Meeting of the IACC

Science Update

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These slides do not reflect decisions of the IACC and are for discussion purposes only.
Q1. When should I be concerned?

February 19, 2014

**Longitudinal patterns of repetitive behavior in toddlers with autism**


March 13, 2014

**Genetically meaningful phenotypic subgroups in autism spectrum disorders**

Veatch OJ, Veenstra-Vanderweele J, Potter M, Pericak-Vance MA, Haines JL.
Longitudinal study - 294 high risk and 116 low risk: 6, 12, 18, 24, 36 mos.

- Close to 50% of younger siblings of children with ASD develop in an atypical fashion. In the current study, 17% developed ASD, and another 28% showed delays or deficits in other areas of development or behavior.

- Differences in development are detectable using standardized assessment instruments by 12 months of age in many children.

- The most common development differences seen in younger siblings of children with ASD are delays in social-communication development (including reduced eye contact, extreme shyness with unfamiliar persons, and delayed onset of gestures and speech). Some younger siblings also show delays in cognitive and motor abilities, as well as attentional and behavioral problems.
Q2. How can I understand what is happening?

CNVs conferring risk of autism or schizophrenia affect cognition in controls

February 4, 2014

Differences in the right inferior longitudinal fasciculus but no general disruption of white matter tracts in children with autism spectrum disorder

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Patches of disorganization in the neocortex of children with autism
Q3. What caused this to happen and can it be prevented?

Prevalence and neonatal factors associated with autism spectrum disorders in preterm infants
Kuzniewicz MW, Wi S, Qian Y, Walsh EM, Armstrong MA, Croen LA.

A SWI/SNF- related autism syndrome caused by de novo mutations in ADNP

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A higher mutational burden in females supports a "female protective model" in neurodevelopmental disorders
Jacquemont S, Coe BP, Hersch M, Duyzend MH, Krumm N, Bergmann S, Beckmann JS, Rosenfeld
Q4. Which treatments and interventions will help?

Preschool-based social communication treatment for children with autism: 12-month follow-up of a randomized trial
Kaale A, Fagerland MW, Martinsen EW, Smith L.

Two to Ten Years: Developmental Trajectories of Joint Attention in Children With ASD Who Received Targeted Social Communication Interventions
Gulsrud AC, Hellemann GS, Freeman SF, Kasari C.

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February 2014

Mitigation of sociocommunicational deficits of autism through oxytocin-induced recovery of medial prefrontal activity: a randomized trial

Q5. Where can I turn for services?

Health care experiences and perceived financial impact among families of children with an autism spectrum disorder
Zablotsky B, Kalb LG, Freedman B, Vasa R, Stuart EA.

Economic burden of childhood autism spectrum disorders
Lavelle TA, Weinstein MC, Newhouse JP, Munir K, Kuhlthau KA, Prosser LA.

| TABLE 4 Summary of the Regression-Adjusted Difference in Costs for Children With ASD Compared With Children Without ASD |
|-------------------------------------------------|-------------|-----------------|-----------------|
| Category                                        | Total costs, $ | 95% CI          | Out of pocket costs, $ | 95% CI          |
| Health care                                     | 3020         | 1017 to 4259    | 182              | –6 to 299       |
| Total aggregate non–health care                 | 14 061       | 4390 to 24 302  | –112             | –715 to 749     |
| School                                          | 8610         | 6595 to 10 421  | –462             | –3496 to 189    |
| ASD-related therapy and other family-coordinated services | 350         | –76 to 972      | 81               | –318 to 523     |
| Time                                            | 5089         | –1672 to 11 936 | —                | —               |

*Adjusted for child gender, age, race/ethnicity, insurance status, household income, geographic region, urban/rural classification, and the presence of a comorbidity not related to ASD.*
Q6. What does the future hold, particularly for adults?

Cognitive and language skills in adults with autism: a 40-year follow-up
Howlin P, Savage S, Moss R, Tempier A, Rutter M.

Employment outcomes of transition-aged adults with autism spectrum disorders: a state of the States report
Burgess S, Cimera RE.

Quality of life in autism across the lifespan: A meta-analysis.
van Heijst BF, Geurts HM.

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Q7. What other infrastructure and surveillance needs must be met?


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Transcriptional landscape of the prenatal human brain.