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Trends in Infant Bedding Use: National Infant Sleep Position Study, 1993–2010

The American Academy of Pediatrics has identified bedding such as pillows, blankets, and quilts as potentially hazardous for the infant sleep environment. Bedding use is a modifiable risk factor for sudden infant death syndrome and unintentional sleep-related suffocation.

Reported bedding use over or under the infant for infant sleep substantially declined from 1993 to 2010. However, about one-half of US infants are still placed to sleep with potentially hazardous bedding despite recommendations against this practice.

Precollege and In-College Bullying Experiences and Health-Related Quality of Life Among College Students

American Public Health Association reported >3.2 million students in the United States are bullied each year; 160 000 students skip school every day for fear of bullying. Little is known about whether bullying affects health-related quality of life (HRQOL) among college students.

Different types of bullying experiences affected different domains of HRQOL. Precollege bullying had long-term effects on HRQOL. Verbal/relational bullying-victimization experiences, mediated via depression, affected psychological HRQOL. Findings inform preventive and clinical practice to ameliorate the impact of bullying.

State-Specific Differences in School Sports Preparticipation Physical Evaluation Policies

Preparticipation physical evaluations (PPEs) are considered necessary for a high standard of care for US scholastic athletes.

However, important questions remain regarding consistency of implementation and content of cardiovascular screening practices among states.

Our results show that PPE policies are variable among US states, and adoption of current PPE-4 best practices is slow, demonstrating the need for nationwide PPE standardization.

Antimicrobial Stewardship Programs in Freestanding Children's Hospitals

Antibiotic overuse is common and is a major public health threat. The prevalence of antimicrobial stewardship programs in children's hospitals is growing. Single-center studies reveal that antimicrobial stewardship programs are effective in reducing unnecessary antibiotic use. Multicenter evaluations are needed.

Antibiotic use is declining overall across a large network of freestanding children's hospitals. Hospitals with formalized antimicrobial stewardship programs experienced greater reductions in antibiotic use than other hospitals, suggesting that these interventions are an effective strategy to address antibiotic overuse.

Methylphenidate and the Risk of Trauma

Children and adolescents with attention-deficit/hyperactivity disorder are prone to sustaining trauma that requires emergency department (ED) admission. Methylphenidate can reduce attention-deficit/hyperactivity disorder symptoms and thus theoretically may reduce the risk of trauma-related ED admission, but previous studies did not provide a clear association.

For patients treated with methylphenidate, on-medication periods were associated with lower rates of trauma-related ED admission compared with off-medication periods. A similar protective association was found in both genders. Potential treatment benefit was greater for age ≥ 16 years.

Off-Label Prescribing in Pediatric Outpatients

Off-label prescribing in children has been widely described. There has been growing awareness and action from regulatory bodies since 2006 to promote drug assessment in children and rational prescribing.

In comparison with a similar study done in 2000, there was no significant change in off-label prescribing in children. In contrast with the previous findings, off-label prescribing did not increase risk for adverse drug reactions.

Maternal Depressive Symptoms During Childhood and Risky Adolescent Health Behaviors

Maternal depression has been associated with adolescent engagement in risky behaviors such as substance use. However, there is a lack of longitudinal research examining timing-specific effects in this relationship.

The results of this study indicate that youth exposed to increasing levels of maternal depressive symptoms in middle childhood are more likely to engage in substance use and delinquent behaviors and have an earlier debut age of these behaviors.

Presepsin for the Detection of Late-Onset Sepsis in Preterm Newborns

Early diagnosis of LOS in preterm infants may be challenging because of the questionable accuracy of blood culture and the common markers of infections, such as C-reactive protein and procalcitonin.

Our study demonstrated for the first time that P-SEP is an accurate biomarker for the diagnosis of LOS in preterm infants and might contribute to the monitoring of infant response to therapeutic interventions.

A School Health Center Intervention for Abusive Adolescent Relationships: A Cluster RCT

Adolescent relationship abuse (ARA) is prevalent in confidential clinic settings such as school health centers (SHCs) and is associated with poor health outcomes. No evidence-based interventions target reduction of ARA in the SHC setting.

This study provides the first evidence of the potential benefits of a brief provider-delivered universal education and counseling

intervention in SHCs to address and prevent a major public health problem: ARA.

Validity of Self-Assessment of Pubertal Maturation

Many population-based studies including pubertal children are based on self-assessment of pubertal maturation, the reliability of which is uncertain.

Self-assessment is not reliable for precise pubertal staging. Simple distinctions between prepuberty and puberty showed moderate agreement with clinical examinations. Parents and girls tended to underestimate and boys to overestimate pubertal development by up to 50% and 30%, respectively.

Family-Initiated Dialogue About Medications During Family-Centered Rounds

Family engagement in the care of hospitalized children may improve outcomes, including medication safety. Although family-centered rounds (FCRs) provide a venue for family engagement in care, how families use this venue to influence medication-related topics is unknown.

