

Friday, December 12, 2008
Morning Session

Teenagers - We Thought We Knew...We Didn't - Lessons Learned

Chris Vitale MSN, RN; and, Barbara Gaines MD

Introduction/Background:

After being involved in a number of programs with teenagers we made the mistake of becoming a little too comfortable with our knowledge - our evaluations have always been positive; we are the experts. This year we embarked on the development of educational brochures and posters for teen drivers and their parents. All went smoothly until the final step; developing the teen poster. We wanted it to be effective and this is a tough crowd. Only by chance were we saved from making an error when the illustrator opened a two week window for investigation.

Methods:

Due to the nature of the teen mind and the unexpected open slot of time in decision-making for the poster we chose to do random sampling of teenagers in a variety of circumstances regarding the poster choices. The teens were given three choices and asked to select the one they would give the most attention to and would view as the most effective for teen drivers or those preparing to drive. We already had the input of adult trauma and prevention specialists.

Results:

The choice of the adults was not the choice of the teens. In fact, the adults chose one poster (66%) over a second (33%) and threw the third one out completely. The teens selected the one the adults discarded (90%) and chose the second (10%), - throwing away the adult first choice.

Conclusions:

We were certain of our choice; especially after we collected input from our peers. We did not use teen focus group input because of time constraints; but when we were given the chance of opportunity (two weeks before the illustrator could complete the work) we chose to get teen input. We went with the choice of the teens and in the future will build in the time needed for input; especially in this age group.

Objectives:

A Multi-Faceted Teen Driving Prevention Program in Wisconsin: Education, Research and the Community

Bridget Clementi; Deena Liska; Eric Andresen BSc; Andrea Winthrop MD; and, Marlene Melzer-Lange MD

Introduction/Background:

The Children's Health Education Center (CHEC) has obtained a Wisconsin Department of Transportation (DOT) grant targeting teen driving injury prevention in Southeastern Wisconsin. This new program will use a multi-faceted approach involving education, research, and targeted community involvement.

Methods:

There are program components in progress and planned during the grant period. Initial community collaboration involved a contest in area high schools for production of public service announcements related to teen driving. The research component has a retrospective and prospective phase involving 15-19 year old drivers and occupants involved in MVC's. Our hypothesis is that teen drivers/occupants involved in an MVC will be more likely to adhere to GDL guidelines, seatbelt use, sobriety, and minimizing distractions when driving. We aim to identify behaviors and attitudes related to driving before MVC and determine any behavior changes resulting since injury. We are completing a retrospective 12-month analysis to create an epidemiologic profile of MVC injuries in the target population. The prospective study will be a completion of questionnaires at 1, 3, and 12-months post injury. Both the teens and their parents will be enrolled to assess knowledge, attitudes and behaviors with respect to driving.

Results:

An example of the PSA's created by the high school students will be presented. The data analysis in progress will identify differences in severity and patterns of injury correlated with seatbelt use, driver distraction, speed, and crash-related factors. The prospective study questionnaire instrument has been developed, and will evaluate changes in knowledge, behavior and attitudes from time of injury to 12 months post injury. All study participants will be asked permission for contact in the future to participate in community-based campaigns and programs targeting teen driving in their community, in conjunction with the CHEC WI-DOT grant.

Conclusions:

We look forward to potential collaboration with other sites that have implemented similar multi-faceted teen driving injury prevention programs, combining education, research and the community.

Objectives:

Participants will learn: How to develop and implement a successful teen-led public service announcement campaign. Preliminary findings on change of behavior, attitude or knowledge around the graduated drivers license program after an MVC.

An analysis of the relation of state alcohol policies, speed limits, graduated driver licensing laws and motor vehicle injury hospitalizations in drivers aged 15 to 19 years

Joyce C Pressley PhD, MPH; and, Barbara Barlow MD

Introduction/Background:

Graduated driver licensing laws (GDL) are effective in reducing teen motor vehicle (MV) injury, but their level of effectiveness varies. We hypothesized that all age-driving laws, such as speed limits and state alcohol policies, could significantly impact teen driver injury independent of GDL.

Methods:

This study examines alcohol policy/penalties in all MV driver (n=8,524) and MV driver with alcohol (n=776) hospitalized teens aged 15-19 years (585,276) in 36 states. Multi-source data included: 2003 Health Care Cost and Utilization Project (KID); state alcohol policies (age for possession, consumption and purchase), penalties for violation (mandatory/discretionary/minimum days for license suspension); and rural road and highway speed limits. Independent predictors (OR, 95%CI) were assessed by logistic regression for: 1) hospitalization for MV driver injury and 2) alcohol diagnoses in drivers.

Results:

Significant independent predictors for MV driver injury included age (1.21, 1.18-1.24), male gender (4.48, 4.27-4.69), weekend admission (1.75, 1.67-1.83), rural residence (1.22, 1.19-1.25), higher speed limits (1.03, 1.02-1.04), no GDL (1.09, 1.01-1.18) and alcohol (2.13, 1.97-2.31). Alcohol-associated MV injury began at age 15 and generally increased with age (6.4%, 4.5%, 7.0%, 10.1%, and 12.3% for 15-19 year olds respectively). Predictors of alcohol-related driver admissions included age (1.35, 1.26-1.45), male gender (2.44, 2.04-2.93), weekend admission (2.02, 1.74-2.35), rural road speed limits (1.03, 1.01-1.06), with license suspension laws > 180 days protective (0.72, 0.62-0.85).

Conclusions:

While underage drinking contributes significantly to MV driver injury in teens, strict alcohol driver license suspension laws were associated with an independent protective effect on alcohol-related admissions in teen drivers.

Objectives:

At the conclusion of this study, attendees will be able to: 1) describe the range of state alcohol policies (age for possession, consumption and purchase), penalties for violation (mandatory/discretionary/minimum days for license suspension); 2) identify which alcohol policies do and do not exert an independent protective effect in teenagers after controlling for presence of GDL laws; 3) explain the importance of rural speed limits on teen driver

hospitalizations; 4) identify an expanded list of risk/protective factors for teen driver hospitalizations.

