

Preventing Childhood Injuries for a Bright Future



NIHCM
FOUNDATION

One in four children in the United States is injured every year; this number represents about 14 million children. Each day almost 40,000 seek medical attention. In 1997, unintentional injuries were the leading cause of death for individuals between ages 1 through 34.

To reinforce the efforts of groups which have established injury prevention programs as well as to encourage others to address this problem, NIHCM Foundation convened health plan managers, federal, state and local officials, childhood safety experts, advocacy groups and policy makers for a forum on March 1, 2000.

The forum was part of a "Bright Futures and Managed Care" series, which NIHCM Foundation is conducting under a cooperative agreement with the Health Resources and Services Administration's (HRSA) Maternal and Child Health Bureau (MCHB). This Action Brief summarizes key issues and discussion from the forum.

"Injuries are not accidents. They do not happen without cause, and they are preventable."

- Carol Delany

Opening Presentations

Carol Delany, Co-Lead for Injury and Violence Prevention, MCHB (Welcome)

Susan Dentzer, Correspondent, The NewsHour with Jim Lehrer (Moderator for the Day)

Richard Schieber, MD, MPH, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention (Keynote Speaker)

Ms. Carol Delany greeted the 75 participants and described the four programs of MCHB's Injury and Emergency Medical Services unit: (1) Injury and Violence Prevention; (2) Emergency Medical Services for Children; (3) Traumatic Brain Injury Program; and (4) Poison Prevention Program. She portrayed Bright Futures as a springboard for MCHB's work through incorporation of injury prevention information into Bright Futures' materials. **Ms. Delany** also explained the work of the Children's Safety Network resource centers, which provide technical assistance in injury and violence prevention.

Inviting the audience to view childhood injury via its real-life consequences, **Ms. Susan Dentzer** presented a one-day sample of news stories found on the Internet: a family's pickup truck broke through the ice in Minnesota, trapping a seven-month old who drowned; a mother and three children escaped from fire in a Cleveland duplex, but one boy died; a baby fell 60 feet from an apartment window in Tampa and was miraculously uninjured; a father was cited for carrying his nine-month old daughter astride his motorcycle, secured in a backpack and wearing an oversized helmet. These incidents show the complex causes of injury, such as the failure to envision potential consequences and temporary lapses in parental judgment.

Walk Through the Door: Welcoming the audience into the world of injury prevention through the paradigm of a door, **Dr. Richard Schieber** entreated each person to close the door as soon as having entered and never exit again. He expressed his hope that all attending would make a personal commitment, not only through the workplace, but also through family, places of worship, and other institutions to find ways to reduce childhood injuries.

"Each year, there are about 6,000 deaths among children ages 0-14; that equates to roughly a Boeing 727 going down and killing all passengers and crew, twice a week."

- Richard Schieber

“Why aren’t we all up in arms, marching for additional enforcement of laws already on the books, not to mention more laws to be enacted or greater federal expenditures?”

- Susan Dentzer

Staggering Statistics: Dr. Schieber compared the effect of injuries to the shape of a pyramid. For every one death, approximately 19 admissions, over 200 visits to emergency departments, and almost 500 physician office visits occur. For children, injury is the number two cause of hospitalizations in the United States. Injury causes six times more years of potential life lost than cancer.

Realm of Prevention: Dr. Schieber discussed common sources of injury and the relatively inexpensive items which may prevent them. For traumatic brain injuries, solutions include car seats, seat belts, bicycle helmets, zero alcohol tolerance laws, and graduated licensure for teens. Burn injuries can be prevented by distributing smoke alarms, fire extinguishers and fire-safe cigarettes. Drowning episodes can be decreased by four-sided swimming pool fences and personal flotation devices.

Prevention Does Work: Prior to the Child Proof Safety Act, the number of children

under age five poisoned by prescription medications was gradually climbing. After 1974, a dramatic drop in poisoning occurred. Dr. Schieber believes that similar reductions in other injury rates could be seen if solutions were not “being warehoused.” The U.S. does not have a universal distribution program for safety devices.

The Three E’s: The elements of an injury prevention program are education, engineering, and enforcement of legislation. “Education is necessary, but it is not sufficient. It is useful in moving people from that pre-contemplation stage to contemplation.” Engineering is considered to be the best method: in general, devices are installed and work when needed.

Enforcement has resulted in dramatic, quick, and permanent decreases; drunk driving laws have reduced fatalities among children by 17% between 1985 and 1996, while minimum drinking age laws have been estimated to have saved the lives of 18,000 teens since 1975.

