



**Penn Medicine**  
Lancaster General Health

Community Health and Wellness

# Health and Economic Benefits of Walking and Bicycling Trails

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October 2022  
American Planning Association Pennsylvania Chapter



# Overview

- ▶ Impact of built environment on health
- ▶ Connections between trails and health/economic development
- ▶ Assessing community health
  - How to assess community health needs and identify community priorities
  - Gathering health data to support trails projects
- ▶ Key stakeholder analysis
  - Gaining support from diverse partners for trails projects
  - Stakeholder analysis and strategies for engagement

# The Built Environment & Health



# Social-Ecological Model of Health



Our built environment includes all the human-made physical spaces where we live, play, and work.

These spaces affect our health by increasing or reducing access to **resources we need for health**, and increasing or reducing our **exposure to harmful things** in the environment.



# Health Benefits of Bicycle-Pedestrian Trails

Physical  
activity

Improved  
mental  
health

Improved  
environment

Community  
interaction

Reduced  
injuries and  
crashes

# Promoting Health Equity

## ▶ Older adults:

- Accessible pedestrian paths in good repair, safety, access to rest rooms and rest areas, aesthetics, and a pleasant environment were important influences on older adults' physical activity.

## ▶ Children:

- Reducing traffic volume, speed, and sidewalks increased safety for children using active transportation.

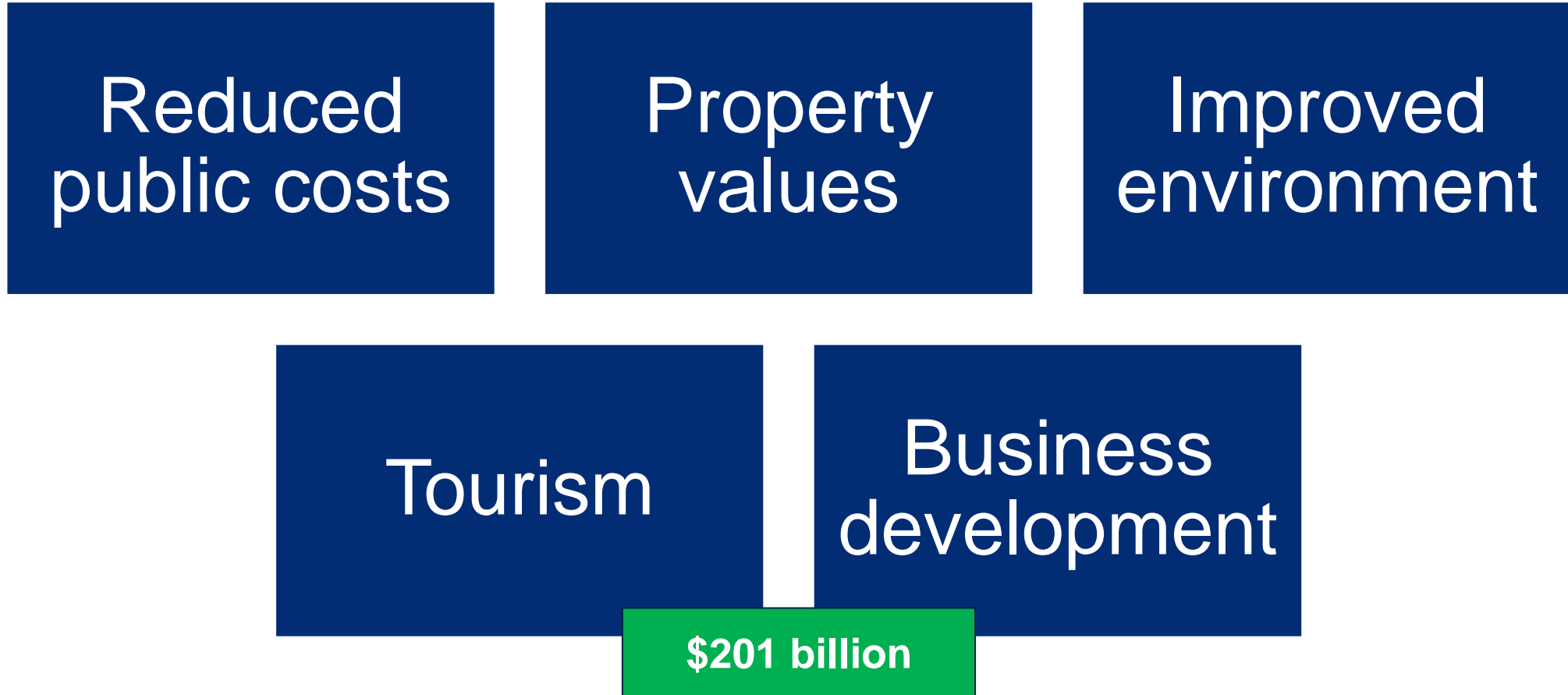
## ▶ People with physical limitations:

