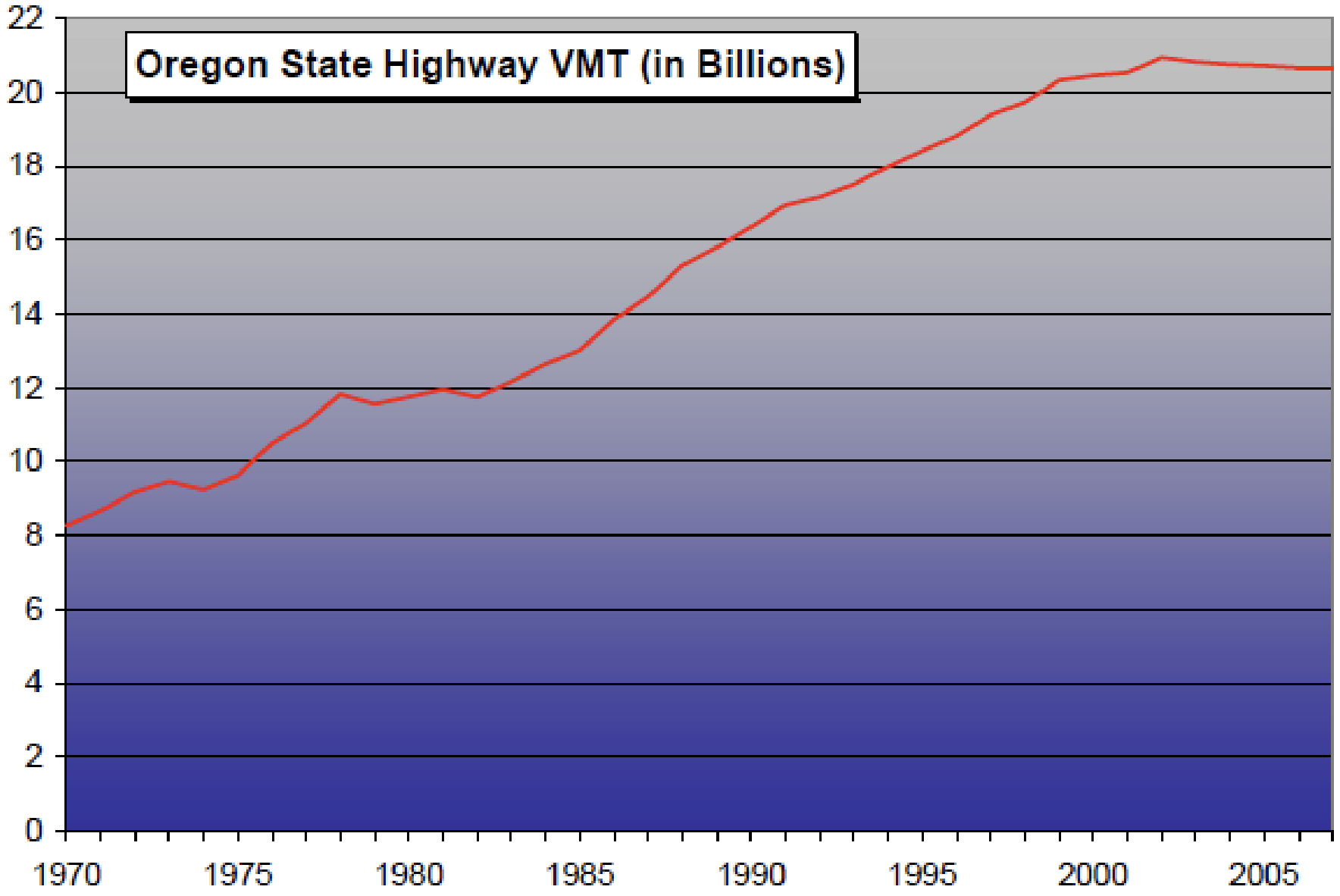
# Steps in conducting a Health Impact Assessment

- **Screening** – Determines the need and value of an HIA
- **Scoping** – Determines which health impacts to evaluate, the methods of analysis and the workplan
- **Assessment** – Using qualitative and quantitative data, and expertise to judge the magnitude and direction of health impacts
- **Reporting** – Communicating the results to stakeholders and decision-makers
- **Evaluation and monitoring** – Tracking the effects of the HIA

