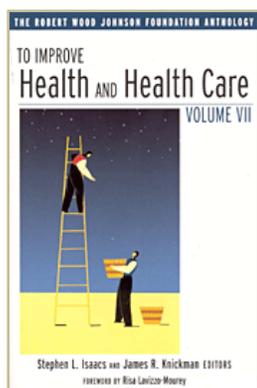




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Editor's Introduction

Beginning in 1988, the Robert Wood Johnson Foundation supported a series of programs focused on reducing injuries to children living in low-income neighborhoods. The idea for the initial program came from two Harlem Hospital physicians who treated injured children from the gritty inner-city area of New York City surrounding the hospital and who carried out research on children's injuries. Disturbed by the number of children who came to the emergency room with injuries from gunshot wounds, traffic accidents, falls from windows, and the like, the physicians approached the Robert Wood Johnson Foundation about funding a pilot program designed to prevent injuries to children. The Foundation was receptive to the idea and made an award for what became the Harlem Hospital Injury Prevention Program.

The story of this program and its successor, the nationwide Injury Free Coalition for Kids program, is told by Paul Brodeur, a former staff writer at the *New Yorker* and a frequent contributor to the Robert Wood Johnson Foundation *Anthology*. It illustrates how the Foundation sometimes works in addressing serious health issues: taking promising ideas suggested by knowledgeable outsiders, testing them on a relatively small scale, expanding the test on a larger scale, and then funding those same experienced individuals to assist those who are newer to the field.

Supporting efforts to reduce childhood injuries is a logical component of the Robert Wood Johnson Foundation's long-standing interest in improving children's health, which is woven into almost every area of its grantmaking. In the 2001 volume of the *Anthology*, Sharon Begley and Ruby Hearn wrote that between 1972 and 2001 the Foundation had made more than two thousand grants totaling \$860 million to improve children's health.¹ Since then, the Foundation has awarded an additional \$388 million.

The Harlem Hospital Injury Prevention Program foreshadowed the expansion of the Foundation's grantmaking to include health as well as health care. When the program was initially funded, most Foundation grants were directed toward improving the medical care system. In contrast, the injury prevention initiative was a classic prevention program—one that attempted to get at some of the causes of poor health, such as unsafe playgrounds and traffic accidents. Under a reorganization of the Foundation that occurred in 1998, improving health per se—for example, by reducing unhealthy

behaviors such as smoking, drinking, and using illicit drugs, or by reducing preventable injuries—was given equal priority to improving health care.

1. Begley, S., and Hearn, R.P. “Children’s Health Initiatives.” In *To Improve Health and Health Care 2001: The Robert Wood Johnson Foundation Anthology*. San Francisco: Jossey-Bass, 2001.
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In the United States preventable injuries are the leading cause of death for children from ages one to fourteen, accounting for more deaths than cancer, AIDS, pneumonia, and all other diseases combined. More than 5,000 children die each year of preventable injuries, and nearly 40,000 are treated every day in hospital emergency rooms or doctors’ offices for broken bones, lacerations, burns, or other more serious injuries.² Childhood injuries occur in a wide range of circumstances:

- *Motor vehicle injuries.* Among children between the ages of one and fourteen, motor vehicle injuries are the leading cause of death and hospitalization. Every ninety seconds, a child is killed or injured while riding in an automobile or a truck. In 1999 (the latest year for which fatality data were available at the time of this writing), more than 2,000 children under 16 were killed in car crashes, and more than 320,000 were injured. Nearly half of the children five and younger who were killed in car crashes were riding unrestrained by car safety seats, booster seats, or seat belts. Only about 6 percent of children aged four to eight ride in booster seats, the recommended safety seat for this group.³
- *Drowning.* Drowning is the second leading cause of injury-related death among children between the ages of one and fourteen. Some 1,000 children drown each year in the United States, most of them in backyard swimming pools. For every child who drowns, 4 others are hospitalized, and 15 receive emergency care for near-drowning.⁴
- *Fires.* Fires are the third leading cause of injury-related deaths among children up to the age of nine. Children under four are at greatest risk for dying as a result of a residential fire. Ninety-five percent of scalds from hot liquids—the most frequent cause of nonfatal, nonfire injuries—occur among children younger than five.⁵
- *Bicycle crashes.* In 1999, 750 bicyclists died in crashes. More than one-quarter were children between the ages of five and fifteen. And 140,000 children are treated each year in emergency rooms for head injuries sustained while the victims were bicycling. Only about 1 in 4 children between the ages of five and 14 wear helmets when riding bicycles.⁶
- *Falls.* Falls are the leading cause of visits to emergency rooms by children, accounting for as many as 3 million visits a year. More than 40 percent of these falls occur among infants, toddlers, and preschoolers.⁷
- *Pedestrian injuries.* In 1999, some 600 child pedestrians 15 and younger died from traffic-related injuries. And 27,000 sustained nonfatal injuries.⁸
- *Playground injuries.* More than 200,000 children 14 and younger are treated annually in emergency rooms for playground-related injuries. More than a third of the injuries sustained on playgrounds are severe—including fractures, internal injuries, and concussions. Most playground

injuries are associated with the use of climbing equipment, slides, and swings. Almost 70 percent of the injuries involving playground equipment occur on public playgrounds.⁹

- *Poison.* In 1999, poison control centers in the United States reported more than 2 million exposures to poison. More than half of these occurred among children younger than six.¹⁰

In large part, the distressing situation highlighted by these statistics can be explained by the fact that, until recently, few communities and pediatric trauma centers had undertaken significant efforts to reduce the incidence of unintentional injuries being sustained by children—particularly those living in crowded urban areas. Instead of acting to prevent childhood injuries, most pediatric trauma centers have merely treated injuries, viewing them as accidental and, as such, random, unexpected, and not preventable. Only within the past 15 years has there been a major effort to reverse this reactive attitude and to engage in a proactive, preventive approach to the problem of childhood injury. The new initiative has focused on studying where, why, when, and how childhood injuries occur, and then devising programs and interventions designed to reduce their incidence.