- Bicycle and pedestrian infrastructure that is designed for accessibility and physically separated from vehicles can help increase comfort and safety.

## ▶ Access to resources:

- Trails can provide a safe space for activity for lower-income and minority communities, which often have less access to recreation facilities.
- Safe bicycle and pedestrian infrastructure, combined with mixed land use, creates transportation alternatives to jobs, shopping, and other services for people without vehicles or who do not drive.

# Economic Benefits of Bicycle-Pedestrian Trails





# Assessing Community Health



# Assessing Community Health

- ▶ What are the health problems in the community?
- ▶ Which problems have the most serious impact?
- ▶ Which populations are at increased risk?
- ▶ Which problems have declined over time?
- ▶ Which ones are increasing?
- ▶ What resources and services are available to address these problems?

**Connecting trails projects to community health needs can increase support, funding, and political will for projects.**

# Lancaster County Example: Community Health Priorities



**Activity:**  
**Group Discussion**

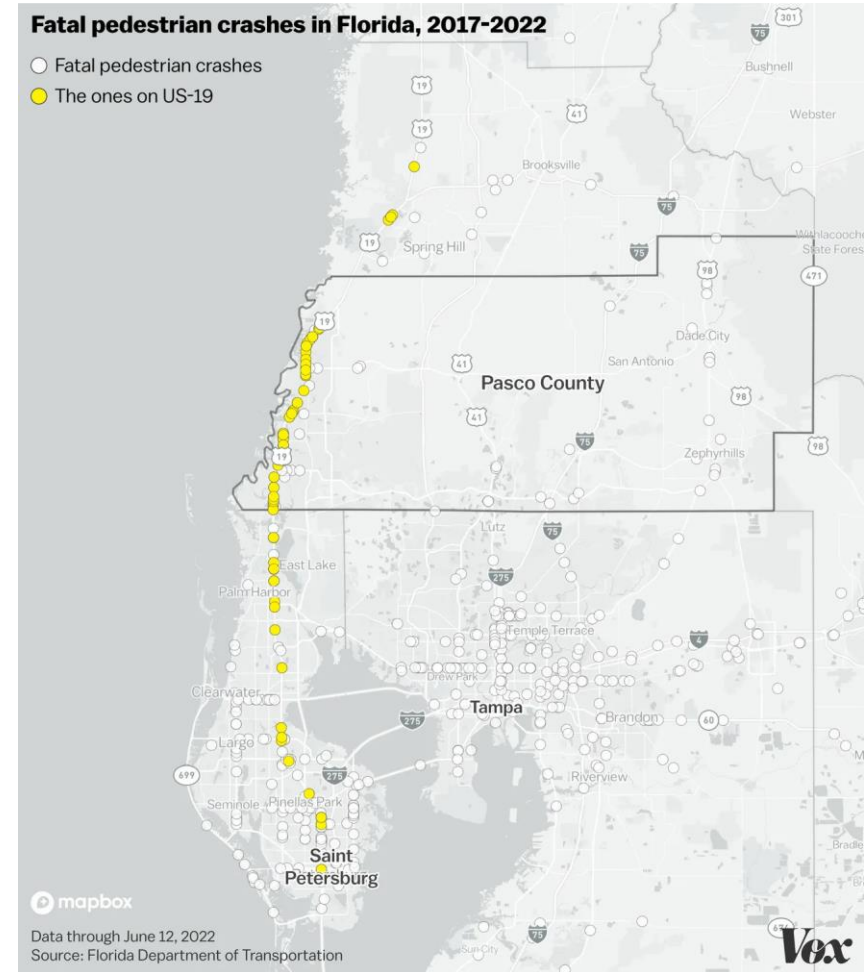
What does your community value?