Evaluation of student-led safety belt promotion programs

Joseph O'Neil MD, MPH; and, Stephanie Berry

Introduction/Background:

Motor vehicle crashes are the leading cause of death among teens. Despite the benefits of safety belts, use among teens lags behind the general driving population. This study evaluates the effect of student-led programs to increase safety belt use and motor vehicle safety awareness among Indiana teen drivers.

Methods:

This is a non-controlled pre/post observational survey of safety belt use among teen drivers at 19 Indiana high schools between 2005 and 2008. Grant money was provided to these schools for students to develop or adapt a 3-month program to increase safety belt use and driving safety awareness. These projects included student-developed signs, songs, DVDs PSAs, mock car crashes and assemblies to increase safety awareness. One school used the "Act Out Loud" program. Pre/post safety belt use observations were conducted by volunteers on a random day immediately after the program. Pre and post usage rates were compared.

Results:

Nearly 10,000 high school students participated. No schools showed lower safety belt usage after the programs. During the 2005-2006 school year the mean increase in safety belt use was 12.8% (range 1%-26%); during 2006-2007, 5.25% (range 3%-11%); and during 2007-2008, 14.6% (range 3%-26%). The "Act Out Loud" program demonstrated a 6.5% increase in safety belt usage and an increase in awareness of safety belt use and the dangers of alcohol use among teens.

Conclusions:

This study does show that teens can effect a change in safety belt use and safety awareness. Feedback on improving programs included moving the program's start date earlier in the school year, assigning a consultant to facilitate program design, evaluation and analysis, and convening a teen driving conference for the high schools to share successes and challenges.

Objectives:

Objective is to share with colleagues challenges and successes in promoting student-led programs to increase teen safety belt use.

Evaluating a new educational component of a hospital-based child passenger safety program.

Nomi Weiss-Laxer, MPH, MA; Michael J. Mello, MD, MPH; and, Patricia Nolan, MD, MPH

Introduction/Background:

Prior research has found interventions that combine educational programs and discounted child safety seats (CSS) improve parental child passenger safety (CPS) knowledge and practices. A new educational component consisting of an hour-long bilingual (English/Spanish) class was added to the CPS program at Hasbro Children's Hospital. We conducted an evaluation of the new program to measure CPS knowledge retention and practices and identify motivators and barriers for CSS use.

Methods:

Researchers conducted a 15-minute telephone survey in English or Spanish with past participants (n=79) of the program. Descriptive statistics and cross-tabulation calculations were conducted in STATA 10. Odds ratios and 95% confidence intervals were generated for associations with p-values of <0.05. Qualitative data from open-ended questions were translated into English (if necessary) and grouped categorically. IRB approved all protocols.

Results:

Sample (n=79) was mostly female (93.7%), Hispanic (78.5%) and foreign-born (77%). Six months post program, there was a statistically significant decrease in parental knowledge regarding safe transitions from back-facing to front-facing, from infant to booster seats, and of state CSS law, with odds ratios of 0.35 (0.13, 0.93), 0.44 (0.17, 1.15) and 0.16 (0.04, 0.54), respectively. Barriers to CSS use were parents' not understanding the importance of CSS and being in a rush. Most commonly reported motivators were safety and fear of a ticket.

Conclusions:

Recommendations for the program include 1) send parents CSS reminders to refresh transition knowledge and 2) address parental motivators and barriers to proper CSS use in the new class.

Objectives:

Lessons from a replication of “The Battle of the Belts Project” in a state without a primary seat belt law.

Pamela W. Goslar PhD; and, Tiffiny Strever, RN, BSN, CEN

Introduction/Background:

Teen driving issues result in higher rates of injury. The ADHS recommended addressing teen seat belt use. Driver belt use has been reported as lowest among those transporting passengers of similar age. Self-management is essential for long-term behavioral change. Peer-to-peer approaches have been shown to be effective. A group of Trauma Center representatives replicated the Battle of the Belt program began in 2005 in Missouri to address teen seat belt use using a peer-to-peer approach.

Methods:

Each trauma center “adopted” one school securing an adult champion and a group of students responsible for the project. Monetary awards were made for the schools with the most improved and highest seat belt use. A toolkit was provided. Random observations measured change. Injury Free of Phoenix provided data entry and analysis.

Results:

Of the six original schools, one withdrew due to the death of a student in a MVC. A total of 2,892 vehicles were observed. Significant increases were found for drivers [70.6%-91.4% p=0.000], front passengers [51.1%-67.9%, p=0.000], and first rear passenger [26.2%-68.8%, p=0.002]. Additional rear passenger use also increased, but small numbers created unstable results. The largest changes were seen in schools with closer trauma rep involvement. ORs were computed for the likelihood of belted passengers based on driver seat belt use (Baseline 10.0, Follow-up 5.2).

Conclusions:

The peer-to-peer methods appear to be productive with long-term impact unknown. Results associated with drivers compared to rear passengers may indicate youth “thinking for themselves.” Lessons learned from the project will also be discussed.

Objectives:

Participants will (1) Learn about the role of trauma center injury prevention coordinators in improving teen seat belt use in a multi-site project. (2) Describe results of a peer-to-peer approach implemented in multiple high schools in a state without a primary seat belt law. (3) Describe issues associated with multiple site projects.

Is the "seat belt sign" associated with serious injuries in pediatric trauma?

Sara Chidester; and, Jonathan I. Groner MD

Introduction/Background:

The "seatbelt sign" has been reported to be highly associated with intra-abdominal injury in pediatric trauma patients. This study defines its predictive value in identifying injuries in a large pediatric trauma population.

Methods:

At a Level 1 pediatric trauma center, we performed a retrospective review of trauma flowsheets for all motor vehicle crash victims (ages 0-20) requiring trauma team activation during 2005 and 2006. All patients with an abdominal seatbelt sign (SBS) recorded were included in the analysis.

Results:

Of 331 patients (mean age=9.96 years), a SBS was present in 54 (16%) of these children (mean age=9.17 years). Abdominal injury was identified by CT scan or intra-operatively in 12 (22%) of these children. 3 (6%) children with SBS required operative intervention, of which two had bowel injuries and 1 had a negative laparoscopy. SBS and abdominal tenderness were reported in 30 (56%) patients; 8 (15%) of whom sustained abdominal injury. Of the 277 (84%) children without SBS, 36 (13%) had abdominal injuries. 4 (11%) of these had a positive laparotomy with 3 having bowel injuries. The relative risk of an abdominal injury given an SBS was 1.7 (CI 0.96 - 2.69; $p=0.078$). 4 (1.4%) children without SBS died of head injuries, compared to 0 with SBS. The SBS had a sensitivity of 25% and a specificity of 85%.