EARLY EFFORTS TO PREVENT CHILDHOOD INJURIES

The effort to chronicle and prevent childhood injuries has its genesis in the vision and determination of a single person—in this case, Barbara Barlow, who became chief of pediatric surgery at the Harlem Hospital Center in New York City in 1975. What Dr. Barlow encountered during her early months at the Harlem Hospital Center, a public hospital affiliated with the College of Physicians and Surgeons at Columbia University, led her to suspect that Harlem and other parts of northern Manhattan were experiencing an extraordinarily increased incidence of childhood injury compared with the rest of New York City. “I had never seen anything like it at any of the other hospitals with which I had been associated,” she said not long ago. “Dozens upon dozens of children were being brought in who had fallen out of windows, been hit by cars, been hurt on playgrounds, or been shot, stabbed, or assaulted by other means. Since the predominant weight of a small child is in the head, children who were falling from high windows were falling headfirst, with catastrophic results. In fact, more than one in four of them were dying.”

In 1972, the New York City Health Department had developed a pilot program to prevent window falls, after a study conducted between 1965 and 1969 showed that falls from heights during this period had caused 12 percent of all deaths among children under 15 years of age, with 123 deaths (82 percent) occurring as a result of window falls. The program, which was called “Children Can’t Fly,” included door-to-door visits by outreach workers, who counseled parents on preventive measures and distributed free

window guards. Between 1973 and 1975, the number of deaths among New York City children caused by falls from heights decreased by 35 percent, but the problem remained severe. In 1974 and 1975—a period in which 3,200 free window guards were distributed to some 8,400 families—170 children who had fallen from windows were admitted to city hospitals for treatment of injuries that included skull fractures, brain damage, paralysis, ruptured spleens, loss of eyesight and other incapacitating trauma.

In 1976, the New York City Board of Health passed a law requiring owners of multiple dwellings to provide window guards for apartments in which children 10 or younger were residing. The law stipulated that all landlords be in compliance by the end of March 1979.¹¹ At that time Dr. Barlow, who had already established a pediatric trauma registry at the Harlem Hospital Center, began working with the director of the school health program to educate the parents of young children in Harlem about the importance of informing landlords of the requirement to install window guards. Within two years there was a 96 percent reduction in the number of children falling out of windows in central Harlem.¹²

“The success of the window guard program convinced me not only that other urban communities should establish similar initiatives but also that urban public hospitals might be able to play a leadership role in preventing childhood deaths and injuries from other causes,” Barlow has said.

In 1982, Barlow and some colleagues from the College of Physicians and Surgeons of Columbia University published a paper in the *Journal of Pediatric Surgery* in which they wrote that during the previous 10 years, 108 children 16 years of age and under had been admitted to the Pediatric Surgical Service of Harlem Hospital with gunshot wounds. Half of them had been shot by guns held by other children. More than 1 in 20 of them had died. Since only one child had been admitted to the Pediatric Surgical Service for treatment of gunshot wounds during the 10 years preceding the review period, it was obvious that gunshot wounds had become a significant new source of mortality and morbidity among children living in Harlem. In their paper Barlow and her colleagues pointed out that one obvious reason for the increase was the ease with which it had become possible to obtain handguns in Harlem. They also pointed out a second, less obvious reason—the so-called 1973 Rockefeller Drug Laws (named after Governor Nelson Rockefeller), which imposed very stiff penalties on adults convicted of drug possession.

As a result of the 1973 law, drug dealers in Harlem began recruiting children from twelve to 16 years of age to sell drugs on the street. The dealers armed the children with handguns to intimidate rivals and enforce the drug-selling code of behavior, knowing that drug possession, drug selling, and gun possession

among youngsters of their age were handled by family court and were usually punished by probation or short-term incarceration in a juvenile home. Since most drug-dealing children were school dropouts, Barlow and her colleagues in the Pediatric Surgical Service worked closely with the hospital's Social Service Department and its Division of Child Psychiatry to evaluate children who had been admitted for gunshot wounds, encourage them to return to school, and support them in changing their dangerous lifestyle. In their paper in the *Journal of Pediatric Surgery*, she and her coauthors acknowledged that such efforts were not uniformly successful but declared that "we do have many former patients back in school, attending technical schools or colleges—heading toward productive lives."¹³

Meanwhile, Barlow had been sending grant proposals to various federal minority health programs and other governmental agencies, asking for financial support for a program to prevent childhood injuries. It was a futile and discouraging process. "Whenever and wherever I put in for a grant, I was told that the problem of childhood injuries was insoluble because such injuries were the result of accidents, and accidents were bound to happen and were thus unpreventable," she recalls, bristling at the memory. A white-haired, brown-eyed, gentle-faced woman in her middle sixties, she has a will of iron when it comes to preventing childhood injuries, and zero tolerance for ascribing them to accidents. Indeed, for Barlow there is no such thing as a childhood accident. There are only preventable childhood injuries.

Between January 1983 and December 1987, Barlow and some colleagues—among them Maureen Durkin, associate professor of clinical epidemiology at Columbia University's School of Public Health and Sergievsky Center; Leslie Davidson of Columbia University's College of Physicians and Surgeons; and Margaret Heagarty, head of the Department of Pediatrics at the Harlem Hospital Center—undertook an epidemiological study of the occurrence of severe injuries among the eighty-nine thousand children under the age of 17 who were living in northern Manhattan. The study was the first ever conducted in the United States to assess the incidence of injury among inner-city children. Data collected on 2,761 injuries severe enough to require hospitalization and on eighty-three deaths during the five-year period showed Barlow's early hunch to have been correct. The rate for injuries causing hospitalization and death in northern Manhattan was significantly higher than in other parts of New York City and the nation. Indeed, the injury rate in central Harlem was nearly twice that of the United States. Falls accounted for the highest incidence of injury, followed by vehicle-related injuries (two-thirds of them to pedestrians and nearly a quarter to bicycle riders), toxic and medical ingestions, burns, assaults, and gunshot wounds.

