## Appendix 1.

- In addition to the authors, other members of the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development Maternal-Fetal Medicine Units Network are as follows:
- Northwestern University, Chicago, IL W. Grobman, G. Mallett, M. Ramos-Brinson, A. Roy, L. Stein, P. Campbell, C. Collins, N. Jackson, M. Dinsmoor (NorthShore University HealthSystem), J. Senka (NorthShore University HealthSystem), K. Paychek (NorthShore University HealthSystem), A. Peaceman
- Columbia University, New York, NY M. Talucci, M. Zylfijaj, Z. Reid (Drexel U.), R. Leed (Drexel U.), J. Benson (Christiana H.), S. Forester (Christiana H.), C. Kitto (Christiana H.), S. Davis (St. Peter's UH.), M. Falk (St. Peter's UH.), C. Perez (St. Peter's UH.)
- University of Utah Health Sciences Center, Salt Lake City, UT K. Hill, A. Sowles, J. Postma (LDS Hospital), S. Alexander (LDS Hospital), G. Andersen (LDS Hospital), V. Scott (McKay-Dee), V. Morby (McKay-Dee), K. Jolley (UVRMC), J. Miller (UVRMC), B. Berg (UVRMC)
- University of North Carolina at Chapel Hill, Chapel Hill, NC K. Dorman, J. Mitchell, E. Kaluta, K. Clark (WakeMed), K. Spicer (WakeMed), S. Timlin (Rex), K. Wilson (Rex)
- University of Texas Southwestern Medical Center, Dallas, TX K. Leveno, L. Moseley, M. Santillan, J. Price, K. Buentipo, V. Bludau, T. Thomas, L. Fay, C. Melton, J. Kingsbery, R. Benezue
- University of Pittsburgh, Pittsburgh, PA H. Simhan, M. Bickus, D. Fischer, T. Kamon (deceased), D. DeAngelis
- MetroHealth Medical Center-Case Western Reserve University, Cleveland, OH B. Mercer, C. Milluzzi, W. Dalton, T. Dotson, P. McDonald, C. Brezine, A. McGrail
- *The Ohio State University, Columbus, OH* C. Latimer, L. Guzzo (St. Ann's), F. Johnson, L. Gerwig (St. Ann's), S. Fyffe, D. Loux (St. Ann's), S. Frantz, D. Cline, S. Wylie, J. Iams
- *University of Alabama at Birmingham, Birmingham, AL* M. Wallace, A. Northen, J. Grant, C. Colquitt, D. Rouse, W. Andrews
- University of Texas Medical Branch, Galveston, TX J. Moss, A. Salazar, A. Acosta, G. Hankins
- Wayne State University, Detroit, MI N. Hauff, L. Palmer, P. Lockhart, D. Driscoll, L. Wynn, C. Sudz, D. Dengate, C. Girard, S. Field
- Brown University, Providence, RI P. Breault, F. Smith, N. Annunziata, D. Allard, J. Silva, M. Gamage, J. Hunt, J. Tillinghast, N. Corcoran, M. Jimenez
- The University of Texas Health Science Center at Houston, McGovern Medical School-Children's Memorial Hermann Hospital, Houston, TX– F. Ortiz, P. Givens, B. Rech, C. Moran, M. Hutchinson, Z. Spears, C. Carreno, B. Heaps, G. Zamora
- Oregon Health & Science University, Portland, OR J. Seguin, M. Rincon, J. Snyder, C. Farrar, E. Lairson, C. Bonino, W. Smith (Kaiser Permanente), K. Beach (Kaiser Permanente), S. Van Dyke (Kaiser Permanente), S. Butcher (Kaiser Permanente)

Kominiarek MA, Smid MC, Mele L, Casey BM, Sorokin Y, Reddy UM, et al. Child neurodevelopmental outcomes by prepregnancy body mass index and gestational weight gain. Obstet Gynecol 2018; 132. The authors provided this information as a supplement to their article.

