

Highmark Delaware and Nemours Children's Health System Join Collaborative to Study Effects of COVID-19 on Preterm Birth

Wilmington, Del. (January 28, 2021) — According to the World Health Organization, worldwide one in ten babies are born before 37 weeks each year. While researchers don't fully know why babies are born prematurely, what is known is the many long-term and lasting effects of a premature birth.

A baby born prematurely may have more health problems at birth and later in life. They can have intellectual and developmental disabilities, or problems with their lungs, brain, eyes, and other organs, according to the March of Dimes. Nemours has previously led work to successfully understand and treat preterm birth and its related complications in partnership with the other hospital systems and organizations in the region, notably Christiana Care and the March of Dimes. But preventing preterm birth has been a larger challenge.

During the COVID-19 pandemic however, studies are showing that pre-term birth rates are actually down.

"I began to hear anecdotal evidence of a drop in pre-term births here in Delaware," explains Jay Greenspan, MD, a neonatologist at Nemours duPont Hospital for Children. "If we can actually document that the rate is dropping, the next question we need to ask is 'why?' Could a silver lining of the COVID-19 pandemic really be a drop in pre-term births? If so, what's the cause, what can we learn, and how do we apply that post-pandemic?"

What started as a question blossomed into a consortium involving some of the country's most esteemed institutions and researchers, known as the [AQUEDUCT Perinatal Research Collaborative](#). This group includes researchers from Nemours Children's Health System, Children's Hospital of Philadelphia (CHOP), Yale University, and Northwestern University. The study is being funded by \$300,000 in grants from Highmark Blue Cross Blue Shield Delaware's donor-advised fund, BluePrints for the Community, and Independence Blue Cross.

"Highmark was really intrigued by this finding," said Nick Moriello, President of Highmark Blue Cross Blue Shield Delaware. "As Delaware's largest health insurer, it is critical we understand factors that impact the health of those we serve, in order to ultimately improve the way we approach care. We have a great relationship with Nemours, and for our two Delaware-based organizations to be able to band together with other health leaders is really remarkable."

The research builds on earlier analyses Heather H. Burris, MD, an attending neonatologist at CHOP and co-lead investigator of the research, and colleagues performed using local data on the impact of COVID-19 on preterm births and stillbirths in Philadelphia. In this new collaborative, the members of AQUEDUCT (Advancing Quality, Utilization, and Equity for the Dyad: Understanding Care Together) will analyze a national cohort of patients insured by Highmark who were pregnant and/or delivering between 2018 and 2020, with the COVID-19 era defined as beginning in March 2020.

"What we want to analyze is whether the COVID-19 pandemic actually has had an impact on birth outcomes and prenatal care," says Dr. Greenspan also a co-lead investigator of the research. "If there is a notable drop in pre-term births, this data can also help us see where the drop is occurring – does it cross socioeconomic lines or specific demographics such as age, race, and geography. This unique collaboration of payers and esteemed academic health care centers coming together to answer important questions like these is really unprecedented."

The researchers will look at both spontaneous and medically-indicated preterm births as well as stillbirth rates, using data from the large and diverse AQUEDUCT cohort to assess the impact of the pandemic on these outcomes, which could provide important information about the drivers of preterm birth. The research team will also examine how often patients attended prenatal visits and what tests they underwent at each appointment.

In analyzing the data, the researchers intend to assess the demographics of the mother, as well as infant health metrics and hospital characteristics, including whether it is an urban or rural hospital and has a neonatal intensive care unit (NICU).

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About Nemours Children's Health System. Nemours is an internationally recognized children's health system that owns and operates the Nemours/Alfred I. duPont Hospital for Children in Wilmington, Del., and Nemours Children's Hospital in Orlando, Fla., along with outpatient facilities in five states, delivering pediatric primary, specialty, and urgent care. Nemours also powers the world's most-visited website for information on the health of children and teens, KidsHealth.org and offers on-demand, online video patient visits through Nemours CareConnect.

Established as The Nemours Foundation through the legacy and philanthropy of Alfred I. duPont, Nemours provides pediatric clinical care, research, education, advocacy, and prevention programs to families in the communities it serves.

About Highmark Blue Cross Blue Shield Delaware

Highmark Blue Cross Blue Shield Delaware serves approximately 441,000 members through the company's health care benefits business. It is an influential company in the market generating an economic impact of \$135 million and supporting

more than 1,000 direct and indirect jobs across the state. Highmark Blue Cross Blue Shield Delaware is an independent licensee of the Blue Cross and Blue Shield Association, an association of independent Blue Cross and Blue Shield companies. For more information, visit www.highmarkbcbsde.com.

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