Assaults caused nearly one in 10 injury hospitalizations and more than one in three injury deaths. Gunshot wounds were the leading cause of injury mortality, accounting for 14 percent of the deaths.¹⁴

Even though the data clearly showed the necessity of undertaking preventive measures to reduce the number of childhood injuries in northern Manhattan, Barlow continued to be stymied in her efforts to gain financial support. The turning point came in late 1987, when Barlow's colleague Margaret Heagarty, who had been a Robert Wood Johnson Health Policy Fellow, approached Ruby Hearn, a senior vice president at the Foundation, and suggested that since the Foundation was working to improve the health of children, it ought to consider giving a small grant to help prevent childhood injuries. Hearn then sent Michael Beachler, a young program officer who had joined the Foundation six months earlier, to meet with Barlow, Heagarty, and Durkin at Harlem Hospital, with the idea of determining whether an injury prevention program might be viable.

"We sat around a table and floated a bunch of ideas," Beachler recalls. "The thing that stood out was Dr. Barlow's passion and commitment. Within a week or two she had sent me the results of the northern Manhattan study, as well as a concept paper outlining some specific interventions that could be taken to reduce the incidence of childhood injuries. During the next few months, we worked together to frame a proposal for a small program designed to form a coalition between Harlem Hospital's Departments of Pediatrics and Pediatric Surgery and various city and community agencies, in order to continue the window safety initiative, improve playground safety, and develop new projects designed to reduce injury to children in central Harlem."

In 1988, the Foundation awarded Harlem Hospital the first of two grants (totaling \$541,000 over four years) to enable Barlow and her colleagues to develop a pilot injury prevention program for children living in central Harlem.

THE HARLEM HOSPITAL INJURY PREVENTION PROGRAM

The Harlem Hospital Injury Prevention Program, which grew out of this grant, became one of the most successful ad hoc projects in the history of the Robert Wood Johnson Foundation. Under Barlow's direction the new project hit the ground running. Hypothesizing that motor vehicle pedestrian injuries would decrease if children stopped using the streets as play areas, she and program staff members surveyed and photographed several dozen parks, playgrounds, and schoolyards in central Harlem to document unsafe conditions—among them dangerous equipment, unpadded surfaces, rodent infestation, and drug dealing. During the next 10 years, they worked with the New York City Board of Education and

local schools to build 55 new playgrounds at public schools and day-care centers, and with the New York City Department of Parks and Recreation to rebuild playgrounds in eleven parks, equipping them with soft safety surfaces and rubber swings. Child pedestrian injuries dropped during 1989, the first year of the initiative, and not a single child was admitted to Harlem Hospital in 1991 for a swing injury, which had previously been the major cause of equipment-related park and playground injuries.

Working with the New York City Department of Transportation, coalition members instituted an intensive pedestrian and bicycle safety program for grammar school children, undertook to provide more than five hundred bicycle helmets free or at cost, repaired children's bicycles, and formed an Urban Bike Corps. In collaboration with the New York Emergency Medical Services, they established a "Kids, Injuries, and Street Smarts" curriculum on how to deal with violence-related situations. With the help of the Central Harlem Board of Education, they initiated a "No Guns in School" curriculum. Together with the Department of Parks, they developed a "Greening of Harlem" program that taught children horticulture and encouraged them to plant and care for school playground gardens.

With the support of private and corporate donors, they continued the window guard campaign and developed a burn prevention curriculum that included the distribution of smoke detectors. They also started a variety of programs to involve children in the hours they were not in school—when injuries were most likely to occur. These included a hospital-based art studio with more than two hundred participants, a hospital-based dance clinic involving several hundred girls, a program in which more than one hundred children were encouraged to paint murals, a Harlem Little League with 24 teams, a soccer league, and a winter baseball clinic. A Safe Kids/Healthy Neighborhoods Coalition provided education in teen pregnancy prevention, gun safety for parents, and alternatives to violence for adolescents and adults.

During 1989, major injury admissions to Harlem Hospital's Pediatric Trauma Service dropped 14 percent—the first recorded decrease since 1975. By the end of 1992, when funding from the Robert Wood Johnson Foundation ended, there had been a 41 percent decrease in major trauma hospital admissions for children living in central Harlem, as compared with admissions during the 1983–1987 period. There was also a 50 percent decrease in motor vehicle pedestrian injuries, a 50 percent drop in bicycle injuries, and a 50 percent drop in serious playground injuries. In addition, a 50 percent decrease in assault and gun injuries among Harlem adolescents had been recorded.¹⁵

By this time, the Injury Prevention Program had received considerable media attention and had been able to raise more than \$1 million in additional financial resources. The program had also begun to serve as a model for injury prevention projects that were being planned at city, state, and national levels. The New York State Health Department's injury prevention people had expressed interest in replicating it in problem areas within their jurisdiction; and Harlem Hospital's injury prevention resource book had been circulated to 10 groups across the nation whose members had requested help in setting up similar projects.