10 Leading Causes of Death, United States 1997, All Races, Both Sexes

		Age Groups										
rank		<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	Total
1	Congenital Anomalies 6,178	Unintentional Inj. & Adv. Effects 2,005	Unintentional Inj. & Adv. Effects 1,534	Unintentional Inj. & Adv. Effects 1,837	Unintentional Inj. & Adv. Effects 13,367	Unintentional Inj. & Adv. Effects 12,598	Malignant Neoplasms 17,099	Malignant Neoplasms 45,429	Malignant Neoplasms 86,314	Heart Disease 606,913	Heart Disease 726,974	
2	Short Gestation 3,925	Congenital Anomalies 589	Malignant Neoplasms 547	Malignant Neoplasms 483	Homicide & Legal Int. 6,146	Suicide 5,672	Unintentional Inj. & Adv. Effects 14,531	Heart Disease 35,277	Heart Disease 65,958	Malignant Neoplasms 382,913	Malignant Neoplasms 539,577	
3	SIDS 2,991	Malignant Neoplasms 438	Congenital Anomalies 223	Suicide 303	Suicide 4,186	Homicide & Legal Int. 5,075	Heart Disease 13,227	Unintentional Inj. & Adv. Effects 10,416	Bronchitis Emphysema Asthma 10,109	Cerebro-vascular 140,366	Cerebro-vascular 159,791	
4	Respiratory Distress Synd. 1,301	Homicide & Legal Int. 375	Homicide & Legal Int. 174	Homicide & Legal Int. 283	Malignant Neoplasms 1,645	Malignant Neoplasms 4,607	HIV 7,073	Cerebro-vascular 5,695	Cerebro-vascular 9,676	Bronchitis Emphysema Asthma 94,411	Bronchitis Emphysema Asthma 102,029	
5	Maternal Complications 1,244	Heart Disease 212	Heart Disease 128	Congenital Anomalies 224	Heart Disease 1,098	HIV 3,993	Suicide 6,730	Liver Disease 5,622	Diabetes 8,370	Pneumonia & Influenza 77,561	Unintentional Inj. & Adv. Effects 95,644	
6	Placenta Cord Membranes 960	Pneumonia & Influenza 180	Pneumonia & Influenza 76	Heart Disease 185	Congenital Anomalies 420	Heart Disease 3,286	Homicide & Legal Int. 3,677	Suicide 4,948	Unintentional Inj. & Adv. Effects 7,105	Diabetes 47,289	Pneumonia & Influenza 86,449	
7	Perinatal Infections 777	Perinatal Period 75	HIV 62	Bronchitis Emphysema Asthma 79	HIV 276	Cerebro-vascular 678	Liver Disease 3,508	Diabetes 4,335	Liver Disease 5,253	Unintentional Inj. & Adv. Effects 31,386	Diabetes 62,636	
8	Unintentional Inj. & Adv. Effects 765	Septicemia 73	Bronchitis Emphysema Asthma 50	Pneumonia & Influenza 65	Pneumonia & Influenza 220	Diabetes 620	Cerebro-vascular 2,787	HIV 3,513	Pneumonia & Influenza 3,759	Alzheimer Disease 22,154	Suicide 30,535	
9	Intrauterine Hypoxia 452	Benign Neoplasms 65	Anemias 38	Cerebro-vascular 51	Bronchitis Emphysema Asthma 201	Pneumonia & Influenza 534	Diabetes 1,858	Bronchitis Emphysema Asthma 2,838	Suicide 2,946	Nephritis 21,787	Nephritis 25,331	
10	Pneumonia & Influenza 421	Cerebro-vascular 56	Benign Neoplasms 35	Benign Neoplasms 41	Cerebro-vascular 188	Liver Disease 516	Pneumonia & Influenza 1,394	Pneumonia & Influenza 2,233	Septicemia 1,852	Septicemia 18,079	Liver Disease 25,175	

Produced By: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control

Data Source: National Center for Health Statistics (NCHS) annual mortality tapes

Enforcement needs to be brought into childhood safety programs at the outset and may be based in the school, family, law, neighborhood, or community.

According to **Dr. Schieber**, the problem persists because childhood injury occurs at a sustained level. Also, the myriad causes of injury require different programs with unique elements. Although he concluded that injury prevention does not possess a single champion, **Dr. Schieber** implored the audience to find champions among themselves.

CASE STUDIES

Andrea Gielen, ScD, Professor and Deputy Director, Center for Injury Research and Policy, Johns Hopkins University (Panelist)

Bernard Micke, MD, Physicians Plus Medical Group (Panelist)

Susan Bertenthal, MPA, Business Consultant, Health Education Center (Panelist)

Dr. Andrea Gielen described the SAFE Home Project, a partnership between the School of Public Health and the Department of Pediatrics at the Johns Hopkins University in Baltimore, Maryland. The goal of Safe Home is to identify clinical interventions that enhance parent safety practices for falls, burns, and poisonings suffered by children ages 0 to 2.

Several clinic-based interventions were tested with parents whose children received medical care at a Johns Hopkins pediatric residency training clinic. Six safety practices have been addressed: use of safety gates, non-use of baby walkers, placement of smoke alarms, reduced temperature on water heaters, storage of poisons in locked cabinets, and possession of syrup of ipecac.

Communication Training Program: Pediatric residents received training that included role-playing to practice new counseling strategies and use of skills stations to learn about each of the safety practices. In evaluating the training program, those families who were cared for by physicians receiving training were significantly more satisfied with the assistance they received about safety.

“We were not surprised but were disappointed by the fact that the enhanced

satisfaction and counseling did not translate into more safety practices,” said **Dr. Gielen**. She attributed that outcome to the fact that many low-income, urban families face significant barriers to obtaining recommended safety products. Perhaps the two biggest impediments are cost of safety products and their lack of availability in the inner city neighborhoods in which these families live.

