Using data to advance walkable communities

How do you define a walkable community?
How do (or could) you use data to help build walkable communities?

Importance of data in advocating for equitable and sustainable change
Infrastructure and health inequities

Low-income communities and communities of color are more likely to have:

- inadequate infrastructure promoting active transportation
- higher risk of injury or death due to motor vehicle crashes
- higher risk of chronic disease

Dangerous by Design 2016

Pedestrian deaths by race/ethnicity relative to U.S. population, 2005-2014

- Native American: 2.7% deaths, 0.7% population
- Asian: 4.3% deaths, 5.1% population
- African American: 12.2% deaths, 19.3% population
- Hispanic: 21.5% deaths, 19.9% population
- Non-white (incl. Hispanic): 24.9% deaths, 46.1% population
- White, non-Hispanic: 43.1% deaths, 62.8% population
Pedestrian Safety Trends

Vision Zero

- Fundamental shift in safety programming and management
  - Bad driver behavior will never be completely avoidable
  - Prevent the crash from happening through design
  - Otherwise, make the crash survivable
- Speed increases a driver's need for time and space to react/stop
- Data and Countermeasures: ITE Safety Resources Toolbox
Run errands on foot or bike:
A remedy for adult inactivity.

Walking or biking:
- 75% walk or bike to school.
- 27% walk or bike to work.
- 25% walk or bike in the city.

People who live in:
- Neighboring mixed-use areas are more likely to meet physical activity guidelines.
- People living in older neighborhoods are more likely to walk for transportation.

Attainable Bicycle Short Trip Target:
15% of trips less than 3 miles.
7% of trips less than 9 miles.

City of Austin 2014 Bicycle Master Plan Update
March 21, 2014
Economic Impacts of Walking and Walking Projects

Jobs created per $1 million spent on...

- Pedestrian project: 7.8 full-time equivalent positions
- Bicycle project: 9.6 full-time equivalent positions
- Complete streets project: 11.4 full-time equivalent positions

Impact of Complete Streets Projects

- 8 of 10 projects saw property values increase
- 2 of 10 projects saw property values stay the same

Where can we get the data and what can we do with it?
Where can I get the data on a local level?

- Hospitals
- Health Department
- Law Enforcement
- Schools
- Businesses
- Advocacy Organizations
- Universities
- Public Works or Department of Transportation

Federal data sources

- Bureau of Transportation Statistics
  - Combination of sources
  - Crashes and fatalities by mode
- National Highway Traffic Safety Administration
  - Fatality Analysis Reporting System
  - National Automotive Sampling System
- National Transportation Safety Board
- Pedestrian and Bicycle Information Center
- Federal Highway Administration
  - Roadway Safety Data Program
  - National Household Travel Survey
- Census Bureau American Community Survey
- Centers for Disease Control and Prevention
  - Behavioral Risk Factor Surveillance System
  - Youth Risk Behavioral Surveillance System
  - National Health Interview Survey
- Environmental Protection Agency
  - EnviroAtlas
  - National Walkability Index
Different types of data collection

- Surveys
  - Intercept survey
- Interviews
- Observation
- Photovoice
- Community asset mapping
- Pedestrian counts
- Walk audits


Measuring how people travel

Tracking Surveys

- Useful for peds, bikes, and cars
- Document where people travel, how they move, where is unused/misused space
- Difficult-to-obtain data otherwise

Image Source: [www.pedbikeimages.org](http://www.pedbikeimages.org) (Dan Burden)
Desire Lines

• Traditional demand models do not include pedestrian traffic
• Spot counts can help
• Documenting the frequency and location of “desire lines” can guide future infrastructure development

Walk Audit Tools

• FHWA Pedestrian Road Safety Audit Guidelines
• AARP Sidewalks and Streets Survey
• Toolkit for the Assessment of Bus Stop Accessibility and Safety
• Universal Design Audit Checklist
• Active Living Research- Rural Active Living Assessment
• Microscale Audit of Pedestrian Streetscapes (MAPS)

Information obtained from Pedestrian and Bicycle Information Center, Audits- http://www.pedbikeinfo.org/planning/tools_audits.cfm
You can use data to determine...

- location of traffic crashes
- traffic injuries and fatalities

You can use data to determine...