EXPANDING THE INJURY PREVENTION PROGRAM

The dramatic reduction in injuries sustained by children living in central Harlem between 1988 and 1992 went a long way toward persuading staff members at the Robert Wood Johnson Foundation, who had been skeptical initially, that the Injury Prevention Program had been worth funding and that similar initiatives in other inner-city communities might also warrant support. In 1994, Foundation program officer Michael Beachler approached Barbara Barlow about an initiative that would expand the program by disseminating it as a model to hospital-based sites in other metropolitan areas. As a result, Harlem Hospital received a three-year grant of \$1 million to continue its injury prevention program and to use it as a model in pediatric trauma centers in five cities with high childhood injury rates. The replication sites included Allegheny General Hospital in Pittsburgh; Children's Memorial Hospital in Chicago; Hughes Spalding Children's Hospital in Atlanta; Children's Mercy Hospital in Kansas City, Missouri; and the Harbor-UCLA Medical Center in Torrance, California. Interest earned on the Foundation's grant to Harlem Hospital provided half of the funding for a sixth site at St. Louis Children's Hospital, and to extend the program for an additional six months in Pittsburgh, Chicago, and Kansas City.

To accelerate the formation of injury control programs at the replication sites, members of the Harlem Hospital Injury Prevention Program provided technical assistance for all aspects of the model, including community outreach, coalition building, safe play space design, safe activities, safety education, and evaluation of program effectiveness. The latter proved especially difficult, because each site had unique problems with data collection, ranging from a lack of hospital, city, and state databases, to poorly coded hospital data, state data collected without zip code information, and the refusal of some medical examiners to release data on injury deaths. However, by the summer of 1998, when funding ended for the first phase of the program, all of the hospital sites either had injury surveillance systems that were in

operation or systems that were being set up. At that time the Harlem Hospital Injury Prevention Program and the six replication programs were given a new name—the Injury Free Coalition for Kids.¹⁶

The Injury Free Coalition for Kids of Kansas City

Although Harlem Hospital's Injury Prevention Program provided a blueprint, each expansion site developed its own response to childhood injury. Children's Mercy Hospital, in Kansas City, Missouri, for example, serves 135 counties in western Missouri and eastern Kansas. Initial injury surveillance data and research showed a high rate of injury among children in Kansas City from gunshot wounds and motor vehicle crashes. Playground injuries also resulted in many childhood visits to the emergency room. In partnership with Kansas City officials, the police department, and local residents, the Injury Free Coalition at Children's Mercy developed a program called "Safe Zones," which concentrated on building safe playgrounds for children in neighborhoods with the highest injury rates. Among other programs established by the Kansas City coalition were psychological counseling for children who witness violence, a Safe Kids Safe Homes program, bike-riding safety clinics and bike rodeos, training in the wearing of bike helmets, a teen drama club, toy safety, playground safety, fireworks safety, and airbag safety. In partnership with the Kansas City Royals baseball team, the hospital also provided Safe-at-Home Boxes containing safety items such as electrical outlet covers, medicine cabinet latches, poison control information, and home safety checklists.

The Injury Free Coalition for Kids of Atlanta

The Hughes Spalding Children's Hospital provides health care to the neighborhoods and communities of Atlanta, including Grady Homes, a 495-unit low-income housing project in which many young children reside. Injury data collected on children living in the project showed that many of them—especially younger children—were being hurt in their homes as a result of falls and poisoning. Door-to-door surveys conducted by Injury Free Coalition personnel revealed that safety gates were used by fewer than one-third of the families with young children; that about one-third of the children under one year of age were using walkers in spite of their danger; and that nearly one-third of all families stored hazardous household products in unlocked areas accessible to small children. However, when coalition members visited residents in Grady Homes to look for unsafe conditions, they were greeted with suspicion, as outsiders. As a result, the coalition changed its strategy and built a life-size three-room house on wheels, called "Safety House," which contained a kitchen, a bathroom, and a baby's bedroom. By showing Safety House to the residents of Grady Homes and other low-income communities, the coalition was able to demonstrate unsafe conditions and remedies for them in a way that proved to be nonthreatening and productive. Among other programs initiated by Injury Free Atlanta were car seat

programs for infants and young children, bike safety rodeos and bike helmet giveaways, safe Halloween training, burn and poison prevention and playground safety.

The Injury Free Coalition for Kids of St. Louis

The Injury Prevention Coalition at St. Louis Children's Hospital concentrated its efforts on the Hamilton Heights area, a community of 5,500 residents with many children living in single-family households, a median annual household income of \$16,000, and serious problems with drugs and gangs. Among the coalition's interventions to deal with these problems were the Cease Fire for the Holidays appeal, the Gun Safety Poster contest, the Toy Gun Buyback for Books, the Community Violence Lecture, and the Pediatric Trauma Workshop on Gun Wounds.

Early data showed that African American children living in Missouri were suffering twice the rate of burn injury as white children and that the highest rate was occurring among African American boys who lived in metropolitan counties. Using the zip codes of young burn victims who visited the emergency room at Children's Hospital or were admitted to the hospital, members of the St. Louis Injury Prevention Coalition were able to identify neighborhoods with the highest number of burn injuries. At that point, working with the St. Louis Fire Department, they visited those neighborhoods and installed smoke detectors in several hundred homes that lacked them. In addition, they trained children and adult residents in fire safety awareness. By 2001, there was a steep reduction in the number of pediatric burns being treated at St. Louis Children's Hospital, although how much of this decrease can be attributed to the coalition's initiatives cannot be known with certainty.¹⁷

The Injury Free Coalitions for Kids of Pittsburgh and Worcester

The earliest and one of the most successful replication programs was begun in 1994 at Allegheny General Hospital in Pittsburgh by Michael Hirsh, a pediatric surgeon, who pioneered a number of innovative projects at Allegheny General before moving to Mercy Hospital of Pittsburgh and establishing a second replication program there. "Soon after we started up in 1994, we learned that gunshot wounds were the leading cause of childhood injury among children between the ages of five and 19 in Allegheny County," he recalled not long ago. "We also learned that we had a very negative image in the community. At a neighborhood meeting attended by then attorney general Janet Reno, people not only were bitterly critical of the hospital but also were convinced that it was profiting from the injuries occurring to their children instead of working to prevent them. As for the kids, when asked what their perception of a hospital was, they would often as not reply 'a place I go when I get shot.'"