To address these and other barriers, the Children’s Safety Center (CSC) was created. The Center offers public and professional education, service delivery, product distribution, and advocacy. The Center has low-cost safety products, car seat rentals, and hands-on demonstration areas as well as a full-time health educator who provides personalized education and assessment of a family’s needs.

Pediatricians write prescriptions for specific safety items to encourage their patients to go to the CSC. The Center, focused primarily on the needs of low-income families but open to anyone, also helps to link families with other existing safety services, such as the free smoke detector distribution program of the Baltimore City Fire Department.

Results: The clinic tracked 122 families and tallied the safety practices observed in their homes. The 79 families who visited the Safety Center adopted significantly more safety practices than the 43 families who did not visit. **Dr. Gielen** offered these comments about the preliminary evaluation of the SAFE Home Project: (1) effective partnerships with pediatric health care providers were established; (2) continuous and creative marketing of the CSC to families is critical; and (3) the combination of pediatric counseling and visiting the CSC appears to be an effective way to increase home safety for families. **Dr. Gielen** was optimistic about the benefits of these combined clinic-based interventions for low-income families, and she concluded by describing current efforts to test similar interventions in other medical and community settings.

Dr. Bernard Micke, a founding member of the CHILD SAFE Foundation, described its mission as “dedicated to the prevention of childhood injuries and death, particularly due to firearm injuries, through community initiatives and public education.”

Created through a partnership with the State Medical Society of Wisconsin and Blue

“There is now consensus and the statistics mentioned prove this, that firearm death and injuries are public health issues and a legitimate concern of public health professionals.”

- Bernard Micke

“Often, childhood injuries are perceived as unavoidable. However, with education and simple changes to the home environment, the vast majority can be prevented.”

- Susan Bertenthal

Cross & Blue Shield United of Wisconsin, the goal of CHILD SAFE (Children’s Health Initiative with Local Doctors to Support Safety and Firearm Education) is to prevent accidents and suicides by reducing the ready, easy access to firearms which are the most lethal of suicide modalities.

According to **Dr. Micke**, approximately 50% of CHILD SAFE’s \$60,000 budget is given in grants to groups throughout Wisconsin which emphasize education and involvement of health care workers in gun safety efforts. The program has distributed over 25,000 trigger locks. CHILD SAFE has also developed safety materials, such as a gun safety checklist, for use in doctors’ offices and by hunter safety groups and law enforcement groups.

Promoting Awareness: The other major focus of CHILD SAFE takes gun safety directly to the public through sponsorship of public service announcements. The program purchased discounted airtime from the Wisconsin Broadcasters’ Association and also received pro bono support from some leading Wisconsin public relations firms to create several television ads.

Dr. Micke described some of CHILD SAFE’S other collaborative efforts, which include peer mediation in the schools and bicycle safety fairs with hospital and service organizations. The Foundation has also executed a partnership with McDonald’s restaurants in Milwaukee and southeastern Wisconsin to encourage bike and gun safety.

Ms. Susan Bertenthal described how the Health Education Center (HEC), a nonprofit affiliate of Highmark Blue Cross Blue Shield in Pittsburgh, designed the Home Safe Home childhood injury prevention program “to reduce the number of unintentional injuries and resulting deaths among children ages 6 and under from low-income families.” Home Safe Home has served more than 480 families since 1995. HEC intends to expand Home Safe Home later this year to expectant mothers who are Highmark Blue Cross Blue Shield members.

Three Main Goals: The program aims to (1) improve parental knowledge of injury causes and methods for prevention; (2) increase physical safety of the home through measures such as safe storage of hazardous materials and medications, appropriate use of appliances, safe tap water temperatures, and increased use of safety devices such as smoke detectors, safety gates, and window guards;

and (3) increase safety related behavior, such as strapping infants into changing tables and high chairs, supervising children while they are bathing, using care when drinking hot beverages, and use of car seats.

A Unique Aspect: HEC trains Family Advocates from existing home visitation programs to conduct home safety assessments. The Advocates accompany parents or other care givers through the home using a 50 item home safety checklist. During the assessment, parents become educated about the major impediments to child safety and receive an information folder for future reference along with safety aids, such as stickers, a bath temperature card, and safety coloring books.

Partnerships: The program is implemented in conjunction with five home visitation agencies operating in low-income Pittsburgh area neighborhoods, as well as a hospital prenatal outreach program which provides in-home services to young expectant and new mothers. Funded through grants and donations, Home Safe Home costs about \$165 per family, including \$70 for safety devices. Partners donate visitation time.

Evaluation: The home safety assessment is repeated three months after the initial visit. Family Advocates determine whether safety improvements have been made. **Ms. Bertenthal** stated that participants’ homes have become safer by an average of nine new safety practices. Furthermore, “parents earn self-confidence by making their children’s living environment safer while in-home visitors have expressed satisfaction in their roles as parent educators and partners.”

A Real-Life Scenario: **Ms. Bertenthal** described how a young mother left a pot unattended on the stove while she played with her baby in the living room. A cooking fire occurred. Alerted by a smoke detector alarm, the mother successfully put out the fire with an extinguisher. Both devices were provided through Home Safe Home. The mother explained: “If it weren’t for the fire extinguisher and Rochelle, the Family Advocate, teaching me how to use it, I’m afraid we would have been killed. I remembered the code word she taught me, PASS: Pull the pin, Aim, Squeeze, and Sweep. Because of the smoke detector, I caught the fire when it was still small enough for me to handle it. I can’t tell you how grateful I am.”

