Doing it Right: Leveraging Data and Evaluation to Develop Pedestrian Safety Projects
Safe Kids Overview
Our Mission

We work to keep all kids safe from preventable injuries
Why It Matters

PREVENTABLE INJURIES ARE THE #1 KILLER OF KIDS IN THE U.S.

IT’S A GLOBAL EPIDEMIC.

MILLIONS MORE CHILDREN ARE INJURED EVERY YEAR.
Where We Work: Global Network

- 400+ Coalitions in the United States
- 25+ Network Member Countries
- 4 Network Associate Countries
Find Your Local Safe Kids

SAFE KIDS COALITIONS IN THE UNITED STATES

Our coalitions in the United States take action to provide proven and practical ways to keep kids safe. They host safety events, conduct workshops in everything from schools to hospitals, advocate for effective legislation, and distribute safety devices such as car seats, smoke and carbon monoxide alarms, helmets, and personal flotation devices. Just as important, they also teach parents, caregivers and children how to use these important resources correctly.

The best news is that there is a good chance there is one near you. To get involved or to learn more about what our coalitions are doing in your community, please click on your state listed below.

To find out more about events in your area, go directly to our events section.

Find Safe Kids in Your State

- Safe Kids Alabama
- Safe Kids Alaska
- Safe Kids Arizona
- Safe Kids Arkansas
- Safe Kids California
- Safe Kids Colorado
- Safe Kids Connecticut
- Safe Kids Delaware
- Safe Kids District of Columbia
- Safe Kids Florida
- Safe Kids Georgia
- Safe Kids Hawaii
- Safe Kids Idaho
- Safe Kids Illinois
- Safe Kids Indiana
- Safe Kids Iowa
- Safe Kids Kansas
- Safe Kids Kentucky
- Safe Kids Louisiana
- Safe Kids Maine
- Safe Kids Maryland
- Safe Kids Massachusetts
- Safe Kids Michigan
- Safe Kids Minnesota
- Safe Kids Mississippi
- Safe Kids Missouri
- Safe Kids Montana
- Safe Kids Nebraska
- Safe Kids Nevada
- Safe Kids New Hampshire
- Safe Kids New Jersey
- Safe Kids New Mexico
- Safe Kids New York
- Safe Kids North Carolina
- Safe Kids North Dakota
- Safe Kids Ohio
- Safe Kids Oklahoma
- Safe Kids Oregon
- Safe Kids Pennsylvania
- Safe Kids Rhode Island
- Safe Kids South Carolina
- Safe Kids South Dakota
- Safe Kids Tennessee
- Safe Kids Texas
- Safe Kids Utah
- Safe Kids Vermont
- Safe Kids Virginia
- Safe Kids Washington
- Safe Kids West Virginia
- Safe Kids Wisconsin
- Safe Kids Wyoming

http://www.safekids.org/safe-kids-coalitions-united-states
Our Work

Safe Kids Worldwide provides **coalitions** with resources to **deliver community programs**.

- **Road Safety**
  - Child Passenger Safety
  - Teen Driving
  - Pedestrian
  - Bike/Motorcycle
  - Distraction

- **Home Safety**
  - Fire, Burns, CO
  - Poisoning
  - Suffocation
  - Falls
  - Drowning

- **School & Play**
  - Sports Safety
  - Drowning
  - Pre-K Start Safe

**Emerging Issues**
i.e.: Button Battery; TV Tip-overs; Liquid Laundry Packets
How We Work

**RESEARCH**
Collect and Analyze Data
4-6 reports annually

**PROGRAMS**
Reach parents, caregivers, educators and kids

**AWARENESS**
Deliver consistent messaging through our global network

**ADVOCACY**
Advocate for new and improved laws

**RESOURCE MOBILIZATION**
Procure resources to support and mobilize programs
Safe Kids Worldwide Reach

- **Media Impressions**: 5,392,000,000
- **Facebook Fans**: 1,055,000
- **Twitter Followers**: 54,300
- **YouTube Views**: 5,562,000
Walk This Way
Building Safer Communities for Child Pedestrians
**Walk This Way** is implemented in Brazil, Canada, China, India, South Africa, South Korea, Philippines, Thailand, United States and Vietnam

