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FASD CENTER NEWS

FASD Center for Excellence at 2009 American Public Health Association Meeting

Representatives from SAMHSA’s FASD Center for Excellence will speak at the 2009 Meeting and Exposition of the American Public Health Association (APHA). This year marks the 137th annual APHA meeting, which convenes in Philadelphia on November 7-11, 2009.

Speakers from the FASD Center will present a poster session on November 10 on the following topics:

- *Trends and approaches in evidence-based programs for the prevention of fetal alcohol spectrum disorders*—Callie Gass, FASD Center Project Director and Vinitha Meyyur, FASD Center Senior Evaluator
- *Partnership to prevent fetal alcohol spectrum disorders*—Dan Dubovsky, FASD Center Specialist

- *Fetal alcohol spectrum disorders: Prevalence and effects of alcohol exposure* – Patricia Getty, FASD Center Task Order Officer

Other important presentations and poster sessions at the meeting will include the following:

- *Testing the feasibility of screening for fetal alcohol syndrome disorders risk in early intervention settings* – Enid Watson, Norma Finkelstein, Deborah Gurewich, and Barbara Morse
- *Clinical and genetic factors and the diagnosis of fetal alcohol syndrome disorders* – Helga Valdmanis Toriello, Vivian Grace Valdmanis, Steven Pasternak, Anthony Richtsmeier, and Barbara Wybrecht.
- *Current and future directions for prevention of fetal alcohol spectrum disorders during the preconception period* – R. Louise Floyd
- *Incidence of tobacco smoking and drinking alcohol in expectant and postpartum mothers* – Witold Zatonski, Andrzej Wojtyla, Przemyslaw Bilinski, and Piotr Holownia
- *Healing the wounded spirit: best practices* – Kanaqlak (George P.) Charles
- *Recommendations from the National Task Force on Fetal Alcohol Syndrome and Fetal Alcohol Effect – Where do we go from here?* – Mary Kate Weber
- *Screening for past alcohol drinking behavior among pregnant women* – Kate Hughes, Sara Schussler, Diane Dado, Keri L. Rodriguez, Robert Arnold, Susan Zickmund, Kevin Kraemer, Doris Rubio, and Judy C. Chang

APHA's Annual Meeting and Exposition is the oldest and largest gathering of public health professionals in the world, attracting more than 13,000 national and international physicians, administrators, nurses, educators, researchers, epidemiologists, and specialists in related areas. To learn more about the conference or to register, visit <http://www.apha.org/meetings>.

FASD-RELATED LITERATURE

Special Issue of *Developmental Disabilities Research Reviews* on Fetal Alcohol Spectrum Disorders

In September 2009, a special issue of *Developmental Disabilities Research Reviews* on fetal alcohol spectrum disorders (FASD) was published. In the introduction to the 10 articles, the Guest Editor, Blair Paley summarizes the purpose of this special issue: "A major impetus for this issue on FASD was to reach a broad multidisciplinary audience of researchers and clinicians who we hope will find these reviews relevant to their own work and ideally, to spur new and productive collaborations in order to continue the current momentum in responding to this major public health problem." The 10 reviews are summarized here.

1. Fetal alcohol spectrum disorders: When science, medicine, public policy, and laws collide

Kenneth R. Warren and Brenda G. Hewitt

This article is an overview of the inherent confusion when new scientific findings confront prevailing medical practice, the history of this confusion with respect to FASD, including public policy and legal issues that have arisen around alcohol and pregnancy, and the research and clinical challenges still being faced.

2. Prevention of fetal alcohol spectrum disorders

R. Louise Floyd, Mary Kate Weber, Clark Denny, and Mary J. O'Connor

The article discusses a recent report of the National Task Force on Fetal Alcohol Syndrome and Fetal Alcohol Effect that describes effective interventions to reduce these

risk factors for FASD and outlines recommendations to promote and improve related strategies. The researchers concluded that use of evidence-based alcohol screening tools and brief counseling for women at risk for AEP, as well as other effective population-based strategies, can help to achieve alcohol-free pregnancies.

