SESSION I: Incorporating Heterogeneity Into Autism Care and Research: A Multi-Spectra Approach

Jeremy Veenstra-VanderWeele
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Course Materials
The purpose of these materials is to provide an introduction to this INSAR Institute session on heterogeneity in Autism Spectrum Disorder. The materials are designed to provide trainees with some background prior to the webinar, in order to get the most educational benefit from the session. Toward this objective, we have prepared the following: (1) learning objectives for this session; (2) some key terms and concepts; (3) and some recommended resources. These materials could be considered “prerequisites” in preparing for this session.

In collaboration with Jeremy Veenstra-VanderWeele, these materials were developed by Alicia Montgomery (pediatrician, and doctoral student at the University of New South Wales Australia; alicia.montgomery@health.nsw.gov.au), and Tawny Tsang (Postdoctoral Research Associate at Yale Child Study Center; tawny.tsang@yale.edu). Feel free to contact us with questions/comments.

Register for this course and other sessions in this series at https://www.autism-insar.org/events
Learning Objectives

The INSAR Institute for Autism Research was established in direct response to requests from early career researchers (graduate students, postdocs, etc.), for further training opportunities in multidisciplinary areas. The INSAR Institute priorities are to provide: (1) freely available; (2) multidisciplinary training platform for young scientists and others from various backgrounds that; (3) allows for international participation. The INSAR Institute covers broad topics and is meant for people who are not experts in the topic area. It is offered over a free web platform, and allows researchers from around the world to connect with the presenter(s). The overarching goal of the INSAR Institute is to expose junior scientists to topics they are not currently engaged in, with the hope that basic scientists and clinical scientists could learn from each other to ultimately advance the understanding of autism.

The current session, ‘Incorporating heterogeneity into autism care and research: a multi-spectra approach’, is led by Dr. Jeremy Veenstra-VanderWeele, Director of the Division of Child and Adolescent Psychiatry at Columbia University, New York.

At the conclusion of this session, participants will:

1. Understand the range of ways in which Autism Spectrum Disorder can present, and the range of co-occurring psychiatric and medical issues commonly seen in this population.
2. Discuss that Autism Spectrum Disorder can be conceptualized as an ‘array of spectra’ rather than just a single spectrum.
3. Identify that associated neurological and genetic disorders are one of the first issues to consider when assessing Autism Spectrum Disorder.
4. Identify that cognitive and language development is the main target of behavioral and educational treatments in ASD, and is the first step for all children with ASD.
5. Discuss the spectra of social interest, restricted interests, compulsivity, attention, emotion regulation, and anxiety as domains that predict adaptive function and distress.
6. Identify the perils and promises of treatments that target the whole person, and the concept of ‘inclusive’ versus ‘personalized’ approaches to treatment.
7. Understand the “touchpoints in development” perspective on care across the lifespan.
**Key Terms and Concepts**

**heterogeneity**

/ˌhɛt(ə)rə(ʊ)dʒɪˈniːti/

*noun*

The quality or state of being diverse in character or content.

**Precision Medicine**

Precision medicine is an emerging approach for treating specific conditions, that considers individual variability in genes, environment, and lifestyle for each person with that condition. This approach aims to predict more accurately which treatment and prevention strategies for a particular condition will work in which subgroups of people with that condition. A precision medicine approach is in contrast to a ‘one-size-fits-all’ approach, in which treatment strategies are developed for the population of individuals with the condition overall.


**‘Touchpoints in Development’ – a perspective of care across the lifespan.**

A “touchpoints in development” perspective on care across the lifespan emphasizes community engagement, mental health, sexual development, and constructing a meaningful life that contains moments of joy.

The term originates from the developmental theoretical work of late T. Berry Brazelton, Professor Emeritus of Pediatrics at the Harvard Medical School and founder of the Child Development Unit at Children’s Hospital, Boston. The Touchpoints model was originally developed for early childhood development in the primary health-care setting, but has wide application across a variety of settings.

Touchpoints are periods of transition during which spurts in development result in disruption in the family system. The succession of touchpoints across the lifespan can often be anticipated. Foreknowledge of these touchpoints and strategies for dealing with them can reduce the negative impact associated with these transitions, and optimize successful gains in independence, mental health, and quality of life.

**Supplemental Readings**

