



Focusing Research Efforts...Where?

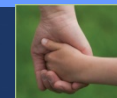
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IHE Consensus Development Conference on
**Fetal Alcohol Spectrum Disorder
(FASD) – Across the Lifespan**

October 7 to 9, 2009, The Westin Edmonton, Edmonton, Alberta

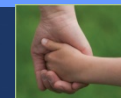
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Initial Domains

Addressing Heterogeneity

- Structure and Function Dissociation
- Dissociation between Exposure & Outcome

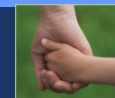


Dissociation between Exposure and Outcome

- Essential Attention to:
 - Quantity
 - Frequency
 - Critical Developmental Periods



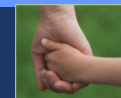
- Growing/Increasing Attention:
 - Comorbid Substance Use/ Direct and Indirect Exposure
 - Dietary Supplements: Level of Protection
 - Fetal Risk Conditions



Modeling Neurobehavioral Deficits

Initial Domains, Cont.

- Comparative studies with appropriate controls
- Application of process approaches in addition to endpoint analyses
- Identifying/applying compensatory behaviors: Skill substitution as well as skill building
- Identifying links among neurobehavioral and social/emotional deficits



Prevention via Abstinence and the Neurobiology of
Later

INTERVENTION... WHEN

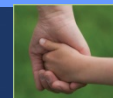
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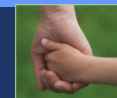
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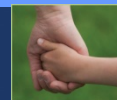
Innovative Neuroscience

- Inadequate interface:
- Behavio(u)ral
- Developmental
- Molecular
- Cognitive

NEUROSCIENCES



- **Explore opportunities for post-exposure intervention**
- **Maternal Health Interventions**
- **Direct Fetal Intervention**
- **Neonatal, infant, childhood and adolescent continued intervention(s)**

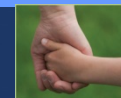


Application and Integration

What/ How Much and When?

How might pharmacologic & behavioral efforts be most effectively combined?

WHO gets WHAT? In a condition of limited supply, how is treatment allocated? What are the ethical issues associated with treating PAE babies and/or their mothers?



and.. Conferential Epiphanies

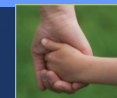
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Personality/Temperament

Externalizing Behaviors:

- ↑ Conduct Disorder (CD)
- ↑ Oppositional Defiant Disorder
- ↔ ADHD due to overlap with CD

Internalizing Behaviors: Indirect

- ↑ Depressive symptoms (situational)
- ↑ Anxiety due to familial comorbidity



Neuropsychological



Impulsivity



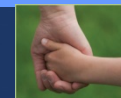
Behavioral Inhibition



Executive Cognitive Function:
(poor decision making)



Abstract Planning



Neurophysiological

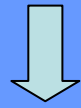


Brain activation

- Frontal areas (Behavioral Inhibition)
- Parietal function?

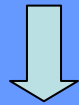


P3 Amplitude (Associated with memory updating)



Sensory evoked potentials:

Auditory MAEP: with  FH



Pa



Pb



Acknowledgments

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- Department of Psychiatry & Division of Addiction Research

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