3. Prevalence and epidemiologic characteristics of FASD from various research methods with an emphasis on recent in-school studies

Philip A. May, J. Phillip Gossage, Wendy O. Kalberg, Luther K. Robinson, David Buckley, Melanie Manning, and H. Eugene Hoyme

This review of literature on the epidemiology and estimation of prevalence of fetal alcohol syndrome (FAS) and other fetal alcohol spectrum disorders (FASD) addresses strengths, weakness, prevalence results, and other practical considerations of the three major approaches used in the past: surveillance and record review systems, clinic-based studies, and active case ascertainment methods including in-school screening and diagnosis. Previous conclusions about prevalence in the general U.S. population are summarized. The investigators concluded that FAS and other FASD are more prevalent in school populations than was previously estimated. The findings indicate that FAS prevalence is at least two to seven per 1,000 and that FASD prevalence for young school children may be as high as 2 percent to 5 percent.

4. Animal models of fetal alcohol spectrum disorders: Impact of the social environment

Sandra J. Kelly, Charles R. Goodlett, and John H. Hannigan

This report highlights findings from research on animals that point to the impact of social context or behavior on effects of exposure to alcohol during development. Because study findings indicate that such exposure alters patterns of DNA methylation, as well as maternal care of alcohol-exposed offspring, the researchers suggested that epigenetic effects and their relationship to social behavior in animal models of FASD are likely to become a fruitful area of research.

5. Neuroimaging and fetal alcohol spectrum disorders

Andria L. Norman, Nicole Crocker, Sarah N. Mattson, and Edward P. Riley

In this review of research on neuroimaging in persons with fetal alcohol spectrum disorders (FASD), the investigators examined results from magnetic resonance imaging and more advanced imaging techniques. The studies reported reduced brain volume and central nervous system disorganization, with specific structural abnormalities of the corpus callosum, cerebellum, caudate, and hippocampus, as well as detection of regional increases in cortical thickness and gray matter volume along with low volume and disorganization of white matter. Functional imaging showed functional and neurochemical differences. The findings indicate that behavioral differences in persons with FASD are consistent with results of brain imaging.

6. Fetal alcohol spectrum disorders and the criminal justice system

Diane K. Fast and Julianne Conry

Lifelong neurologic impairments of persons with fetal alcohol spectrum disorders (FASD) can increase susceptibility to victimization and involvement in the criminal justice system (CJS). It is critical that all involved in CJS are educated and trained to understand implications of FASD for the offender. A comprehensive medical-legal report, prepared by professionals experienced with FASD can help judges and lawyers understand the complex interactions among brain damage, genetics, and the environment. Corrections workers and probation officers need to comprehend

how an FASD affects the ability to understand and follow rules and probation orders. Caregivers and parents should be involved if possible. Early recognition of these disabilities may help to reduce the overrepresentation of this group in CJS.

7. Neurocognitive profile in children with fetal alcohol spectrum disorders

Piyadasa W. Kodituwakku

This review focuses on studies of higher-order cognitive skills in children with fetal alcohol spectrum disorders (FASD), to delineating a pattern of cognitive functioning. The study findings converge on the conclusion that children with an FASD have a generalized deficit in the processing and integration of information. The investigators recommend study of developmental trajectories of both elementary and higher-order functions to elucidate the development of this cognitive profile.

8. Psychiatric conditions associated with prenatal alcohol exposure

Mary J. O'Connor and Blair Paley

This review summarizes the literature on mental health outcomes across the lifespan for persons with prenatal exposure to alcohol. The research on psychiatric disabilities of persons with fetal alcohol syndrome disorders throughout development highlights the need for training of mental health professionals to identify and provide specific treatments addressing the unique features of this developmental disability. Early identification and treatment protect against more serious secondary disabilities.

9. "Family matters:" fetal alcohol spectrum disorders and the family

Heather Carmichael Olson, Rosalind Oti, Julie Gelo, and Sharon Beck

This article integrates multiple information sources to better understand the role of family factors in outcomes for persons with fetal alcohol spectrum disorders (FASD) and in how the family is affected by raising a child with the lifelong effects of an FASD. New data describe children with FASD and characteristics of their caregivers. The researchers present emerging directions for data-gathering and interventions and for use of a proposed conceptual framework joining a perspective on developmental systems with a family systems approach.