Conclusions:

The SBS was not significantly associated with abdominal injury in our population. Patients without SBS had a higher ISS and accounted for all of the deaths. Although lap belts can cause operative abdominal injuries, SBS may not be as predictive of abdominal injury as previously reported.

Objectives:

1. Identify risk factors for intra-abdominal injury in pediatric MVC injuries.
2. Recognize injuries associated with "seat belt sign."
3. Describe injury mechanism for seat-belt related intra-abdominal injuries

Friday December 12, 2008
Afternoon Session

A multi-center study of infant home safety: Race and ethnic differences in safety practices, behaviors, device ownership and voucher redemption

Joyce C. Pressley, PhD, MPH; Andrew Kiragu MD; Garry Lapidus PA-C, MPH; Wendy J. Pomerantz MD, MS; Henri Ford MD; and, Barbara Barlow MD

Introduction/Background:

Most injuries to infants occur at home and are known to have a modifiable component. Additional information on safety behaviors, practices, and device ownership could inform prevention programs aimed at reducing injury-related race and ethnic disparities.

Methods:

This study is a secondary data analysis of race and ethnic differences in home safety using data collected by the Connecticut, Ohio, Pennsylvania, Minnesota and New York sites of the Injury Free Coalition for Kids. Study participants were English and Spanish speaking parents/guardians of infants aged 4-6 months. All participants received a voucher redeemable for free safety devices and educational materials.

Results:

The 542 study participants were 37.8% black, 41.7% Hispanic, 10.5% white, and 10.0% other race. Whites more frequently owned safety devices including cabinet latches ($\chi^2 = 28.9$, $p < 0.0001$), drawer latches ($\chi^2 = 21.4$, $p < 0.0001$), bath thermometers ($\chi^2 = 2.5$, $p < 0.0001$), electric outlet covers ($\chi^2 = 15.9$, $p = 0.0004$), and the poison control number ($\chi^2 = 93.8$, $p < 0.0001$). Practice of unsafe behaviors, such as stomach sleep position, was higher in blacks (29.3%) than whites (15.8%) or Hispanics (17.7%) ($\chi^2 = 11.8$, $p < 0.0083$). Overall, 62.1% redeemed vouchers, but this varied significantly by ethnicity: blacks (42.2%); non-Hispanic whites (64.6%); and Hispanics (76.3%) ($\chi^2 = 48.5.1$, $p < 0.0001$).

Conclusions:

Compared to whites, both blacks and Hispanics were less likely to own a variety of safety devices at baseline, but Hispanics were more likely than blacks to redeem vouchers. This one shot voucher program was effective at increasing device ownership, but was not sufficient alone to achieve population saturation of safety devices.

Objectives:

1. Examine race and ethnic differences in safety practices and safety behaviors of parents/guardians of infants. 2 Identify race and ethnic disparities in modifiable factors, including baseline ownership of safety devices, associated with differential injury risk in infants. 3 Identify factors associated with safety device voucher redemption in black, white, and Hispanic parents/guardians of young infants

Assessing the Impact of Focused Pediatric Home Safety Education in an Urban Population

Jennifer Adu-Frimpong MD; Kathleen Monahan MPH; and, Karen Sheehan MD, MPH

Introduction/Background:

Home injuries are a substantial health problem for our children. Data from the National Vital Statistics System 1985-1997 indicate that the highest residential injury mortality rates are in infants <1 year of age (12.6 per 100000); >90% of injury deaths in children <1 year of age occurred in the home. Many residential injuries can be prevented using recommended home safety products such as smoke alarms, stair gates, and cabinet locks. Previous research suggested that general injury prevention has not been successful and perhaps the strategy should be a focused education with specific interventions. Our study sought to evaluate whether focused home injury prevention education based on the family's needs would be better adopted compared to standard approaches of providing general anticipatory guidance about child-proofing the home. Secondly, we hypothesized if partnering with an already established home visiting program could provide a sustainable injury prevention education in underserved communities.

Methods:

A randomized control study of a cohort of patients. Participants: Families were recruited from patients referred to the Chicago Department of Public Health (CDPH) Childhood Lead Poisoning Prevention Program with elevated blood lead levels, requiring an in home lead inspection. Recruitment and enrollment occurred during the time of the initial visit in April of 2007, and data collection for the initial assessment was completed in April 2008. The post assessment started July 2008. The study took place in large urban neighborhoods in Chicago, Illinois. Interventions: Families were randomized to either focused injury prevention education (FIPE) or standard injury prevention education (SIPE) in the home. Based on sample size calculations for moderate-effect sizes, using $\alpha = .05$ and $\beta = .20$, we enrolled 150 families in each study group. Data analysis: Bivariate analyses, including t- tests and chi-2 statistics, were used to compare the sociodemographic characteristics and baseline safety practices between the SIPE and FIPE groups at the time of enrollment and during the home observation.

Results:

Enrolled participants were mostly mothers (86%) and primarily black (82%); 80% had received some form of public or medical assistance, and 40% had not completed high school. Overall, 47% were unemployed; 36% of participants lived with a friend or relative, 62 % rented, and 2% owned their home. 52% of the participants named their number one safety concern as fire; followed by burns (scalds), window falls and poisoning. The 6 month follow up assessment will be completed this summer.

Conclusions:

Tailoring anticipatory guidance to specifically address the possible housing and safety issues prevalent in low-income, urban areas is needed. General childproofing of the home may be too overwhelming especially in urban families where prevention of injury may not a priority due to other socioeconomic needs that families have to address.

Objectives:

By the time of the conference we anticipate having follow-up information on many of these families. We think the information we will gather will help session attendees tailor their injury prevention guidance and assist in determining the best method of handing out injury prevention products to parents in large urban settings.

Fall Related Brain Injuries: At What Age Does Risk Taking Really Begin?

