Complete Streets: Dangerous by Design

May 23, 2017

Emiko Atherton, Director, National Complete Streets Coalition
The National Complete Streets Coalition, which launched this movement in 2004, promotes the development and implementation of Complete Streets policies and professional practices.

To date, over 1060 agencies at the local, regional, and state levels have adopted Complete Streets policies, totaling over 1,200 policies nationwide.
Steering Committee

- AARP
- AECOM
- American Heart Association
- American Planning Association
- American Public Health Association
- American Public Transit Association
- American Society of Landscape Architects
- Association of Pedestrian and Bicycle Professionals
- America Walks
- Institute of Transportation Engineers
- National Association of City Transportation Officials
- National Association of Realtors
- Nelson\Nygaard
- Smart Growth America
- SRAM
- Stantec
- MiG/SVR Design
- VHB
- Washington State DOT
What are Complete Streets?
Why do we need Complete Streets?

https://www.tedeytan.com/2015/09/12/19053
Traditional town plan

- Mixed-use
- Compact
- Buildings of several stories
- Blocks with multiple building types
- Street grid
Redlining
Unsafe Streets
National Trends

Pedestrian deaths nationally by year, 2005-2014
States

Pedestrian Danger Index (PDI) by State, 2016

Pennsylvania #34
New Jersey #20

Lowest PDI scores
Highest PDI scores
Age

- Older adults age 65+ were 50% more likely than younger individuals to be killed.
- In 2014, 46.2 million people in US aged 65+, by 2060 there will be 98 million.
- PDI for 75+ is 42.5 rises rapidly from 65+; compared to overall PDI 18.5.
Income

Relationship between metro area median household income and PDI
Insurance

Relationship between percentage of uninsured individuals and PDI

![Graph showing the relationship between percentage of the population uninsured and Pedestrian Danger Index. The graph includes a scatter plot with data points and a trend line indicating a positive correlation.](image-url)
Washington, DC
Equity & Complete Streets
Race and representation

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

- Native American: 2.7% (0.7% of population)
- Asian: 4.3% (5.1% of population)
- African American: 19.3% (12.2% of population)
- Hispanic: 21.5% (16.9% of population)
- Non-white (incl. Hispanic): 46.1% (34.9% of population)
- White, non-Hispanic: 53.1% (62.8% of population)
Race and fatalities

Annual pedestrian fatalities per 100,000 people by race/ethnicity (2005-2014)

- White, non-Hispanic: 0.93
- Asian: 0.93
- Hispanic: 1.40
- African American: 1.74
- Native American: 4.52
DxD: Conclusion

- Examined the Pedestrian Danger Index (PDI) for 104 Metropolitan Statistical Areas (MSA), up from 51 MSAs in 2014.
- People of color and older adults are disproportionally represented in pedestrian fatalities.
- Income and insurance are correlated with the likelihood of being killed by a car while walking.
- Street design plays a major factor in pedestrian fatalities.
- Governments at all levels need to take action to build better and safer streets for all users.
Walking while black

“Put another way: Not only do black men have to worry about being hassled — and possibly shot — by police for simply being black, they have to worry about being run over by motorists.”

--Washington Post, Oct 26, 2015
Walking while black

“the average number of vehicles to pass by a black pedestrian who was already in the crosswalk was at least seven times higher compared with a white pedestrian in the wealthier neighborhood…”

Poor neighborhoods – higher rate of death

“…poorer neighborhoods have disproportionately higher rates of pedestrian deaths.”

-Governing Magazine, August 2014
“Many [poorer] areas have been neglected from a transportation standpoint...We need to devote much more energy on providing safe transportation options for everyone. Walking is a basic human right.”

-Scott Bricker, former director of the nonprofit America Walks
Policy to Practice
Safety through Streets Design

Better roadway design plays an integral role in altering driver behavior and reducing crash risk.
Safety through Street Design

Design features such as

• wide travel lanes,
• lack of peripheral obstructions/visuals,
• wide roads

send visual cues to drivers that it is safe to travel at high speeds.
Safety through Street Design

Safety engineering countermeasures:

• Road diets
• Speed bumps
• Pedestrian medians
• Curb bulb-outs
Safety Through Street Design

Toolbox of Countermeasures and Their Potential Effectiveness for Pedestrian Crashes

FHWA-SA-014 - May 2008

Introduction

This issue brief documents estimates of the crash reduction that might be expected if a specific countermeasure or group of countermeasures is implemented with respect to pedestrian crashes. The crash reduction estimates are presented as Crash Reduction Factors (CRFs). As some studies reviewed included bicycle crashes in their analysis, some of the crash reduction estimates include bicyclists.

Traffic engineers and other transportation professionals can use the information contained in this issue brief when asking the following types of question: Which countermeasures might be considered at the signalized intersection of Maple and Elm streets, an intersection experiencing a high number of pedestrian crashes? What change in the number of pedestrian crashes can be expected with the implementation of the various countermeasures?

Crash Reduction Factors

A CRF is the percentage crash reduction that might be expected after implementing a given countermeasure. In some cases, the CRF is negative, i.e. the implementation of a countermeasure is expected to lead to a percentage increase in crashes.

One CRF estimate is provided for each countermeasure. Where multiple CRF estimates were available from the literature, selection criteria were used to choose which CRFs to include in the issue brief:

- Firstly, CRFs from studies that took into account regression to the mean and changes in traffic volume were preferred over studies that did not.
- Secondly, CRFs from studies that provided additional information about the conditions under which the countermeasure was applied (e.g. road type, area type) were preferred over studies that did not.

Downloadable Version

PDF [827 KB]
Implementation
Changing philosophy

**Previous:**
- Focus on motorists
- Little or no distinction by land use

**New:**
- Focus on people
- All travelers treated with respect
- Defines land use
- Context-sensitive
- Set expectations
The Intersection of Planning and Safety
The Intersection of Planning and Safety

Use Data
The Intersection of Planning and Safety

Use Data

Speak Safety

Show don’t tell

@CompleteStreets
Questions?
www.smartgrowthamerica.org
Emiko Atherton
Director, National Complete Streets Coalition
Smart Growth America

eatherton@completestreets.org
www.completestreets.org