

# Making the Connection: Public Health and Transportation



Karyn L. Johnson, MSEd, CHES  
Onondaga County Health Department  
June 2012

# Transportation

- Arrival of engine and highway system has had great positive impact on public health
- Active transportation has declined compared to previous generations
- Currently, built environment is centered around automobiles
- Has improved quality of life, but also contributed to unhealthy outcomes



# Public Health Issue: Obesity

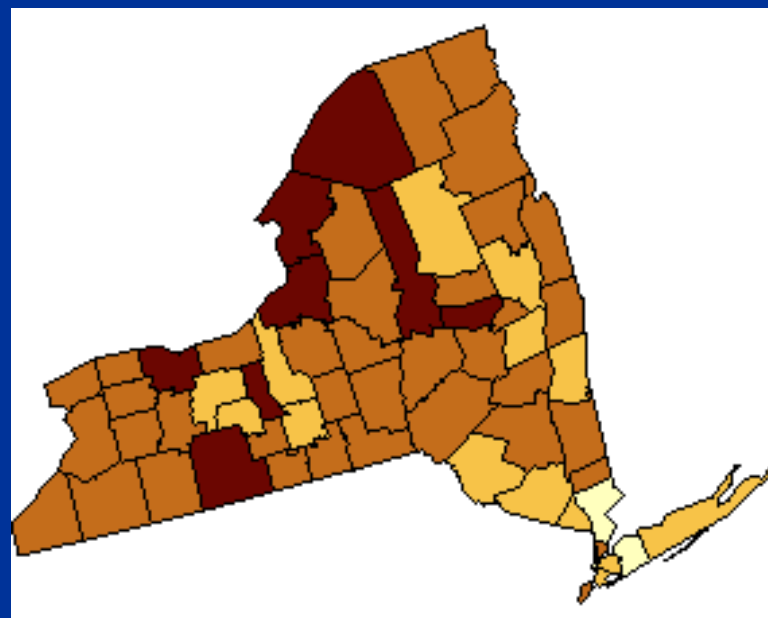
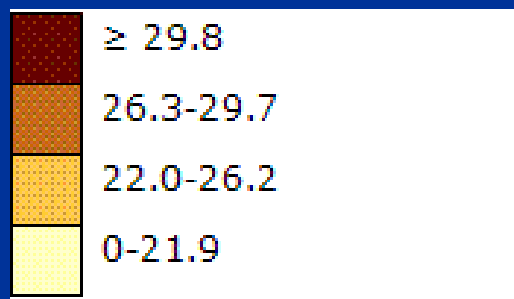


- Approximately two-thirds of U.S. adults and one-third of children are overweight or obese.
- Over half the population does not meet the recommended daily physical activity guidelines
- 21% of adults report no participation in physical activity during the last month.



# New York State Obesity Trends

- 2009 age-adjusted estimates of the percentage of adults who are obese in New York State
- Onondaga County 28.2%



# Public Health Issue : Health Care Costs

Estimated that 3.1 trillion will be spent on  
health care in 2012



# Public Health Issue: Threatened Environment



- Air pollution leads to a number of adverse health effects:
  - Cardiac symptoms
  - Worsening asthma symptoms
  - Decreased lung function
- Transportation sector accounts for one-third of the U.S. greenhouse gas emissions which contribute to climate change

# Public Health Issue: Equity

- Transportation is used by all to get to work, school, to get medical attention, to access healthy foods at a grocery store, etc.
- 20% of population has a disability that limits their daily activities
- 1 out of 3 people do not drive
  - 21% of population over 65
  - Children under 16
  - Many low income persons do not have access to automobiles



