

## Reinventing Preconception Health through the Lens of Precision medicine

Dr. LaReesa Ferdinand

Pre-conception counseling is a meeting with a health-care professional generally a physician or midwife by a woman before attempting to become pregnant. It generally includes a pre-conception risk assessment for any potential complications of pregnancy as well as modifications of risk factors, such as increasing folic acid intake to reduce the risk of neural tube defects and counseling on smoking cessation, alcohol reduction, and medications that may compromise fetal development. Physicians, midwives and baby experts recommend that a woman visit them as soon as the woman is contemplating having a child, and optimally around 3 to 6 months before actual attempts are made to conceive. This time frame allows a woman to better prepare her body for successful conception and pregnancy, and allows her to reduce any health risks which are within her control. Agencies such as the have developed screening tools that healthcare providers can use with their patients. In addition, obstetricians or midwives have developed comprehensive check-lists and assessments for the woman who is planning to become pregnant.

In one sense, pre-conception counseling and assessment can be compared to a well-baby visit in which a baby is screened for normal health, normal development, with the benefit of identifying emerging problems that may have gone unnoticed in an infant. For a woman, the Pre-Conception Counseling Assessment and Screening is intended to assess normal health of a child-bearing woman, while at the same time identifying: Existing or emerging illness or disease which may have gone undetected before, and Existing risks for the woman who may become pregnant, and Existing risks which may affect a fetus if the woman does become pregnant.

Precision Medicine alludes to the fitting of clinical treatment to the individual qualities of every patient. It doesn't actually mean the making of medi-

cations or clinical gadgets that are novel to a patient, but instead the capacity to characterize people into subpopulations that vary in their vulnerability to a specific infection, in the science or guess of those ailments they may create, or in their reaction to a particular treatment. Preventive or remedial intercessions would then be able to be focused on the individuals who will profit, saving cost and reactions for the individuals who won't. Despite the fact that the term 'customized medication' is additionally used to pass on this importance, that term is some of the time confounded as suggesting that interesting medicines can be intended for every person.

The maternal death rate in the United States has garnered increased interest and attention in the media over the past years. The Centers for Disease Control and Prevention (CDC) states for every American woman who dies from childbirth, 70 nearly die. That adds up to more than 50,000 women who suffer "severe maternal morbidity" from childbirth each year. This creates extended concerns especially since almost 50% of pregnancies are unplanned.

Preconception health is a pivotal time and often overlooked part of women's health. This period of time creates opportunities to evaluate health risks that potentially compromise the health of mother and baby in the future. So why not plan pregnancy more strategically?

Epigenetics involves modifications of gene expression without changing the DNA blueprint. Transgenerational epigenetics through inheritance reflects epigenetic marks acquired on DNA through one generation and passed to the next. Looking through the lens of precision medicine utilizes the evolving field of epigenetics to improve probability of creating desired outcomes. Precision medicine offers the opportunity to focus on daily integration of uniquely fitted lifestyle recommendations of nutrition, sup-

plementation, exercise and the mitigation of stress. Understanding the scope of these effects on the future mothers' genetic makeup can, in turn, improve the probability of improved maternal and offspring outcomes.

**Biography:**

Dr. LaReesa Ferdinand is a board certified obstetrician and gynecologist and an integrative women's health specialist with a wealth of experience for over 10 years. Her mission is to redefine health and wellness as a whole-body connection focusing on restored hormone balance and solutions that meet the needs of every woman's lifestyle. Her results driven solutions are highly sought after in her clinical practice and speaking engagements.

It is her passion to assist women in bridging the gap to understand the missed opportunities in the typical doctor-patient exchange. She helps women restore hormone balance and seek "best fit" solutions through a more personalized "Whole-istic" approach. Her expertise involves creating strategies combining

parts of her conventional medical background with advanced skill sets of metabolic and nutritional lifestyle medicine.

Outside of attaining her medical doctorate and residency training, Dr LaReesa has also completed an Emerging Infectious Disease Laboratory Fellowship at the Centers for Disease Control and Prevention, training in anti-aging, metabolic, nutritional Medicine, and Epigenetics Coaching.

She is married with one child and enjoys relaxing with family, reading, traveling, and mentoring young women.