

A Research Approach to Preventing Preterm Birth Focused on What Works

Why is it that one group of women with similar racial and ethnic backgrounds experiences rates of preterm birth that are dramatically lower than another group with the same racial and ethnic characteristics? It's a question that has confounded doctors and researchers for years, and it lies at the heart of what Dr. Irina Buhimschi, Director of the Center for Perinatal Research at The Research Institute at Nationwide

Children's Hospital, and Theme 5 leader, hopes to find out.



Dr. Irina Buhimschi,
Professor of Pediatrics,
Director of the Center for
Perinatal Research at The
Research Institute at
Nationwide Children's
Hospital

Because preterm birth results in a lifetime of health challenges, it impairs the quality of life of children and their families. In Ohio, one out of every eight babies is born preterm—more than 15,000 a year. The study funded by March of Dimes will enable Dr. Buhimschi's team to attain their highest goal: for everyone to be born with equal opportunity.

It is one of the reasons Dr. Buhimschi became an obstetrician in the first place. "It is the only medical specialty where there is happiness and patients are mostly healthy," says Dr. Buhimschi. "An obvious exception—preterm birth.

"We can put rockets on the moon but we don't understand why or how nine months in utero makes a new person," she adds. So she turned to research. "Practicing medicine allowed me to impact one person at a time; research allows me to impact a whole community."

Preterm birth is the birth of an infant prior to 37 weeks of pregnancy.

Why are Preterm Rates of Somali Women in U.S. so Low?

African American women are twice as likely as women from any other racial or ethnic background to deliver a preterm baby. This racial disparity is well documented, but not well understood, as it remains an issue even when access to health care, behavior, education, or socioeconomic status are taken out of the equation.

continued

Premature birth is one of the most intractable health challenges in modern medicine.

- One in nine babies in the United States is born prematurely each year
- Premature birth is the leading cause of newborn death in children from birth to age five
- Nearly half a million babies are affected annually
- Premature birth costs society at least \$26 billion a year, according to the Institute of Medicine
- 15 million children are born prematurely every year worldwide
- Premature birth often leads to a lifetime of significant health challenges

The consequences of preterm birth extend to the entire family in terms of healthcare costs and impaired quality of life for the parents and siblings.

The March of Dimes Prematurity Research Center Ohio Collaborative is a robust, integrated cross-institutional effort among major medical and research centers in Ohio. Its goal is to develop fundamental new insights into the biology of human pregnancy and the disease mechanisms of preterm birth to decrease the rate of prematurity and its associated complications. The March of Dimes intends to invest \$10 million over five years to support the Ohio Collaborative research effort.

To accomplish its goal the Ohio Collaborative has developed five interrelated theme areas, each bringing together renowned thinkers, researchers, physicians and top academics to focus on key aspects of the underlying causes of preterm birth.

There is, however, a minority population of African descent with a notably low rate of preterm birth, as low as or lower than women of European ancestry—Somalis.

Why is this group the exception? That is what a multi-disciplinary team led by Dr. Buhimschi intends to find out. Because identifying what makes Somali women less susceptible to preterm birth will help develop strategies to improve

Ohio has the second largest Somali community in the country, with an estimated 45,000+ Somalis who have arrived in waves of refugees fleeing Somalia's civil war. The large majority of women of Somali descent in Ohio live and work in Franklin County.

outcomes for African American, and all, women. That is the “positive deviance” approach: to study what works so it can be replicated.

“We believe a variety of genetic, environmental and social factors are involved in preterm birth. From stress and resilience,

to diet and lifestyle, to vaginal and gut bacteria, we will comprehensively study why Somali-American women have lower rates of preterm birth. Our hope is to develop an evidence-based plan of action for lowering rates of preterm birth in other populations,” said Dr. Buhimschi.



Partners in this research collaborative include Nationwide Children’s Hospital and The Ohio State University Wexner Medical Center; the University of Cincinnati and Cincinnati Children’s Hospital Medical Center; Case Western Reserve University and University Hospitals MacDonald Women’s Hospital and Rainbow Babies & Children’s Hospital; and MetroHealth System.

For more information on how you can be a part of this effort, please contact

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