

Transportation HIA

Inaugural National Health Impact Assessment Meeting
April 4, 2012

CDR Arthur Wendel, MD, MPH
Healthy Community Design Initiative
dvq6@cdc.gov



Transportation HIA examples

- ❑ **Transportation planning – Tumalo Community Plan**
- ❑ **Transportation policy – Vehicle Miles Traveled**
- ❑ **Transportation projects – Atlanta Beltline**

Health Costs

- **Annual costs of transportation-related health outcomes (APHA 2010)**
 - Air pollution from traffic: \$50-80B
 - Traffic crashes: \$180B
 - Obesity and associated diseases (Transportation one of many factors)

Transportation's Impacts on Health

- ❑ Injury
- ❑ Physical activity
- ❑ Air pollution mediated illness
- ❑ Climate change impacts
- ❑ Access
 - Food
 - Work
 - Recreation
 - Health care
- ❑ Equity
- ❑ Others



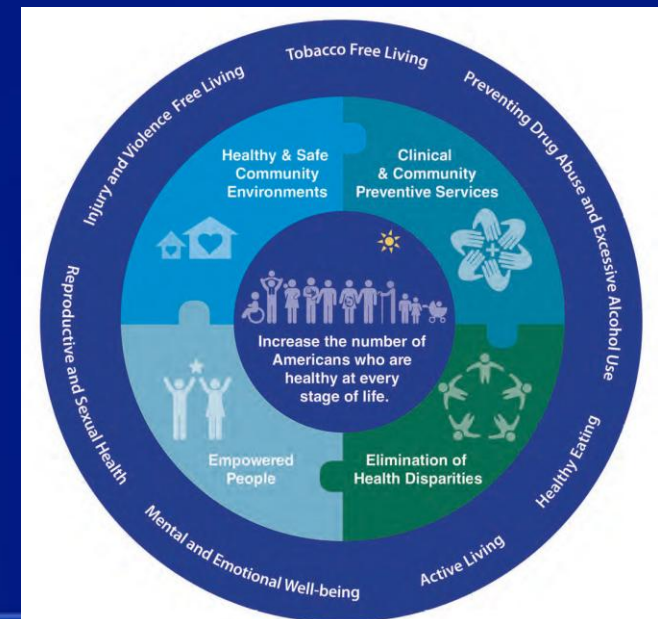
Concordant Health Strategies

❑ CDC's Winnable Battles

- Motor vehicle injuries
- Nutrition, physical activity, and obesity

❑ National Prevention Strategy

- Creating safe and healthy community environments
- Active living
- Healthy eating
- Injury- and violence-free living



www.cdc.gov/winnablebattles

www.healthcare.gov/prevention/nphpphc/strategy/report.pdf

Public Health Impacts of Physical Inactivity

- ❑ 36% of adults report no leisure-time physical activity and 82% do not meet current federal guidelines for physical activity and muscle strengthening.¹
- ❑ 88% of U.S. adolescents do not meet current aerobic and muscle strengthening guidelines.²
- ❑ Estimated medical cost of physical inactivity: \$75 billion per year.³
- ❑ Physical activity lowers risk for⁴
 - Premature death
 - Coronary heart disease
 - Stroke
 - Hypertension,
 - Type 2 diabetes
 - Depression
 - Colon cancer
 - Breast cancer
 - Unhealthy weight gain

1. CDC National Health Interview Survey

2. CDC Youth Risk Behavior Surveillance System 2009

3. <http://www.cdc.gov/chronicdisease/resources/publications/aag/nutrition.htm>

4. U.S. Department of Health and Human Services. 2008 Physical Activity Guidelines for Americans. October 2008. <http://www.health.gov/paguidelines/>.

How do people get exercise?