Pamela F. Love MD; Joseph J. Tepas III MD; and, Peter Wludyka PhD

Introduction/Background:

Falls remain a major cause of childhood morbidity and mortality. To improve effectiveness of our prevention program, we utilized our electronic injury surveillance database to analyze patient variables and the incidence of fall-related brain injury.

Methods:

The database was queried for all injuries treated in the pediatric emergency department for which the word “fall” was listed as part of the chief complaint. Age, gender, and mechanism variables were cross-tabulated for analysis with traumatic brain injury (TBI) codes.

Results:

Between 6/05 and 6/08 the electronic surveillance system reported 39,718 injury-related visits to the pediatric emergency department. Falls were reported in 3436 patients (2107 males, 1329 females). TBI occurred from falls in 171 patients. Children aged 0-11 months sustained the largest number of TBI from falls (19/212). TBI fall rates were not significantly different for males and females. TBI falls occurred at a higher mean age for males (6.60 ± 5.15) than females (5.40 ± 4.45). 32.51% of male TBI falls were for children less than 48 months, while 36.95% of female TBI falls were at less than 48 months. This runs contrary to previous studies suggesting that toddler males are at highest risk (Park, 2004). Although fall rates were higher in non-white, non-black (“other”) children, whites had the highest rate of TBI from falls (9.93%).

Conclusions:

A disproportionate number of infants, toddlers and adolescents sustain brain injury from falls. Race and gender group differences mandate enhanced focus on environmental safety and risk-taking behaviors.

Objectives:

1. To determine patients most at risk for morbidity and mortality from falls and traumatic brain injury.
2. To demonstrate the utility of an injury surveillance database to identify at-risk populations and facilitate targeted interventions.

Injury prevention classes and home visits for families of migrant and seasonal farm workers can improve safety behaviors.

A. Rewers, G. Faries, T. Rapstine, B. McDowell, M. Ray, K. Emery

Introduction/Background:

Children from families of migrant and seasonal farm workers (MSFW) experience the highest risk of injury. The goal of this study was to assess knowledge and behaviors regarding child passenger safety (CPS) and burn safety among MSFW.

Methods:

Safety knowledge was assessed by questionnaires before and after CPS and burn safety classes. Safety behaviors: appropriate use of car seats, smoke detectors and water heaters, were checked during home visits before and after the classes. Chi-square test and paired t-test was used to assess differences in measures of safety knowledge and behavior pre- and post intervention.

Results:

Study participants (N=168) were enrolled during the initial home visit. Of those, 128 (76 %) completed second home visit, several weeks later and 122 (73%) took part in the CPS and burn safety classes provided by the study. Initial questionnaires completed before the class showed a low baseline knowledge regarding requirements for CPS (34 %), proper car seat use (38%), the safest child position in the car (44%), care of the burn (46%), proper pot position on the stove (54%) and smoke detectors care (8%). Knowledge regarding CPS and burn safety improved significantly immediately and several weeks after completion of the class. There was an evidence of a positive impact of the intervention on proper CPS use ($p=0.0005$), proper care for smoke detectors ($p<0.0001$) and water heater setting ($p=0.03$).

Conclusions:

A combination of home visitation and safety class was effective in improving MSFW families' knowledge and behavior concerning CPS and burn safety

Objectives:

The main objective of this study is to present our results to Injury Free Coalition for Kids members. We also would like our abstract to be consider for publication.

Disaster Preparedness in Low Income, Multi-Cultural Communities

Mary Beth Moran; and, Cheri Fidler

Introduction/Background:

Low income families are a particularly vulnerable population during periods of evacuation due to disasters. Many are immigrant families that do not speak the language spoken during emergency alerts. This issue is of specific concern in San Diego County as the area has a large immigrant and low income population, located in very densely populated sections of the city. San Diego is prone to a variety of disasters; most recently the firestorm of 2007 forced the evacuation of 500,000 residents. The County of San Diego provided funding to assess the disaster preparedness in low income families seeking assistance at family resource centers.

Methods:

A survey was developed and administered in both English and Spanish to 228 families to assess their preparedness for a disaster with an escape plan, reunion site identification, knowledge of public emergency warning signals and evacuation procedures

Results:

The results of the survey found that 62% of respondents did not have an escape plan, 68% did not have a reunion site outside their home, 62% did not have a family contact card, 53% did not know the warning signs of a disaster, and 43% did not know what to do in case of an evacuation.

Conclusions:

These results warrant the need to educate this population in preparation for a disaster and understanding the warning signs and evacuation instructions. Further research is needed to assess if an alternate method of public emergency communication and evacuation would improve emergency preparedness for low income, multicultural populations.

Objectives:

The objectives for this presentation are to raise awareness of deficits in our emergency response communications in regards to non-English speaking, low income families. In doing so we want to encourage modifications to the system to address the needs of citizens that do not speak English and do not have resources to prepare for a disaster, or evacuate their homes in a safe and timely manner.

The Impact of Community-Built Playgrounds on the Community

Dawn Daniels DNS, RN; and, Estell Lenita Johnson, MA

Introduction/Background:

Community built playgrounds have been an integral component of Injury Free Coalition for Kids sites as they work with communities to provide safe places for children to play. The purpose of this pilot survey was to explore the potential impact of the community built playground on the community.

Methods:

Over the last 7 years, Allstate and Injury Free has partnered to build 34 Little Hands Playgrounds in more than 20 cities. A survey was developed and sent electronically to Injury Free Program Coordinators who had coordinated the planning/build of the playgrounds. Variables examined included: condition and maintenance of the playground; vandalism; and community participation. Open-ended questions were used to examine the impact of the playground on the community and school. Descriptive statistics were used to describe quantitative data. Open-ended responses were collated and grouped into themes.

Results:

Surveys were returned from 23 Allstate playground sites in 16 cities. The playgrounds were built within the last 6 years with the majority (65%) built in the last two years. While 14 of the playgrounds sustained minor vandalism, 11 of the sites reported the vandalism was corrected by the community. Community impact themes centered on revitalization and empowerment, safety, and social capital changes while school impact themes centered on socialization and health.

Conclusions:

From the perspective of the program coordinators, the playgrounds had a positive impact on the communities. Further research within this arena is needed to explore the relationship of community built playgrounds and community development.

Objectives:

Upon completion of this presentation, the attendee will: 1. Understand the Injury Free playground building process 2. Identify three ways to measure the impact of the Injury Free building process. 3. Develop skills to articulate the benefits of the Injury Free building process to potential funders.

