



Receive summaries of articles in each month's issue of *Pediatrics* when you sign up at [www.pediatrics.org](http://www.pediatrics.org).

### **Child Passenger Deaths Involving Alcohol-Impaired Drivers**

Approximately 20% of US child passenger deaths involve an alcohol-impaired driver, typically in the child's own vehicle. The higher the blood alcohol concentration of a driver, the more likely his or her child passenger was unrestrained in the fatal crash.

The risk of a child passenger dying while being transported with an alcohol-impaired driver varies meaningfully across states. These state-specific rates may help to inform renewed prevention efforts.

### **Portrayal of Alcohol Consumption in Movies and Drinking Initiation in Low-Risk Adolescents**

Several experimental and observational studies reveal an association between exposure to alcohol consumption in movies and youth drinking, but little is known about the effect of such exposure on drinking onset among low-risk adolescents.

In a longitudinal study, exposure to alcohol consumption in movies was associated with drinking initiation in a sample of adolescents from 6 European countries who had never drunk alcohol and were attitudinally nonsusceptible to future use at the time of exposure.

### **Parental Smoking Exposure and Adolescent Smoking Trajectories**

It is well-established that parental smoking is associated with adolescent smoking initiation and regular tobacco use. However, we know less about how exposure to specific types of

parental smoking affect adolescent smoking and progression to regular smoking in young adulthood.

Among adolescents with parents who are nicotine dependent, each previous year of parental smoking increases the likelihood they will be in a heavy smoking trajectory. Parental smoking cessation early in their children's life is critical to prevent smoking in families.

### **Role of Guidelines on Length of Therapy in Chorioamnionitis and Neonatal Sepsis**

Chorioamnionitis (CAM) is a major risk factor for early-onset neonatal sepsis. The Committee on the Fetus and Newborn recommends extending the duration of antimicrobial therapy in neonates exposed to CAM and intrapartum antibiotics if laboratory data are abnormal, even if culture results are sterile. When managed by using a strategy similar to recent Committee on the Fetus and Newborn guidelines, a large number of term and late-preterm infants exposed to CAM who had sterile blood culture findings were treated with prolonged antibiotic therapy, subjected to additional invasive procedures, and had prolonged hospitalization.

### **Duration and Course of Post-Concussive Symptoms**

Although there has been increasing research into the effects of concussion on the developing brain in recent years, little is known about the expected duration and clinical course of individual post-concussive symptoms in children.

Children and adolescents have a significant burden of disease after concussion, with typical patients experiencing physical

effects such as headache immediately after the injury, emotional symptoms later in the recovery period, and cognitive symptoms that may be present throughout.

### **Impulsivity, “Advergaming,” and Food Intake**

Previous studies have shown that food advertisements influence caloric intake among children. However, individual susceptibility to food advertisements has not been examined thoroughly.

This study examines the role of impulsivity in the effect of food advertisements. An advergame promoting snacks overruled refraining from eating, especially among impulsive children. The findings suggest that impulsivity plays an important role in susceptibility to food advertisements.

### **Chronic Sleep Curtailment and Adiposity**

Curtailed sleep in children has been found to be associated with increased cardiovascular disease risk factors, including obesity. Few existing studies have examined measures of adiposity beyond BMI or have examined the effects of being chronically sleep curtailed.

In this cohort of children who had research-level measures of sleep, BMI, total fat mass, and fat mass distribution, we found that chronic sleep curtailment from infancy to age 7 years was associated with higher overall and central adiposity in mid-childhood.

### **Cognitive Outcomes of Preterm Infants Randomized to Darbepoetin, Erythropoietin, or Placebo**

Although a number of randomized controlled trials of erythropoietin administration to preterm infants have been performed, few studies have reported 2-year or longer neurodevelopmental outcomes, and no studies have evaluated neurodevelopmental outcomes of infants randomized to receive Darbepoetin.

This is the first prospectively designed study to evaluate the neurocognitive outcomes of preterm infants randomized to receive Darbepoetin or erythropoietin compared with placebo. Infants in the ESA groups had significantly higher cognitive scores compared with the placebo group.

