



Receive summaries of articles in each month's issue of *Pediatrics* when you sign up at www.pediatrics.org.

Weapon Involvement in the Victimization of Children

Firearms are among the 10 leading causes of injury-related death for youth and continues throughout the life span. Annually youth homicides and assault-related injuries result in an estimated \$16 million in combined medical and work loss costs.

Findings add to the field's broadening conceptualization of youth victimization highlighting the potentially highly consequential risk factor of firearm and other weapon exposure as a component of victimization experiences on the mental health of youth.

Youth Drinking in the United States: Relationships With Alcohol Policies and Adult Drinking

Youth drinking is associated with adult drinking. Alcohol policies can influence youth and adult drinking. However, it is unknown whether alcohol policies influence youth drinking patterns directly or through their effect on adult drinking. Alcohol policies, including population-oriented policies, are protective for youth drinking. The effect of population-oriented policies may be mediated through effects on adults. These findings suggest that efforts to reduce youth drinking should rely on policies that address all age groups.

Emergency Department Visits for Self-Inflicted Injuries in Adolescents

Self-harm behavior is a major public health problem and a leading cause of death in adolescents. The majority of patients

who self-injure do not die, but they are at increased risk for a successful future suicide attempt.

Emergency department visits for self-inflicted injuries in adolescents increased from 2009 to 2012, whereas visits for self-inflicted firearm injuries decreased. The presence of any comorbid condition increased risk for self-harm, indicating that increased attempts at prevention may be warranted in these young people.

Critical Elements in the Medical Evaluation of Suspected Child Physical Abuse

Previous research has described important variability in the medical evaluation of suspected child physical abuse. This variability may contribute to bias and reduce reliability in the medical diagnosis of abuse.

A panel of child abuse pediatricians participated in a Delphi Process, defining critical elements for the medical evaluation of suspected physical abuse in children. Results can be used to reduce practice variability that may contribute to potential bias in evaluation.

Antibiotic Choice for Children Hospitalized With Pneumonia and Adherence to National Guidelines

The 2011 national guidelines for the management of pediatric community-acquired pneumonia recommended narrow-spectrum antibiotic therapy (eg, ampicillin) for most children hospitalized with pneumonia. Before the release of the guidelines, the use of broader-spectrum antibiotics (eg, third-generation cephalosporins) was much more common.

After release of the guidelines, third-generation cephalosporin use declined and penicillin/ampicillin use increased among children hospitalized with pneumonia. Changes were most apparent among institutions that proactively disseminated the guidelines, underscoring the importance of local efforts for timely guideline implementation.

Association of National Guidelines With Tonsillectomy Perioperative Care and Outcomes

Tonsillectomy guidelines make evidence-based recommendations for the perioperative use of dexamethasone, no routine use of antibiotics, and discharge education of families and for surgeons to monitor bleeding complication rates. The impact of the guidelines on processes and outcomes is unknown.

The guidelines were associated with improvement in perioperative care processes but no improvement in outcomes. Perioperative dexamethasone use increased slightly, and antibiotic use decreased substantially. Bleeding rates were stable, but revisit rates for complications increased because of revisits for pain.

Umbilical Cord Milking Versus Delayed Cord Clamping in Preterm Infants

Delayed cord clamping is recommended for all premature births, despite some studies suggesting a decreased placental transfusion at cesarean delivery.

Umbilical cord milking appears to improve systemic blood flow and perfusion in preterm infants delivered by cesarean delivery more efficiently than delayed cord clamping.

Physician Communication Training and Parental Vaccine Hesitancy: A Randomized Trial

Parental hesitancy about childhood vaccines is prevalent and related to delay or refusal of immunizations. Physicians are highly influential in parental vaccine decision-making, but may lack confidence in addressing parents' vaccine concerns.

A physician-targeted communications intervention designed to reduce maternal vaccine hesitancy through the parent-physician relationship did not affect maternal hesitancy or physician confidence communicating with parents. Further research should determine the most effective approaches to addressing vaccine hesitancy.