# Public Health Issue: Safety

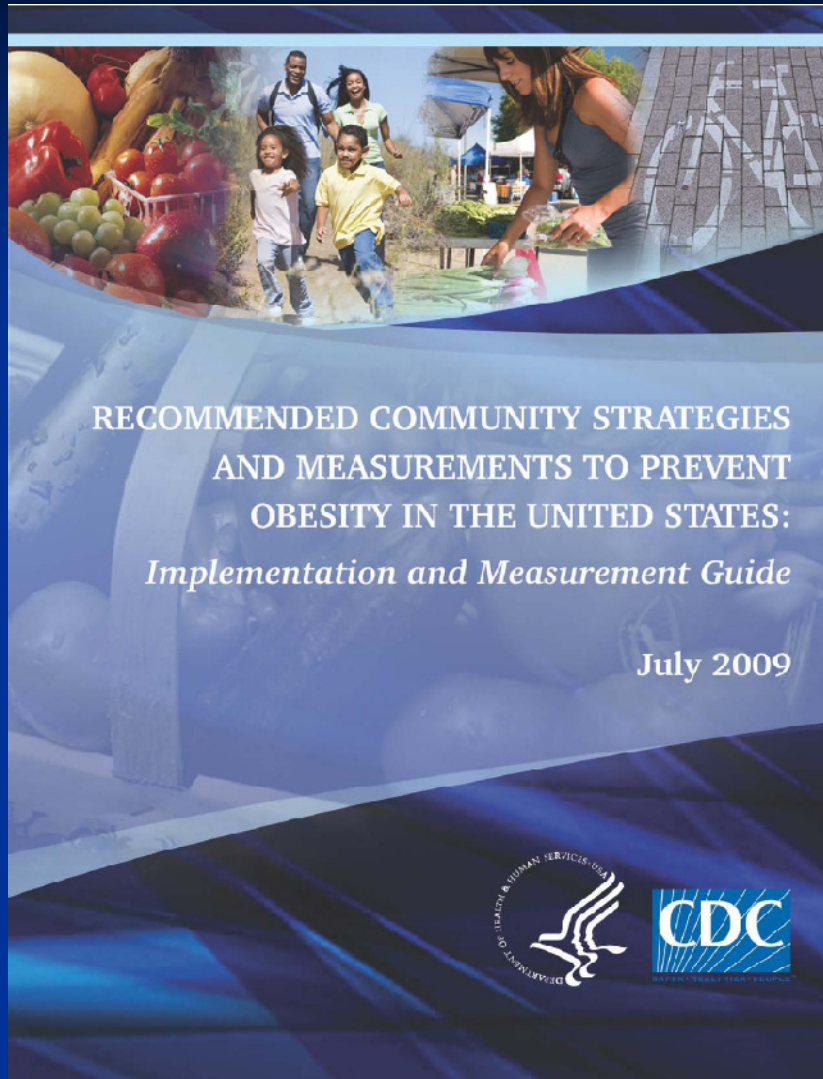
- In 2009:
  - 4,092 pedestrians nationally were struck and killed by motor vehicles
    - accounting for 11.4% of all transportation related fatalities (Bureau of Transportation Statistics, Transportation Statistics Annual Report, 2010)
  - Motor vehicle collisions are the leading cause of death among children ages 3 to 14
    - 19% of these children were pedestrians (National Highway Traffic Safety Administration. 2009. Traffic Safety Facts: Children)
- Many view walking and bicycling within their communities as unsafe because of traffic and the lack of sidewalks, crosswalks, and bicycle facilities



# The Public Health / Transportation Connection



Transportation networks can either promote or hinder the public's health



The Centers for Disease Control and Prevention named the adoption of Complete Streets policies as a recommended strategy to prevent obesity

# What are Complete Streets?

Streets that are safe, comfortable, and convenient for travel for everyone, regardless of age or ability



# Who Benefits From Complete Streets?



- Motorists
- Pedestrians
- Bicyclists
- Transit users
- Persons with disabilities
- Children
- Senior Citizens

# Elements of a Complete Street

- Sidewalks
- Bike lanes
- Wide paved shoulders
- Bus lanes
- Comfortable & accessible transportation stops
- Median islands
- Accessible pedestrian signals
- Curb extensions
- Narrower travel lanes
- Signage & other alerts
- Frequent and safe crossing opportunities