Hirsh, who now heads the Injury Free Coalition at the UMass Memorial Children's Medical Center in Worcester, Massachusetts, went on to say that the Pittsburgh Police Department had operated a gun return program since 1990, but because people had to turn in their weapons at precinct stations, where there were surveillance cameras, the police had managed to collect only about 25 guns. "Some years earlier I had heard about a carpet store owner in Washington Heights (New York City) who offered free carpets in return for guns," he said. "With that in mind, we started a Goods for Guns program under the slogan 'Guns and Kids Don't Mix,' offering \$25 for a rifle or long gun, and \$50 for a handgun, in the form of department store gift certificates. On the morning of the first day, the line of people waiting to turn in weapons was three blocks long. We ran out of certificates in an hour, so we went to the nearest ATM machine, and, after depleting our personal stock of cash, ended up handing out vouchers. During the first two Saturdays of September, we collected 1,400 guns. During the past nine years, the program has collected 7,800 guns—more than any other buyback program in the country—at a total cost of about \$435,000. That, by the way, is approximately the cost of one spinal cord injury to a child."

Seeking to prevent motor vehicle injuries to children, Hirsh and his colleagues at Injury Free Pittsburgh used funds from the Robert Wood Johnson Foundation and other private foundations and corporations to design and build a life-size model city street, called "Safety Street," which is on permanent display in a parking lot at the Pittsburgh Children's Museum. The model contains stores, traffic signals, cars, bicycles, a school bus, and recordings of city street noise. It is visited each year by 30,000 city and suburban schoolchildren, who learn valuable lessons about how to make safe choices when crossing a street, riding a bike, or exiting from a school bus.

In order to counter the peer pressure that encourages children to drop out of school and join gangs, Hirsh and his colleagues established Health Rangers—a mentoring program that gives middle school children the opportunity to develop one-on-one relationships with adult role models. The program, which began in 1994, selected marginal kids—those who exhibited promise but were considered at risk for future trouble—and paired them with hospital mentors in order to increase their self-esteem, broaden their outlook, and provide them with information about possible careers. "We were careful not to limit our mentors to doctors and nurses, because we didn't want to set the bar too high and scare the kids away," Hirsh said. "So we also recruited cooks, dieticians, housekeepers, security guards, van drivers, and helicopter pilots. The program started with 25 seventh graders. The program has since grown to include

seven middle schools and three additional hospitals, and has resulted in improved school attendance and academic performance among children who have been enrolled in it.”

FURTHER EXPANSION OF THE INJURY FREE COALITION FOR KIDS

In July 1998, the Robert Wood Johnson Foundation approved a new \$3.1 million grant for the development over a three-year period of a strengthened network of pediatric injury centers, as well as the establishment of a technical assistance resource center on hospital-based pediatric injury prevention. Under the direction of Barbara Barlow, the network and the center were to work with the expansion sites to help them become institutionalized in their hospitals and to further develop their programs.

The Injury Prevention Coalition for Kids of Philadelphia

Using funds from the grant, TraumaLink—the center for injury prevention research of the Children’s Hospital of Philadelphia—joined the network. At about the same time, with consultation and guidance from the Injury Free Coalition resource center, the Children’s Medical Center of Dallas created an injury prevention program that was self-funded.

Like other injury prevention sites, the ones in Philadelphia and Dallas had unique problems that demanded special interventions. West Philadelphia—the immediate service area of the Children’s Hospital of Philadelphia—is home to more than sixty thousand children under the age of eighteen. Nearly half of them live in single-parent, female-headed households, and 26 percent of these households exist below the poverty level. Between 1997 and 1999, members of the Injury Free Coalition for Kids of Philadelphia identified the leading causes of childhood injury. They found that in West Philadelphia approximately 40 percent of children who were severely injured or admitted to the hospital had been hurt at home. Pedestrian and biking injuries also ranked high as causes for emergency room visits and hospitalization.

Using geographical mapping and community surveys, coalition staff members determined the locations of the most severe and prevalent home injuries, and then joined with the local SAFE KIDS coalition and other groups to train volunteers, who provided in-home safety education, home safety inspections, and home safety equipment, such as smoke detectors, safety gates, nightlights, and crib and cabinet latches.

Using TraumaLink’s surveillance system, the Injury Free Coalition for Kids of Philadelphia collected information on the pre-injury behavior of children hit by cars. It showed that most of them had been playing in the street. The coalition then mapped the locations of child pedestrian injuries to identify

patterns and troublesome locations, and, together with the city's Department of Recreation, began to develop structured activities for children who lived and played in the vicinity of trouble spots. In partnership with the Philadelphia Department of Public Health and the SAFE KIDS campaign, the coalition also mounted a broad effort to distribute helmets to children who had been identified as high-risk as a result of bicycle-related or similar injuries. As a result, more than four hundred Philadelphia children who were injured while riding bicycles or scooters or roller-blading received a safety helmet before going home.¹⁸