Personal Belief Exemptions to Vaccination in California: A Spatial Analysis

An increasing number of children are unvaccinated at entry into public schools, potentially endangering children who

cannot be vaccinated for medical reasons and threatening herd immunity. Voluntary exemptions from immunizations vary geographically and by parental characteristics.

We find that exemption behavior is highest in peripheral areas of cities and that specific types of student populations are associated with high exemption rates. Additionally, there is spatial overlap between clusters of high personal exemption and medical exemption populations.

Car Seat Screening for Low Birth Weight Term Neonates

Almost half of NICUs include low birth weight (<2.5 kg) as an inclusion criterion for car seat tolerance screening (CSTS), formerly car seat challenges. However, little is known about incidence and risk factors for failure in this group.

This is the largest study to date evaluating the incidence and predictors of CSTS failure in full-term low birth weight neonates. Epidemiologic data are provided to help guide future CSTS policies and protocol development for this group.

Medical-Legal Strategies to Improve Infant Health Care: A Randomized Trial

US parents trust the health care system and bring their infant children in for preventive care. Previous studies have demonstrated the ability of health care systems to identify, and sometimes address, the economic needs of low-income families.

Families of newborns at a safety-net primary care center have high levels of economic hardship. Compared with controls, Developmental Understanding and Legal Collaboration for Everyone families had accelerated access to concrete supports, improved rates of on-time immunization and preventive care, and decreased emergency department utilization.

Effects of Physician-Based Preventive Oral Health Services on Dental Caries

The US Preventive Services Task Force recommends primary care clinicians apply fluoride varnish to the teeth of all young children, but no studies have examined the effect of comprehensive preventive oral health services on children's clinical oral health status.

Comprehensive preventive oral health services delivered by primary care clinicians can help improve the oral health of Medicaid-enrolled children, but more work is needed to link medical and dental offices to ensure the continuity of dental care for these children.

PEDIATRICS[®] SUMMARY

digest Summary

Cognition and Brain Structure Following Early Childhood Surgery With Anesthesia

Permanent neuronal deletion and neurocognitive impairment after anesthetic exposure in animals raised substantial concern that similar effects occur in children. Human studies were equivocal but have not combined structural and intelligence tests in otherwise healthy children after childhood anesthesia.

Anesthetic exposure for surgery did not lead to measurable neuronal elimination in brain regions previously identified in animals. However, language comprehension and performance IQ were decreased in exposed children and associated with decreased gray matter, primarily in posterior brain regions.

Risk Factors for Recurrent Urinary Tract Infection and Renal Scarring

Vesicoureteral reflux is recognized as an important risk factor for recurrent urinary tract infection and renal scarring. Less is known about the contribution of other risk factors to these outcomes.

This study found that information about vesicoureteral reflux and bladder and bowel dysfunction can be used to identify children at low, medium, and high risk of recurrent urinary tract infection, information that clinicians could use to select children for specific preventive therapies.

Pneumococcal Conjugate Vaccine and Clinically Suspected Invasive Pneumococcal Disease

Conventional invasive pneumococcal disease (IPD) definition using laboratory confirmation lacks sensitivity. Using a vaccine-probe design, the FinIP trial showed that IPD disease burden and vaccine-preventable disease incidence were fourfold higher when a more sensitive outcome, clinically suspected IPD, was used.

Vaccine-preventable disease incidence (ie, absolute reduction due to PCV10 vaccination) during routine vaccination program was threefold with the more sensitive outcome of clinically suspected IPD compared with the conventional IPD definition. This has major implications for cost-effectiveness of PCVs.

Immunogenicity and Safety of a 9-Valent HPV Vaccine

Prophylactic vaccination of young women 16 to 26 years of age with the 9-valent human papillomavirus (HPV)-like particle (9vHPV) vaccine prevents infection and disease with vaccine HPV types.

These data support bridging the efficacy findings with 9vHPV vaccine in young women 16 to 26 years of age to girls and boys 9

to 15 years of age and implementation of gender-neutral HPV vaccination programs in preadolescents and adolescents.