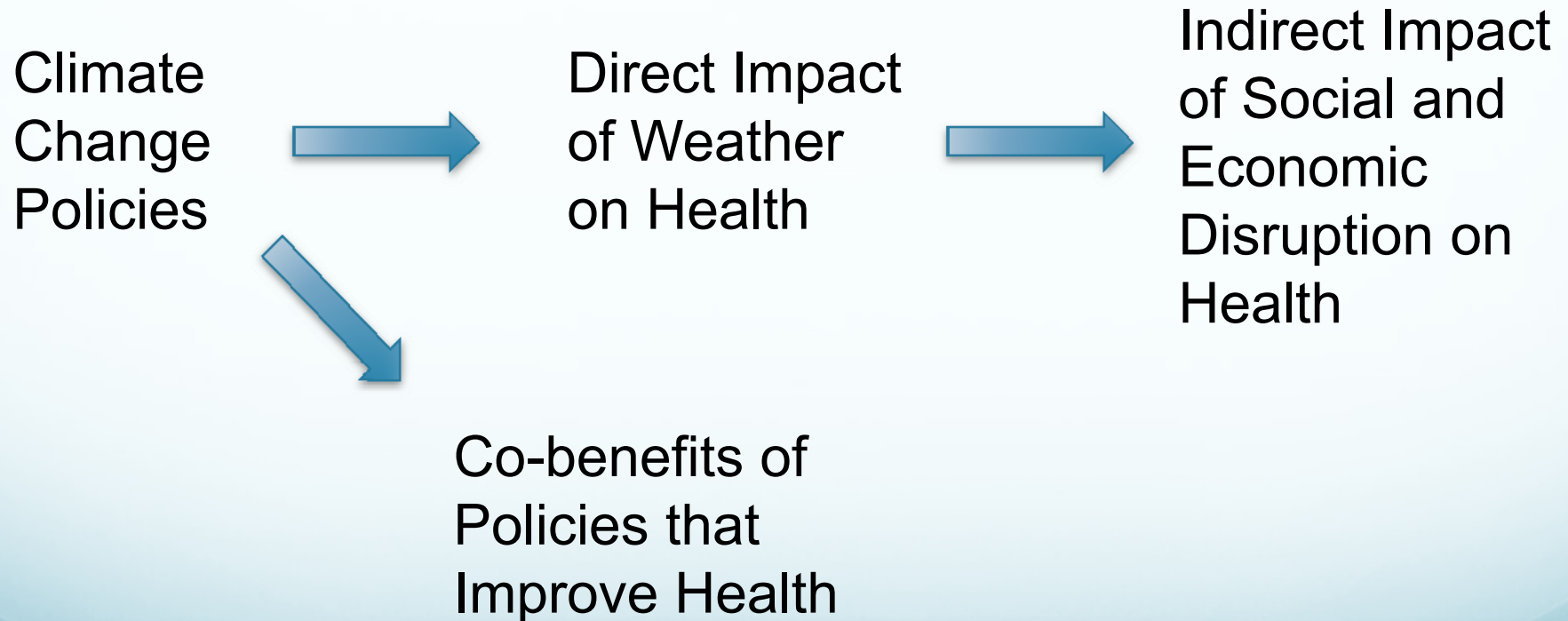
# Objectives of HIA on VMT Policies

- Inform policymaking
- Increase the use of health impact assessments
- Promote healthier planning in transportation and land-use

**Oregon State Highway VMT (in Billions)**



# Climate Change Policy and Health



# Advisory Committee

- **Coordination:** Upstream Public Health
- **Analysis:** Oregon Health and Science University
- **Advisory Role:** Human Impact Partners

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- Metropolitan Planning Organization staff
  - Oregon Department of Human Services
  - Oregon Department of Transportation
  - Health Non-profits
  - Land Use and Bicycle Advocacy Non-profits

# Literature Search

- Literature reviews for original research
- Policies:
  - Positive changes to the built environment
  - Access to public transportation
  - Increasing costs of driving
- Health Impacts:
  - Physical Activity
  - Air Pollution
  - Collisions

# Policies to Reduce VMT – Urban Design

- Increased density (residential and employment)
- Mixed-use development
- Increased bicycle and pedestrian infrastructure
- Increase in desirable neighborhood destinations
- Increased street connectivity

