

American Academy of Pediatrics
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Ohio Chapter

Injury Prevention Learning Collaborative

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Introduction

Injuries continue to be the leading cause of death and disability for Ohio children. In 2006, unintentional injuries were the fifth-leading cause of death for Ohioans of all ages, and the leading cause of death for Ohioans ages 1-44 years (<http://injuryresearch.net/OhioInjuries.aspx>). Young children ages 0-4 years are typically at greatest risk for unintentional injuries in the home environment, with childhood injuries causing more deaths than all other diseases combined (<http://www.cdc.gov/ncipc/osp/data.htm>). Unintentional injuries are one of the most serious health problems facing our society.

Even with effective injury prevention products available, injuries continue to harm children in great numbers. A disproportionately high number of injuries occur among economically deprived and minority children. Living in poverty has been associated with a higher risk for severe injury. Unfortunately, this higher risk population has less access to, and more difficulty paying for, safety products. In addition, many of these families are unaware of the common childhood injuries and how to prevent them.

The 2012-2013 EMSC grant money was used to develop a quality improvement program to integrate an injury prevention screening tool into primary care. From September 2012 through May 2013, 6 practices in Ohio, worked to implement a standardized injury prevention screening tool into every well child office visit for children 1 year of age and younger. At baseline, it was determined through surveys that primary pediatricians in the state discuss injury prevention advice with families less than 50% of the time and they never include all areas of injury risk. The Injury Prevention Learning Collaborative worked with primary care providers to assess and document injury risk based on parent's answers and enabled providers to offer targeted advice and guidance at all well child visits on all injury prevention risk categories at least 90% of the time during the six month learning collaborative.

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ATTACHMENTS

- ATTACHMENT 1 – FINAL PROJECT DATA
- ATTACHMENT 2 - ABSTRACT PRESENTED AT SPRING 2013 PEDIATRIC ACADEMIC SOCIETY MEETING
- ATTACHMENT 3 - ABSTRACT SUBMITTED FOR FALL 2013 IFC NATIONAL MEETING
- ATTACHMENT 4 – INJURY PREVENTION: WHAT WORKS?

Executive Summary

The Injury Prevention Learning Collaborative is a program designed to provide tools for pediatricians to address injury prevention at all well child visits for children less than 1 year of age.

Participation in this MOC Part IV QI program within pediatric offices increased screening and discussion of injury prevention practices. Discussions on individual topics ranged from 40% to > 90% on each topic. By the end of the project, all topics were covered more than 90% of the time. This pilot work has helped to solidify a tool, determine how best to implement this work into practices, and has been used as a platform to receive other funding to continue these efforts.

Information/Qualifications of Principal Investigators

Principal Investigator, Mike Gittelman, MD, FAAP, is a pediatric emergency room physician at Cincinnati Children's Hospital, Medical Center in Cincinnati, Ohio, and is a Professor of Clinical Pediatrics at the University Of Cincinnati School Of Medicine. He completed his undergraduate work at Swarthmore College and his medical school training at the Medical College of Pennsylvania. He completed his residency in pediatrics at St. Christopher's Hospital for Children in Philadelphia, PA, and a fellowship in Emergency Medicine at Cincinnati Children's Hospital Medical Center. Dr. Gittelman's area of expertise is in the field of injury control. Prior to their formation of a Council, he served as the Chairperson for the American Academy of Pediatrics' Section on Injury and Poison Prevention. He also serves as a Co-Director for the Injury Free Coalition for Kids in Greater Cincinnati (IFCK) sits on the Executive Board for the National IFCK, and he is a Co-Director of the Comprehensive Children's Injury Center at Cincinnati Children's Hospital. He is involved in resident education on injury prevention, in particular relating to sports safety, firearm safety, playground safety, drowning prevention, and toy safety. His works with high-risk communities in an effort to reduce pediatric injuries has been well recognized and published. One of his research interests has been to study the impact of an injury

prevention emergency room encounter on promoting behavior change. He is nationally recognized and he has published extensively within the field of injury control.