An Early Feeding Practices Intervention for Obesity Prevention

“Protective” complementary feeding practices that promote self-regulation of intake and development of healthy food preferences have been positively associated with healthy child eating patterns and growth. There are few high-quality trials evaluating feeding practice interventions; none has reported long-term outcomes.

This large randomized controlled trial demonstrates that anticipatory guidance on the “how” of complementary feeding resulted in more protective feeding practices. These intervention effects were sustained for 3 years and translated into commensurate trends in obesity risk.

Global and Regional Burden of Isoniazid-Resistant Tuberculosis

Fifteen percent of tuberculosis cases globally are resistant to the drug isoniazid. Isoniazid resistance puts patients with tuberculosis at risk for poor treatment outcomes and threatens the effectiveness of isoniazid preventive therapy in people with latent tuberculosis infection.

We present the first global and regional estimates of the proportion of children with tuberculosis who have isoniazid-resistant disease, showing large geographic variations in risk of resistance. We estimate the number of annual incident cases of isoniazid-resistant tuberculosis in children.

Exclusive Breastfeeding and Risk of Dental Malocclusion

Breastfeeding provides a protective effect against some malocclusions, and there is a strong inverse correlation between the duration of breastfeeding and the duration of pacifier use.

The protective effects of predominant and exclusive breastfeeding against malocclusion are distinct: exclusive breastfeeding reduces the risk of malocclusions regardless of pacifier use, whereas the effect of predominant breastfeeding depends on the duration of the pacifier use.

Unrecognized Celiac Disease in Children Presenting for Rheumatology Evaluation

Associations have been reported between celiac disease (CD) and numerous autoimmune conditions in adults and children. However, current screening guidelines do not consider patients with rheumatic diseases to be at high risk for CD.

The prevalence of CD in children presenting for rheumatology evaluation was found to be 2% by routine serologic screening. The majority of screening-detected CD cases had no CD-associated symptoms. Gluten restriction was found to relieve some musculoskeletal complaints.

Prenatal Hemoglobin Levels and Early Cognitive and Motor Functions of One-Year-Old Children

Studies on the consequences of abnormal prenatal hemoglobin (Hb) concentration have focused on maternal morbidities and adverse birth outcomes. To date, very little is known about the association between prenatal Hb concentration and infant cognitive and motor functions.

There is an inverted U-shaped relationship between maternal Hb concentration and infant gross motor function. Hb concentration between 90 and 110 g/L appears to be optimal for early gross motor function of children.

Weight Growth Velocity and Postnatal Growth Failure in Infants 501 to 1500 Grams: 2000–2013

Postnatal growth failure is common for very low birth weight infants. Although many of the major morbidities experienced by these infants during their initial NICU stays have decreased in recent years, it is unclear whether growth has improved.

For infants weighing 501 to 1500 g, average growth velocity increased and postnatal growth failure decreased from 2000 to 2013. Still, in 2013, half were discharged with a weight below the 10th percentile for postmenstrual age.

Trainee Perspectives on Manikin Death During Mock Codes

The acceptability of the “death of the manikin” during mock codes has been debated by experts, but there is scarce information regarding trainees’ experience and perspective. Many experts recommend a “death disclosure” before trainees are exposed to simulated death.

Participants found the death of the manikin beneficial for their training. They report death does not occur during simulation in their curriculum: they doubted their skills and provided prolonged resuscitation. None of them thought a death disclosure was important.

Pediatric Liver Transplant Center Volume and the Likelihood of Transplantation

Low case volume has traditionally been associated with poor outcomes in complex surgical procedures, including pediatric liver transplantation.

This retrospective analysis supports the association between low case volume and poorer outcomes in pediatric liver transplantation, and, in addition, shows that candidates listed in low-volume centers have severely limited access to transplantation.