CASE STUDIES

Damona Fisher, Community Integration and Public Relations Coordinator, Arkansas Blue Cross and Blue Shield (Panelist)

Kimberly Hays, MPH, Manager of Research, Policy Development and Evaluation in Community Health Development and Advocacy, Children's Healthcare of Atlanta (Panelist)

Angela Mickalide, PhD, CHES, Program Director, National SAFE KIDS Campaign (Panelist)

Since 1996, Arkansas Blue Cross and Blue Shield (ABCBS) has educated more than 200,000 Arkansas youths about healthy behavior through the *Blue and Youth Health Program*, stated **Ms. Damona Fisher**.

BlueAnn Ewe, a big blue sheep mascot, serves as the wellness ambassador and helps to carry the program's messages through: (1) an elementary school education program; (2) High School Heroes, who teach fifth graders about the dangers of smoking; (3) the Wildwood Arts Tour, a traveling live production which combines music, drama, and comedy with a health message; (4) the BlueAnn Class Club (current enrollment is 4,529 students in 230 kindergarten and first grade classes), and the BlueAnn Health Club (current enrollment is 832 students ages 5-10). Both clubs feature healthy habits activity projects that provide opportunities for receiving rewards; and (5) "BlueAnn Rocks" television spots.

A Variety of Topics: After distribution of an initial membership packet, BlueAnn Health Club members receive materials focused on several issues: nutrition; exercise; hygiene; dental health; emotions; and drug, tobacco, and alcohol abuse prevention. **Ms. Fisher** explained that many safety lessons are included in the supplementary materials distributed to the youth. "The Wild and Woolly Health Tips for Kids" coloring book features topics such as seatbelt safety and bicycle safety; over 60,000 books have been distributed. On a poster awarded for completing the club calendar activity, BlueAnn is practicing safety by wearing her helmet, elbow pads and knee pads while riding a skateboard.

Other Safety Features: Through the

BlueAnn Health Club reward program, a child may earn the grand prize of a new bicycle and safety helmet. Also, ABCBS has partnered with several community relations programs and distributed 250 safety helmets throughout the state. BlueAnn Rocks, which reached children more than one million times last year, has recently incorporated a SAFETY SONG.

The program soon will release an entire health packet devoted to childhood safety featuring bicycle/skateboard safety; using seat belts; crossing streets; fire safety; not speaking to strangers; water safety; poisons; firearms; and pets.

According to **Ms. Kimberly Hays**, Children's Healthcare of Atlanta became involved in safety issues over nine years ago, through its predecessors, Egleston Children's Hospital and Scottish Rite Children's Hospital. As the lead agency for a SAFE KIDS state-based effort, Children's has helped to grow 50 SAFE KIDS coalitions across Georgia.

The SAFE KIDS of Georgia partnership encompasses activities to bring about long-term behavioral change and affect health outcomes by focusing on education, legislation, and communication. One of its goals is to increase the usage of child safety seats and booster seats. Legislative successes include House Bill 444, which allows points on licenses of drivers who do not buckle up their children in booster seats and safety seats. The First Lady of Georgia, Marie Barnes, is SAFE KIDS honorary chair person.

Ms. Hays detailed several of the group's accomplishments in 1999. SAFE KIDS of GEORGIA distributed more than 6,000 child safety seats and 2,300 bike helmets. A partnership between Kroger Supermarkets and the Governor's Office of Highway Safety has delivered four child passenger safety programs. WXIA Channel 11 promoted five events for a total of 262 child safety seat checks. Thirty safety seat technicians have been trained.

Other Efforts: Children's is working outside of SAFE KIDS, to enhance knowledge about prevention of unintentional injuries through the Sitter Safety program. Focusing on after-school hours, 21 programs have been completed, training 369 youth. Sitter Safety is being retooled to work with 12 schools in the Atlanta area and teach first aid and injury prevention. Children's also has a two-year grant from the state to help develop an injury prevention program for the Latino community.

"Look left. Right. Then left again. It's left. And right. Then left. Sing the SAFETY SONG. Biking. Boarding. Helmets are cool. Skating. Scoring. Safety rules! Sing the SAFETY SONG. Buckle up. Buckle up. That's the trick. The safe way to travel. Join the click. Sing the SAFETY SONG."

- Blue and Youth Health Program Copyright © 2000

"Agencies should work with coalitions to help them prove what they are doing works, so we can bring in more resources for injury prevention."

- Kimberly Hays

"In no other area of public health do we fund solutions as effective as those that we have for injuries. A bike helmet reduces the risk of head injury by 85%, a car seat reduces an infant's risk of death by 71% in a crash, and a smoke detector cuts the risk of dying in a home fire in half. These devices are tremendously effective but also relatively inexpensive."

- Angela Mickalide

Dr. Angela Mickalide gave a primer on the National SAFE KIDS Campaign, the only nationwide program in existence to prevent unintentional injury among children ages 14 and under. SAFE KIDS has a national office and 285 state and local SAFE KIDS coalitions in all 50 states, the District of Columbia, and Puerto Rico. Coalition membership is tremendously diverse, comprised of firefighters, paramedics, educators, police officers, parents, businesses, and children.