- the presence of sidewalks
- the presence of bicycle lanes
You can use data to determine...

- bicycle and pedestrian trends
- chronic disease rates

You can use data to identify

- ‘vulnerable populations’ by using such data as:
  - race and ethnicity
  - economic status
  - education level
  - employment
  - disability status
  - age
  - geography
  - sex
  - limited English proficiency
Data can help you

- Identify priorities
- Understand and monitor inequities
- Create effective programs, interventions, or policies
- Justification
- Evaluate progress of efforts

Capital Trails Coalition Example

Partners involved:
- Rails-to-Trails Conservancy
- East Coast Greenway
- Metro Washington Council of Governments (MPO)
- Maryland-National Capital Parks and Planning Commission
- Prince George’s County
- District Department of Transportation
- Trust for Public Land
- National Park Service
- Washington Area Bicyclist Association
### Capital Trails Coalition Example

<table>
<thead>
<tr>
<th>Off-road/On-road</th>
<th>Off-street, separated from moving traffic.</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Provision for on-street facilities for connection</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Width</th>
<th>10-12 feet minimum.</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Designed for probable use</td>
<td></td>
</tr>
<tr>
<td>● Wider if demand warrants</td>
<td></td>
</tr>
<tr>
<td>● Narrower in short segments to accommodate design constraint</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Design Standards</th>
<th>Designed according to best practices.</th>
</tr>
</thead>
<tbody>
<tr>
<td>● &quot;Examples of best practices&quot;</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Types of Use</th>
<th>Designed for non-motorized use.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Paved/Unpaved</th>
<th>Paved.</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Firm, crushed stone where appropriate</td>
<td></td>
</tr>
<tr>
<td>● Boardwalks and bridges are acceptable</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relation to the Network</th>
<th>Is directly connected to the overall system or will be part of the system with the completion of future planned trails.</th>
</tr>
</thead>
<tbody>
<tr>
<td>● This connection also needs to be in the form of a physical multi-use trail</td>
<td></td>
</tr>
<tr>
<td>● “Thematic” connections are not acceptable</td>
<td></td>
</tr>
<tr>
<td>● Each trail should connect to the overall network at at-least one point.</td>
<td></td>
</tr>
<tr>
<td>● Even if individual trail segments are short, the completed trail should connect places</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transportation/Recreation</th>
<th>Well-suited for serving both transportation and recreation purposes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Connecting people to transit, activity centers, and recreation areas</td>
<td></td>
</tr>
</tbody>
</table>

| Feasibility | Right of way identified and trail capable of being built within 25 years. |

---

### Capital Trails Coalition Example - Mapping to Support Capital Trails Coalition Goals

#### Immediate Goals
- Define the future network
- Set benchmarks
- Coalition members can access and print maps
- Gather input from planning partners on map/app content/functionality
- Develop advocacy strategy

#### Sustained Goals
- Improved communication between jurisdictions and among departments
- Guidance for data collection standards
- Enhanced project trail information in a central location, with associated planning documents
- Analyses
- Customize app and tool design for ease of use (tool instructions, print templates, etc.)

---

*Slide courtesy of Kelly Pack, Rails to Trails Conservancy*
Advancing equity through data

Safe Routes to School Health Impact Assessment in Columbus, Ohio

Figure 1. Socioeconomic Status Index with All School Locations

In Figure 1, note that the lighter areas, that are generally near the central core of the city, indicate higher levels of vulnerability. This means that the socioeconomic status index includes high poverty, low incomes, low educational attainment, overcrowding along with other housing issues.

Information obtained from Columbus Safe Routes to School District-Wide Travel Plan Health Impact Assessment Full Report
### Columbus Safe Routes to School HIA in Columbus, Ohio

Information obtained from Columbus Safe Routes to School District-Wide Travel Plan Health Impact Assessment Full Report

### Key Factors

#### Inclusive Analysis
- Establish an inclusive process designed to assess health effects and define local solutions
- Zoning and transit projects may move ahead without a clear understanding of potential consequences for health and health inequities

#### Community Awareness & Involvement
- Build capacity and promote engagement of people who are typically absent from planning processes
- Underserved residents may be left out of planning processes, which may result in development decisions that fail to encompass diverse perspectives. Planning processes can also be time consuming and technical, which may present a barrier to resident participation.