### **Respiratory Syncytial Virus Prophylaxis in Down Syndrome: A Prospective Cohort Study**

Down syndrome is an independent risk factor for severe respiratory syncytial virus infection and subsequent hospitalization. This observational study suggests that immunoprophylaxis may reduce respiratory syncytial virus-related hospitalization by

3.6-fold (95% confidence interval, 1.5–8.7) in children with Down syndrome overall.

### **Developmental Pathways to Sexual Risk Behavior in High-Risk Adolescent Boys**

Investigations of adolescents' sexual risk behavior have focused on factors such as parental monitoring, deviant peer affiliation, and daring that occur during early and mid-adolescence. Less is known about early childhood precursors to adolescent sexual risk behavior.

This prospective longitudinal study identifies parenting practices and mothers' depressive symptomatology during early childhood as precursors to later sexual risk behavior and involvement in pregnancy in adolescent boys, with deviant peer affiliation during emerging adolescence mediating these relationships.

### **Care Coordination and Unmet Specialty Care Among Children With Special Health Care Needs**

Parents of children with special health care needs and low-income children report more unmet specialty care needs. Care coordination is associated with increased and decreased referrals to specialty care, but whether care coordination is related to unmet needs is unknown.

Among children with special health care needs, care coordination is associated with lower odds of unmet specialty care needs regardless of whether care coordination was received within a medical home. This association was independent of household income.

### **Predicting Service Use for Mental Health Problems Among Young Children**

A large majority of preschool and young school age children with mental health problems do not receive services and little is known about the determinants of service use in this age group.

Behavioral, not emotional, disorders increase service use but only if impairment is present. Such impairment may operate via increased parental burden and parent and caregiver problem recognition. Low socioeconomic status has an independent effect increasing service use.

### **Supply and Utilization of Pediatric Subspecialists in the United States**

There is wide variation in pediatric subspecialty supply in the United States. The impact of this variation in supply on utilization and child and family disease burden is not known.

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Among children with special health care needs, living in a county with lower subspecialty supply was associated with lower perceived need for subspecialty care, lower subspecialty utilization, and no meaningful differences in examined measures of child and family disease burden.

#### **Timely Versus Delayed Early Childhood Vaccination and Seizures**

Reasons for childhood immunization delay include parental intent and barriers such as transportation. To date there has been 1 study of the association of delayed vaccination and seizures, which found measles-mumps-rubella and measles-mumps-rubella-varicella vaccines are both associated with a higher rate of seizures if received after 15 months of age. Our study found no association between the timing of vaccination and occurrence of seizures in the first year of life. By using different methods, our results support the observation that delaying vaccination with measles-containing vaccines past 15 months of age increases the incidence of post-vaccination seizures.

#### **Duration of Protection After Infant Hepatitis B Vaccination Series**

Duration of protection among children and adolescents who have received the recombinant hepatitis B (HB) vaccination series is known to be long. Less is known about duration of protection of the vaccination series after being administered during infancy. A robust response to a challenge dose of HB vaccine among adolescents indicates prolonged duration of protection against disease; the addition of a booster dose of HB vaccine to the routine immunization schedule for adolescents appears unnecessary.

#### **Neuroimaging in the Evaluation of Neonatal Encephalopathy**

Computed tomography is commonly used for neuroimaging in newborn infants with neonatal encephalopathy despite concerns over potential harm from radiation exposure. Alternative neuroimaging options include MRI and cranial ultrasound. Using a very large, international, multicenter database, we demonstrate utilization rates and compare diagnostic findings of computed tomography, MRI, and cranial ultrasound in the evaluation of neonatal encephalopathy.

#### **High Doses of Methylprednisolone in the Management of Caustic Esophageal Burns**

Corrosive substance ingestion is a public health issue in developing countries. Stricture formation is a late complication of

corrosive substance ingestion. The role of corticosteroids in preventing corrosive-induced strictures is controversial.

High doses of methylprednisolone therapy lead to less frequent stricture formation in grade IIb esophageal burns in children who ingested caustic substances and may improve prognosis.

#### **Attributable Cost and Length of Stay for Central Line–Associated Bloodstream Infections**

Central line–associated bloodstream infections (CLABSI) are common types of hospital-acquired infections associated with high morbidity and cost. In recent years, quality improvement initiatives have demonstrated how to reduce the incidence of CLABSI.