10. Intervention for individuals with fetal alcohol spectrum disorders: Treatment approaches and case management

Blair Paley and Mary J. O'Connor

This report reviews treatment needs and considerations for persons with an FASD and their families, current empirically tested treatment approaches, case management issues, and suggestions for future directions in research on treatment of an FASD.

Effects of Fetal Alcohol Syndrome on Response Execution and Inhibition

Alcoholism, Clinical, and Experimental Research. August 31, 2009 [Epub ahead of print]

Burden MJ, Andrew C, Saint-Amour D, Meintjes EM, Molteno CD, Hoyme HE, Robinson LK, Khaole N, Nelson CA, Jacobson JL, Jacobson SW

Executive function deficits and slower processing speed are characteristic of children with fetal alcohol exposure, but the temporal dynamics of neural activity underlying cognitive processing deficits in fetal alcohol spectrum disorders have rarely been studied. To this end, event-related potentials (ERPs) were used to examine the nature of alcohol-related effects on inhibition of response, by identifying differences in neural activation during performance of tasks.

Observed differences in timing and amplitude in the ERP measures suggest that children with fetal alcohol syndrome or partial fetal alcohol syndrome (FAS/pFAS) were characterized by slower and less efficient processing during identification of the initial stimulus. In addition, these

components were less sharply defined in the exposed children throughout the stimulus and response evaluation processes involved in successful response inhibition.

Although both groups were equally able to inhibit their responses, the level of neural activation in the children with FAS/PFAS was greater. This finding suggests that more cognitive effort was required for these children. The specific deficits in processing of response inhibition at discrete stages of neural activation may also have implications for understanding the nature of alcohol-related deficits in other cognitive domains.

Phosphodiesterase Inhibition Increases CREB Phosphorylation and Restores Orientation Selectivity in a Ferret Model of Fetal Alcohol Spectrum Disorders

PLoS One. August 14, 2009; 4(8):e6643

Krahe TE, Wang W, Medina AE

Fetal alcohol spectrum disorders (FASD) are the leading cause of mental retardation in the western world, and children with FASD present altered somatosensory, auditory, and visual processing. Growing evidence indicates that some of these problems in sensory processing may be related to alteration in cortical maps caused by impaired plasticity of neurons during development.

The primary visual cortex of ferrets exposed to alcohol during the third trimester equivalent of human gestation had decreased CREB phosphorylation and poor orientation selectivity. Treatment with a phosphodiesterase type 1 inhibitor (vinpocetine) several days after fetal exposure to alcohol increased CREB phosphorylation and restored orientation selectivity columns and neuronal orientation tuning.

The researchers concluded that these findings suggest that CREB function is important for the maturation of orientation selectivity and that enhancement of neuronal plasticity by vinpocetine may prove useful in treatment of sensory problems in FASD.

Do Canadian Prenatal Record Forms Integrate Evidence-Based Guidelines for the Diagnosis of an FASD?

Canadian Journal of Public Health. July-August 2009; 100(4):274-280

Premji SS, Semenic S

Prenatal alcohol exposure is a significant public health issue with lifelong psychological, emotional, and financial costs associated with caring for an affected individual. In 2005, the Public Health Agency of Canada and Health Canada's First Nations and Inuit Health Branch developed evidence-based guidelines for diagnosis of fetal alcohol spectrum disorders (FASD). This study examined the extent to which prenatal record forms across Canadian provinces and territories integrated key recommendations from these guidelines. Only five of the forms examined included a validated screening tool to identify risky behavior in alcohol use. Most of the forms lacked prompts to encourage providers to intervene or refer pregnant clients with high-risk drinking behavior.

The investigators concluded that integration of these key recommendations into Canadian prenatal record forms may be an effective public health strategy for helping to identify pregnancies at high risk for alcohol exposure. This strategy may hold promise for reducing the incidence of FASD by leading to appropriate prenatal intervention and referral, thus facilitating early diagnosis of an FASD.