What have you observed are serious health concerns for your community?

What are your local health priorities, informal or formal?



# Using Public Health Data (Epidemiology)



# Making the Case Using Health Data

- ▶ Mortality/Deaths
- ▶ Chronic Diseases (obesity, asthma)
- ▶ Unintentional Injuries (crashes)
- ▶ Behaviors (commuting mode, physical activity)
- ▶ Health Risk Factors (such as income, disabilities, age)
- ▶ Healthcare Costs (Kaiser Family Foundation)

**Sources:**  
**CDC WONDER**  
**PA EDDIE**  
**American Community Survey**  
**State Health Assessment**

# Example from Lancaster County

## WHAT IS ACTIVE TRANSPORTATION?

Active transportation is a term used to describe transportation that is self-propelled or powered by human energy, such as walking and bicycling. Often referred to as "non-motorized transportation" the term active transportation is preferred because it suggests a stronger connection between transportation choices and healthy lifestyles.

The built environment provides important cues that influence the transportation decisions people make. Features of the built environment include the design of our roads; the provision of sidewalks, trails, and bicycle lanes; the compactness of development; and a mix of land uses. If it is easy and safe to walk and bike to a variety of destinations, people are more likely to choose active transportation.<sup>1</sup>

The following are just a few of the benefits of active transportation:

## WHY ACTIVE TRANSPORTATION IS IMPORTANT

There are many benefits of active transportation that contribute to our quality of life. Infrastructure investments in trails, sidewalks, traffic-calming, and public transit support active travel and increase routine physical activity, which improves health, environmental quality, and livability of communities.

### HEALTH

Public health officials recognize the connection between mental and physical health and the built environment. Many residents view walking and bicycling within their communities as unsafe due to heavy traffic and the lack of sidewalks and bicycle facilities. This can lead to physical inactivity, which is a major contributor to the rise in rates of obesity, diabetes, heart disease, stroke, asthma, and other chronic health conditions in the United States. In Lancaster County, 60% of adults, 40% of teens and 36% of children are overweight or obese.<sup>2</sup> These numbers can be lowered with an active lifestyle that incorporates biking and walking as daily activities.

### SAFETY

The lack of sidewalks and separated bicycle facilities can also make it dangerous for those who walk or bike for transportation purposes. According to PennDOT's Annual Crash Reports 2012-2017, there were 1,142 crashes involving pedestrians and bicyclists in Lancaster County, which resulted in


<sup>1</sup> Community Preventive Services Task Force. *Physical Activity: Built Environment Approaches Combining Transportation System Interventions with Land Use and Environmental Design*. December 2016; and Barnett, David W. et al. *Built environmental correlates of older adults' total physical activity and walking: a systematic review and meta-analysis*. *International Journal of Behavioral Nutrition and Physical Activity* (2017).  
<sup>2</sup> Pennsylvania Department of Health. *Behavioral Risk Factor Surveillance System* (20-26-2016)

## Health Benefits of Walking & Biking

### CURRENT U.S. HEALTH STATISTICS

 **47%** of Pennsylvanians **DO NOT ACHIEVE** the recommended 150 minutes per week of **MODERATE EXERCISE**.  
(CDC 2017)

 **67%** or **2/3** of Pennsylvanians are **OVERWEIGHT OR OBESE**.<sup>\*</sup>  
(CDC 2017)

 **CARDIOVASCULAR DISEASES** are the **#1 CAUSE OF DEATH** in the United States.  
(CDC, 2016 and 2017)

INTRODUCTION | 1-3



## Lancaster Active Transportation Plan

### Pennsylvania: Lancaster



42 fatalities.<sup>1</sup> Installation of safe pedestrian facilities, like sidewalks, along with separated bicycle facilities could substantially reduce these numbers.