#### Displacement
- Account for potential displacement effects of TOD and mixed-use zoning strategies
- Transit investments may drive up median area income, housing values, and rents. A possible result of such changes is that existing residents and small business owners may no longer be able to afford living or doing business there.

#### Transportation Needs
- Consider TOD and mixed-use zoning strategies in transportation networks that serve all transit users
- Many TOD efforts are centered on rail with little focus on bus transit or bus rapid transit. Rail projects can be resource-intensive, may often serve more affluent populations, and could divert funds from bus transit upgrades.

### Barriers or Unintended Consequences

- Use health and equity impact assessments to identify potential unintended negative consequences of all community improvement efforts.
- Engage residents in the assessment process and raise awareness of potential health effects of proposed outcomes for health and health inequities.
- Use assessment process to increase transparency in decision-making and improve communication between partners.

### Opportunities to Maximize Impact

- Diversify leadership on boards and commissions to ensure multiple perspectives in decision-making processes.
- Cultivate resident understanding, leadership, and decision-making through training programs, guided reviews of plans, neighborhood scans, and mapping activities.
- Ensure public input is inclusive, timely, and representative of community experiences.

<table>
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<th>Barriers or Unintended Consequences</th>
<th>Opportunities to Maximize Impact</th>
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Information obtained from A Practitioner’s Guide for Advancing Health Equity—Community Strategies for Preventing Chronic Disease
Partnerships are key

Identifying and Engaging Stakeholders

Which institutions do you (or will you) work with most closely to advance walking and walking infrastructure?
Working together to create walkable communities

Co-benefits of partnerships

- Pooling of resources
- Strength in numbers
- Access to a larger network of people
- Increased flexibility
- Sustainability
- Advance win-win opportunities for all partners involved
The Collaboration Continuum

Finding Leaders from Within: The Case of Go Bronzeville

• Goal: Reduce drive-alone trips and increasing trips made by foot, bicycle, transit and carpool
• Hired two local residents as program's Outreach Ambassadors
• Results: 750 residents signed up, 10 group walks and bike rides occurred, and other events to promote biking and walking in the community
Finding Leaders from Within: The Case of Go Bronzeville

- Funded by Congestion Mitigation and Air Quality Improvement Program (CMAQ) federal grant
  - City of Chicago
    - Hires Alta Planning + Design
      - Hires Active Transportation Alliance
    » Hires Local Ambassadors

Data Resources
Helpful Resources

Reports
- Step It Up! The Surgeon General’s Call to Action to Promote Walking and Walkable Communities
- Federal Highway Administration- A Resident's Guide for Creating Safe Communities for Walking and Biking
- Pedestrian and Bicycle Information Center
- Safe Routes to School National Partnership- “Safe Routes to School By the Numbers: Using Data to Foster Biking and Walking”
- Safe States- Evaluation Guide for Pedestrian Safety

Websites
- Benchmarking Project Website
- CDC- Nutrition, Physical Activity, and Obesity: Data, Trends and Maps
- 500 Cities
- Transportation and Health Tool
- Policy Link- National Equity Atlas
- County Health Rankings and Roadmaps
- Community Commons
- ITE Vision Zero Portal

Finding Your Angle
A Representative Assessment of Walkability in the US Virgin Islands, 2016

John Omura, MD, MPH
Physical Activity and Health Branch
Centers for Disease Control and Prevention
National Walking Summit. September 13, 2017

US Virgin Islands
St. Thomas
St. John
St. Croix
Why aren’t residents of the USVI more active?
Why aren't Virgin Island residents more active?
Objectives

1. Conduct an observational assessment of street-level supports for walking and physical activity
   - Generate representative estimates of features across the territory

2. Provide recommendations on how to improve walkability in the territory
Methods

Key Informant Interviews

- Department of Public Works
- Department of Sports, Parks and Recreation
- Department of Education
- Department of Health
- Community Running Advocate
- Americans With Disability Act (ADA) Coordinator
- American Association of Retired Persons (AARP)
- Territorial Policy Maker
Key Informant Interviews

