NHLBI MMM Program Updates

- Maternal and women’s health priorities span all objectives of the NHLBI Strategic Vision
- NHLBI partners with NICHD, NIDDK, ORWH, and OBSSR on many maternal health programs.

- Objective 1: Normal Biology
  - Resilience (e.g., hormonal influences on HLBS diseases; vascular biology of hypertension in pregnancy; sex hormone induced thromboembolism in premenopausal women RFA-HL-18-003)

- Objective 2: Pathobiology, Onset, & Progression of HLBS Diseases
  - Disease mechanisms and presentation such as preeclampsia

- Objective 3: Population Differences
  - Studies of sex differences— sex-specific studies on conditions more prevalent/differentially in affecting women
  - Risk prediction and treatment (e.g., adverse pregnancy outcomes and CV health, nuMoM2b Heart Health Study — precision medicine and trans-omics research; cardiomyopathy and preeclampsia research)

- Objective 4: Precision Medicine
  - Biomarkers of HLBS disease development; LIFE-Moms; NuMoM2B Sleep-Disordered Breathing study

- Objective 5: Novel Diagnostics & Therapeutics

- Objective 6: Clinical & Implementation Research
  - Clinical science; sex-specific analyses; inclusion gaps; eliminate care/management disparities

- Objective 7: Data Science
  - Genome-phenome activities (e.g., DataStage, TOPMed)
  - Meta-analyses of Clinical Trial endpoints in women

- Objective 8: Workforce & Resources
  - Multidisciplinary/team science (e.g., trans-NIH collaboration)
Focus of Maternal Health Programs: Women face increased risk of cardiovascular disease during and after pregnancy due to disruptions in sleep, blood pressure, and metabolism.

- **Chronic Hypertension and Pregnancy (CHAP)** - Large multi-center trial evaluating the efficacy and safety of treating pregnant women for mild chronic hypertension (>140/90 mmHg)

- **nuMoM2b Heart Health Study** (NHLBI, NICHD, OBSSR, ORWH, ODP) - Effect of pregnancy outcomes (normal, preeclampsia, gestational diabetes, preterm birth) on the future risk of cardiovascular disease in women

- **NuMoM2b Sleep-Disordered Breathing Study** (NHLBI and NICHD) - Association between sleep disordered breathing and preeclampsia, hypertensive disorders of pregnancy, and gestational diabetes mellitus

- **Hispanic Community Health Study/Study of Latinos (SOL)** - Longitudinal cohort study of self-identified Mexican Americans, Puerto Ricans, Cuban Americans, and Central/South Americans; pregnancy-related complications (including pre-eclampsia, eclampsia, and gestational diabetes) were added as outcome measures in 2013

- **Effect of Preeclampsia on Cardiovascular Health (EPOCH)** - The goal of the study is to improve cardiovascular health in women, by learning how pregnancy affects heart disease later in life