This study presents nationally representative estimates of the cost and length of stay attributable to pediatric CLABSI. We make the business case to justify quality improvement prevention initiatives and the adoption of strategies for cost-effective management of CLABSI.

#### **Follow-Up Formula Consumption in 3- to 4-Year-Olds and Respiratory Infections: An RCT**

Inadequate nutrient intake can compromise a child's nutritional status, which may affect immune function. Improving dietary intake via a follow-up formula may support appropriate immune responses and improve a child's ability to resist infection.

Children who consumed an experimental follow-up formula had fewer episodes and shorter duration of acute respiratory infections, as well as less antibiotic treatment, and fewer days missed of day care due to illness.

#### **Delayed Primary HHV-7 Infection and Neurologic Disease**

Primary HHV-7 infection is almost universal by age 5 years and is causally associated with exanthem subitum, febrile seizures, and febrile status epilepticus. The consequences of delayed primary infection are unknown, although encephalitis has been reported in one adult.

Delayed primary HHV-7 infection can cause serious neurologic disease as identified in 3 adolescents, 2 with encephalitis and 1 with Guillain-Barré syndrome. Serologic tests to distinguish primary from past HHV-7 infection are imperative when HHV-7 DNA is present in CSF.

#### **The Pediatric AIDS Corps: A 5-Year Evaluation**

Demographic data concerning health care providers working long-term in resource-limited areas with religious groups or

other government or nongovernment organizations are limited. Health outcomes from these programs vary with the focus of the individual program.

This study describes the composition and evaluation of a long-term global health corps program. Other groups interested in long-term physician placement in resource-limited areas will be able to use these data while developing their program.

### **Safety of Rotavirus Vaccine in the NICU**

Rotavirus vaccination is discouraged during hospitalization, given concerns regarding live-attenuated virus transmission; vaccination is recommended upon NICU discharge for eligible infants, however. Vaccination must be initiated before 104 days of age or infants become age-ineligible.

RotaTeq vaccine administered with routine 2-month vaccinations within the NICU was tolerated in recipients, with no suggestion of symptomatic nosocomial transmission to neighboring unvaccinated infants.

### **Distinct Developmental Trends in Sleep Duration During Early Childhood**

A limited number of studies have identified distinct patterns of child sleep duration, which appear to have implications for health and well-being.

This article identifies distinct patterns of sleep duration during early childhood and demonstrates that these have important implications for health-related quality of life.

### **Safety and Efficacy of Filtered Sunlight in Treatment of Jaundice in African Neonates**

Phototherapy effectively treats unconjugated hyperbilirubinemia. However, in resource-poor settings, functional phototherapy devices are often unavailable due to financial constraints or erratic electrical power availability.

Filtered-sunlight phototherapy could be a cost-effective option in resource-poor settings with abundant sunlight.

### **Adverse Drug Event-Related Emergency Department Visits Associated With Complex Chronic Conditions**

Children who experience outpatient adverse drug events represent 0.5% of pediatric emergency department visits. The subset of children with complex chronic conditions often take multiple medications, but the incidence and severity of adverse drug events in these children is unknown.

Children with complex chronic conditions have a higher risk of emergency department visits related to adverse drug events, compared with other children. The implicated drugs

with the highest rates include psychotropic agents, antimicrobial agents, anticonvulsants, hormones/steroids, and analgesics.

### **Neurobehavioral Comorbidities in Children With Active Epilepsy: A Population-Based Study**

In addition to seizures, school-aged children with epilepsy can have coexisting cognitive and behavioral difficulties, but the spectrum and prevalence of such difficulties are uncertain.

This study provides population-based data on the prevalence of common comorbid cognitive impairments and factors associated with such diagnoses in school-aged children with “active” epilepsy.

### **Factors Associated With Dental Care Utilization in Early Childhood**

Early preventive dental care is cost-effective and can reduce subsequent restorative or emergency visits. Little is known about the factors distinguishing families who receive dental care in early childhood and those who do not.

Our results suggest that among healthy children seen by primary care providers, those most in need of dental care are least likely to receive it. This highlights the importance of promoting early preventive dental care in the primary care setting.

### **Youth Ice Hockey Injuries Over 16 Years at a Pediatric Trauma Center**

Participation in youth ice hockey is increasing. Players are prone to injury because of the nature of the game. Injury patterns vary based on age, gender, and degree of contact permitted.