- Walkability supports in the USVI need improvement
- Limited number of community programs to promote physical activity are in place
- Cross-sector collaboration helps drive existing initiatives forward, and more is needed to promote walkability

Walkability Audit

- Planning tool to identify problem areas in a community
- Advocacy tool to raise awareness among community stakeholders and improve buy-in
- Surveillance tool to systematically quantify the prevalence of built environment features in a geographical area
Audit Tool

- Modified version of Microscale Audit of Pedestrian Streetscapes (MAPS) Abbreviated Tool
  - University of California at San Diego
  - 46 items

- Sections:
  - Land use & destinations
  - Streetscape
  - Sidewalks & bike paths
  - Aesthetics
  - Street crossings
Data Collection

- Trained 26 volunteers from the USVI Department of Health
  - Webinar
  - In-person refresher
  - Field practice audits

- Teams of two people
  - CDC
  - Department of Health

Key Results and Potential Action Steps
Key Results:
Walkability Supports in the USVI are Limited

Key Results:
Comparing Commercial and Residential Areas
Potential Action Steps

1. Make walking a territory-wide priority in the USVI
   – Convene and support cross-sector Active Living Coalition

2. Design communities that make it safe and easy to walk for people of all ages and abilities
   – Use data to identify priority areas
   – Develop a long-term Community Action Plan

3. Promote programs and policies to support walking where people live, learn, work, and play
   – Safe Routes to School, worksite wellness, community walking programs

Potential Action Steps

4. Provide information to encourage walking and improve walkability
   – Facilitate training for local decision-makers and staff of relevant partner agencies (e.g., Department of Public Works)
   – Local Walkbility Institute

5. Fill surveillance, research, and evaluation gaps related to walking and walkability
   – Continue walkability audits
   – Conduct surveillance of physical activity and chronic diseases
Walkability Institute

- 45 participants
- Multi-sectoral
- Developed 3 action plans

Thank you!

John Omura
ydk8@cdc.gov

For more information, contact CDC
1-800-CDC-INFO (232-4636)

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.
Complete Streets Policies

- Streets should be safe for all users, not just automobile drivers
- Design AND Operations
- Better delineation of spaces
- Traffic calming
- Inclusivity a matter of routine, rather than exception

How does data support Complete Streets?

Look at usage by lane, rather than volumes alone.
Case Study: Raleigh, North Carolina

Community Goals

• Alleviate safety concerns with pedestrians crossing between local neighborhoods and the university
• Spur economic development and community use of the thoroughfare
• Slow traffic but improve flow

Case Study: Raleigh, North Carolina

Implementation

• Pedestrian fatalities in the late 1990s spurred a local neighborhood group to collect data on crash rates, on-street parking, and pedestrian access
• Initial data collection motivated a NCDOT feasibility study in 2001
• Construction began in 2009, completed in 2010
Case Study: Raleigh, North Carolina

The power of data

- Ad hoc data collection on pedestrian safety motivated the project
- Since completion: 23% reduction in crashes (many of which were vehicle-pedestrian), $200 million in economic development
- After-action data prompting additional stage of construction, other projects across the city

Benchmarking Report
Website
HISTORY OF THE BENCHMARKING REPORT

BENCHMARKING REPORT WEBSITE
KEY USES

COMPARING STATES

COMPARING CITIES
» 50 largest cities + 18 small or mid-sized cities

CREATING REPORTS
» Multiple tables & charts

MAKE YOUR CASE CHAPTERS

OVERVIEW

INTERACTIVE CHARTS
» 53 Charts

DATA SETS
» 24 Data Sources

HIGHLIGHTED DATA
» Safety
» Commuting
» Policy Goals
» Population Health
BENCHMARKING REPORT WEBSITE

COMPARING STATES

In the next step, you'll select a state or city that you want to visualize and explore. We'll suggest a few more so you can make comparisons.
COMPARING STATES

TARGET LOCATION:
WASHINGTON

Based on your selection, we've chosen two comparable locations based on population size. You may select one additional location.