Most families initiated medication-related dialogue during FCRs, discussing inpatient and home medications. Topics raised were important for medication adherence and safety, even altering treatment plans. Findings suggest specific medication topics that health care team members can anticipate addressing during FCR.

Coparenting Breastfeeding Support and Exclusive Breastfeeding: A Randomized Controlled Trial

Fathers' attitude and support affects breastfeeding outcomes. Fathers are currently not targeted in breastfeeding support and care provided by health care professionals. Breastfeeding interventions delivered to fathers have been shown to increase breastfeeding exclusivity and duration.

A coparenting breastfeeding support intervention delivered to mothers and fathers in the postpartum period showed beneficial effects on breastfeeding duration, paternal breastfeeding confidence, breastfeeding help provided by fathers, and mothers' satisfaction with fathers' involvement with breastfeeding.

Breastfeeding Duration and Weight Gain Trajectory in Infancy

Although we know breastfeeding is beneficial and infant weight gain can predict obesity later in life, the relationship between breastfeeding duration and infant weight gain patterns among populations exhibiting high risk for obesity is unexplored.

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This study demonstrates the greater odds of increased infant weight gain for infants who breastfed for shorter durations among those exposed to a high number of maternal biopsychosocial risk factors for obesity.

Use of Electronic Health Record Systems by Office-Based Pediatricians

In 2009, only 58% of pediatricians were using electronic health records (EHRs), most of which were lacking pediatric functionality. The American Recovery and Reinvestment Act (ARRA) of 2009 accelerated the implementation of EHRs in pediatric offices. The effects of ARRA have remained largely unmeasured in pediatrics. This study provides information on the prevalence and functionalities of EHRs, as well as physicians' perceptions.

Early Weight Loss Nomograms for Exclusively Breastfed Newborns

Exclusively breastfed newborns lose weight daily in the first few days after birth. The amount of weight lost varies substantially between newborns, with higher amounts of weight loss increasing risk for morbidity.

This study presents nomograms demonstrating percentiles for weight loss by delivery mode for those who are exclusively breastfed. The nomograms have potential to be used for early identification of neonates on a trajectory for greater weight loss and related morbidities.

Respiratory Syncytial Virus–Associated Mortality in Hospitalized Infants and Young Children

Respiratory syncytial virus (RSV) infection is a common cause of pediatric hospitalizations. Mortality rates associated with RSV hospitalizations are based on estimates from studies conducted decades ago. Accurate understanding of mortality is required for identifying high-risk infants and children.

Mortality associated with RSV is uncommon in the 21st century, with annual deaths far lower than previous estimates. The majority of deaths occurred in infants with complex chronic conditions or in those with life-threatening conditions in addition to RSV infection.

Neuroimaging and Neurodevelopmental Outcome in Extremely Preterm Infants

White matter abnormality (WMA) on neuroimaging is considered a crucial link with adverse neurodevelopmental outcome in preterm infants. Brain MRI is more sensitive in detecting WMA than cranial ultrasound (CUS), but questions remain about timing and prognostic value of modalities.

Near-term CUS and MRI abnormalities were associated with adverse 18- to 22-month outcomes, independent of early CUS and other factors, underscoring the relative prognostic value of later neuroimaging in this large, extremely preterm cohort surviving to near-term.

Risk Factors for Exclusive E-Cigarette Use and Dual E-Cigarette Use and Tobacco Use in Adolescents

There is a debate about whether e-cigarettes will benefit public health. However, there is little knowledge about how e-cigarette users and dual users (those using both e-cigarettes and tobacco cigarettes) differ from other adolescents on a range of variables.

Teenagers who only used e-cigarettes were intermediate in levels of risk and protective factors between nonusers and those who used both cigarettes and e-cigarettes. This raises a question about whether e-cigarettes recruit low-risk youth to tobacco product use.

Psychosocial Outcomes of Fetal Alcohol Syndrome in Adulthood

Prenatal alcohol exposure can cause congenital neuro-psychological and behavioral disabilities in later life. These usually lead to secondary disabilities (adverse outcome when the individual interacts with environmental settings), such as problems with school, the law, alcohol, or drugs.

This was a 30-year psychosocial register-based follow-up on adults with fetal alcohol syndrome and state care comparison group. The FAS-group had lower education and higher rates of unemployment, social welfare, and mental health problems than peers. Rates of criminality did not differ.

Etiologies of NICU Deaths

Infant mortality is an important indicator of societal health, and approximately two-thirds of all infant deaths occur during the neonatal period and in neonatal intensive care units.

We report detailed information on the cause of death in infants admitted for intensive care. Factors associated with death are multifactorial, diverse, and change with gestational age. Potentially modifiable factors were identified in 31%.