Co-Principal Investigator, Sarah A. Denny, MD, FAAP, is an attending physician at Nationwide Children's Hospital in the Emergency Department and Assistant Clinical Professor of Pediatrics at The Ohio State University College of Medicine. She received her medical degree from Wright State University and completed her residency in pediatrics at University of Washington, Seattle Children's Hospital. Dr. Denny is the Co-Chair of the Ohio Chapter of the American Academy of Pediatrics, Committee for Injury, Violence and Poison Prevention and a member of the Executive Committee for the Council on Injury, Violence and Poison Prevention for the American Academy of Pediatrics. Her interests include injury prevention and patient education, specifically related to bicycle helmets and safe sleep.

Drs. Gittelman and Denny bring injury prevention expertise and leadership to this project, and have been working over the past year to develop this program with the assistance of the OAAP staff, board, and quality improvement team.

Summary of Injury Prevention Literature – Historical Perspectives and Current Issues

Pediatricians face several barriers when offering injury anticipatory guidance counseling to families. One barrier is that pediatricians themselves are not adequately educated about injuries,

especially due to limited exposure during residency training. In a survey by Wright¹, 98.5% of chief residents reported counseling parents on at least one injury prevention topic. However, they admitted that the topics chosen for counseling were ones in which they had received education. Another barrier is that primary care physicians do not have enough time to discuss all injury prevention topics; they would have to spend nearly 25-percent of each patient's visit to address all prevention-related counseling recommendations by the United States Preventive Services Task Force, of which one-third is injury-related.

Many approaches to teach families injury prevention in primary care settings have been tried; however, a survey conducted by the Ohio Chapter, American Academy of Pediatrics (OAAP) in the fall of 2011 revealed that most pediatricians report that their injury prevention anticipatory guidance with families is lacking due to resources, knowledge base, product availability, and efficient processes to address injury prevention before an injury occurs.

Anticipatory guidance about injury prevention has been shown to be associated with improved child and family functioning. Bass² and colleagues showed that injury prevention counseling during an office visit is associated with increased motor vehicle restraint use, safe home hot water temperature, smoke alarms in the house, and increased use of outlet covers, decreased falls, and decreased home and auto passenger injuries.

¹ Wright, M.S., "Pediatric injury prevention. Preparing residents for patient counseling." *Archives of Pediatrics & Adolescent Medicine*. Volume 151, pp. 1039-1043, Oct. 1997.

<http://www.ncbi.nlm.nih.gov/pubmed/9343016?report=abstract>

² Bass, J.L., Christoffel, K.K., Widome, M., Boyle, W., Scheidt, P., Stanwick, R., and Roberts, K., "Childhood injury prevention counseling in primary care settings: A critical review of the literature." *Pediatrics*. Volume 92, pp. 544-550, Oct. 1993. <http://pediatrics.aappublications.org/content/92/4/544.short>

The approach of providing pediatricians with tools to help them counsel families about injury prevention is not completely novel. In the 1980s, the AAP developed The Injury Prevention Program, a screening tool to be used in the pediatrician's office to screen injury risks for youth under 14 years of age. Although their initial findings showed that this technique can successfully have pediatrician's discuss more injury risks with families, the program required pediatricians to purchase materials, the screening tool was too broad (covered a wide array of age categories), and it did not significantly show that families behaviors were changed. The new tool developed by the Ohio Chapter, AAP, is provided to pediatrician members free of charge and it covers specific injuries found to be risky for specific ages of children cared for at particular well child visits. This pilot study enabled our study team to solidify the screen tool and determine best ways for it to be used in a pediatric practice. Also, this study showed that all relevant injury prevention topics can be discussed greater than 90% of the time at all visits for youth under 1 year of age.

Future Trends – Regionally and Nationally

After the pilot of this study has been completed, there are future steps to be taken. First, the next step is to determine if families change their behaviors based on recommendations received while at the pediatrician office. It is expected from other studies that close to 30% of changes recommended will be made.