This study adds an updated description of injuries sustained by youth ice hockey players and associated demographic patterns, with emphasis on seriously injured children. It also evaluates health care utilization and outcomes related to youth ice hockey injuries.

### **Intellectual, Behavioral, and Emotional Functioning in Children With Syndromic Craniosynostosis**

Children who have syndromic craniosynostosis are at risk for developing intellectual disability, behavioral and emotional problems. Study results were often based on small samples and wide age-based variation, using non-validated instruments and describing no clear inclusion and exclusion criteria.

Intellectual, behavioral, and emotional functioning is described in a national sample ( $N = 82$ ) of school-aged children with

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syndromic craniosynostosis. Using standardized instruments, this study indicates higher risks for intellectual disability and behavioral problems mainly in children having Apert and Muenke syndromes.

#### **Validity of a Single Item Food Security Questionnaire in Arctic Canada**

Food insecurity is best measured by comprehensive assessments. However, rapid assessments can be useful in certain circumstances, but their validity is not characterized.

Rapid assessment of food insecurity is feasible among Inuit adults and children.

#### **Peer Mentoring for Type 2 Diabetes Prevention in First Nations Children**

Type 2 diabetes mellitus is one of the fastest growing pediatric chronic illnesses worldwide and disproportionately affects indigenous people from all continents.

These data support the growing body of evidence that peer mentoring is an attractive strategy for teaching health behaviors and improving health outcomes in children.

#### **Prenatal Tobacco Exposure and Cotinine in Newborn Dried Blood Spots**

Cotinine assays for dried blood spots have been developed but not deployed in a large sample of newborn specimens.

Cotinine levels consistent with active maternal smoking were detectable in 12% of newborn blood spots, although 41% of the mothers reportedly did not smoke. Data confirm that reported smoking during pregnancy is an imperfect measure of prenatal tobacco smoke exposure.

#### **Preparing Adolescents With Chronic Disease for Transition to Adult Care: A Technology Program**

Adolescents with chronic disease are a diverse population with common needs for transition. Disease-specific interventions have shown promise at improving patient outcomes but with substantial personnel and resource costs. Whether a generic approach across diseases may be useful is unknown.

This study is among the first to evaluate a generic (across disease) approach to transition of adolescents to adult care. The approach demonstrated promise and cost savings due to reduced personnel requirement and use of low-cost technology dissemination methods.

#### **Pediatric Medical Complexity Algorithm: A New Method to Stratify Children by Medical Complexity**

Quality measures developed by the Pediatric Quality Measures Program are required to assess disparities in performance according to special health care need status. Methods are needed to identify children according to level of medical complexity in administrative data.

The Pediatric Medical Complexity Algorithm is a new, publicly available algorithm that identifies the small proportion of children with complex chronic disease in Medicaid claims and hospital discharge data with good sensitivity and good to excellent specificity.

#### **Common Genetic Variants and Risk of Brain Injury After Preterm Birth**

Preterm birth is strongly associated with alterations in brain development and long-term neurocognitive impairment that are not fully explained by environmental factors.

Common genetic variation in genes associated with schizophrenia and lipid metabolism modulates the risk for preterm brain injury; known susceptibilities to neurologic disease in later life may be exposed by the stress of preterm birth.

#### **Practice-Tailored Facilitation to Improve Pediatric Preventive Care Delivery: A Randomized Trial**

Children receive only half of recommended health care; disadvantaged children have higher risk of unmet needs. Practice coaching combined with quality improvement using rapid-cycle feedback has potential to help practices meet quality standards and improve pediatric health care delivery.

The Practice-tailored Facilitation Intervention led to large and sustained improvements in preventive service delivery, including substantial numbers of disadvantaged children, and in multiple simultaneous health care domains. Practice-tailored facilitation holds promise as a method to advance pediatric preventive care delivery.

#### **Variation in Outcomes of Quality Measurement by Data Source**

Administrative health insurance claims have limitations when measuring care quality.

Children's care quality measures assessed using administrative claims alone may not accurately reflect care quality. Use of electronic health record data in combination with administrative claims data provides an opportunity for more complete measurement.

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