The Injury Free Coalition for Kids of Dallas

In Dallas, where backyard swimming pools are common, members of the injury prevention program faced a different set of problems. According to statistics from the Texas Department of Health, ninety-five children died by drowning in the Dallas area between 1995 and 1998. The high rate of drowning was compounded by the fact that for every child who drowns, four other children nearly drown, and one in five of those who nearly drown are left with severe lifelong disabilities. Since the Injury Free Coalition for Kids of Dallas was a member of the Dallas County Child Death and Infant Mortality Review Team, which reviews the death of every child that occurs in Dallas, the coalition was able to determine that most drowning victims were toddlers or young children; that most drownings occurred in pools that were not fenced separately from the house; that many drownings occurred in apartment pools; and that most of the drownings were silent events, with children toppling quietly into pools without thrashing or crying out. To deal with the problem, the coalition developed a drowning prevention curriculum that included a slide presentation, video, and script, and presented it at a safety forum for health, safety, and community professionals. With the help of volunteers from the Texas Women's University School of Occupational Therapy, the coalition then took its drowning prevention message to the broader Dallas community. In addition, the coalition worked with the Texas Department of Health in seeking stronger laws to regulate fencing for semiprivate and private swimming pools.¹⁹

In July 2001, the Robert Wood Johnson Foundation authorized up to \$15 million over a five-year period to extend the dissemination of the injury prevention program to 40 hospitals that had pediatric trauma centers and were interested in replicating the model. Under the new initiative each additional hospital site would receive a grant of \$50,000 a year for three, four, or five years. By the end of 2002, the network of injury prevention sites had reached 27, with 13 additional sites planned for 2003.²⁰³

The Foundation's \$15 million grant also provided for the establishment of a National Program Office for the Injury Free Coalition, which was set up in 2002 under the direction of Dr. Barlow within the

Department of Epidemiology of Columbia University's Mailman School of Public Health. The National Program Office provides the program's injury prevention sites with brochures and safety checklists and an array of home safety devices—among them smoke alarms, bath thermometers, window safety disks, choke tubes for measuring small items that children might swallow, and cabinet door locks. It also coordinates research activities across sites and provides technical assistance by conducting workshops, helping to calculate population-based injury rates, and obtaining injury information from state agencies charged with maintaining statewide hospital discharge data.

A CLOSER LOOK: VISITS TO THREE OF THE COALITIONS

A closer look at three coalitions—those of Miami, San Diego and Chicago—illustrates how the Injury Free Coalition for Kids program has developed.

The Injury Free Coalition for Kids of Miami

One of the new kids on the block is the Injury Free Coalition for Kids of Miami, which started up in April 2001 at the University of Miami Department of Pediatrics Mailman Center for Child Development, with support from Jackson Memorial Hospital. The coalition is directed by Dr. Judy Schaechter, an assistant professor of pediatrics, who, like many of her colleagues, is passionate about the necessity of preventing childhood injuries. "Miami is the poorest large city in the nation, and it leads the nation in violent crime," Schaechter said. "When I joined the Department of Pediatrics, in 1996, there were more admissions to Jackson Memorial Hospital and the Ryder Trauma Center for childhood injuries caused by violence than for injuries caused by motor vehicle crashes. Why, we were treating thirteen- and fourteen-year-olds practically every day for gunshot wounds! Between 1994 and 1998, gunshot wounds caused 123 deaths among Miami children. Half of them were killed in their own homes, or in the home of a relative or friend—places where they should have been the most safe. Nearly half of the children under twelve years of age who were the victims of fatal violence were killed by their mother's intimate partner. Most of the weapons involved in these shootings were owned by parents, a family member, or a friend of the family. I call them household guns."

Schaechter went on to say that in 1999 she started a coalition against violence called "Not One More," with the aid of a \$7,500 grant from the American Academy of Pediatrics. "The name was intended to stand as a declaration by the community that not one more child should die by violence," she explained. "In October of 2000, supporters of Not One More developed the Partnership for the Study and Prevention of Violence, which later became the lead agency for the Injury Free Coalition for Kids of Miami. Teaming up with Miami-Dade County mayor Alex Penelas, school board members, community organizations, business

leaders, and the police, the Partnership and Not One More passed out brochures against violence, distributed more than five hundred gun locks, produced a gun lock video with the assistance of the Miami-Dade Police Department, and initiated a guns-for-gifts exchange program that netted nearly 450 handguns and rifles. That same year, in conjunction with law enforcement and health officials, the Partnership set up a violent injury statistics system, which now tracks fatal and nonfatal injuries caused by violence in the greater Miami area.”

“In 2001,” Schaechter continued, “with money from the Robert Wood Johnson Foundation and a matching grant from Miami-Dade County, we became a member of the nationwide Injury Free Coalition for Kids and were able to set up a program called InReach, which works closely with community residents to support solutions to the problem posed by violence. InReach also develops projects encouraging youth activities, such as talent shows, musical instrument lessons, and participation in sports. Adult mentoring activities include swimming lessons, football clinics, and projects for improving the environment. All told, we have two hundred kids enrolled in 10 programs.”

The Injury Free Coalition for Kids of San Diego

An even newer kid on the block is the Injury Free Coalition for Kids of San Diego. It started up in March 2002 and operates in partnership with the San Diego Safe Kids Coalition and the Center for Healthier Communities at the Children’s Hospital and Health Center, about three miles northeast of downtown San Diego. The Center for Healthier Communities was launched in 1996 and serves as the lead agency of the Injury Free Coalition. As is the case in other cities, unintentional injuries are the leading cause of death for San Diego children, with motor vehicle collisions being the leading cause of death and severe injury among children five to 14 years of age. Statistics gathered by the Safe Kids Coalition show that a vast majority of child safety seats in San Diego are incorrectly installed. Indeed, the misuse rate has been estimated to be more than 85 percent. To combat this problem, the Center for Healthier Communities, the Safe Kids Coalition, the Injury Free Coalition for Kids of San Diego, and partner organizations have conducted more than one thousand child safety seat inspections and prepared an up-to-date child safety seat handout that includes compliance with 2002 California state regulations.

