

INFORMATION AND MATERIALS FOR PROGRAM IMPLEMENTATION

The Pedestrian and Bicycle Information Center (www.bicyclinginfo.org) has a number of items to help you implement your program, including:

- Design guidelines, law enforcement training, assessment tools, and an image library to aid in the design of campaign materials.
- A searchable online catalog that identifies skills and knowledge that bicyclists of different ages need to have and matches those needs to existing resources.
- The Bicycle Countermeasure Selection System (BIKESAFE), a selection tool which lists actions that can correct specific roadway problems.

The National Highway Traffic Safety Administration has the following resources:

- Materials for bicycle safety education, enforcement, outreach, and legislation, including instructional videos, law enforcement training materials, resource guides, and children's activity kits. <http://www.nhtsa.dot.gov/portal/site/nhtsa/menuitem.810acaee50c651189ca8e410dba046a0/>
- *Bicycle Helmet Use Laws: Lessons Learned from Selected Sites*, the experiences of six jurisdictions in enacting and implementing bicycle helmet use laws. Appendices include specific activities that states and communities have used to raise awareness of and promote compliance with the new laws. <http://www.nhtsa.dot.gov/people/injury/pedbimot/bike/BikeHelmetUseLawsWeb/images/BicycleHelmetUseLaws.pdf>



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PROMOTING BICYCLE SAFETY FOR CHILDREN: Strategies and Tools for Community Programs

This issue brief provides strategies and resources for community organizations to use in developing and implementing bike safety programs for children and youth. Here is how you can use the information:

- **Scope of the Problem:** Use these facts to support the need for your program.
- **Evidence-Based Strategies:** These are drawn from comprehensive, expert reviews of research. Use these strategies to increase the likelihood that your program will actually improve the safety of young bicyclists in your community.
- **Program Planning Guides:** Use these comprehensive guides to plan and implement the kinds of activities described in the Evidence-Based Strategies section.
- **Basics of a Successful Community Program:** These three elements are critical aspects of effective programming.
- **Information and Materials for Program Implementation:** Once you have planned your program, use these tools to find the resources you need to carry it out.



The Children's Safety Network (CSN) created this tool for State maternal and child health (MCH) and injury and violence prevention programs to disseminate to local health departments and community organizations interested in developing effective bike safety programs for children and youth.

CSN is a resource center for MCH and injury prevention professionals in State and Territorial health departments who are committed to reducing injuries and violence among children and adolescents. CSN is supported by the Maternal and Child Health Bureau, Health Resources and Services Administration, Department of Health and Human Services.

SCOPE OF THE PROBLEM

Bicycle injuries and deaths affect children and young people more often than any other age group.

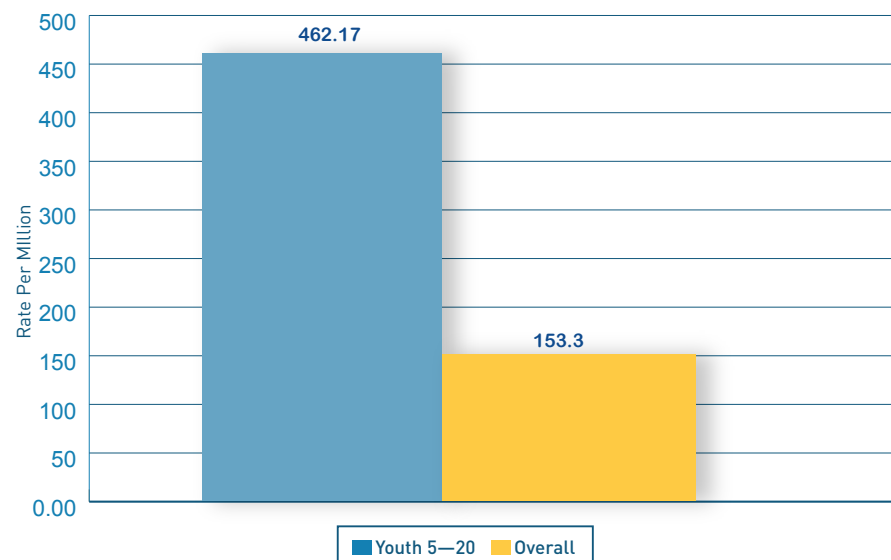
- In 2005, **44 percent** of nonfatal bicycle injuries occurred in children and youth age 5 to 20.¹
- In 2005, the rate per million of nonfatal bicycle injuries in children and youth age 5 to 20 was **462.17** compared to 153.3 overall.¹
- In 2005, children and youth age 0 to 20 made up **23.4 percent** of bicycle fatalities.¹
- In 2005, the rate per million of bicycle fatalities in children and youth age 5 to 20 was **4.37 compared to 2.64** overall.¹
- In 2005, children under 15 accounted for **53 percent** of bicycle injuries treated in emergency departments.¹
- From 1999 to 2002, the average annual cost of bicycle fatalities in children and youth age 0 to 19 was **\$1.03 billion**.²
- From 1999 to 2002, the average annual cost of nonfatal bicycle injuries in children and youth age 0 to 19 was **\$3.6 billion**.²

Young cyclists are more likely than adult cyclists to die of head injuries, most of which are caused by motor vehicle collisions.

Among children and youth age 0 to 19 in 2000:

- Head injuries accounted for **62.6 percent** of bicycle fatalities.³
- Collisions with motor vehicles accounted for **75.7 percent** of bicycle fatalities.³
- **61.7 percent** of motor vehicle collision deaths were due to head injury.³

NONFATAL BICYCLE INJURIES



EVIDENCE-BASED STRATEGIES

What Works?

