



**May 18, 2023**

## **Exploring Asthma Disparities in Maternal Health**

Happy Thursday, Mount Sinai Community –

In this week's Bulletin, we're continuing to dig into Black maternal health disparities with a focus on **asthma**, which is the most common chronic disease that affects pregnancy. In fact, asthma creates complications in [up to 12 percent](#) of pregnancies annually—and while many people may not realize it, the condition increases the risk of serious issues like preterm birth, gestational diabetes, and [preeclampsia](#), which can be deadly, especially for Black women.

Nationwide, the burden of asthma falls [disproportionately](#) on people of color, who face higher rates of asthma diagnosis, hospitalization, and death. While the causes of this disparity are [complex](#), the close connection between race, socioeconomic status, social determinants of health, and structural racism plays a role—with communities of color, for example, [more likely](#) to be exposed to high levels of airborne pollutants.

Given the sharp, overlapping racial disparities in both asthma and maternal health, addressing the intersection of asthma and pregnancy is vital—and Mount Sinai is leading those efforts.

Teams at the Icahn School of Medicine at Mount Sinai, **led by Angela Bianco, MD, Director of Maternal-Fetal Medicine in the Raquel and Jaime Gilinski Department of Obstetrics, Gynecology and Reproductive Science; Sonali Bose, MD, MPH, Associate Professor of Pulmonary, Critical Care and Sleep Medicine, and Pediatrics; and Hsiao-Hsien Leon Hsu, ScD, Assistant Professor of Environmental Medicine and Public Health**, are conducting

research to better understand the connection between asthma, maternal health, and race. This work will explore how structural forces affect individual patients and, ultimately, uncover preventative measures that can decrease asthma's effect on pregnant patients of color. To learn more, we spoke with **Sonali** and **Rachel Meislin, MD, Graduate Fellow in Maternal-Fetal Medicine.**



Angela Bianco, MD



Sonali Bose, MD, MPH



Hsiao-Hsien Leon Hsu, ScD

Sonali and Rachel are exploring the effect of environmental exposures—one of the [most common causes](#) of asthma morbidity—on pregnant patients. Their work includes looking at the pollutants created by everyday household items and activities, like cooking on a gas stove in a poorly ventilated area, using certain cleaning products, or being exposed to second-hand smoke. To connect these findings to real-world impacts, they are providing low-cost sensors to pregnant patients to better understand the effect of these indoor pollutants. Eventually, these findings could lead to recommended changes for patients and their families to decrease the risk during pregnancy.

In addition to studying how indoor pollutants are affecting vulnerable communities, the Mount Sinai Maternal-Fetal Medicine and Pulmonology Interdisciplinary team is examining pregnant patients' asthma symptoms to understand poorly controlled asthma as an underlying cause of worsening health disparities.



Rachel Meislin, MD

“Poorly controlled asthma remains common in our communities and is associated with an increased risk of adverse pregnancy outcomes, including hypertensive disorders of pregnancy, fetal growth restriction, and preterm birth,” **Rachel** said. “We’re hopeful that our investigations will reveal ways to improve asthma health for pregnant patients and inform future targeted interventions to reduce health disparities across generations.”

To monitor the asthma of pregnant patients and better determine risk mitigation interventions, the team is providing remote spirometry measurements to assess lung function, home lung inflammation analysis tools, and remote Asthma Control Test surveys to indicate asthma control and environmental triggers.

We look forward to seeing where this research goes and continuing to dive deeper into related topics for our Maternal Health series next week.

**To suggest a topic, highlight a coworker, or provide feedback on the Bulletins, send us an email at [RoadMap@mountsinai.org](mailto:RoadMap@mountsinai.org)**

All the best,

Angela and Shawn

## Join Us for an Upcoming Event:

### Full list on Mount Sinai Daily

**Center for Asian Equity and Professional Development Town Hall—We invite** all Asian and Asian American and Pacific Islander faculty, staff, and students, and their allies to an interactive town hall where we will discuss taking steps to advance diversity, equity, and inclusion within The Health System. Register here for this virtual and in-person hybrid event on **Thursday, May 18, from 6-7 pm**. Read more on [Mount Sinai Daily](#).

**Let's Connect | Racial Justice At Work—**Join us on **Monday, May 22 at 5 pm** for a *Let's Connect* session on *Racial Justice At Work*. In this session, **Pamela Abner**, Vice President and Chief Diversity Operations Officer for the Mount Sinai Health System, will have an open conversation with **Mary-Frances Winters**, Chief Executive Officer of The Winters Group, to better understand resistance and the importance of racial justice to advance our system's anti-racism efforts. Ms. Winters is the author of a new book titled *Racial Justice at Work*, and her company is guiding our leaders in the implementation of the Road Map strategies. [Click here](#) to register to join the conversation and connect.

**Chats for Change | Social Media: A Tool for Racism and Anti-Racism—**Chats for Change is a production of Icahn Mount Sinai's Racism and Bias Initiative. Join facilitators and [RBixCAP Fellows](#) **Jerrel Catlett, Edward Sarfo, and Tracy Okine** on **May 23 from 12-1 PM** for a conversation on how social media can call out racism, combat hate speech, and promote bystander intervention to make the digital environment safer for us and younger generations while navigating the nuances that may arise. [Register](#) on Zoom.

**A Conversation on Asian and Black Solidarity—**Join the Asian Resource Network Employee Resource Group on **Tuesday, May 23, from noon-1 pm**. This engaging conversation will touch upon topics such as the history of racial dynamics at the intersection of Black and Asian communities, how recent experiences have affected these dynamics, and how relevant these experiences are to the Mount Sinai community. [Click here](#) to register.

**Let's Connect | Reflections of Healing and Hope** Join us on **Thursday, May 25, from 5:30-6:30 pm** for a Let's Connect session, "Reflections of Healing and Hope," to commemorate the third anniversary of George Floyd's death. This virtual session will provide you the opportunity to share your thoughts, reflect on the past three years, and heal in a safe and welcoming space. All employees, faculty, trainees, and students are welcome to join. Register [here](#) to connect.

[Road Map for Action](#)

[Past Bulletins](#)