### ENVIRONMENT

Greenway trail corridors typically contain extensive areas of plant life, open space, and waterways that link fragmented habitats, help protect native species and preserve natural landscapes. This is especially important in Lancaster County where only a small percentage (17%) of the landscape is forested.<sup>2</sup>

From an environmental health standpoint, active transportation helps reduce carbon emissions by providing an alternative to the use of the single passenger automobile. Efforts to reduce air pollution are needed in Lancaster County. A 2018 report by the American Lung Association rated the

<sup>1</sup> Pennsylvania Department of Transportation. *2017 Pennsylvania Crash Facts and Statistics*. [https://www.penndot.gov/TravelInPA/Safety/Documents/2017\\_CFR\\_linked.pdf](https://www.penndot.gov/TravelInPA/Safety/Documents/2017_CFR_linked.pdf)  
<sup>2</sup> 2018 Land Use/Land Cover Analysis, Lancaster County GIS Department

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County's air quality a grade of "D" for High Ozone Days, and a grade of "F" for both Annual and 24-Hour Particle Pollution.<sup>3</sup>

### ECONOMIC OPPORTUNITY

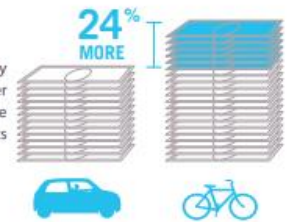
Active transportation can enhance the economic health of our communities through increased bicycle and pedestrian activity and tourism. When visitors use local trails, they spend money on goods and services such as hotels, restaurants, and shops. A 2017 study by the Outdoor Industry Association found that bicycling participants spend \$83 billion on "trip-related" sales (bicycle tourism) and generate \$97 billion in retail spending. Dicycle recreation spending also contributes to the creation of 848,000 jobs.<sup>4</sup>

<sup>3</sup> American Lung Association. *State of the Air 2018*

<sup>4</sup> Outdoor Industry Association. *The Outdoor Recreation Economy*, 2017.

### BICYCLISTS SPEND MORE

Customers who arrive by automobile spend the most per visit across all of the establishments, but cyclists spend the most per month.



(Source: Clifton, Montway & Ritter, 2012)

## Activity

What health statistics might help you make the case for improved trails, bicycle and pedestrian infrastructure in your community?





## Group Activity

Key Stakeholder Analysis:  
How to get health sector and other partners on board?