**Program Objectives:**
Safe Kids teaches safe behavior to motorists and child pedestrians to create safer, more walkable communities

- Awareness – International Walk To School Day
- Education and Needs Assessment – PHOTOVOICE
- Environmental Improvements – Creating Safer School Zones
- Annually, the program reaches more than 2 million children in 4,000 schools globally
Safe School Zone Project

Safe States Conference
Albuquerque, NM
The Process

Data Review
Workshop
Plan Development
Implementation
Evaluation
Coalition provides instructor with relevant data and other information to help prepare for workshops, such as:

- Crash Reports
- Hospital Data
- School Data
- Demographic Info
- Pedestrian Plans
- Crash Maps

Information is used to identify high priority locations in advance of workshop and better understand local safety issues.
Purpose of data review is to answer the following questions:

1. Where are child pedestrian crashes occurring?
2. Which schools have the highest number of children walking to school?
3. Where is the greatest need?
Data analysis in Memphis, TN, included pedestrian crashes from 2003 to 2011. Hot spots revealed potential sites, and site reviews were used to finalize project location.
Instructor, Coalition, and stakeholders gather for two day workshop.

Instructor provides overview of pedestrian safety issues and countermeasures, and group discusses problem areas.
Process – Workshop

Once sites are identified, instructor leads a field audit of target sites to observe issues.
Once sites are identified, instructor leads a field audit of target sites to observe issues:

- **Missing Sidewalks**
Once sites are identified, instructor leads a field audit of target sites to observe issues.

**Maintenance Needs**
Process – Workshop

Once sites are identified, instructor leads a field audit of target sites to observe issues Speeding and Unsafe Motorist Behavior
Once sites are identified, instructor leads a field audit of target sites to observe issues.

Wide Corridors with Long Crossing Distance
Once sites are identified, instructor leads a field audit of target sites to observe issues

Lack of Signals or Markings
At the end of the workshop, coalition discusses sites and observations and finalizes location for intervention and selected countermeasure. Draft plan is completed during workshop.
Process – Plan Development

Work plan identifies each intervention to be implemented, including:

- Environmental Modifications
- Educational Programs
- Media and Outreach
- Enforcement Activities
- Evaluation Components

Each element of the plan includes timeline and individual(s) responsible for implementation.
Coalition works with engineers to install selected treatment

Education/enforcement activities are coordinated around the installation

Ribbon cutting ceremony held to draw media attention and build community awareness of pedestrian safety issues
Data collected before and after installation to measure effectiveness in:

- Reducing Speeds
- Increasing Activity
- Increasing Yielding
- Improving Behavior
- Reducing Conflicts

Local coalitions also measure effectiveness of educational programs delivered to schools by pre/post tests.
Project Examples

Memphis, Tennessee  Seattle, Washington

Clayton County, Georgia  Wilmington, North Carolina

Chattanooga, Tennessee  DeKalb County, Georgia

Philadelphia, Pennsylvania
Outcomes

Memphis, Tennessee

- High traffic corridor alongside school property – 23 crashes between 2003 and 2011
- Difficulty crossing from neighborhoods on one side to school on the other
- Additional issues with vehicle circulation around school property
Outcomes

Memphis, Tennessee
• Solution: Addition of high visibility crosswalk with rectangular rapid flashing beacon
• Improvements made to vehicle circulation patterns and signage
• Outcomes: No crashes since installation. More children crossing at the site. Decreased motor vehicle speeds.
Outcomes

Seattle, Washington

- Two intersections identified along common school route
- Long crossing distances, traffic speed and volume concerns
- One site at school property, one several blocks away
Outcomes

Seattle, Washington

• Solution: Crosswalks and curb ramps were upgraded, one intersection reduced crossing distance by extending curb into intersection
Outcomes

Clayton County, Georgia

- Busy road separated neighborhoods from local recreation center
- Road also lacked critical sidewalk connections on one side
Clayton County, Georgia