Children "Sleep Badly" If Mum Drank in Pregnancy

Daily Mail, August 1, 2009

A research psychologist who studied 289 eight-year-olds reported that maternal drinking of even low levels of alcohol weekly during pregnancy adversely affected the quantity and quality of children's sleep for years afterward. Sleep disturbances are also associated with obesity, depression, attention-deficit/hyperactivity disorder, and behavior problems.

Professor Katri Raikkonen said, "The results were in accordance with the many studies that have shown adverse fetal environment may have lifelong influences on health and behavior....It is well known that maternal alcohol consumption during pregnancy can have detrimental effects on the development of fetal organ structure and function, including [those of] the brain."

<http://www.dailymail.co.uk/health/article-1203556/Children-sleep-badly-mum-drank-pregnancy.html>

Expert Hits out at Report on Boozing Mums

Worcester News, August 3, 2009

Peter Limbrick, a consultant in the field of childhood disability, is criticizing a Worcestershire research project to help young children with birth defects caused when a mother drinks alcohol during her pregnancy. Building Bridges With Understanding: Fetal Alcohol Spectrum Disorders (FASD) is a study organized by the Sunfield Research Institute and funded by the Worcestershire County Council.

Limbrick says the study should involve pediatricians and general practitioners rather than just nursery staff. "My anxiety is about nonmedical staff in Worcestershire being asked to identify FASD," he explained.

A questionnaire is being sent to 400 facilities in Worcestershire where children younger than age 5 years with an FASD may have received care.

http://www.worcesternews.co.uk/news/local/4526093.Expert_hits_out_at_report_into_boozing_mums/

Fetal Alcohol Victims Face Discrimination: Law Professor Says Fetal Alcohol Spectrum Disorder Sufferers Unfairly Treated by Courts

The Globe and Mail, August 3, 2009

A Toronto law professor reports that there are offenders with fetal alcohol syndrome (FAS) in the criminal justice system. The cognitive deficits of fetal alcohol spectrum disorders (FASD) are challenging to assumptions of the Canadian criminal justice system. Persons with an FASD tend to lack a sense of responsibility, to have memory loss, and to be deficient in impulse control, and these characteristics could contribute to behavioral difficulties.

<http://www.theglobeandmail.com/news/national/fetal-alcohol-victims-face-discrimination/article1239601/>

Chicagoland Motorcycle FAST Ride To Fight Fetal Alcohol Spectrum Disorder

Fox Business, August 4, 2009

The Chicago-area FASTeam and a group of motorcyclists are riding to raise awareness of fetal alcohol spectrum disorders (FASD). The 2009 FAST Ride will feature intersections monitored by police and a light lunch at the Moose Lodge in Morris, Illinois. The post-ride party will include a

dinner buffet, a live band, and raffles of prizes ranging from cash to plasma and flat-screen television sets.

"We started the ride in 2004, and last year we had over 400 riders," said Walt Teichen, chairman of the FASTeam Board of Directors. Teichen and his wife cofounded the organization in 2003. "Personally, my own family has been dramatically impacted by FASD, and that has driven our commitment to help other families and FASD individuals get the help they need," he explained.

Drinking alcohol during pregnancy increases the chances that a child will have an FASD. Although this disorder affects 40,000 infants annually – more than spina bifida, Down syndrome, and muscular dystrophy combined – FASD remains relatively unaddressed.

<http://www.bio-medicine.org/medicine-news-1/Chicagoland-Motorcycle-F-A-S-T--Ride-to-Fight-Fetal-Alcohol-Spectrum-Disorder-3A-53589-1/>

New Collaboration of California Teratogen Information Service With Women, Infant, and Children's Program To Help Women Avoid Risky Drinking During Pregnancy

Cloud Computing Journal, August 13, 2009

The California Teratogen Information Service (CTIS) will evaluate the effectiveness of a Web-based program that aims to measure and reduce current alcohol consumption among low-income women who are not pregnant and participate in the Special Supplemental Nutritional Program of the Women, Infants, and Children's Program. Adapted from the "electronic Check-Up-To-Go" program, this effort is funded by a grant from the Agency for Healthcare Research and Quality.