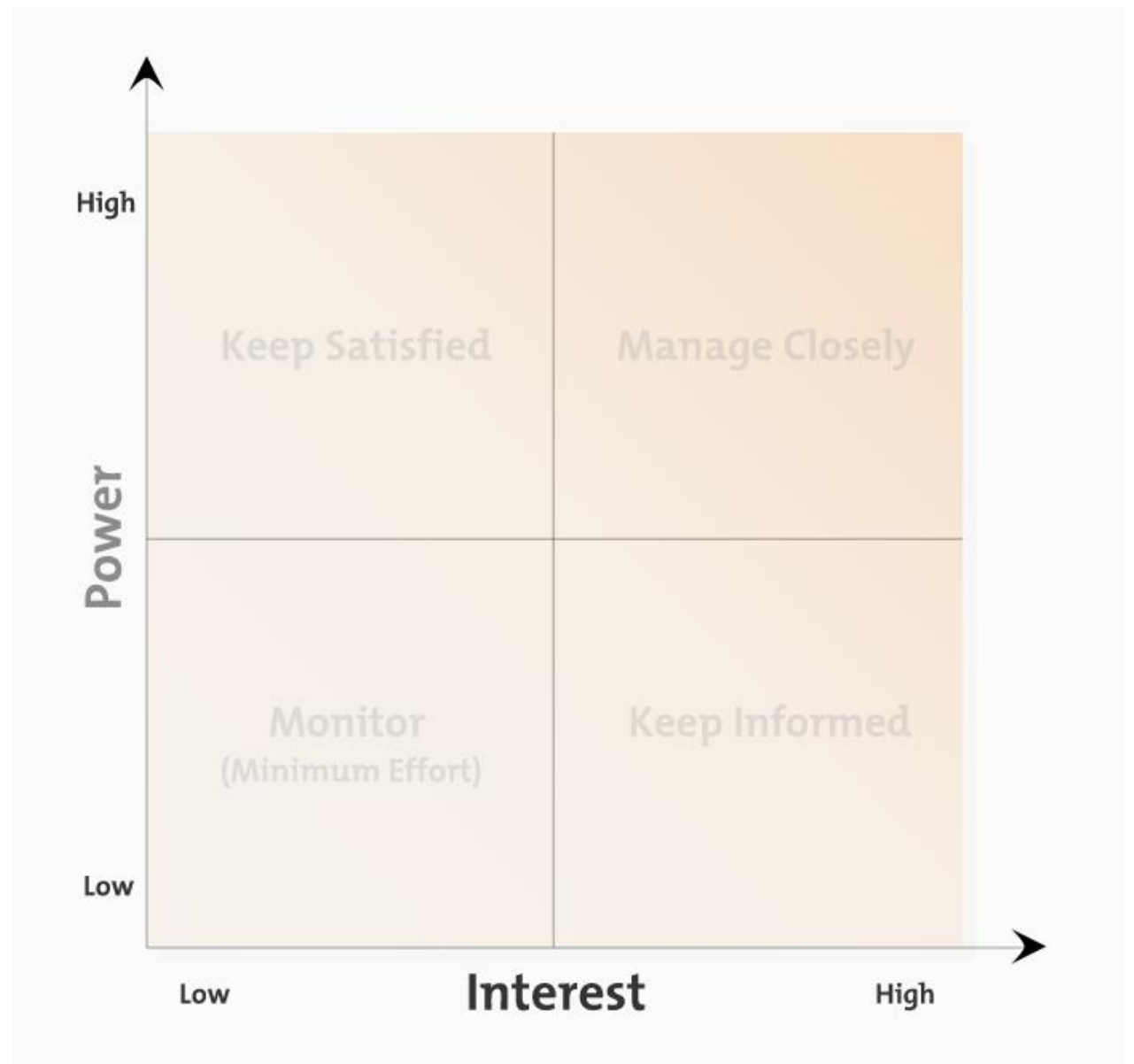


# Stakeholder Analysis: Identify Stakeholders

## ► Brainstorm stakeholders:

- Who is affected?
- Who has power or influence?
- Who has an interest in success or failure?

# Stakeholder Analysis: Prioritize Stakeholders



# Stakeholder Analysis: Understand Key Stakeholders

- ▶ What financial or emotional interest do they have in the outcome of your work? Is it positive or negative?
- ▶ What motivates them most of all?
- ▶ What information do they want from you, and what is the best way of communicating with them?
- ▶ What is their current opinion of your work? Is it based on good information?
- ▶ Who influences their opinions generally, and who influences their opinion of you? Do some of these influencers therefore become important stakeholders in their own right?
- ▶ If they aren't likely to be positive, what will win them around to support your project?
- ▶ If you don't think that you'll be able to win them around, how will you manage their opposition?

# Lancaster County Example

Health	Economic Development/ Business	Education	Government
Penn Medicine Lancaster General Health	Lancaster City Alliance Local bicycle shops Bike Share sponsors	Franklin & Marshall College K-12 schools	Lancaster County Planning Department City/municipal governments LCSWMA PennDOT/DCNR
Non-Profit			
The Common Wheel Lancaster County Conservancy Susquehanna National Heritage Area			

## Group Activity: Discussion

Did you identify any stakeholders you hadn't considered?

Are you communicating effectively as you should be with your stakeholders?

What actions can you take to get more from your supporters or win over your critics?





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