- Solution: Addition of high visibility crosswalk with rectangular rapid flashing beacon and sidewalks
- Outcomes: Increase in pedestrians crossing at the crosswalk location, and fewer pedestrians crossing in higher risk midblock locations
Wilmington, North Carolina

• Intersection lacked high visibility crosswalks and button for pedestrian to request signal

• Solution: Addition of pedestrian signals, high visibility crosswalks, and upgraded curb ramps
Outcomes

Wilmington, North Carolina

• Intersection lacked high visibility crosswalks and button for pedestrian to request signal
• Solution: Addition of pedestrian signals, high visibility crosswalks, and upgraded curb ramps
Outcomes

Chattanooga, Tennessee

• Lack of safe crossing at intersection near park and local zoo
• Neighborhood desired better connections with park
• Solution: Addition of high visibility crosswalks and pedestrian signals
Outcomes

Chattanooga, Tennessee

• Lack of safe crossing at intersection near park and local zoo
• Neighborhood desired better connections with park
• Solution: Addition of high visibility crosswalks and pedestrian signals
Outcomes

DeKalb County, Georgia

- Busy road near local school
- Problems with yielding and motorists using slip lane to pass stopped vehicles, creating conflicts for peds
- Solution: Installation of rectangular rapid flashing beacon, curb construction to eliminate slip lane, addition of crosswalk and median
Outcomes

DeKalb County, Georgia

- Busy road near local school
- Problems with yielding and motorists using slip lane to pass stopped vehicles, creating conflicts for peds
- Solution: Installation of rectangular rapid flashing beacon, curb construction to eliminate slip lane, addition of crosswalk and median
Outcomes

Southeastern Pennsylvania

• Intersection of two busy roads lacked crossing amenities
• Solution: Crosswalk marking enhanced, pedestrian signals installed, turning movements restricted, and curbs upgraded.
Outcomes

Southeastern Pennsylvania

- Intersection of two busy roads lacked crossing amenities
- Solution: Crosswalk marking enhanced, pedestrian signals installed, turning movements restricted, and curbs upgraded.
Outcomes

Pitt County, North Carolina

- Elementary school lacked sidewalk connections, causing pedestrians to walk in street and through grass
Outcomes

Pitt County, North Carolina

• Solution: Addition of sidewalk along entire block, connecting school to local neighborhoods

• Outcome: Fewer pedestrians walking in street, less opportunity for conflicts with motor vehicles.
Memphis, TN
**When, Where, How?**

- Locally, most crashes occur in April; Fewest occur in June, followed by December
- Number of crashes peaked on Fridays; Lowest on Sundays
- Hours of 2:00 pm and 6:59 pm saw the largest share of crashes overall
- Nearly a quarter involved pedestrians age 14 and younger; Ages 10-14 appear to be the most overrepresented
- Most were males
Why?

• The maturity level of a child under 10 years of age makes him or her less able to correctly gauge road dangers and renders him or her at greater risk for injury and death.

• Distraction
What?

• Safe Kids Mid-South formed a Pedestrian Safety Task Force

• $40,000 grant award from FedEx
The Initiative

- Held a Task Force Workshop
  - engineers, urban planners, university, healthcare & police professionals, pedestrian & bike advocacy groups, school officials, coalition members

- Analyzed Data at all elementary schools
  - crash, speeds, pedestrian injuries & deaths

- Selected “Top Ten” elementary schools
  - made site visits to observe vehicular and pedestrian behaviors
  - utilized engineering principles to determine potential solutions
  - examined ways to implement improvements with the best “bang for the buck”
  - named our Intervention School
The Principles

Goals

• Improve children’s safety
• Improve accessibility
• Encourage increased walking
Rules

- *Focus on easy to implement & low cost solutions*
- *Identify & program in longer-term improvement needs*
- *Match the treatment with the type of problem identified*
- *Provide & maintain facilities along the school route*
- *Provide safe street crossings*
  - Keep it simple
  - Shorten crossing distances
  - Carefully connect location & marked crosswalks
  - Create visible crosswalks
- *Slow down traffic speeds*
• Pre-Kindergarten through Grade 5
• 630 Students
• 28% Living below the poverty level
  • 77% African American
  • 20% Hispanic
• 350 Walkers
Our Intervention