What factors encourage families to make the greatest changes needs to be determined as well. Does it matter if discussed by a nurse, physician, or injury prevention specialist? What if product is provided to the family at time of counseling? Does it matter about the belief system and risk aversive attitude of the guardian? These questions still need to be determined in the future.

Finally, once a successful, cost-effective program has been determined, we hope to institute it with all pediatricians and family practice providers nationally.

Financial Issues and Considerations

Much of the literature on prevention has showed that preventing an illness or injury prior to individuals being affected significantly saves healthcare dollars. With regards to injury, Dr. Ted Miller has written many papers on the cost savings of different injury prevention techniques (see Attachment 4 - Injury Prevention: What Works? From the Pacific Institute for Research and Education). In particular, Dr. Miller showed that the AAPs TIPP sheets, when used cost, on average, \$11 per child ages 0-4 and generates \$97 in benefits to society. We are hoping our injury screening tool which is easier to employ in practice and directed more appropriately to a specific age group will be even more cost effective in the future.

Education and Training – Issues and Considerations

Practices who participated in the Injury Prevention Learning Collaborative were provided with a wide variety of education and training on both injury prevention topics, as well as topics relating to quality improvement.

Training on the above topics began early in the project with the Pre-Work call. This call covered items such as why the topic of injury prevention was being focused on for the project and what was required of them prior to the September 27, 2012 in-person learning session. At the September 27 meeting, attendees were given: additional background information on the project, guidance on how to integrate the injury screening tool into their office setting, details on how injury prevention efforts can lead to cost savings for families and society as a whole, and introductory education on quality improvement topics such as the model for improvement and PDSA cycles.

Following the learning session, practices participated in monthly action period calls. These calls are a key part of a quality improvement project and are used to discuss any issues experienced, review data submitted by the practices, as well as provide additional education on injury prevention topics selected by the participants. Throughout the course of the project, the participants were provided additional education on the following topics: How to market your practice's participation in this project, child passenger safety, including resources around the state of Ohio, discussing difficult topics during well child visits, water safety, and firearm safety.

Taking the time to educate participants on various injury prevention topics was key to the projects success, as providers shared with the project team their lack of training on injury prevention during medical school and residency training. In order to appropriately integrate injury prevention into the primary care setting in the future, additional training on this topic must be integrated into the training that physicians receive.

Data and Information Issues and Considerations

For a comprehensive look at the data from the Injury Prevention Learning Collaborative, please reference "Attachment 1 – Final Project Data".

Analysis of Researcher Findings

Ohio pediatricians provide families with injury prevention anticipatory guidance at WCC visits, yet many believe that they discuss these issues more than they are documenting these conversations in their charts. The injury prevention screening tools were developed to help pediatricians document injury prevention anticipatory guidance at WCC visits so that future evaluation of the effectiveness of this tool can be determined.

Conclusion

Participation in a MOC Part IV QI program within pediatric offices can increase screening and discussion of injury prevention practices. Participating pediatricians found that they were sometimes surprised at the lack of knowledge the families had around injury topics, and felt that the educational component of the action period calls better equipped them to provide appropriate council to these families. The physicians felt that the injury screening tool insured that they covered the most important safety topics appropriate for each age and developed a consistency between the doctors in each practice. The monthly data indicates a notable increase in documentation and discussion of key injury topics following the implementation of the screening tool.

Recommendations

Wave 1 of the Injury Prevention Learning Collaborative was effective in illustrating that participating physicians and their team can implement a screening tool into the work flow of their office, and that the tool is effective in improving the documentation and discussion of key injury topics in the first year of life. It is the recommendation of the Ohio Chapter of the American Academy of Pediatrics that the tool now be used to determine if the discussions by the pediatrician result in behavior change by the family to reduce high risk behaviors that can lead to injury in children, and thereby, reducing the morbidity and mortality of childhood injury in Ohio's kids.