Massachusetts
Pop. 6,646,338

Virginia
Pop. 8,194,299

COMPARING STATES

WASHINGTON DATA
Comparable Locations: Massachusetts - Virginia

DEDICATED HOUSING
$48,873,426.00

STARTING
7%

Ways of Routes & Trails

Open to Road Cycling
Natural Surface Trails
Open to Pedestrians

Facility/Harvest Size

Bicycle
Pedestrian

THE LEAGUE
OF AMERICAN BICYCLISTS
COMPARING STATES

FATALITY RATES
Washington - Massachusetts - Virginia

Bicyclist Fatalities per 10k Bicycling Commuters

Source: FARS 2005-2013 (annual data), ACS 2007, 3-yr est; ACS 2010, 3-yr est; ACS 2013, 3-yr est.

THE LEAGUE OF AMERICAN BICYCLISTS
MAKE YOUR CASE CHAPTERS

HEALTHY COMMUNITIES

MAKE YOUR CASE

Analysis and Advocacy to Achieve Healthier, healthier, and more equitable outcomes by promoting cycling and walking

TABLE OF CONTENTS

- Healthy Communities
- Multimodal Infrastructure
- Effective Governance
- Dedicated Resources
- Engaged Public

THE LEAGUE OF AMERICAN BICYCLISTS

Inequalities in public health

Physical inactivity has been linked to various diseases, including cardiovascular disease, diabetes, and some types of cancer. Even modest increases in physical activity, such as walking or cycling, can have significant health benefits. According to the Centers for Disease Control and Prevention, adults should aim for at least 150 minutes of moderate-intensity aerobic activity or at least 75 minutes of vigorous-intensity aerobic activity each week.

Some communities have higher rates of obesity than others. For example, African American men and women are more likely to be obese than white men and women. Even among non-Hispanic white men and women, rates of obesity are higher in urban areas than in rural areas. The percentage of adults who are obese has increased in recent years, and obesity is a major risk factor for many chronic diseases, including heart disease, diabetes, and some types of cancer.

SOURCE: CDC

THE LEAGUE OF AMERICAN BICYCLISTS

GIRL TREK: WALKING BACK HEALTH DISPARITIES

By Tiaashington for the League of American Bicyclists

Percent of Commuters who Walk Compared to Health Indicators

Source: CDC

THE LEAGUE OF AMERICAN BICYCLISTS
MAKE YOUR CASE CHAPTERS

CREATING A REPORT
CREATING A REPORT

NEXT STEPS

BICYCLE FRIENDLY STATE RANKING
» Publication in October – Oct. 18th

2018 BENCHMARKING REPORT: BICYCLING & WALKING IN THE UNITED STATES
» Late 2018

UPDATED WEBSITE
» 2019
WINNING A CAMPAIGN - WITH DATA

The Data you Have

The Data you Like

“Cycling is like a piece of magic: It only has advantages” – Ms. Lot van Hooijdonk, Vice Mayor of Utrecht

The Data you Need to Win

THE DATA YOU HAVE

Short-term
» Public Data
» Private Data
» Applying studies to your context

Mid-to-Long Term
» Lobby for better Public Data
» Create Data
THE DATA YOU LIKE

Passion
» I like running
» I like urbanism

Confirmation Bias
» I will gravitate towards data that confirms that running and urbanism are good

THE DATA YOU NEED TO WIN

Winning is context-sensitive
» Who is your target?

Win by Sharing Interests with your Target
» What data do they like?
» How do you stay authentic while speaking their language?
DETERMINING A GOOD TARGET

Powermapping
» Who do you know?
» Who has influence?
» What is shared between influencers?

CAMPAIGN – REACH THE TARGET

Campaign Plan
» Message
» Distribution
» Outcome
WINNING A CAMPAIGN WITH DATA

Two-way Street
» Campaign drives data used
» Data drives campaign

Better Data = Better Campaigns

DATA EXERCISE

1. BREAKOUT INTO SMALL GROUPS
2. PICK A CITY USING BIKINGANDWALKINGBENCHMARKS.ORG
3. REVIEW DATA
4. DEVELOP A MESSAGE OR CAMPAIGN WITH MESSAGES THAT USE THE DATA
5. PRESENT TO THE GROUP
WORLD CAFE

1. TABLE LEADER
2. DISCUSS TOPIC
3. EVERYONE BUT LEADER MOVES IN 10 MINUTES

Thank You!

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Ken McLeod, ken@bikeleague.org