Coalition Work: The head of the sponsoring organization, which may be a hospital, or health, fire, or police department, signs a contract with the national office to build a SAFE KIDS Coalition in that community and commits a staff member to work 10 to 40 hours per week on injury prevention. In exchange, the national office provides educational materials, grant support, and training and technical assistance to the Coalition.

The National SAFE KIDS Campaign is funded by corporate sponsors (e.g., Johnson & Johnson, General Motors, Bell Sports), federal agencies (e.g., MCHB, National Highway Traffic Safety Administration (NHTSA), United States Fire Administration (USFA) and trade and membership organizations (e.g., National Fire Protection Association, American Plastics Council). **Dr. Mickalide** stated that the collective efforts of the injury prevention community have reduced unintentional injury-related deaths among children by 33% over the last decade.

Three Recent Initiatives: The SAFE KIDS BUCKLE UP program combines a national media strategy, partnership with health and education organizations, and car seat check up events at automotive dealerships and community venues to promote the correct use of safety restraints. GM's \$10.6 million sponsorship since 1997 has resulted in nearly 2,400 check up events with more than 72,000 seats checked. An analysis of the first 17,500 car seats checked revealed that 85% were misused, putting children at greater risk in a car crash. GM, in partnership with the United Auto Workers, has also provided a \$5 million donation to General Colin Powell's America's Promise initiative to fund free child safety seats and correct use education for African American and Hispanic families. The Campaign is working through the National Council of La Raza, the NAACP and their local affiliates on this effort. In addition, GM has donated 51 Chevy Venture vans to SAFE KIDS Coalitions

to facilitate community-based car seat check ups across America.

The SAFE KIDS AT HOME program, funded by Ronald McDonald House Charities and the U.S. Department of Housing and Urban Development, is making homes safer for low-income families. Coalition members from five pilot sites were trained in Washington, DC and then returned to their communities to conduct home safety checks, stage Home Safety Day events, and distribute educational materials (e.g., brochures, tray liners) through local McDonald's restaurants. A unique feature of the program is that Coalitions not only educate families about home safety but also install safety devices such as smoke alarms and carbon monoxide detectors in the homes that need them.

The National SAFE KIDS Campaign, along with Johnson & Johnson and the National Athletic Trainers' Association, launched Get into the Game!, a nationwide sports safety initiative to educate parents on the preventability of sports injuries and their role in keeping their kids safe. A centerpiece of this initiative was a study examining parents' perceptions of sports injury risks as well as the sports injury experiences of their children. The findings from this study were used to launch SAFE KIDS Week in May, as well as in SAFE KIDS Coalition and Johnson & Johnson retail efforts across the country.

Dr. Mickalide invited forum attendees to call the national office to locate their nearest SAFE KIDS coalitions and become involved, "because working together we surely can save a child's life every day."

BRIGHT FUTURES UPDATE

Eileen M. Clark, Assistant Project Director, Bright Futures, Georgetown University's National Center for Education in Maternal and Child Health (NCEMCH) (Speaker)

Ms. Eileen Clark announced that the second edition of the *Bright Futures Guidelines for Health Supervision of Infants, Children and Adolescents* has been released. This edition was the product of collaboration with many organizations, including MCHB, the American Academy of Pediatrics and the American Academy of Pediatric Dentistry. The Health Care Financing Administration (HCFA) has

included Bright Futures in its recommended models of care for children.

The latest book in the Bright Futures series focuses on nutrition. Others in development include books on physical activity and mental health. New features in the books are full color photos and illustrations as well as color-coded sections to enhance the books' usefulness.

Bright Futures offers anticipatory guidance for families on many topics, including injury prevention. The series includes information on safety seats, safety belts, bike helmets, poison prevention, gun safety, smoke alarms, safety gates, window guards, baby walkers, water safety and safe driving practices. **Ms. Clark** noted that Bright Futures also comes in a CD-ROM version. An upcoming initiative will explore innovative and cost-effective ways to use the Bright Futures Guidelines to shape practice and policy in managed care.

POLICY AND ADVOCACY

Ron Feinstein, MD, University of Alabama at Birmingham (Panelist)

Rebecca Spicer, MPH, Associate Research Scientist, Children's Safety Network Economic Resource Center (Panelist)

Steve Barrow, California Coalition for Children's Safety and Health (Panelist)

Alan Korn, JD, Director of Public Policy and Advocacy, National SAFE KIDS Campaign (Panelist)

Richard Gilchrist, MD, Mercy Children's Medical Center (Discussant)

Karen Remley, MD, MBA, FAAP, Trigon Blue Cross Blue Shield (Discussant)

Dr. Ron Feinstein cited his recent involvement with the new Bright Futures in Practice guidelines on physical fitness and physical activity, to be released later this year. The role of the physician and the health care professional is critical to childhood safety, but time constraints during office visits do not always allow for injury prevention or other counseling activities. One opportunity to reach

5.5 million children is the annual pre-participation physical for children involved in school sports.

Head and Neck Injuries: The decline in such injuries, primarily from football, is an illustration of change resulting from collection and evaluation of data, development of a proposal, and work with the appropriate organization.