Pedestrian injuries are the second leading cause of unintentional injuries among San Diego children. Data gathered in 1999 revealed that Mid-City—a heavily Hispanic and new immigrant neighborhood—had a far greater proportion of child pedestrian injuries than the rest of San Diego County. In fact, although Mid-City children under the age of 15 accounted for less than 7 percent of the total population of the county, they sustained 16 percent of the pedestrian injuries in the county.²¹ In 2000, with a small grant

from the University of California, San Francisco, and the California Department of Health Services, Children's Hospital and Health Center and a large number of community partners implemented the Safe Routes to School project in Mid-City. To begin with, three schools with a high incidence of childhood pedestrian injury were identified through Trauma Registry data, police reports, and anecdotal information provided by parents and the members of neighborhood associations. Over the next two years, engineers from the California Institute of Traffic Safety analyzed traffic and pedestrian behavior at these locations and recommended specific remedies, such as the construction of new crosswalks, traffic signals, flashing "Don't Walk" signs, and footprint trails on sidewalks to guide young children to safe street-crossing points.

Since the spring of 2002, the Injury Free Coalition for Kids of San Diego and the Center for Healthier Communities have been in the process of expanding the Safe Routes to School project to southeast San Diego, a densely populated neighborhood that includes residents with Hispanic and African American backgrounds as well as many recent immigrants from Eritrea, Somalia, Ethiopia, Vietnam, and Cambodia. According to Cheri Fidler, the director of the Center for Healthier Communities, the cultural experience of many of the residents of southeast San Diego has not equipped them to cope with the pedestrian hazards of a large modern city. "I have been given to understand that people who have grown up in Mexico often teach their children to cross the street in the middle of a block rather than at a corner because corners are known to be the most dangerous place to cross a street in Mexico," she told a visitor to the Injury Free Coalition of San Diego's offices at the Euclid Health Center, in the southeast section of the city. "Other people have never driven cars and so are without any reference point that provides them with an awareness of how fast cars travel. Their children are especially at risk because children perceive, think about, and react to traffic differently from the way adults do."

The Injury Free Coalition for Kids of Chicago

The Injury Free Coalition for Kids of Chicago functioned from the start in partnership with Children's Memorial Hospital of Chicago and the hospital-based Cabrini Green Youth Program (now called Chicago Youth Programs), an organization founded back in 1984 by medical students at Northwestern University to help children in Cabrini Green, a low-income housing project known for gang violence. One of the founders, Joseph DiCara, went on to win a Robert Wood Johnson Community Health Leadership Award in 1998.

Like the five other original replication sites that were financed by the Robert Wood Johnson Foundation in the middle 1990s, the Injury Free Coalition for Kids of Chicago has developed a large number of programs and interventions as well as an extensive network of partnerships. The coalition is directed by Karen Sheehan, who is a pediatrician at Children's Memorial Hospital and an assistant professor of pediatrics at Northwestern University's Feinberg School of Medicine. She is also the medical director of the Chicago Youth Programs/Children's Memorial Clinic, where doctors and medical students not only provide care for inner-city children but also play in the gym with them, tutor them, and take them on field trips.

A longtime advocate of preventing childhood injuries, Sheehan joined the Cabrini Green Youth Program when she began her studies at Northwestern University's Medical School in 1984. "In those days, we paid for our big-brother-big-sister programs by passing around the hat in classroom," she recalls. "We've come a long way since then, but especially since 1995, when the Injury Free Coalition for Kids of Chicago began its partnership with Chicago Youth Programs and Children's Memorial Hospital."

"In 1995," Dr. Sheehan explained, "with funding from Bally Total Fitness, the coalition built a new playground in Cabrini Green. Last year, with the cooperation of Chicago Public Schools, the Chicago Park District, and a civic organization called 'Friends of the Parks,' we were able to refurbish half a dozen playgrounds in several other inner-city neighborhoods we serve. One of them is Washington Park, a neighborhood on the south side of Chicago, which ranks near the bottom of the city's communities in household income, employment, and school graduation, and near the top in terms of teen births and homicides. The other is the Uptown community, an ethnically diverse neighborhood that is populated by African Americans, Mexicans, Cambodians, and Vietnamese, and in which fifty-seven languages are spoken. Together with Children's Memorial Hospital, we have initiated a collaboration to expand injury free programs with the University of Chicago Children's Hospital, Stroger Hospital, the Rehabilitation Institute of Chicago, and Northwest Community Hospital in Arlington Heights. Recently, one of our former volunteers spearheaded a campaign to build our own headquarters building. It is now being constructed in Washington Park on land provided by the city, and it will house office space, a day-care center, and a basketball court."

Sheehan went on to say that during the past two years five hundred Safe-at-Home boxes paid for by funds from the Allstate Foundation have been distributed by the Injury Free Coalition and its partners to Chicago families through local health clinics and parenting programs in Chicago Public Schools. "The

Safe-at-Home boxes contain smoke detectors, outlet covers, poison control information, home safety checklists, and safety door latches. We have also initiated a major initiative to reduce childhood injuries caused by falls—especially window falls. Thanks to a comprehensive report issued in 2001 by the Child Health Data Lab of the Children's Memorial Institute for Education and Research, we learned that falls are the leading cause of hospitalization for Chicago children, accounting for almost 30 percent of all unintentional injury hospitalizations. We also found out that falls from windows account for the highest single rate of hospitalization for two- and three-year-olds. In fact, every spring and summer, two to three kids in Chicago are hospitalized each week because of injuries resulting from window falls. As a result, we have embarked upon a priority program called 'Stop the Falls.' It includes educating families about how to prevent window falls, limiting any opening in a window to no more than four inches, and encouraging the use of releasable window guards that are affordable and easy to install. Eventually, we're hoping to achieve the same kind of result that was achieved in New York City, where mandatory use of window guards in multiple-story buildings has reduced the number of window falls by 96 percent."