SOUTH SALT LAKE CITY PLAYGROUND PROJECT

Charles W. Pruitt MD; Steven C. Rogers MD; and, Sherry Hartline

Introduction/Background:

We hypothesized that playground related injuries are common in communities without access to safe public play areas. We studied injury, demographic and geographic data to locate the site within our region most in need of a safe playground.

Methods:

We reviewed the Primary Children's Medical Center (PCMC) trauma registry (2002-2007). The South Salt Lake City (SSLC) Police Department (PD) provided incident data (2003-2007). We analyzed aggregate data from the U.S. Census Bureau website (2000).

Results:

In the PCMC region 219 children ≥ 15 years sustained playground injuries significant enough to require admission to the trauma service, children who were treated then discharged were not counted therefore these data inherently under-identify the total number of injured children treated at PCMC. The SSLC PD data includes 4024 personal injury crime dispatches. SSLC had a population of 22,038; 27% non-English-speaking, 13.3% below poverty level and 9.3% under 5 years of age (U.S.=6.8%). The main public park in SSLC serves a relatively large population; it has access points opening to 3 different neighborhoods, 2 parking areas with handicapped access and close proximity to 3 schools and multiple retail establishments. The park contains an underutilized central space, old/unsafe play and exercise equipment dispersed around the periphery and inadequate barriers isolating traffic and water hazards.

Conclusions:

The Injury Free Coalition for Kids of Salt Lake City identified SSLC as a population dense, relatively diverse, low socioeconomic status community where playground injuries are common and where access to a park with safe playground equipment would be most beneficial.

Objectives:

A Community Playground Builds Safe and Healthy Kids in South Carolina

Melanie Stroud RN; and, Kristin Wedding, MS, CCLS

Introduction/Background:

Each year 146,000 children ages 5 to 14 go to the Emergency Room from accidental injuries involving playground equipment, and three out of four occur on public playgrounds. Injury surveillance discovered a link between an increased number of pedestrian and playground injuries, high obesity rates and children living in poverty where there was no safe playground. The objective of this project is to decrease injury and obesity and increase public awareness in regards to pedestrian and playground safety.

Methods:

An analysis of the rate of injury, obesity, and poverty within our community was completed to evaluate an area in need of a safe playground. Community surveillance of existing playground locations, and a partnership with the City Parks Department was used to identify possible sites. Collaborating with community partners will assist in our playground build.

Results:

Since 2001 the number of children visiting MUSC Children's Hospital Emergency Department for playground related injuries has increased each year, totaling 432 visits, and almost 10% (91) of total injuries were pedestrian related. 55% of children under 12 in this area are living in poverty; low income is linked to obesity. S.C. ranked 4th in the U.S. for children who suffer from obesity. Nationally, about half of all children ages 6 to 17 go without sufficient exercise. Regular physical activity can lower the risk of becoming overweight and developing related diseases.

Conclusions:

Continued surveillance of related injury and obesity will be conducted following the playground build, and the effectiveness of community education will be evaluated.

Objectives:

Saturday, December 13, 2008
Morning Session

Building Consensus for Safer Teen Driving

Mary E. Porter; Beverly Miller Med; S. Hope Mullins MPH; and Mary E Aitken MD, MPH

Introduction/Background:

Motor vehicle crashes are the leading cause of deaths for U.S. teens with nearly 6,000 teens killed and more than 300,000 injured in crashes every year. In Arkansas teen rates of motor vehicle deaths are twice as high as the U.S. overall.

Methods:

The Adolescent Medicine Clinic was used for awareness building and recruitment for families into the controlled, randomized study aspect of the project. Physician and staff education was conducted and educational messages were placed in the waiting area. Your Teen and the Open Road was developed to increase the use of driving contracts for novice drivers. Baseline surveys were completed upon enrollment with telephone follow-up at three, six, and 12 months planned. A multi-disciplinary coalition assisted in the development of educational materials and generated grassroots awareness for support for strengthening GDL legislation in 2009.

Results:

A web-based educational module for physicians was developed. Continuous showings of video messaging are on a closed monitor in the waiting room, including a locally developed PSA. Three-month follow up has begun for approximately 65 families. Anecdotally, parents from both study and control groups have reported completing the baseline survey raised awareness. The coalition sponsored a "Town Hall at the Mall" to raise awareness of seat belt use, impaired driving, and traumatic brain injury.

Conclusions:

Clinical settings may have merit to increase awareness on motor vehicle safety for teens. A family-based educational intervention for novice drivers was well received, especially by parents. The coalition has been successful in forming collaboration and partnerships.

Objectives:

Following the presentation, participants will be able to: 1) Identify components of a coordinated effort to increase motor vehicle safety at multiple levels of influence 2) Describe a family-based intervention for graduated driving privileges with novice drivers

Physician attitudes, knowledge, and practice behavior regarding teen driving safety

Brendan T. Campbell MD, MPH; Kevin Borrup, JD, MPA; John M. Corsi MBA; Kristine M. Kelliher MD; Hassan Saleheen MBBS, MPH; Leonard Banco MD; and Garry Lapidus PA-C, MPH

Introduction/Background:

Objectives – To describe physician attitudes, knowledge and practice regarding teen driving safety.

Methods:

Methods – A thirty one item self-administered survey was mailed to Connecticut pediatricians and family medicine physicians. Participants were asked about frequency of providing education materials, frequency of discussing specific teen driving issues with adolescent patients and attitudes and knowledge regarding teen driving issues.

Results:

Results – 218 of 642 physicians (34% response rate) completed the survey. Eighteen percent of respondents provided posters or visual materials in the office, 12% a fact sheet/brochure, 11% information about Connecticut's graduated driver licensing laws, and 7% a parent-teen driving contract. During a health supervision visit 92% of physicians reported discussing seat belt use, 85% driving while impaired, 79% distractions when driving, 77% risk factors for teen driver crashes and injury, 51% night/passenger restrictions for teen driving, 47% Connecticut's graduated driver licensing laws, and 13% parent teen written contract. Forty five percent (45%) reported having a teen in their practice killed in a motor vehicle crash. Those reporting having time to counsel teens/parents were more likely discuss risk factors for teen driver crashes and injury (84% v 70%, $p < 0.05$), distractions while driving (85% v 72%, $p < 0.05$), and were more likely to report confidence (76% v 62%, $p < 0.05$), and feel effective in discussing teen driving issues (38% v 19%, $p < 0.05$).