□ Leisure

- They walk
- They ride bicycles

□ Utilitarian

- They walk
- They ride bicycles



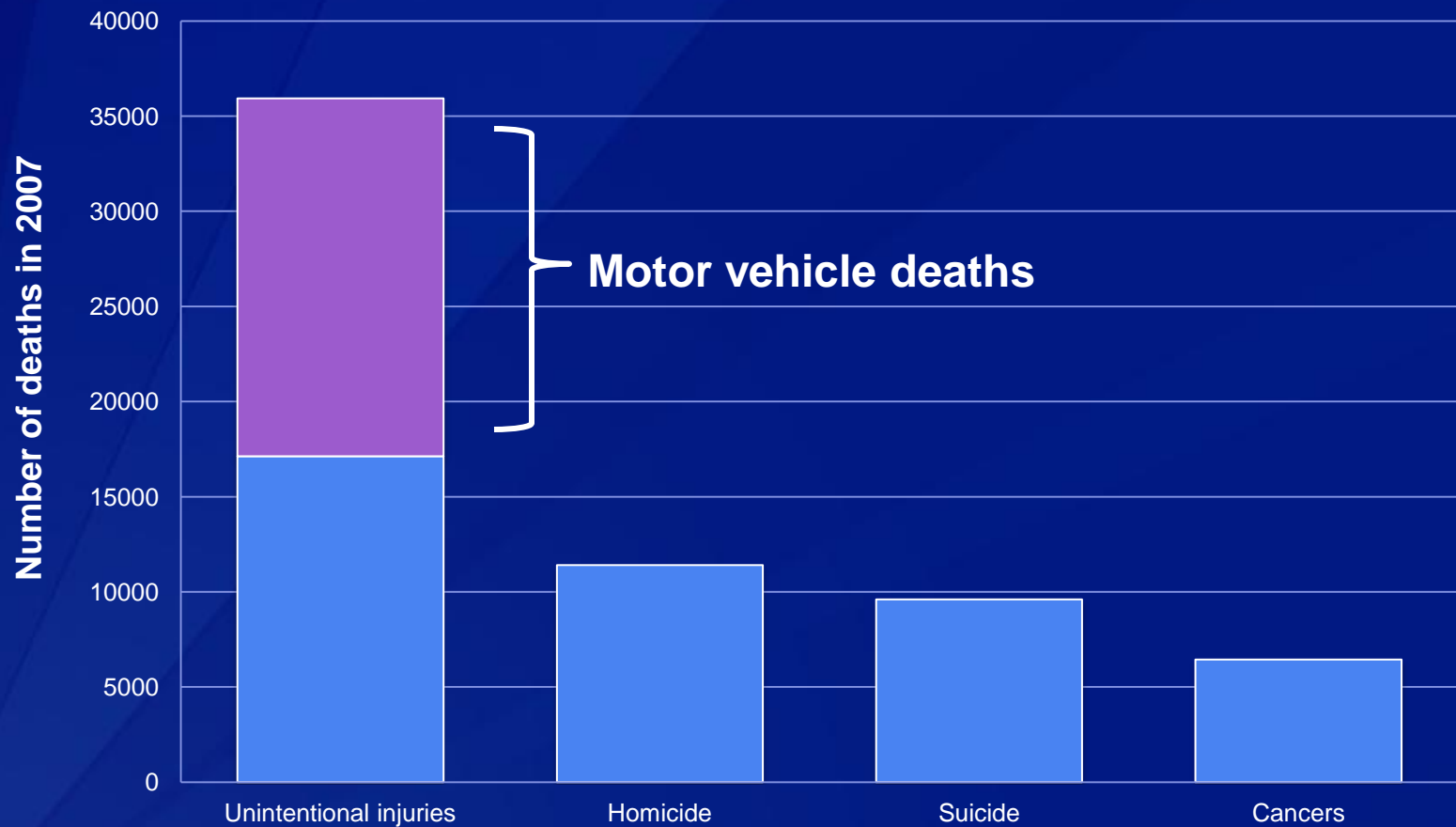
Public Transit Connection

- ❑ Transit users walk a median of 19 minutes daily to and from transit
- ❑ 29% exceed 30 minutes of physical activity daily
- ❑ Light rail system in Charlotte associated with higher PA



Besser and Dannenberg,
AJPM 2005;
MacDonald *AJPM* 2010

Motor vehicle crashes are the leading cause of death for people under 35



Centers for Disease Control and Prevention. Web-based Injury Statistics Query and Reporting System (WISQARS) [Online]. (2010). National Center for Injury Prevention and Control, Centers for Disease Control and Prevention (producer). www.cdc.gov/injury/wisqars.