According to **Dr. Feinstein**, data collection on these injuries began in the 1970s; at that time, approximately 200 children died per year. An examination of video tapes revealed that players were lowering their heads and tackling directly into another's chest. Since 1976, almost all football groups have changed the way players tackle, now leading with the shoulder. Only a few head and neck injuries now happen each year.

Guidelines for management of concussion present another example of how prevention applies to head and neck injuries. Noting that some other health supervision guidelines are primarily consensus reports, **Dr. Feinstein** recommended that such guidelines instead be evidence-based as are the components of Bright Futures.

Exertional Heat-Related Illness: In the 1950s through the 1970s, it was common to forbid the drinking of liquids while practicing. Moreover, coaches gave players salt tablets and required them to exercise "until you drop." **Dr. Feinstein** said that "someone finally figured out that dehydration kills you." A 300 pound football player may lose up to 15 to 20 pounds during a practice or game and can not drink enough to replace the seven liters of fluids lost. In some instances, during college football games, some players may receive intravenous fluids at halftime. Environment, clothing, physical condition, and hydration all must be assessed for players during sports.

Heart Problems: Although only about five children die per year during athletics due to cardiovascular problems, attempts should be made to prevent all such deaths. According to **Dr. Feinstein**, some are suggesting that each child should undergo an echocardiogram as a part of the pre-participation physical. Balancing the incidence of heart disease with the high cost of such testing, the American Heart Association has developed recommendations for questions to help identify heart problems, along with basic physical examinations; these do not, however, include EKGs, hematocrits, urinalysis, or echocardiograms.

"Research has shown that the incidence of athletic fatalities can be significantly reduced by collection and attention to appropriate data analysis and wide dissemination of results."

- Ron Feinstein

“Safety is good business. Safety promotes good health. It is a good marketing tool. It attracts new customers. It pleases current enrollees, and finally, it is profitable.”

- Rebecca Spicer

“We have the painful reality that California loses over 2,900 children annually from unintentional injuries, which is equivalent to having eight elementary schools wiped out every year.”

- Steve Barrow

Ms. Rebecca Spicer pointed to Group Health of Puget Sound as a good example in managed care of how data has been used in policy research. Group Health conducted a comparison study of people who had bought handguns verses those who had not to determine whether the purchase of a handgun increases the risk of homicide or suicide. The study concluded that those who had purchased guns were at a higher risk.

Significant Savings: Referencing anticipatory guidance and physician counseling on injury prevention, **Ms. Spicer** stated that the cost of counseling is approximately \$6.30 per visit which will return \$5.50 in medical cost savings from injuries prevented. Another \$11 is saved in future earnings and other tangible costs.

For every bicycle helmet worn by kids between age 5 -14, the community saves \$41, \$29 of which returns to the insurer. Smoke detectors, which cost about \$10 including batteries, will save about \$35 in medical costs from fire injuries prevented.

Child safety seats will save \$145 in insurance payments. People wonder why parents do not use child safety seats. Often families cannot afford to purchase them, they may be misinformed, or they may underestimate the risks of not using the seat. **Ms. Spicer** described a study of 229 parents in a California managed care organization who were given the option upon the birth of a new child of receiving a cash award or a free child safety seat. Ninety percent chose the safety seat.

Community Involvement: An infrastructure exists to serve managed care and the entire health system for treating injuries: that is, primarily poison control centers and regional trauma care systems. Managed care should make an effort to work within this system, rather than simply receiving its services. Though every poison control center call costs \$20, it saves \$174 - eight times the cost - by preventing an emergency room visit.

After the poison control center serving the Grand Rapids Blue Cross closed, the organization reviewed its claims data and found that poisoning cases increased, resulting in 20% higher claims cost. So Grand Rapids Blue Cross petitioned to have the poison control center reinstated.

Policy and Advocacy: Since managed care organizations currently engage lobbyists, **Ms. Spicer** suggested they should

enlarge their scope to support policies that prevent injuries. Examples include blood alcohol level laws, child safety seat laws, sobriety checkpoints, and provisional licensing for teenagers. A driver's license restricted in the time and types of driving has a benefit/cost ratio of 7.2. If provisional licensing was instituted in all states, the cost of the program would equal the cost of the injuries prevented.

Mr. Steve Barrow outlined the genesis of California's effort to reduce brain injuries. About 10 years ago, the California Department of Health Services (DHS) Emergency Preparedness Branch created a 50 member advisory committee. It put out a little-known report on injury prevention, which included data, information about timelines and goals, and recommendations for legislation, regulation, education, product design and environmental change. “This provided a roadmap in our state of what needed to be done,” said **Mr. Barrow**. As a state agency, DHS could not advocate, so it turned to the private sector for help with aspects of the plan.

A Broad Membership: The California Coalition for Safety and Health was conceived in the early 1990s by the insurance industry and health care providers, who approached children's advocates, academic institutions, and local injury prevention advocates to work together on California's number one killer, brain injury.

The Coalition's first priority was to institutionalize injury prevention by seeking legislation to require every child under the age of 18 to wear a bicycle helmet while riding in California. The communities which have embraced the helmet law in California have enforcement mechanisms.