Influenza-Related Hospitalization and ED Visits in Children Less Than 5 Years: 2000–2011

Influenza represents a leading cause of morbidity and a rare cause of death in children. Annual influenza vaccination was gradually expanded to include all children ≥ 6 months in 2008.

The impact of these recommendations on disease burden is unclear.

We assessed the burden of influenza-related health care encounters in children aged 6 to 59 months from 2000 to 2011. In this ecologic exploration, influenza vaccination and influenza-related emergency department visits increased over time, whereas hospitalizations decreased. Influenza-related health care encounters were greater when A(H3N2) circulated.

Registry-Linked Electronic Influenza Vaccine Provider Reminders: A Cluster-Crossover Trial

Frequency of influenza vaccination is low, partially because of missed opportunities to vaccinate. Barriers to implementing successful influenza vaccination reminders in the electronic health record include alert fatigue and incomplete vaccination information due to scattered records.

A noninterruptive, immunization information system–linked influenza vaccination reminder can increase vaccination late in the winter when fewer vaccine doses are usually administered. Tailoring the reminder to clinicians' needs can increase its use.

Text Message Reminders for Second Dose of Influenza Vaccine: A Randomized Controlled Trial

Influenza vaccine coverage is low, and young children in need of 2 doses in a given season are at particular risk, with less than half receiving both doses. Text message vaccine reminders increase receipt of first dose of influenza vaccine.

Little is known about what types of text message reminders are most effective, including embedding educational information. We demonstrate that text message reminders increase timely receipt of the second dose of influenza vaccine and embedding health literacy information improves effectiveness.

Cesarean Section and Chronic Immune Disorders

Cesarean delivery has previously been associated with increased risk of specific immune diseases in children. The mechanism remains unknown.

In 1 large population-based cohort, we demonstrate cesarean delivery as a shared risk factor for several immune-related diseases. Such common risk factor suggests early life commonality in the origins of these chronic immune disorders.

Potential Drug–Drug Interactions in Infant, Child, and Adolescent Patients in Children's Hospitals

Hospitalized pediatric patients are often exposed to many medications during an inpatient admission. Drug–drug

interactions may increase the risk of developing medication-related adverse drug events, leading to serious clinical morbidity and mortality.

Exposure to “major” potential drug–drug interactions occurs in 41% of pediatric hospitalizations in children's hospitals. One-half of all these exposures were due to less common specific drug pairs ($\leq 3\%$ of patients exposed per hospital day) and thus may be less clinically familiar.

Children's Academic Achievement and Foster Care

There is extensive literature documenting that children experiencing foster care placement have myriad adverse developmental outcomes, including poor academic achievement. However, such children face a host of other risk factors that may jeopardize healthy development independent of foster care placement.

Using statewide administrative data from Wisconsin, we observed children before, during, and after foster care placement and compared their educational outcomes with those of the general population, as well as with children more similar in terms of unobserved characteristics.

Anaerobic Antimicrobial Therapy After Necrotizing Enterocolitis in VLBW Infants

Necrotizing enterocolitis is associated with high mortality and morbidity in premature infants. Anaerobic antimicrobial therapy has been associated with increased risk of intestinal strictures in a small randomized trial. Optimal antimicrobial therapy for necrotizing enterocolitis is unknown.

Anaerobic antimicrobial therapy was associated with increased risk of stricture formation. Infants with surgical necrotizing enterocolitis treated with anaerobic antimicrobial therapy had lower mortality. For infants with medical necrotizing enterocolitis, there was no added benefit associated with anaerobic antimicrobial therapy.

Growth Charts for Non-Growth Hormone Treated Prader-Willi Syndrome

Syndrome-specific standardized growth curves are not currently available for non–growth hormone–treated subjects with Prader-Willi syndrome and are required for monitoring growth and development in this rare obesity-related disorder.

Standardized growth curves were useful in monitoring growth and development in these subjects with Prader-Willi syndrome and for the management of growth hormone treatment of both genders, particularly those aged 3 to 18 years.

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Pediatric Germ Cell Tumors From 1987 to 2011: Incidence Rates, Time Trends, and Survival

Germ cell tumors in children are heterogeneous and rare neoplasms that occur in various locations, such as gonads, the central nervous system, and the pelvis. The incidence rate has been increasing in some countries.

Population-based analyses of germ cell tumors in children are rare. This population-based study describes the incidence rates, trends, and survival of germ cell tumors in German children from 1987 to 2011.

Insulin and BMI as Predictors of Adult Type 2 Diabetes Mellitus

Fasting insulin levels in childhood are increasingly being used as a surrogate for insulin resistance and risk of later type 2 diabetes, despite only a moderate correlation with whole-body insulin sensitivity and few data related to adult outcomes.

Elevated insulin values between the ages of 3 and 6 years are associated with an elevated risk for later type 2 diabetes. In 9- to 18-year-olds, elevated BMI (but not insulin values) is associated with later type 2 diabetes.

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