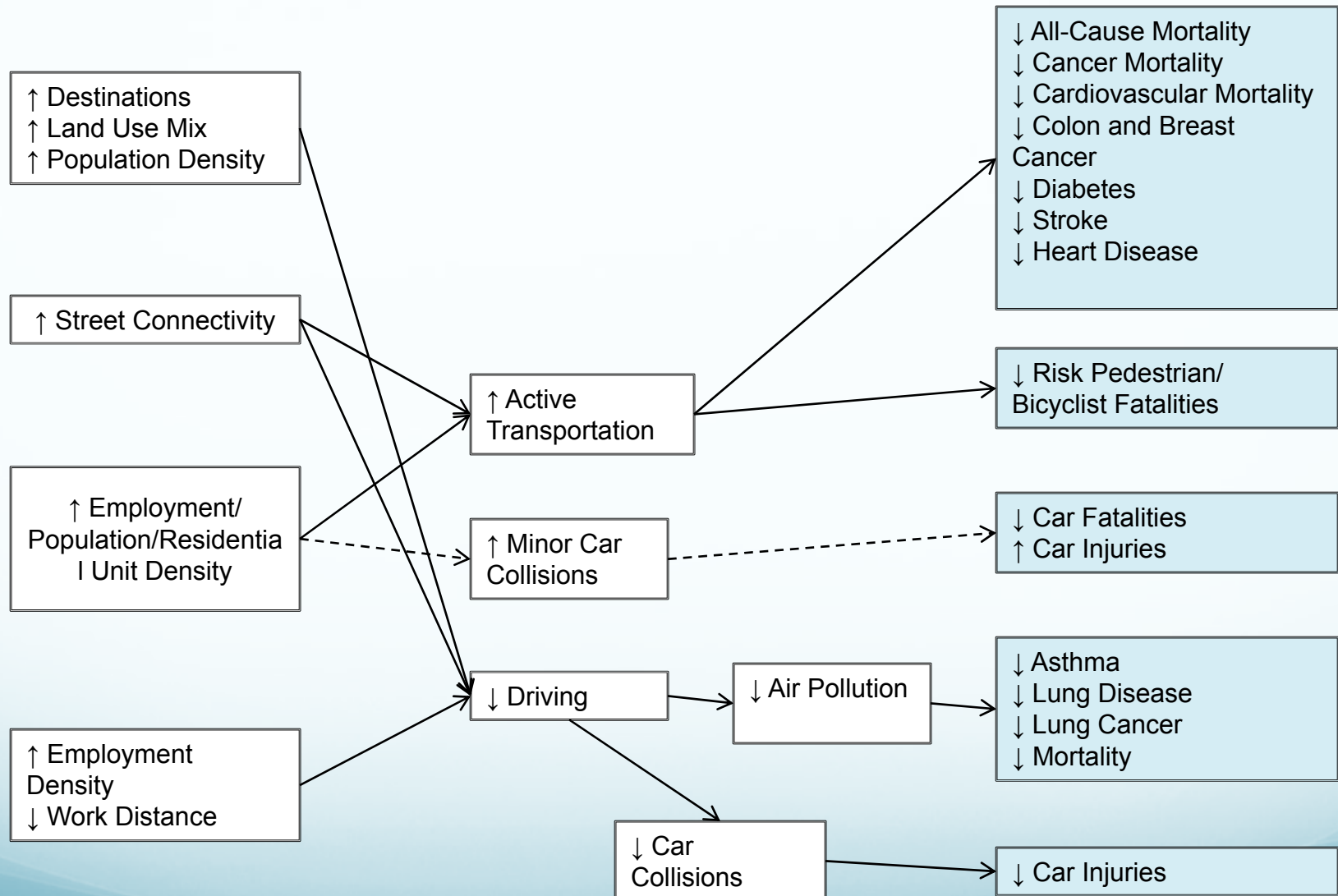
# Policies to Reduce VMT – Pricing Mechanisms