Price Matters: At the time of the legislation's passage, the average cost of a bike helmet was \$45, out of the reach of most families. So the bill's author and **Mr. Barrow** approached manufacturers and convinced them that required usage for the 10 million children in California should allow a lower price. Now high quality helmets are widely available for about \$7 - \$10.

Beyond Alphanumeric: The Coalition has also helped to create a special license plate, which a driver can personalize with four different symbols, a heart, a star, a hand, and a plus sign, to form any message desired. For every plate sold, \$35 of the original purchase price and \$40 on subsequent

renewals goes to a special Child and Safety Fund to pay for child abuse and injury prevention efforts statewide. In California, 47,000 cars have these plates, producing over \$3 million for child abuse and childhood injury prevention programs. By 2008, projections show \$10 million flowing annually from the plates.

The license plate law also mandated CPR, disaster drill, and immunization record keeping for every child care provider, which will reach the 700,000 children in the state's licensed child-care system.

Next Steps: To take the cause of injury prevention beyond the “do-gooders” and government, the Coalition is working on a consortium to bring together academic and researchers, advocates, agencies, health care providers, the business community, local programs and emergency services to support and expand current activities, including more statewide periodic planning.

The Coalition envisions future work which would: (1) increase the capacity of public education throughout California and enhance research efforts, both in the public and private sector; (2) educate local communities on how to improve their efforts, so that programs are based on promising practices and the best data available; and (3) create a clearinghouse for technical support.

Persuasion and Participation: Mr. Barrow recalled that he sat beside one of the Coalition members, Brad Winger, president of the Association of California Life Insurance Companies (ACLIC), while meeting with a legislator to secure support for the helmet bill. The legislator recognized the political clout of ACLIC and was therefore amenable to their concerns. **Mr. Barrow** advised coalitions to “make it a big tent, get everybody in there and show off your big tent.” Asking the audience not to wait for organizations to solicit their help, **Mr. Barrow** instead recommended that “you should be reaching out because (1) not only does such action help your bottom line, but (2) it is the right thing to do.”

Mr. Alan Korn reviewed four of the six powers of Congress and how they relate to safety efforts. Congress has authorization power and enables agencies, such as the MCHB, the Department of Transportation, and NHTSA, to take action.

The Consumer Product Safety Commission (CPSC) has the authority to

protect the public from products found in the home. **Mr. Korn** noted that CPSC's authorization specifically precludes it from regulating guns, “not withstanding the fact that with 200 million firearms in America, a gun is found in homes almost as regularly as a teddy bear, which the Commission is allowed to regulate.”

The Power of Appropriation: According to **Mr. Korn**, the level of funding to a particular agency indicates congressional priorities. The CPSC receives \$51 million to regulate 15,000 consumer product categories; by contrast, the Department of Defense spends \$51 million per hour.

The Power to Legislate: This power manifests itself in laws such as the Child Protection Safety Act. Prior to its passage, toys were labeled “not for children under age 3,” which most parents interpreted as a comment on the cognitive ability of the child. That was not the meaning intended by the toy industry, so Congress worked with the Consumer Product Safety Commission which resulted in a warning about small parts in the toy presenting a choking hazard.

The Power to Police: **Mr. Korn** cited the tragic example of the child from Idaho who was decapitated two and a half years ago by an airbag inflated during an automobile accident. Congress summoned the National Highway Traffic Safety Administration to an oversight hearing to determine what happened. The subsequent debate over changes to airbags has occurred due to that incident.

CPSC's recent recall of the Pokemon ball, the largest toy recall in the history of the United States with 25 million units, is a prime example of an agency's power to remove dangerous products from the market. Agencies also craft and develop standards for products, such as bike helmets, as well as collect and evaluate data.

The Importance of Compromise: Mr. Korn suggested that compromise may at times be necessary to overcome large well-funded opponents. “Sometimes, democracy breeds mediocrity and if you go into the process of knowing that, not letting the perfect be the evil of good, then accept democracy the way it is.” To comply with the toy labeling bill described above would have been very difficult for the Lego company. So, the Lego exception allows small boxes or packaging to print on the front display panel “Safety Information on the Back.”

“The most important thing I think you need to take away from this is to understand that you all have an expertise which members of Congress do not have. This gives you the ability to really influence things. If your daily activities don't include keeping members of Congress or your state legislatures involved in what you are doing, please add it to them. Your expertise is needed to help protect kids.”

- Alan Korn

Discussants: Noting the “clear face value” of Bright Futures and The Injury Prevention Program (TIPP) from the American Academy of Pediatrics, **Dr. Richard Gilchrist** queried whether sufficient data exists to validate their efficacy. Additional evidence-based medicine approaches would help advance anticipatory guidance. **Dr. Gilchrist** echoed others’ remarks regarding the brevity of office visits and multiple priorities. If counseling works, a primary care physician should be reimbursed for the time spent doing it.

He compared this approach to auto and home insurance companies which give rebates to consumers who have or use safety devices. One incentive for offering such counseling could be to give bonuses to physicians whose patients have less than the projected numbers of injuries. Studies validating counseling are needed as well.

Physicians and other primary care providers also should consider participation in coalitions at local, state and national levels. “As pediatricians, as primary care providers, I think we need to step out of our ivory towers, get involved in our community, join our professional organizations that advocate for children, not that advocate for doctors.”