Conclusions:

Conclusions – The majority of physicians who provide care to teenagers in Connecticut report discussing and counseling teens on first wave teen driver safety issues (seat belts, alcohol use), but most do not discuss graduate driver licensing laws or related issues. Almost half of physicians had a teen patient die from a motor vehicle crash. Most physicians are interested and receptive to increasing teenage anticipatory counseling

Objectives:

Participants will be able to demonstrate an understanding of how those in clinical practice can promote teen safe driving strategies.

High School Drive Smart Challenge

Julie Philbrook, RN, MA

Introduction/Background:

Motor vehicle crashes are a leading cause of injury and death among Minnesota students. The High School Seat Drive Smart Challenge (HSDSC) is a four-week, student-run program designed to increase seat-belt use among high school students.

Methods:

The program begins with students conducting an initial observation of seat-belt use at their high school lot. Using the HSDSC manual, students conduct at least eight activities over the course of four weeks to promote seat-belt use. After four weeks, students conduct a final observation of seat-belt use to determine if use has increased. The program concludes with a celebration in which students from all schools gather to celebrate their success and receive awards.

Results:

Each year, the majority of schools experience an increase in student seat belt use. During the 2008 Challenge there was increased seat belt use in all 11 schools that participated. The average seat belt use increased 9 percent from base line. The school with the most improvement went up 20%.

Conclusions:

The Drive Smart Challenge continues to be an effective way to raise awareness and improve seat-belt use among high school students. Each year the seat belt use increases in the majority of the schools. Another positive result is the opportunity this provides to include parents and community partners in this teen lead intervention. Additional projects should be developed to help maintain the positive results seen after the Challenge period

Objectives:

1. Describe how the High School Drive Smart challenge works 2. Discuss how to implement the Drive program in their state 3. List ways to continue the drive smart message with students and their parents beyond the 4 week campaign.

Teen RIDE: A Unique Collaboration Between Medical and Law Enforcement Communities

Mariann Manno MD; Michael Hirsh MD; and Anthony DeRoss, MD

Introduction/Background:

Motor vehicle crashes are the leading cause of death among 16 to 20-year olds. IFCK – Worcester and the Worcester County Juvenile Court system developed a highly realistic experience for teens who have been arrested for dangerous and illegal driving behaviors. Objectives: 1) To teach risk factors that predispose teens to injury and death from a MVC; 2) To expose at risk teens to the consequences of serious injury from a MVC; 3) To provide participants with the opportunity to discuss safe alternatives that they can employ in the future.

Methods:

Participants (13 - 17 years of age) are remanded to the course by a Juvenile Court Judge as a condition of probation. The day includes large and small group activities. This program has been offered 13 times between 2006-08. Approximately 250 students have attended.

Results:

Evaluation: 1) Students complete a pre and post test at the program to assess baseline and change in knowledge, attitudes and behaviors regarding safe driving. 2) Recidivism rates for students of Teen RIDE are tracked through the Court system and will be matched with controls who did not attend. Formal program evaluation is currently underway. Informal feedback from one Juvenile Court Judge suggests Teen R.I.D.E. is helping them become safer drivers. Anecdotally only one participant has re-offended with a non driving offense.

Conclusions:

We hope that the results of this program will prove that a highly structured, interactive program in a realistic environment will change the way teens who have already demonstrated illegal driving behaviors think about their risk for serious injury in a MVC and will impact their driving behaviors after the program.

Objectives:

1) To describe a unique approach designed to address risky driving behaviors in a target audience of teens selected by the Juvenile Court System. 2) To solicit feedback from others in the Coalition with experience in teen driving injury prevention programs. 3) To promote collaboration with other sites with similar interests in teen driving safety issues.

Saturday, December 12, 2008
Afternoon Session

INJURY PREVENTION COMMUNITY PROGRAM “ILESOS” (“Uninjured”)

Neira, J; Bosque, L. Buenos Aires. Argentina.

Introduction/Background:

Ilesos Program was created as an injury prevention program within the context of the Injury Prevention Committee belonging to the Argentine Society of Medicine and Surgery of Trauma (SAMCT). This program was formally presented during the 9th World Congress of Critical Care Medicine held in Buenos Aires in 2005. The purpose of this paper is to present the characteristics, success and difficulties we confronted since that time.

Methods:

Since its inception, the program was committed to: 1.- promote trauma information spreading; 2.- work in community training on primary, secondary and tertiary trauma prevention programs; 3.- emphasize professional training and 4.- create a multidisciplinary coalition devoted to injury prevention.

Results:

We were able to gather several Argentine scientific societies involved in trauma management to develop a consensus statement on trauma disease and the enforcement that injuries are not accidental due to its foreseeability and preventability. This document is currently shared by scientific societies and universities. Community training consist in two programs, “Octavio superhero” devoted to primary and secondary injury prevention for 10-14 y/o kids and “First Aid Program (Socorrismo Básico)” in its School and General Versions. First Aid for School was accepted by the Ministry of Education as a teacher’s training tool. Professional training includes ATLS and BTLS programs. LESOS participated in the creation of the Coalition of Entities for the Prevention of Trauma Disease belonging to the Argentine National Academy of Medicine in 2007.

Conclusions:

A pathway was made with several interesting and important successes. However this program has some shortcomings that can confront its sustainability in a near future.

Objectives:

To present a Community Program made in Buenos Aires Argentina To discuss and share the philosophy of our program To review the sustainability of a program in a developing country

Injury Prevention Advocacy for Dummies: The Story Behind Injury Free Nova Scotia

Natalie L Yanchar; Ismael Aquino; Jackie A Norman; and, Susan Brushett

Introduction/Background:

Recognizing barriers to effect changes in injury prevention policy and attitudes, the need for a unique and effective advocacy group was recognized in the Canadian province of Nova Scotia

Methods:

In 2006, with funding support from the Government of Nova Scotia, Injury Free Nova Scotia (IFNS) was formed, led by enthusiastic and passionate health care and safety professionals with little resources and even less experience in the establishment of a non-profit organization.