Current burden of walking and bicycling

- ❑ **Walking or biking accounts for 11% of trips**
- ❑ **Pedestrians and bicyclists represent 14% (4,772) of all motor vehicle fatalities**

U.S. Department of Transportation, Federal Highway Administration, 2009 National Household Travel Survey. URL: <http://nhts.ornl.gov>.

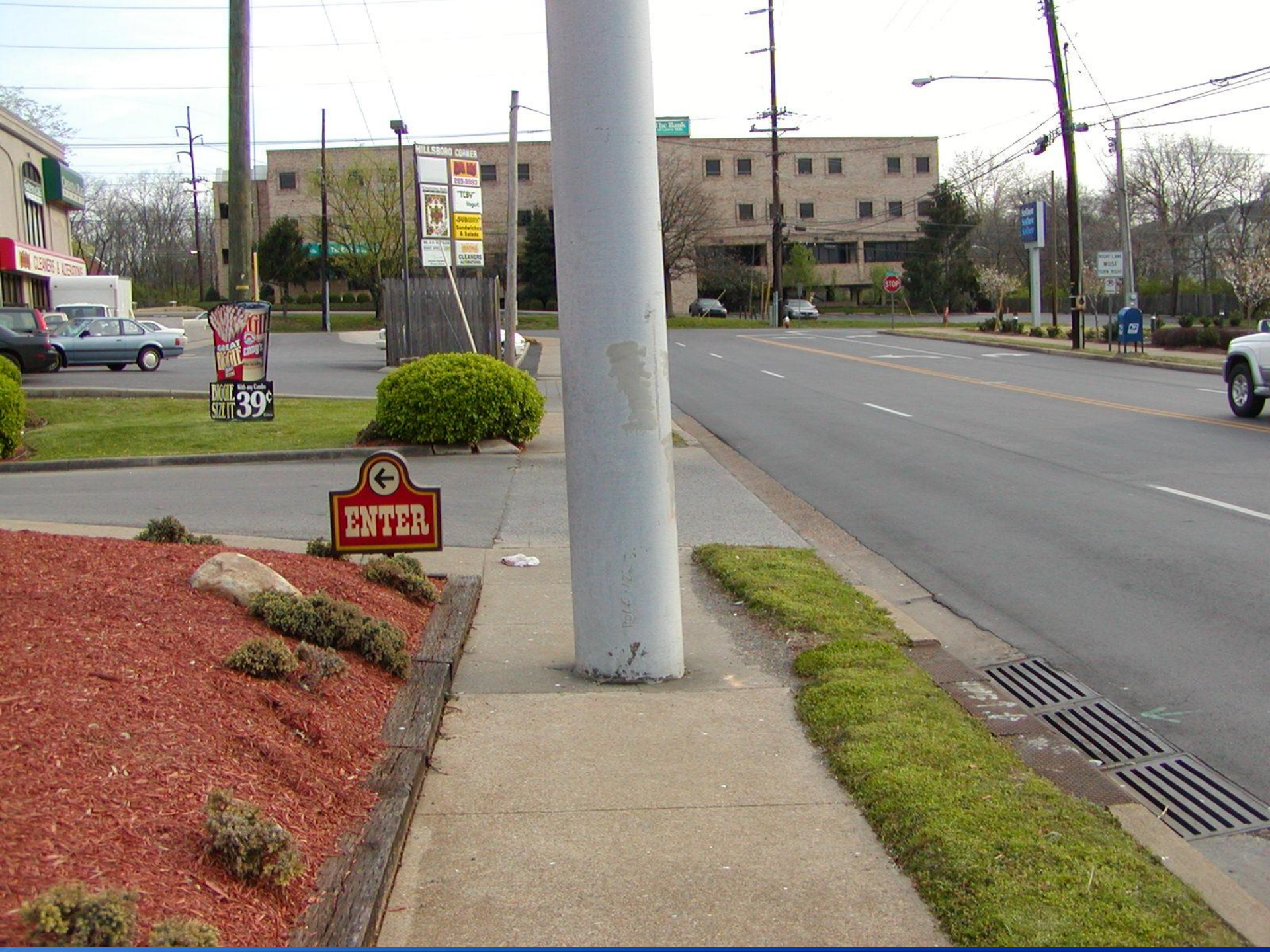
U.S. Department of Transportation, National Highway Transportation Safety Administration, 2009 Fatality Analysis Reporting System. URL: <http://www-fars.nhtsa.dot.gov/Main/index.aspx>