- Congestion Pricing
- VMT Tax
- Fuel Tax
- Employee Parking Fees

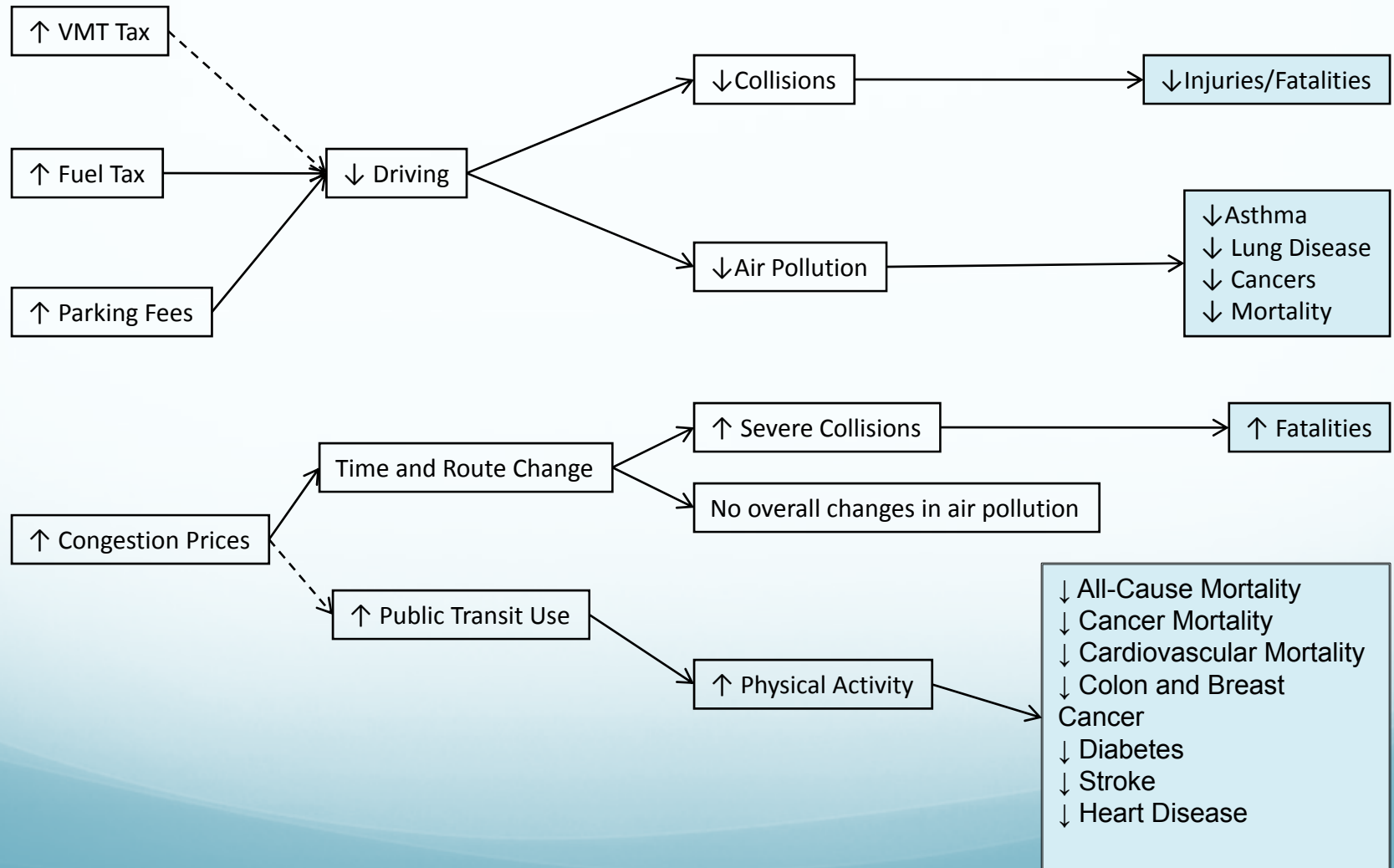
# Policies to Reduce VMT – Public Transit

- Increasing coverage area of public transit
- Promotion of public transit

# Pathway between land use planning and health



# Pathway between increasing costs of driving and health



# Selected Built Environment Data

- “Sprawl Index”
  - Clackamas County - 98.45
  - Multnomah County - 131.42
  - Washington County - 108.29
  - New York County - 352.07
- Associated with higher levels of physical activity, lower BMI, less traffic fatalities, less pedestrian fatalities