- **Pre-Intervention Data Collection**
  - physical site assessment; vehicle numbers, travel patterns & speeds; pedestrian numbers & behaviors

- **School Partnership**
  - system administrators; principal & faculty; PTA; community

- **Route Optimization Study**
  - bus, child care vans, car pool, personal vehicle patterns

- **Work Plan**
  - environmental modifications; interactive pedestrian safety curriculum; WTW School Day
  - identified responsible persons and a time line
The Specifics

• Made Given a 2-Way Street
  • Striped the median, added turn arrows, added stop bar, striped and painted curb extension, added flexible vertical delineators, removed confusing signage

• Trimmed bushes at Given Street and Highland Avenue
• Installed 15 School Zone signs
• Painted 150 Yield lines
• Installed 8 Yield Here to Pedestrian signs
• Painted 240 Advanced Yield lines
• Painted 8 High Visibility Longitudinal crosswalks
• Painted 1 Standard crosswalk
• Rerouted vehicle traffic

• Added Crossing Guards and ‘armed’ them highly visible hand-held Stop Signs

• Taught grade-specific interactive pedestrian safety curriculum to students
  • Pedestrian Safety Jeopardy

• Hosted WTW Pedestrian Safety Days
  • Stations included The Pledge, Identification of potential hazards, Bean Bag Safety Rules game, Identifying blind spots
• **Installed 2 Rectangular Rapid Flashing Beacons (RRFBs)**

RRFBs are user-actuated amber LEDs that supplement warning signs at un-signalized intersections or mid-block crosswalks:

- *activated by pedestrians manually by a push button*
- *use an irregular flash pattern that is similar to emergency flashers on police vehicles*

The **FIRST** in Tennessee!
• **Post-Intervention Data Collection**
  - *physical site assessment; vehicle numbers, travel patterns & speeds; pedestrian numbers & behaviors*

• **Celebration!!!**
  - *huge event*
  - *photo ops for Treadwell Elementary and the nearby community, school system, media*
• **Pre-Environmental Changes**
  
  • Crashes 23
  • Under age 15 16
  • Fatalities under age 16 5
  • A clustering of serious injury or fatal crashes occurred near the school property  
    
    \((2003-2011)\)

• **Post- Environmental Changes**
  
  • No accidents reported since the installation of the RRFB’s  
    
    \((2016)\)
Beyond The Intervention

- Memphis has established new guidelines for managing the installation of crosswalks and Rapid Rectangular Flashing Beacons (RRFB's)
- City-wide pedestrian study modeled off of Safe Kids project
  - July 17, 2015 the City of Memphis releases its Pedestrian and School Safety Action Plan, the result of an 18-month planning process focused on prioritizing and constructing pedestrian infrastructure near schools in Memphis.
The Video

- We filmed our progress from the beginning to the end of our two year effort.
Tools and Resources

- Audits and Checklists
- Guides
- Design Resources
- Safety Data
- Education and Outreach
Tools and Resources

Walkability and Bikeability Checklists

www.pedbikeinfo.org/checklist
Tools and Resources

A Resident’s Guide for Creating Safer Communities for Walking and Biking

www.pedbikeinfo.org/residentsguide
Pedestrian and Bicycle Countermeasure Selection Systems

www.pedbikesafe.org
Tools and Resources

NHTSA Traffic Safety Facts

Children

For the purpose of this fact sheet, children are defined as people 14 and younger. Motor vehicle traffic crashes were the leading cause of death for children age 4 and the second leading cause of death for children age 3 and every age 5 through 14 in 2013.

In this fact sheet, the 2013 children information is presented in the following order:

- Overview
- Restraint Use and Effectiveness
- Pedestrians
- Pedalcyclists
- Children in Alcohol-Impaired Driving Crashes
- Children Traffic Fatalities by State
- Important Safety Reminders

Tools and Resources

Pedestrian and Bicycle Safer Journey

www.pedbikeinfo.org/pedsaferjourney
www.pedbikeinfo.org/bicyclesaferjourney