©2018 American College of Obstetricians and Gynecologists.

- *The George Washington University Biostatistics Center, Washington, D.C.* E. Thom, M. Rice, Y. Zhao, P. McGee, V. Momirova, R. Palugod, B. Reamer, M. Larsen, V. Bhandaru
- *Eunice Kennedy Shriver National Institute of Child Health and Human Development, Bethesda, MD* C. Spong, S. Tolivaisa
- MFMU Network Steering Committee Chair (*Medical University of South Carolina, Charleston, SC*) J. P. VanDorsten, M.D.

# Appendix 2. Sample Calculations for Early, Late, and Total Weight Gain Based on Study-Measured Weights

**Example:** A woman with a pre-pregnancy BMI of 25.1 kg/m2 has the following information:

Pre-pregnancy weight is 165 lbs. Baseline visit at 17 weeks – measured study weight is 170 lbs. Next study visit at 22 weeks - measured study weight is 198 lbs. Last study visit at 37 weeks – measured study weight is 215 lbs.

## **IOM 2009 Guidelines:**

For all BMI categories, the first trimester GWG range is 1.1 - 4.4 lbs.

2<sup>nd</sup> and 3<sup>rd</sup> trimester GWG rate varies by BMI category (normal weight 0.8-1 lbs./week; overweight 0.5-0.7 lbs./week; obese 0.4-0.6 lbs./week)

## For early gestational weight gain ( $\leq 20$ weeks) exposure:

At 17 weeks, weight gain was 5 lbs. higher than pre-pregnancy weight (170 lbs. – 165 lbs. = 5 lbs.). The 17 weeks is divided into two parts with 13 weeks for 1<sup>st</sup> trimester weight and 4 weeks for second trimester weight.

According to guidelines, the recommended weight gain for overweight BMI category (BMI 25.0-29.9) for this time period is the following:

1.1 + (0.5\* 4 weeks) to 4.4 + (0.7\*4 weeks) = 3.1 - 7.2 lbs.

Therefore, 5 lbs. is within this range, so early weight gain is "adequate".

#### For late gestational weight gain (> 20 weeks) exposure:

Between 37 weeks (last study visit) and 22 weeks (first visit after 20 weeks study visit), weight gain was 17 lbs. (215 lbs. - 198 lbs. = 17 lbs.)

According to the guidelines, the recommended weight gain for overweight BMI category (BMI of 25.0-29.9) for this time period of 15 weeks during the second and third trimester is the following:

(0.5\* 15 weeks) to (0.7\*15 weeks) = 7.5 to 10.5 lbs.

The weight gain of 17 lbs. is higher than the range, so the weight gain is "excessive".

#### Total weight gain exposure:

Total weight gain based on the last study visit at 37 weeks is 50 lbs (215 lbs. – 165 lbs. = 50 lbs.). The total time period in the  $2^{nd}$  and  $3^{rd}$  trimesters is 24 weeks (37 – 13 = 24 weeks).

According to guidelines, the recommended weight gain for overweight BMI category (BMI of 25.0-29.9) for this time period is the following:

Kominiarek MA, Smid MC, Mele L, Casey BM, Sorokin Y, Reddy UM, et al. Child neurodevelopmental outcomes by prepregnancy body mass index and gestational weight gain. Obstet Gynecol 2018; 132. The authors provided this information as a supplement to their article. ©2018 American College of Obstetricians and Gynecologists.

1.1 + (0.5\* 24 weeks) to 4.4 + (0.7\* 24 weeks) = 13.1 to 21.2 lbs.

The total weight gain of 50 lbs. is higher than the range, so the weight gain is "excessive".

Kominiarek MA, Smid MC, Mele L, Casey BM, Sorokin Y, Reddy UM, et al. Child neurodevelopmental outcomes by prepregnancy body mass index and gestational weight gain. Obstet Gynecol 2018; 132. The authors provided this information as a supplement to their article. ©2018 American College of Obstetricians and Gynecologists.