# Business Parking Fees: An Innovative Approach?

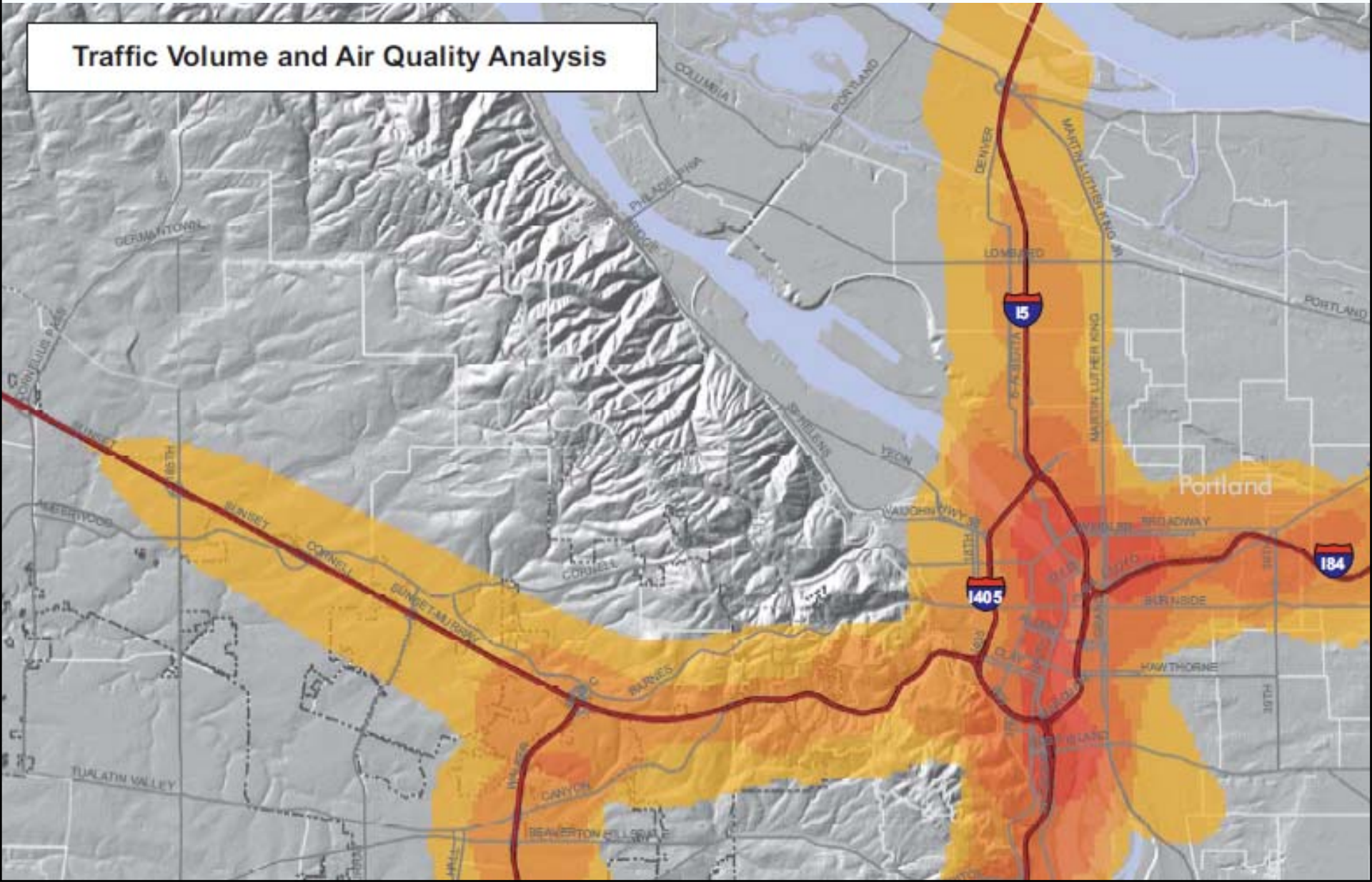
- With a \$6 employer parking fee, annual VMT would be reduced by 3900 miles per commuter in Portland
  - 523,230 commuters driving alone in 2000
  - 135,004 less commuters would drive alone
  - Increase of 71,058 public transit commuters

# Vulnerable Populations

- Unequal distribution of air pollution, affordable housing, transit access
- Increasing transit access and improving the built environment can benefit older, younger, disabled, and low income groups
- Increasing costs would negatively impact low income groups

# Unequal Burden of Health Impacts

Traffic Volume and Air Quality Analysis



# Health Trade-offs in Transportation Policy

- Increased population density → Increased physical activity, lower overall pollution, but increased exposure for those living in the inner city
- Pricing mechanisms → Effective tools at reducing VMT, but impact low income populations disproportionately
- Business Parking fees → Most effective tool at increasing public transit and biking, but government has less control over revenue

# Recommendations

- Concurrent policies would have the greatest impact:
  - Increase population density/develop within UGB
  - Create more mixed-use neighborhoods
  - Increase access to public transit
  - Increase costs of driving
- Mitigation for vulnerable populations

# Next Steps in VMT policy

- Statewide MPO Taskforce
- Proposal for 2010 legislative special session
- Local Jurisdictions will set targets as part of regional transportation plans

# National and Local Reception

CONCLUSION

SUSTAINABLE COMMUNITIES  
& SMART GROWTH



# Questions?

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Co-Director, Upstream Public Health

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