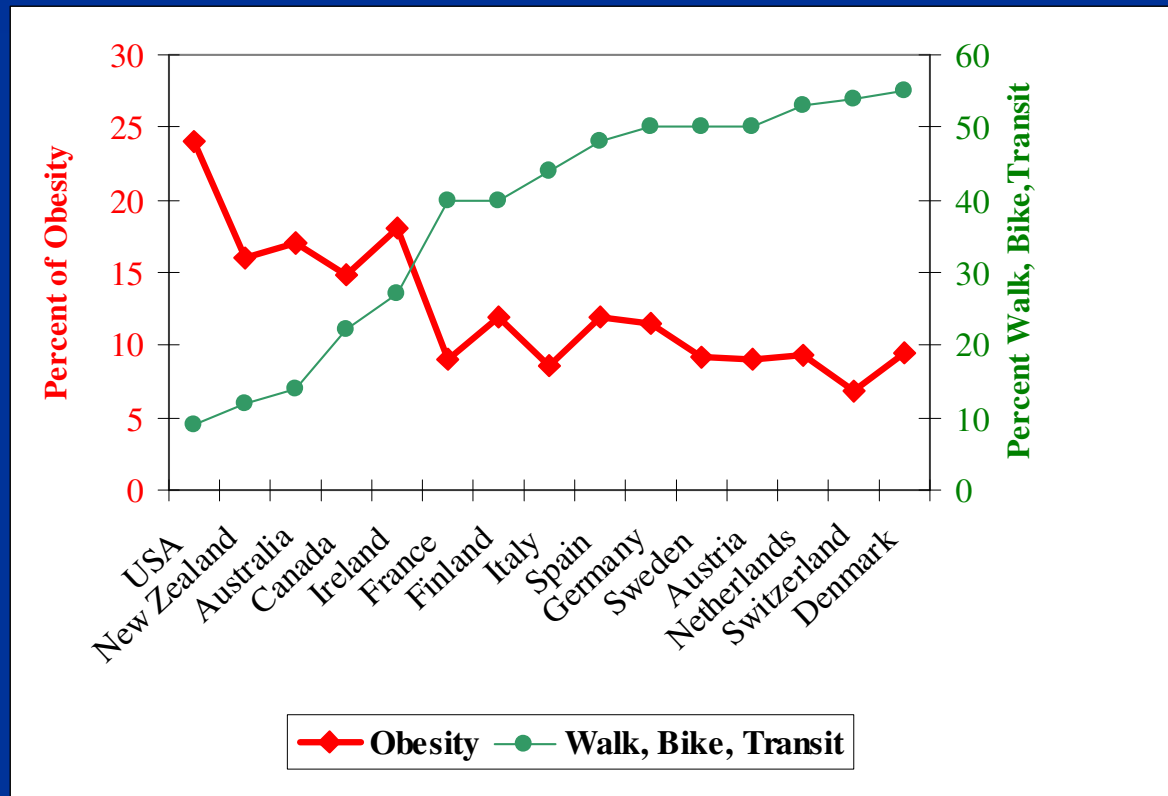
# Benefit: Health

- Improving active transportation options may improve or prevent health problems
- Physical activity may reduce the risks of chronic diseases related to lifestyle:
  - obesity
  - diabetes
  - coronary heart disease
  - stroke



# Benefit: Health

- Obesity rates are lower in places where people walk, use bicycles, or public transportation





# Benefit: Health



- Potential for much more active transportation
  - 50% of trips are under 3 miles
  - 28% are 1 mile or less
  - 72% of trips that are 1 mile or less are driven

