Day 1: Monday, September 18, 2017 8:00 AM - 5:30 PM

<table>
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<tr>
<th>Time</th>
<th>Session</th>
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| 8:00 a.m. | Introduction and Workshop Goals  
Voula Osganian, MD, ScD, National Institute of Diabetes and Digestive and Kidney Diseases |
| 8:15 a.m. | Welcoming Remarks  
Griffin P. Rodgers, MD, MACP, National Institute of Diabetes and Digestive and Kidney Diseases |

**Session 1: Scope of the Problem: Severe Obesity and the Adolescent**  
Moderator: Robert Kuczmarski, PhD, National Institute of Diabetes and Digestive and Kidney Diseases

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| 8:30 a.m.| Epidemiology of Severe Obesity in Adolescents  
Cynthia Ogden, PhD, Centers for Disease Control and Prevention                                           |
| 8:50 a.m.| Adolescent Development  
Margaret Zeller, PhD, Cincinnati Children's Hospital Medical Center                                     |
| 9:10 a.m. | Question and Answer Panel                                                                               |

9:40 a.m. MORNING BREAK

**Session 2: Biopsychosocial and Behavioral Factors that are Associated with the Development of Severe Obesity in Adolescents**  
Moderator: Deborah Hyman-Young, PhD, Office of Behavioral and Social Sciences Research Office of the Director

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| 10:10 a.m.| Psychosocial, Behavioral and Environmental Risk Factors  
Elissa Jelalian, PhD, Alpert Medical School of Brown University                             |
| 10:35 a.m.| Genetics and Epigenetics  
Sadaf Farooqi, MBChB, PhD, University of Cambridge                                              |
11:00 a.m. Hedonic Eating, Food Reward and Appetite  
Ania Jastreboff, MD, PhD, Yale University School of Medicine

11:25 a.m. Question and Answer Panel

**11:55 a.m. LUNCH BREAK**

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**Session 3: Treatment Approaches for Severe Obesity in Adolescents**  
Moderator: Charlotte Pratt, PhD, National Heart, Lung, and Blood Institute

12:45 a.m. Lifestyle and Behavioral Interventions  
*Marsha Marcus, PhD, University of Pittsburgh School of Medicine*

1:05 p.m. Pharmacologic Interventions  
*Aaron Kelly, PhD, University of Minnesota Medical School*

1:25 p.m. Surgical Interventions  
*Thomas Inge, MD, PhD, Children's Hospital Colorado*

1:45 p.m. Emerging Therapies  
*Lee Kaplan, MD, PhD, Harvard Medical School*

2:05 p.m. POWER Clinical Registry- Clinical Experience and Health Outcomes  
*Shelley Kirk, PhD, RD, LD, Cincinnati Children's Hospital Medical Center*

2:25 p.m. Developing and testing a Chronic Care Model for the adolescent with severe obesity  
*Stephen Cook, MD, MPH, University of Rochester Medical Center*

2:45 p.m. Question and Answer Panel

**3:15 p.m. AFTERNOON BREAK**

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**Session 4: Biomarkers and Phenotypes that Predict Response to Treatment in Adolescents with Severe Obesity**  
Moderator: Barbara Linder, MD, Ph.D., National Institute of Diabetes and Digestive and Kidney Diseases

3:45 p.m. Eating Behaviors and Psychological Phenotypes/Factors  
*Kerri Boutelle, PhD, University of California, San Diego School of Medicine*

4:05 p.m. Physical Activity Phenotypes/Factors  
*Molly Bray, PhD, RD, LD, The University of Texas at Austin*
4:25 p.m. Biomarkers  
Charles Burant, MD, PhD, University of Michigan

4:45 p.m. Question and Answer Panel

5:15 p.m. Closing Remarks Day 1 from Co-Chairs

Day 2: Tuesday, September 19, 2017 8:00 AM -12:30 PM

8:00 a.m. Opening Remarks and Goals for Day 2  
Voula Osganian, MD, ScD, National Institute of Diabetes and Digestive and Kidney Diseases

8:15 a.m. Breakout Sessions  
Working Groups to discuss and report on summary of research gaps and opportunities from each topic area

1. Epidemiology and Subgroups at Risk including Disparities and Special Populations  
   Leader: Cynthia Ogden, PhD, Centers for Disease Control and Prevention  
   Facilitator: Pamela Thornton, PhD, National Institute of Diabetes and Digestive and Kidney Diseases

2. Biopsychosocial and Behavioral Factors Associated with the Development of Severe Obesity  
   Leader: Elissa Jelalian, PhD, Alpert Medical School of Brown University  
   Facilitator: Mary Evans, PhD, National Institute of Diabetes and Digestive and Kidney Diseases

3. Treatment Approaches for Severe Obesity in Adolescents  
   Leader: Stephen Cook, MD, MPH, University of Rochester Medical Center  
   Facilitator: Barbara Linder, MD, PhD, National Institute of Diabetes and Digestive and Kidney Diseases

4. Biomarkers and Phenotypes that Predict Response to Treatment  
   Leader: Charles Burant, MD, PhD, University of Michigan  
   Facilitator: Sue Yanovski, MD, National Institute of Diabetes and Digestive and Kidney Diseases

9:30 a.m. MORNING BREAK

9:45 a.m. Presentations and Full Panel Discussion  
Breakout session presentations and full panel discussion to present recommendations for future research needs to develop precision medicine approaches for the treatment of severe obesity in adolescents

9:45 a.m. Breakout Session Subgroup Presentations by Leaders (15 min each)
10:45 a.m.  Full Group Panel Discussion led by Co-Chairs

11:45 a.m.  Workshop Summary and Recommendations with Concluding Remarks from Co-Chairs

12:15 PM  Wrap up and Adjournment

Voula Osganian, MD, ScD, National Institute of Diabetes and Digestive and Kidney Diseases