A Comparison of the Request Process and Outcomes in Adult and Pediatric Organ Donation

Pediatric patients suffer higher mortality due to the shortage of transplantable organs. Factors influencing families’ donation decisions are similar for pediatric and adult patients. However, the general perception that families of pediatric patients are less willing to donate persists.

Communication emerged as a critical factor of family authorization, reinforcing its importance in the organ donation process. Patient age (ie, adult versus pediatric) was not predictive of family authorization.

Recovery From Central Nervous System Acute Demyelination in Children

Most prospective cohort studies of acquired demyelinating syndromes in children have focused on the genetic, environmental, and neuroimaging predictors of multiple sclerosis. Less is known regarding the severity of the incident demyelinating event and predictors of residual attack-related physical disability.

In a national, prospective longitudinal study, incident acquired demyelinating syndromes in children were characterized in terms of physical deficits and acuity at onset, and recovery over the first 12 months. Follow-up evaluations up to 10 years’ postonset were analyzed.

Automated Assessment of Children’s Postoperative Pain Using Computer Vision

Clinical pain assessment methods in youth are vulnerable to underestimation bias and underrecognition. Facial expressions are sensitive, specific biomarkers of the presence and severity of pain. Computer vision-based pattern recognition enables measurement of pain-related facial expressions from video.

This study demonstrates initial validity for developing computer vision algorithms for automated pain assessment in children. The system developed and tested in this study could provide standardized, continuous, and valid patient monitoring that is potentially scalable.

Mycophenolate Mofetil Following Rituximab in Children With Steroid-Resistant Nephrotic Syndrome

Treatment of idiopathic steroid-resistant nephrotic syndrome is challenging, and therapeutic options are limited. In spite of

PEDIATRICS[®] SUMMARY

digest Summary

good initial response with rituximab, responders always remain prone to further relapse, necessitating either repeat course of rituximab or addition of another steroid-sparing immunosuppressant.

Mycophenolate mofetil may be an effective maintenance therapy to consider as an additive immunosuppressant after induction with rituximab in maintaining remission among children with refractory steroid-resistant nephrotic syndrome.

Family Experiences With Feeding Tubes in Neurologic Impairment: A Systematic Review

Gastrostomy tube placement is a difficult decision for families of children with neurologic impairment. Better understanding the impact of these tubes on the lives of children and families will help improve decision-making and support from health care providers.

Gastrostomy tube placement has broad-reaching implications for children and their families. There are physical, emotional,

and relational challenges and benefits for the child, the parents, and the family unit. Exploring potential outcomes with families may improve decision-making conversations and support.

Simulation in Pediatric Emergency Medicine Fellowships

Simulation-based education is increasing but its use in pediatric emergency medicine (PEM) fellowships has not been recently documented. Previous studies identified barriers including equipment and space, but growth of simulation centers and equipment has been widespread.

Simulation is widely used in PEM fellowships, and current barriers include faculty and learner time, implementation of best practices in simulation; equipment is less significant. Future work should focus on curriculum and evaluation development, aligning with the milestones.

See the table of contents of this issue to learn more about these articles.

Pediatrics Digest
Pediatrics 2015;136;D1
DOI: 10.1542/peds.digest1361

Updated Information & Services

including high resolution figures, can be found at:
<http://pediatrics.aappublications.org/content/136/1/D1>

Permissions & Licensing

Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:
<http://www.aappublications.org/site/misc/Permissions.xhtml>

Reprints

Information about ordering reprints can be found online:
<http://www.aappublications.org/site/misc/reprints.xhtml>

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™



PEDIATRICS®

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

Pediatrics Digest
Pediatrics 2015;136;D1
DOI: 10.1542/peds.digest1361

The online version of this article, along with updated information and services, is located on the World Wide Web at:

<http://pediatrics.aappublications.org/content/136/1/D1>

Pediatrics is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since 1948. Pediatrics is owned, published, and trademarked by the American Academy of Pediatrics, 141 Northwest Point Boulevard, Elk Grove Village, Illinois, 60007. Copyright © 2015 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 1073-0397.

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