Aligned Solutions

- ❑ **Proven Safety Countermeasures (FHWA)**
 - Medians and Pedestrian Refuge Areas in Urban and Suburban Areas
 - Road diets
 - Pedestrian hybrid beacons
 - Corridor access management
- ❑ **Physical Activity and Community Design: Recommended Strategies from the Community Guide**
 - Community scale urban design and land-use policies are recommended
 - Street scale urban design and land-use policies are recommended

<http://safety.fhwa.dot.gov/provencountermeasures/>

<http://www.thecommunityguide.org/pa/environmental-policy/index.html>



←
ENTER

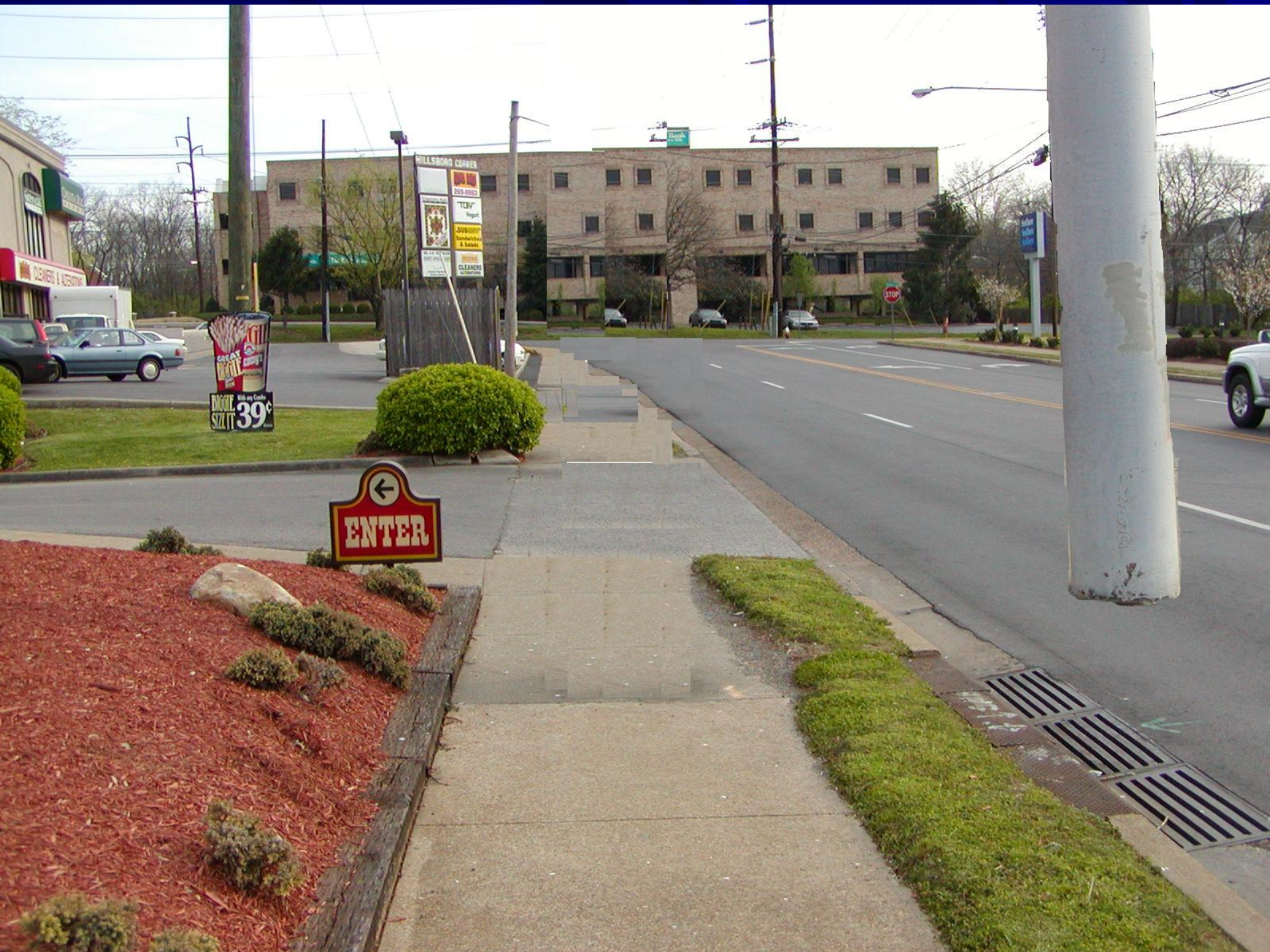
GREAT BIGGEST BIGGEST
SIZE IT 39¢

HILLSBORO CORNER
258-8882
Toby's
Yogurt
SUBWAY
Sandwiches & Salads
CLEANERS

Inc. Bank

STOP

POST OFFICE



←
ENTER

HILLSBORO CORNER
258-8882
Toby's
SUBS
CLEANERS

CREAM
PIZZA
BIGGIE
SIZZLE
39¢

STOP

CDC's Transportation Policy Recommendations

- ❑ Make cars safer and less polluting**
- ❑ Support robust public transportation**
- ❑ Create infrastructure and programs to increase active transportation**
- ❑ Design communities for health – e.g. Complete Streets**
- ❑ Protect healthy choices**
- ❑ Require research and surveillance**
- ❑ Support professional development and job creation**

Planning

	Who Develops?	Who Approves?	Time Horizon	Content	Update Requirements
UPWP	MPO	MPO	1 or 2 Years	Planning Studies and Tasks	Annually
MTP	MPO	MPO	20 Years	Future Goals, Strategies, and Projects	Every 5 Years 4 years for nonattainment and maintenance areas
TIP	MPO	MPO/ Governor	4 Years	Transportation Investments	Every 4 Years
LRSTP	State DOT	State DOT	20 Years	Future Goals, Strategies, and Projects	Not Specified
STIP	State DOT	US DOT	4 Years	Transportation Investments	Every 4 Years

UPWP: Unified Planning Work Program