Results:

Lessons have been learned with respect to focusing objectives, marketing to stakeholders, partnering with key players and developing sustainability. Although still feeling "growing pains", IFNS has been recognized by government and other stakeholders as a valuable partner with advocating for change to reduce injuries in Nova Scotia

Conclusions:

The focus of this presentation will be to highlight the development of this new provincial injury prevention advocacy group

Objectives:

to highlight the development of this new provincial injury prevention advocacy group

Sports Injuries in an Urban Pediatric Emergency Department

Chris Thrash MSIV; Annalise Sorrentino MD; William D. King RPH, MPH, DrPH; and Kathy Monroe MD

Introduction/Background:

Participation in sports is a popular activity for children across the country. Prevention of sports-related injuries can be improved if details of injuries are documented and studied.

Methods:

A retrospective medical record review of injuries that occurred as a direct result of sports participation (both organized and unorganized play) from November 2006 to November 2007. Because the vast majority of injuries were a result of participation in football or basketball, these injuries were focused upon. The injuries specifically examined were closed head injury (CHI), lacerations and fractures.

Results:

There were 390 football and 196 basketball injuries (total 586). Comparing injuries between the two groups fractures were found to be more prevalent in basketball compared to football ($z=2.14$; $p=0.03$; 95%CI (0.01, 0.16)). Lacerations were less prevalent among helmeted patients than those without helmets ($z=2.39$; $p=0.02$; 95%CI (-0.17, -0.03)). CHI was more prevalent among organized play compared to unorganized ($z=3.9$; $p<0.001$; 95%CI (0.06, 0.16)). Among basketball related visits, unorganized play had a higher prevalence of injury compared to organized play. ($z=2.87$; $p=0.004$; 95%CI (0.04, 0.21)). Among football related visits, organized play had a higher prevalence of injury compared to unorganized play ($z=2.87$; $p=0.004$; 95%CI (0.04, 0.21)). No differences in fracture or laceration prevalence were found between organized and unorganized play.

Conclusions:

Football and basketball related injuries are common complaints in a pediatric Emergency Department. Frequently seen injuries include CHI, fractures and lacerations. In our institution, fractures were more prevalent among the basketball players. Surprisingly, CHI was more prevalent among organized sports participants.

Objectives:

Surveillance of injuries is necessary for injury prevention. This abstract specifically addresses common sports related injuries and the potential misconceptions that exist. It should be presented at the Injury Free Coalition for Kids National Conference to guide future preventive interventions.

Evaluation of Pediatric Pedestrian and Bike Injuries: Risk Factors in an Urban Population

Andrea Winthrop MD; Bridget Clementi, Stephanie Post BSc; and, Marlene Melzer-Lange MD

Introduction/Background:

We hypothesize that the presence of on-street parking, deteriorating road conditions, lack of crosswalks/sidewalks, reckless driving and inadequate enforcement of traffic laws results in a higher prevalence of pedestrian/bike injuries in the 7 Injury Free Coalition for Kids-Milwaukee (IFCK) zip codes (central city Milwaukee) compared with the more suburban Milwaukee zip codes.

Methods:

After IRB approval, data was abstracted from medical records for years 2004-2006, children ages 5-14, Milwaukee zip code of residence, and E codes for pedestrian/bike injury. To date, the inpatient database (143 patients) has been completed. Data abstraction for 294 outpatients is in progress. STATA and Excel were used for statistical analysis.

Results:

Of the 143 inpatients, 73% were male, 73% were minorities, and 66% were in the IFCK group. The mean age was 9 years, with 71% between 5 and 11 years. Pedestrian and bike injuries were almost evenly distributed. Sixty percent of the patients were injured between June and August, with 55% of the injuries on local roads or minor arterials, and only 17% on collectors or principal arterials.

Conclusions:

This preliminary analysis suggests that those who reside in IFCK zip codes, minorities, males and children of elementary school age are at a higher risk for pedestrian/bike injuries, with many of these injuries occurring in the summer months, on neighborhood streets. We are currently completing outpatient data abstraction and further focused comparisons between the IFCK and non-IFCK populations. This will provide a detailed injury profile to be used by the Safe Routes to School Program and the Bike Federation of Wisconsin to design targeted injury prevention interventions for this high risk population in the inner city.

Objectives:

At the end of this presentation, the audience will: 1. have a better understanding of risk factors for pedestrian and bike injuries in an inner city urban population.

WATER - DANGER AT ANY DEPTH

Charles W. Pruitt MD; Janet B. Brooks; and, Christine Bunch Menges

Introduction/Background:

The objective of this project is to decrease the number of water related injuries among children by improving parents' knowledge and behavior concerning water safety. Drowning is the second leading cause of death among children under the age of 14; a small child can drown in as little as an inch of water. Water accidents are also a major cause of life-altering brain injury every year.

Methods:

Primary Children's Medical Center, with the help of a public relations firm, has created a multi-media campaign including brochures and radio and television advertisements that provide helpful tips on how to be safe near open water, when boating, near a pool or hot tub, in and around the house, and other general water safety guidelines.

Results:

The campaign has achieved wide exposure throughout Utah and surrounding states by emphasizing the following messages:

-Tragedies happen in a blink of an eye, in water of any depth. -Teach the public to be aware at all times. Whether it is at a lake, river or pool - Don't just be there, be aware. -Never take your eyes off children in the water. -Teach a child to swim, but remember, there is no substitute for supervision. -Never dive into unknown water. -Keep a telephone nearby in case of emergency. -There's simply no substitute for 100% supervision. Watch your children at all times whenever they are around water.

Conclusions:

An effective safety campaign can be implemented successfully through a partnership between public and private organizations.

Objectives:

Working with the media to produce a multi-lingual burn prevention television program

Julie Philbrook RN, MA

Introduction/Background:

Between 2003- 2007, 300 children between the ages of 0-14 were admitted to HCMC with burns, of those 121 (40%) were due to hot liquids. Emergency Community Health Outreach (ECHO) is the first-of-its-kind television series in the United States. Each month it produces a twenty-minute television program on a current health and safety issue in multiple languages. (Spanish, Khmer, Lao, Somali, Vietnamese, and Hmong. All shows are also open-captioned in English

Methods:

In an effort to help prevent burns to children under age 14 IFCK Minneapolis members worked with ECHO staff to write and produce a burn prevention program. The target audience is parents and grandparents who have limited English proficiency. The shows were taped using health and safety experts from the six different cultures so the viewers will see and hear the information from a person from their own culture.