Dr. Karen Remley identified the various roles of the insurance company in childhood safety and injury prevention. Those which are large corporations play a major role in state legislation; they should be encouraged to support bills which improve the public health of the state. Insurers can also give grants and

participate in the work of coalitions, which many companies currently do.

Interaction between insurers and physicians is critical to support physicians’ efforts to promote injury prevention. One mechanism is to reward physicians through monetary or other recognition for providing information to their patients. Employers and other large purchasers can also influence insurers to enhance injury prevention efforts.

Focusing on the discrepancy between hospital practices across the country, such as whether a newborn is sent home in a car seat, **Dr. Remley** suggested that insurance companies use creative ways to reward hospitals concerned about injury and link this to quality initiatives: “Working together with corporations, with coalitions, trying to do the right thing, trying to get public policy headed in the right direction, will be good for insurance companies. Think about it: compared to paying for cardiac care, it is very low-cost, very high value for your money.”

Ms. Dentzer closed the meeting by reiterating the importance of education, as mentioned by Dr. Schieber and other speakers. Saturation of education is extremely important; efforts to reach families and others must not be limited to a particular environment. Anyone contemplating the development of an educational program should think about ways to put it into place in the broadest settings: at a doctor’s office visit; in the home; through the managed care plan; via the employer; and directly to the child.



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STEPS YOU CAN TAKE TO PROMOTE CHILDHOOD SAFETY

Childhood safety should be viewed in a framework of four options: surveillance, programs, research and communication. Through these options, many opportunities exist for individuals and organizations to reduce the rate of unintentional injuries:

SMALL PROJECTS

Post a sign on office parking deck reminding drivers and passengers to buckle up

Organize a system to sell at a discount or give away safety devices in a hospital gift shop

Post messages on closed circuit television in office or hospital waiting rooms or on phone mail system

Start a hospital-based coalition

MEDIUM PROJECTS

Install traffic calming devices around schools and in neighborhoods

Sponsor safety messages on the radio

Encourage local business leaders to invest in childhood safety efforts

Suggest that civic clubs (Kiwanis, Rotary, Eagle) adopt childhood safety as a priority

LARGE PROJECTS

Create a mechanism to track the number of injured people who present at a hospital, in an emergency department or for outpatient care

Work with HEDIS to adopt and track injury prevention measures

Establish a network of philanthropists among multiple organizations

Establish a local philanthropy within your organization to fund safety programs and research

“Research on injury prevention begins at surveillance and data. This is where managed care really has a leg up, because it has a very invaluable resource. It has claims data, which shows the cost of treating those injuries. You can use this data in evaluation, in setting health care service priorities, and in guiding policy.”

- Rebecca Spicer

“Even if you have a helmet law in place, your usage could still be 21-30% if you don’t have local outreach and enforcement programs to support the laws, because that’s really where the action is.”

- Steve Barrow

ADDITIONAL RESOURCES

“People in this country like unfettered freedom. That is probably the biggest challenge to injury prevention, whether it has to do with speed limits or keeping guns away from children.”

- Carol Delany

“Unfortunately, the public health literature is replete with examples of how little difference education alone often makes. It is often in concert with other interventions that the effects are amplified.”

- Susan Dentzer

The Bright Futures system of health care supervision for children and adolescents, including childhood safety and injury prevention information, is located at www.brightfutures.org.

To find out about the Maternal and Child Health Bureau’s injury prevention programs, contact www.mchb.hrsa.gov. Also contact the Children’s Safety Network at www.edc.org/HHD/csn.

The National Center for Injury Prevention and Control (NCIPC) at the Center for Disease Control and Prevention (CDC) works to reduce morbidity, disability and costs associated with injuries. For more information, contact **(770) 488-1506** or www.cdc.gov/ncipc.

Learn about the Johns Hopkins Center for Injury Research and Policy and the Children’s Safety Center at www.jhsph.edu/research.centers/CIRP.

The Wisconsin-based CHILD SAFE Foundation, promoting firearm safety, may be reached at **(800) 762-8970**.

Please call **(412) 544-8782** for more information on Health Education Center’s Home Safe Home program, which is designed to reduce unintentional injuries and deaths among children ages 6 and under.

For more information about Children’s Healthcare of Atlanta and its injury prevention efforts, contact www.choa.org.

National SAFE KIDS and Peter T. Hart Research Associates released a national survey in May 2000, on parents’ knowledge, attitudes, and self-reported practices concerning sports injuries among their children. For survey results and other information about the National SAFE KIDS Campaign, contact **(202) 662-0600** or www.safekids.org.

To learn about the activities of the Children’s Safety Network Economic and Insurance Resource Center, call **Rebecca Spicer at (301) 731-9891**.

The American Academy of Pediatrics (AAP) has established an educational program for parents to help prevent common injuries for children ages 0-12. For more information about The Injury Prevention Program (TIPP), contact www.aap.org.

The Spring/Summer 2000 issue of *The Future of Children* addresses the prevention of unintentional injuries and features articles by speakers from this Bright Futures forum. Contact the David and Lucile Packard Foundation at www.futureofchildren.org to obtain the publication.