MTP: Metropolitan Transportation Plan

TIP: Transportation Improvement Plan

LRSTP: Long-range State Transportation Plan

STIP: State Transportation Improvement Plan

Evidence and Recommendations: Transportation HIA Tool Kit

- Identified all transportation HIAs
- Reviewed for:
 - Baseline data used
 - Recommendations
 - Evidence to support recommendations

The screenshot displays the 'Transportation Health Impact Assessment Toolkit' website. The left sidebar contains a navigation menu with categories such as 'About Healthy Places', 'Recent Accomplishments', 'Fact Sheets', 'Additional Resources', 'Conferences & Events', 'News Releases', 'Publications & Selected Current Projects', 'Related Articles', 'Healthy Places Terminology', 'Health Topics', 'Health Impact Assessment (HIA)', 'Transportation HIA Toolkit', 'HIA Background Information and HIA Indicators', 'Strategies: Reduce Vehicle Miles Traveled (VMT)', 'Strategies: Expand Public Transportation', 'Strategies: Promote Active Transportation', 'Strategies: Incorporate Healthy Community Design Features', 'Strategies: Improve Safety for All Users', 'Strategies: Ensure Equitable Access to Transportation Networks', 'Case Studies', 'Injury', 'Mental Health', 'Physical Activity', 'Respiratory Health', 'Social Capital', and 'Water Quality'.

The main content area is titled 'Transportation Health Impact Assessment Toolkit' and includes a list of resources:

- Study Area Population Profile
- Study Area Land Use Characteristics
- Study Area Population Health Characteristics
- Air Quality Data
- Safety and Injury Data
- Transportation Data
- Combined Indicators

The 'Safety and Injury Data' section contains a table with three columns: Indicator, National Database, and Local Resource.