"Our mission is to educate women on risks and to promote a healthy pregnancy outcome," said Dr. Christina Chambers, program director of the CTIS Pregnancy Risk Line at the University of California, San Diego. "Heavy prenatal alcohol use is a common known cause of adverse effects in a developing baby and is completely preventable. This program has great potential to address this critical issue using 21st century technology."

<http://www.marketwire.com/press-release/California-Teratogen-Information-Service-1030537.html>

Lawyer Touts Supervised Program for Arsonist

Winnipeg Free Press, August 27, 2009

The lawyer for a mentally challenged client who was placed in a specialized supervision program is suggesting that an 18-year-old arsonist arrested in August should be placed in the same program. The arrested man, who is accused of setting more than 20 fires in the last 6 months, has the mental capacity of a third grader. Lawyer Martin Glazer compared the case to that of his former client who had fetal alcohol spectrum disorder and the mental capacity of a 7-year-old child.

"Jail is not the solution for people with mental disabilities in conflict with the law," Glazer said. "Government-funded community supervision is more effective. It's better to have them treated humanely than keep them in jail....Jail simply puts off the inevitable. They will then be released without a safety net."

Glazer's former client had been arrested and charged several times with offenses, but after a bail hearing in 1994 and for the first time in North America, a program of 24-hour care was set up for him and paid for by the provincial government.

<http://www.winnipegfreepress.com/local/lawyer-touts-supervised-program-for-arsonist-55324522.html>

Queensland Mothers "Giving Birth While Drunk"

NineMSN, August 27, 2009

The Queensland Child Safety Department is forced to remove 50 newborns from their mothers each year because of substance abuse or concerns over domestic violence. The alcohol education campaign, which targets expectant mothers, has been recommended for north Queensland after it was revealed that some women are giving birth while they are drunk.

Veteran north Queensland neonatologist John Whitehall said an alcohol education program was necessary to avoid an increase in children being born with fetal alcohol syndrome.

<http://news.ninemsn.com.au/national/854838/queensland-mothers-giving-birth-while-drunk>

FASD EVENTS

15th Annual Maternal and Child Health Epidemiology Conference

Tampa, Florida, December 9-11, 2009

This epidemiology conference focuses on maternal and child health (MCH) professionals sharing experiences, enhancing knowledge, and generating new ideas for improved use of MCH data and informed policy making.

This conference is designed to help students learn more about the practice of MCH epidemiology at federal, state, local, and tribal levels. For additional information, visit

<http://www.cdc.gov/reproductivehealth/MCHepi/2009/AboutConference.htm>

Conference of the National Alliance of State Pharmacy Associations

New Orleans, Louisiana, January 14-16, 2010

This 3-day conference was planned to bring together senior-level student affairs administrators with staff and researchers to focus on advancing knowledge and sharing information about use of alcohol and other drugs in colleges and universities.

Prevalence of alcohol abuse continues to be a serious problem facing college students. Devastating alcohol-related incidents and legal action against universities have flooded the media. Administrators need to be proactive in advancing a tight weave of policies and procedures that allow less room for error and increase accountability. Institutions must consider creation of community standards and a set of values to help deter alcohol abuse.

Several reports, including the Surgeon General's report, the report of the National Institute on Alcohol Abuse and Alcoholism, and information from other leading organizations, have made it clear that colleges and universities should collaborate to prevent alcohol abuse by addressing the environments for both high- and low-risk students. Efforts should include assessment, strategic planning, research and evaluation, and legislative mandates.

This innovative conference is designed as a venue for discussion of research on effective prevention, intervention, individual and environmental practices, and specific information on alcohol use and health status. For additional information, visit

<http://www.naspa.org/programs/aapc/default.cfm>.

Association of Maternal and Child Health Professionals Annual Conference

March 6-10, 2010, National Harbor, Maryland

The annual meeting of the Association of Maternal and Child Health Professionals will be held at the same location as the annual meeting of the National Birth Defects Prevention Network. Preliminary planning is just beginning. For updated information on this conference, visit <http://www.amchp.org/Events/Pages/AMCHPAnnualConference.aspx>.