Results:

The shows will air on public television stations throughout the state several times in February 2009 and can also be viewed anytime on the ECHO web site (www.echominnesota.org). In addition, ECHO will duplicate and package DVDs of the show for us to distribute to clinics, public health agencies, cultural resource centers, and hospitals.

Conclusions:

We will track the success of the program through viewership tracking from the television station and web site hit and burn registry statistics and fire department calls related to the target cultural groups.

Objectives:

1. Describe the steps to producing an injury prevention program for television.
2. Identify the challenges of addressing multiple cultures for prevention activities

Injury Free Rochester Community-Based Teen Smart Driving Program

Anne F. Brayer MD; Lynn Babcock-Cimpello MD; and, Karen Knauf

Introduction/Background:

Motor vehicle related trauma is the leading cause of death for teens in Monroe County. There were 390 visits to the Strong Pediatric Emergency Department in 2007 by 16 – 18 year olds who were involved in motor vehicle crashes. This program is designed to educate area teens on the dangers of distracted driving in an effort to lessen the teen injury burden.

Methods:

To address this problem, we plan on holding a drive-in style event, “Rides for Life”. This event invites teen drivers to a mall parking lot to “show off” their cars. At the event, we will provide the Drive Square Simulation System™. It uses a computer program in an actual vehicle and will help demonstrate the effects of driving distractions. We will also include stations with seat belt, rollover, and impaired driving simulators. We will assess teen’s knowledge and attitudes about smart driving by administering a computer based quiz at the event. Expected attendance is 200.

We will also host trauma internships for teens at the regional trauma center. The workshop will simulate a crash victim’s progress from crash to hospitalization and rehabilitation. Surveys addressing changes in attitudes and knowledge will be administered. We will hold 3 workshops for 20 teens each.

Results:

We will assess changes in attitudes and knowledge at the drive-in event and the workshops. We expect to reach a total of 260 teens at the events.

Conclusions:

We anticipate showing improvement in knowledge and especially change in attitudes about the risks of distracted driving.

Objectives:

Our objectives are to present the results of our new Teen Smart Driving program and to discuss with other members of IFCK the problems and successes of reaching teens about the risks of distracted driving. We hope to make these newly developed programs part of our ongoing community education efforts, and look forward to feedback from our Injury Free colleagues.

Screening for Risky Alcohol Use Among Caregivers of Pediatric Trauma Patients: A Pilot Study

R. Todd Maxson; Kelly M.K. Johnson; Karla A. Lawson; Juliette M. Brown; Paula J. Yuma-Guerrero; Kirk von Sternberg; Mary M. Velasquez,

Introduction/Background:

The American College of Surgeons requires Level I trauma centers to provide screening and intervention for risky drinkers, a strategy proven to reduce recidivism in adult trauma patients. Caregiver alcohol use plays a role in many child injuries, yet no studies applying screening and intervention to caregivers of pediatric trauma patients exist. This work describes a caregiver injury prevention (IP) and alcohol screening process in a pediatric hospital setting.

Methods:

Caregivers of injured in-patients were interviewed about IP-related behaviors, including alcohol use. Group frequencies were compared using chi-square analysis.

Results:

Over seven months, 295 caregivers (195 mothers, 92 fathers, 8 others) of 234 patients were screened; 32.5% (n=96) screened positive for risky alcohol use. One (173 patients) or both (61 patients) caregivers were screened. In the one-caregiver group, 29% (n=50) screened positive; 38% (n=19) were male. In the two-caregiver group, 18% (n=11) had two positive screens and 39% (n=24) had one positive screen; 69.6% (n=32) of the positives were male. Males were more likely to screen positive ($p < .01$). The two-caregiver group was more likely to have a positive caregiver, (57.4% versus 28.9%, $p < .001$). Relationships between child safety behaviors and alcohol were of interest, but not significant.

Conclusions:

A substantial portion of our patients' caregivers are risky alcohol users. Screening only one caregiver may underestimate presence of a risky drinker and a child's risk of injury. Caregivers and adult trauma patients screen positive for risky alcohol use at similar rates. These results demonstrate a need for further study of hospital-based screening and intervention for caregivers.

Objectives:

1. Describe available research on risky drinking screening and intervention programs in hospital settings
2. Understand the results of a pilot screening program with caregivers of injured pediatric patients
3. Identify at least two challenges related to risky drinking screening and intervention for caregivers
4. Discuss the importance of future research on screening and intervention for caregivers who are risky drinkers in pediatric hospital settings

Now I lay me down to sleep...

Kristin M. Rosenthal MEd, CHES; Patricia L. Tackitt, RN, MS; Sue Jane Smith, RN, MSN

Introduction/Background:

Sudden unexplained infant death (SUIDS) is the #1 killer of children under the age of one year. Children's Hospital of Michigan and the Wayne County Child Death Review Team have created a partnership in order to prevent these unnecessary deaths from occurring.

Methods:

When a baby dies with no known medical condition, site visits are completed by the medical examiners office in order to get a complete picture. In 75% of these cases, cause and manner of death are determined at this time. In some site visits, when the infant was sleeping in a crib, as many as 26 items have been found where a baby was placed to sleep and had died.

Results:

Wayne County deaths are on the rise. In 2005, there were 44 total infant deaths. In 2006, it reached 53 and in 2007 there were 74. In 2006, of the 53 infant deaths, 40 were categorized at SUIDS. Clearly, we are not going in the right direction. With education on a massive scale, a rise in compliance should be seen and SUIDS should decrease. Safe sleep education is a matter of life and death. Safe sleep information is provided to new parents after delivery, a time when parents are inundated with information and they only want to take their baby home. Education needs to be provided long before delivery.

Conclusions:

Expectant parent classes are currently being developed and will be implemented by January 2009 along with billboards and wide spread education.

Objectives:

1. Participants will be able to determine the difference between SIDS and SUIDS.
2. Participants will be able to prevent deaths from unsafe sleep situations.