CONCLUSION

Many of Sheehan's colleagues join her in calculating that the injury surveillance systems in operation at the Injury Free Coalition replication sites will not be able to provide statistical proof of reduced childhood injuries for several years to come. However, the National Program Office is hoping to speed up the process by assisting the replication sites in assessing data gathered by injury surveillance systems. In the meantime, the programs and interventions that have been developed at virtually all of the sites furnish powerful reasons to believe that a significant reduction in the rate of childhood injury within many inner-city neighborhoods is under way. Some Injury Free Coalition members have expressed reservations that the organization may be expanding too rapidly and that with a total of 40 sites expected to be in operation by the end of 2003, it may be difficult to avoid the pitfalls of bureaucracy and to retain the kind of focus, purpose, and cohesion that has characterized the organization to this point. However, the leadership of Barbara Barlow and the directors of the established sites, who will act as mentors to the directors and staff members of the 13 new sites that will be added in 2003, should ensure the continuation of the Coalition's high standards. Indeed, Barlow's goal—the establishment of an injury prevention program at every one of the more than one hundred children's hospitals in the United States—has been endorsed by the National Association of Children's Hospitals and Related Institutions. In April 2002, with the aid of a grant from the Robert Wood Johnson Foundation, the Injury Free Coalition for Kids took a step toward this goal by holding a two-day conference at which four-member teams from 35 of the Association's hospitals received instruction in how to develop injury prevention

programs similar to the ones currently in operation at the Coalition's 27 hospital sites across the nation. Such an initiative parallels the Foundation's policy of financing projects whose value can be demonstrated and whose operations can be replicated and widely disseminated.

Notes

¹ *Injury Fact Book, 2001–2002*. National Center for Injury Prevention and Control, Nov. 2001, p. 30.

² *Call for Proposals: Injury Free Coalition for Kids*. The Robert Wood Johnson Foundation, May 2002, p. 2.

³ *Injury Fact Book ...* (2001), pp. 37–38, 58, 74.

⁴ *Ibid.*, pp. 36, 117.

⁵ *Injury Research Agenda*. National Center for Injury Prevention and Control, June 2001, pp. 17, 24.

⁶ *Injury Fact Book ...* (2001), pp. 50, 53.

⁷ *Injury Research Agenda* (2001), pp. 17, 22.

⁸ *Injury Fact Book ...* (2001), p. 78.

⁹ *Ibid.*, p. 82.

¹⁰ *Ibid.*, p. 84.

¹¹ Spiegel, C. N., and Lindaman, F. C. "Children Can't Fly." *American Journal of Pediatric Health*, 1977, 67(12).

¹² Barlow, B., Niemirska, M., Gandhi, R. P., and Leblanc, W. "Ten Years of Experience with Falls from a Height in Children." *Journal of Pediatric Surgery*, 1983, 18(4).

¹³ Barlow, B., Niemirska, M., and Gandhi, R. P. "Ten Years' Experience with Pediatric Gunshot Wounds." *Journal of Pediatric Surgery*, 1982, 17(6).

¹⁴ Davidson, L. L., and others. "The Epidemiology of Severe Injuries to Children in Northern Manhattan: Methods and Incidence Rates." *Pediatric and Perinatal Epidemiology*, 1992, 6, 153–156.

¹⁵ *Prevention of Injury to Children of Harlem, Final Report: Robert Wood Johnson Foundation Grant #13396*. College of Physicians and Surgeons of Columbia University, Aug. 1990, pp. 486–505; *Annual Progress Report: Year 1, Robert Wood Johnson Foundation Grant #14056*. College of Physicians and Surgeons of Columbia University, Aug. 1991, pp. 567–597; Davidson, L. L., and others. "The Impact of the Safe Kids/Healthy Neighborhoods Injury Prevention Program in Harlem, 1988 through 1991." *American Journal of Public Health*, 1994, 84(4); Laraque, D., Barlow, B., Durkin, M., and Heagarty, M. "Injury Prevention in an Urban Setting: Challenges and Successes." *Bulletin of the New York Academy of Medicine*, Summer 1995.

¹⁶ *Dissemination of a Model Injury Prevention Program, Final Grant Report, #023514*. College of Physicians and Surgeons of Columbia University, July 1, 1998.

¹⁷ Quayle, K. S., and others. "Description of Missouri Children Who Suffer Burn Injuries." *Injury Prevention*, 2000, 6, 255–258.

¹⁸ *The Injury Free Coalition for Kids: A Passion for Prevention*. Special Report, The Robert Wood Johnson Foundation, Sept. 2000, pp. 15–17, 24.

¹⁹ *Ibid.*, pp. 9–10.

²⁰ The sites selected in 2001 were Children's Hospital of Pittsburgh; Cincinnati Children's Hospital Medical Center; UMass Memorial Children's Medical Center in Worcester; Children's Hospital and Health Center in San Diego; Connecticut Children's Medical Center in Hartford; the University of Miami's Jackson Memorial Hospital; and Children's Hospital at Columbia University's Presbyterian Medical Center in New York City. The sites added in 2002 were the Harborview Medical Center and the Children's Hospital of Seattle; the Children's Hospital of Michigan in Detroit; the Hennepin County Medical Center in Minneapolis; the Pitt County Memorial Hospital in Greenville, North Carolina; the Arkansas Children's Hospital in Little Rock; the Rhode Island Hospital in Providence; Children's Hospital in Boston; Children's National Medical Center in Washington, D.C.; the University Health System in San Antonio, Texas; Johns Hopkins Children's Center in Baltimore; the University of Chicago Children's Memorial Hospital; and Children's Hospital of Austin in Texas.

²¹ Children's Hospital and Health Center, San Diego. "Pediatric Injuries." *Connections*, Jan.-Feb. 2001, p. 3.