SOURCE: 2008 National Household Travel Survey

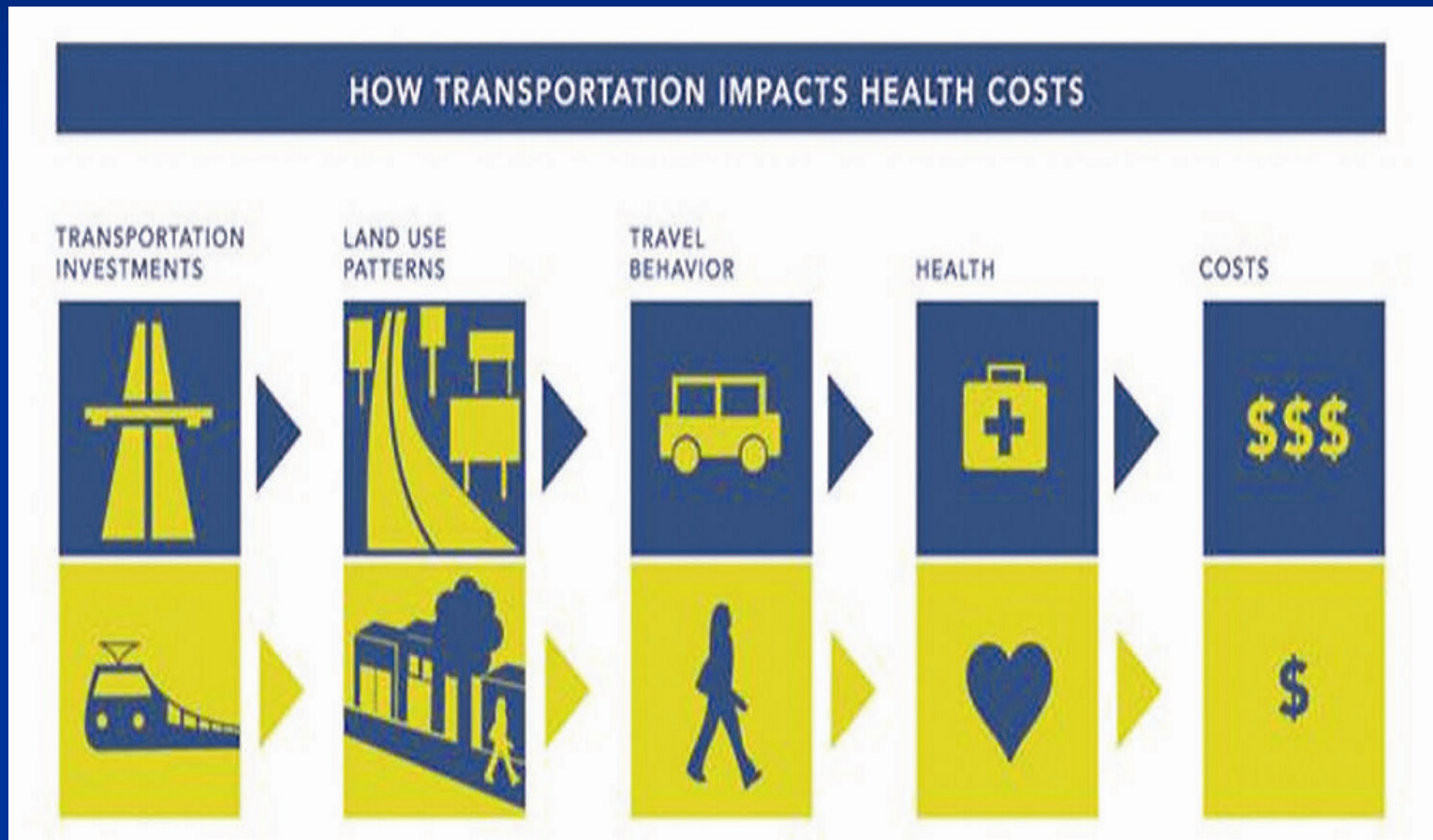
# Benefit: Health



- Multiple studies demonstrate that increasing or improving bicycle infrastructure increases frequency of biking to daily activities
- Street-scale urban design and land use planning that support walking are effective at increasing physical activity

Heath GW, Brownson RC, Kruger J, et al. The effectiveness of urban design and land use and transportation policies to increase physical activity: a systematic review. *Journal of Physical Activity and Health* 2006;3 (Suppl 1) :S55--76

# Benefit: Reduced Health Costs



The Hidden Health Costs of Transportation, Urban Design 4 Health, Inc. and the American Public Health Association (2010)

# Benefit: Safety



## Complete Streets can:

- Improve safety for all road users
- Reduce speed of automobiles
- Reduce pedestrian injuries by as much as 28%
- Reduce bicycle crashes by 50%

# Benefit: Accessibility

## Complete Streets:

- Allow everyone the opportunity to stay connected to the community
- Ensure that all people have access to safe, healthy, convenient, and affordable transportation



# Benefit: Preserve Resources



Picture courtesy of the Complete Streets Coalition

- Reduces air pollution and adverse health effects associated with pollution
- Lowers dependence on gasoline
- Reduced automobile traffic leads to reduced cost of road repair and maintenance

# Benefit: Livable Community

- Residents of walkable communities:
  - Are more socially engaged and trusting
  - Report being in “good health” and “happy” more often



SOURCE: Shannon H. Rogers, et al. Examining Walkability and Social Capital as Indicators of Quality of Life at the Municipal and Neighborhood Scales (2010)

# Benefit of a Complete Streets Policy

- Ensures that the entire right of way is planned, designed, and operated to provide safe access for all users





# Creating Healthy Places to Live, Work & Play in Onondaga County Can Help!

- Conduct walkability / bikeability assessments
- Provide tools to draft a local policy
- Provide examples of policies from other jurisdictions
- Connect you to resources
- Offer training / education



# Questions?



Karyn L. Johnson, MSEd, CHES

Public Health Educator

Creating Healthy Places to Live, Work & Play

[hlkjohn@ongov.net](mailto:hlkjohn@ongov.net)

435-3280