Indicator	National Database	Local Resource
Traffic injury and mortality for: Motor Vehicle Crashes, Bicycle-Motor Vehicle Crashes, Pedestrian-Motor Vehicle Crashes	<p>National Highway Traffic Safety Administration: State Traffic Safety Information®: Find crash fatality maps for county-level traffic fatality data as well as GIS fatality location resources.</p> <p>National Center for Injury Prevention and Control: WISOARS: Injury Mortality Reports 1999-2007</p> <p>Instructions: Select <i>unintentional</i> for the intent or manner of the injury. Then compile data from <i>Transportation Related, overall</i>, then for motor-vehicle injury mortality for occupants, pedestrians, pedal cyclists, and motorcyclists. You must request each mechanism of injury separately. Input the desired state and demographic information and submit the request.</p> <p>WISOARS: Fatal Injury Mapping: maps county-level motor-vehicle fatality data. See above instructions for tool inputs</p> <p>Transportation for America: Dangerous By Design 2011®: maps pedestrian fatalities occurring between 2001-2009 within 60 miles of a location in the U.S.</p> <p>Instructions: Enter project location. Click on a fatality marker to find detailed information on the crash.</p>	<p>Contact the state or local department of health and human services for mortality statistics specific to the study area.</p> <p>Contact the county office or law enforcement agency for accident reports data.</p>
Mortality rates Homicide Suicide	<p>CDC Wonder: Mortality Database: Underlying Cause of Death: See Health Characteristics Section</p>	<p>Contact the state department of health and human services.</p>

The right sidebar includes links for 'Email page', 'Print page', and 'Bookmark and share', along with 'Contact Us' information for the Centers for Disease Control and Prevention (800-CDC-INFO, 800-232-4636, TTY: (888) 232-6348, New Hours of Operation 8am-8pm ET/Monday-Friday, Closed Holidays, cdcinfo@cdc.gov).

http://www.cdc.gov/healthyplaces/transportation/HIA_toolkit.htm

Common Recommendations

- ❑ Complete streets
- ❑ Mitigate noise
- ❑ Multi-use neighborhoods
- ❑ Transit-oriented development
- ❑ Speed control through traffic calming
- ❑ “Eyes on the street”

The screenshot displays the CDC website's 'Healthy Places' section. The main heading is 'Transportation Health Impact Assessment Toolkit' with the subtitle 'Strategies for Health-Oriented Transportation Projects and Policies Ensure Equitable Access to Transportation Networks'. The page includes a breadcrumb trail: 'Healthy Places > Health Impact Assessment (HIA) > Transportation HIA Toolkit'. A sidebar on the left lists various 'Healthy Places' topics, with 'Transportation HIA Toolkit' selected. The main content area features a paragraph explaining that transportation projects should ensure safe, healthy, and affordable access for all, particularly for vulnerable groups. Below this, a section titled 'Strategies recommended in existing Transportation HIAs:' lists seven bullet points: ensuring public participation, prioritizing socio-economic status, providing multimodal options, constructing buffer zones, using universal design principles, providing mixed-income housing, and installing pedestrian signals. A 'Resources' section follows, listing an article by Gordon-Larsen et al. (2006) and a note on the reduced availability of recreational facilities for certain demographic groups. The right sidebar contains utility links like 'Text size', 'Email page', and 'Print page', along with 'Contact Us' information for the CDC.

Unique Challenges

- ❑ **Not done until it's built**
- ❑ **Established parameters – environmental, traffic, fiscal, policy**
- ❑ **Multiple health impacts, different strength of evidence-base**

Upcoming Changes

- ❑ **Federal transportation bill**
 - Funding changes
 - Impact to programs like Safe Routes to School
- ❑ **Cross-sector work - examples**
 - Transportation and health committee at Transportation Research Board
 - Health and transportation at APHA
- ❑ **Improved data**

Thank You

For more information please contact Centers for Disease Control and Prevention

1600 Clifton Road NE, Atlanta, GA 30333

Telephone, 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348

E-mail: cdcinfo@cdc.gov Web: www.cdc.gov

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.

National Center for Environmental Health

Division of Emergency and Environmental Health Services