Comprehensive reviews of high-quality evaluations show consistent, significant reductions of bicycle-related injuries and fatalities when the following strategies are used.

- *Properly wearing a helmet approved by the Consumer Product Safety Commission* provides a 63 to 88 percent reduction in the risk of head and brain injury for bicyclists of all ages. A properly worn helmet fits snugly, is shifted forward on the head, and is secured with a taut chin strap.⁴
- *Helmet use education* should draw on research data, focus on a targeted age group, and have a built-in evaluation component. It should include access to bicycle helmets (through discounts or donations) and demonstration and practice of how to fit a bicycle helmet properly.^{5,6} Education is most effective when supported by other interventions such as public service announcements, rodeos, and helmet discounts; stand-alone interventions, such as providing helmets in pediatric offices, are less effective.^{6,7}
- *Helmet subsidies* are effective in increasing helmet use among low-income children⁶ and should be accompanied by instruction on how to fit a helmet and the importance of always wearing a helmet while bicycling.⁵
- *Helmet give-away programs* are more effective than subsidies.^{7,8,9}
- *Helmet use legislation* is effective, but the impact varies from study to study.^{10,11}

What Might Work?

Comprehensive reviews conclude that the following strategies are likely to work, but they have not yet been sufficiently evaluated to provide conclusive evidence of effectiveness.

- *Bike fairs, rodeos, and skills training* can make children more aware of safe cycling behavior and legislation, but such measures can't counteract developmental factors such as coordination and strength or the ability to evaluate traffic hazards.^{5,6}
- *Visibility aids* are fluorescent materials or lights used by cyclists so that drivers will see them sooner or more clearly. While there is evidence that these improve driver detection and recognition, there have been no studies assessing their effect on cyclist-motor vehicle collisions.^{5,6,12}
- *Targeted enforcement of bicycle-related laws* is directed toward both bicyclists, such as impounding bicycles of un-helmeted cyclists or imposing fines for wrong-way riding, and motorists, such as issuing citations for turning in front of an oncoming cyclist or passing too close.^{5,6}
- *Bike lanes and paths* should be paved and go with flow of traffic.^{5,6}
- *Area-wide traffic calming* has consistently been shown to reduce overall traffic injuries, but studies have not independently examined its effect on injuries to bicyclists.^{12,13}
- *Parental modeling of proper helmet use.* Children are more likely to wear helmets each time they ride when their parents wear helmets as well.¹⁴



PROGRAM PLANNING GUIDES

National Strategies for Advancing Bicycle Safety recommends national, state, and local action steps to address bicycle injuries and fatalities and focuses on five key goals: sharing the road, safe riding, helmets, safety legislation, and safe roads and paths. http://www.nhtsa.dot.gov/people/injury/pedbimot/bike/bicycle_safety/

Helmets: A Road Safety Manual for Decision-Makers and Practitioners provides guidance on the design, implementation, and evaluation of helmet programs. http://www.who.int/violence_injury_prevention/publications/road_traffic/helmet_manual.pdf

Good Practices Guide for Bicycle Safety Education provides effective practices for the development of bicycle safety programs and case examples of existing effective programs that can be implemented in local communities. <http://www.bicyclinginfo.org/ee/bestguidedoc.pdf>

Safe Routes to School Guide provides information on engineering, education, enforcement, encouragement, and evaluation strategies to increase safety for children walking and bicycling to school. <http://www.saferoutesinfo.org/guide/>

BASICS OF A SUCCESSFUL COMMUNITY PROGRAM

Use these links to identify potential partners, funding sources, and evaluation criteria for your program.

Partners

- State injury prevention program directors. Contact csn@edc.org or info@stipda.org
- State 4-H chapters. <http://www.fourhcouncil.edu/find4h.aspx>
- Bicycle advocacy organizations directory (Thunderhead Alliance) <http://www.thunderheadalliance.org/links.htm>
- State highway safety offices. For the office in your state, visit <http://www.ghsa.org/html/links/highwaysafetywebsites.html>
- Traffic safety and injury prevention organizations with local chapters.
 - Safe Kids Worldwide. <http://www.usa.safekids.org/>
 - Injury Free Coalition for Kids. <http://www.injuryfree.org/ifsites.cfm>
- Bicycle retailers directory (Bikes Belong Coalition) <http://www.bikesbelong.org/view/members>
- Health Providers & Associations directory <http://www.ahd.com/freesearch.php3>
- Safe Routes to School state contacts. <http://www.saferoutesinfo.org/contacts/index.cfm>
- Service organizations: Kiwanis. <http://www.kiwanis.org>; Lions Club. <http://www.lionsclubs.org>; Rotary. <http://www.rotary.org>

Funding

- The Pedestrian and Bicycle Information Center has a page on public and private funding sources for local programs. <http://www.bicyclinginfo.org/pp/funding/index.cfm>
- The *Good Practices Guide for Bicycle Safety Education* offers advice on how to secure funding on pages 53-56. <http://www.bicyclinginfo.org/ee/bestguidedoc.pdf>
- Relevant national manufacturing associations, such as the Protective Headgear Manufacturers' Association, fund education, safety gear, and programs to reduce injury. <http://www.phma.org/>
- Safe Routes to School provides funding for infrastructure, education, and campaign materials. State coordinators are listed at <http://www.saferoutesinfo.org/contacts/index.cfm>

Evaluation

- *Evaluating Helmet Campaigns*, a document from the Bicycle Helmet Safety Institute, provides case studies, sample forms, guidelines, and sources of further information. <http://www.helmets.org/evaluate.htm>
- The *Good Practices Guide for Bicycle Safety Education* provides guidance on evaluating bicycle safety programs on page 62. <http://www.bicyclinginfo.org/ee/bestguidedoc.pdf>