

Infant Health

MATTERS

Q: Why is it important that medications and devices be developed specifically for infants?

When it comes to medical innovation, not all patients are the same.

The preterm babies I care for in the NICU, for example, need the highest level of care. They are not “tiny adults.” Yet they are often subjected to smaller doses of “adult” medication or smaller versions of adult devices. This can be dangerous. Measurement errors and inaccurate device readings can lead to poor health outcomes.

I know firsthand that, for the health and safety of my tiny patients, we need innovative technologies tailored to their size and weight.



Mitchell Goldstein, MD
Neonatologist

Q: What’s one example of innovation improving infant health care?

The pulse oximeter. Today, most people know it as the tiny device that slides over your finger and uses light to measure blood oxygen levels. But as recently as the early 1990s, neonatologists had to treat newborn patients using a conventional oximeter, which was developed for adults.

These monitors were unreliable and inadvertently led to some preterm babies receiving too much oxygen, causing blindness in some cases. There were other issues as well. Infants’ motion and reduced blood flow to tiny fingers and toes sometimes prevented these monitors from reading. When the first pulse oximeter adapted for neonates came onto the market, a patient I was caring for became the first life of many saved.

“Tiny patients need innovative technologies tailored to their size and weight.”

Other medical devices, such as ventilators and tubing designed for infants, also prevent avoidable illness and death.

“Measurement errors and inaccurate device readings can lead to poor health outcomes.”

Q: Do you recall a time when safety was critical for a patient’s survival?

Yes, numerous occasions.

I think about a patient of mine who became the first life saved by a pulse oximeter designed for infants. Back then, the oximeter was part of a study, not yet widely accepted and distributed in hospitals. My patient was in critical condition, and the conventional pulse oximeter my team and I were using repeatedly failed to provide an accurate reading of blood oxygen levels. I made a crucial decision to use the “experimental” monitor, which had important modifications to enhance infant safety, and it worked, ultimately saving the infant’s life.

“Innovation and access can go a long way toward saving infant lives.”

Q: How can policymakers encourage the development of more medications and devices for infants?

Policymakers have a lot of options for incentivizing drug development in areas of high need. That includes research grants, patent extensions, tax credits or regulatory incentives like priority review vouchers. We need policymakers to use these tools to encourage optimal infant care and protection.

But policies also have to allow for infants to access these drugs and devices once they’re developed. At some

hospitals, for example, administrators are mandated to purchase medical products from specific manufacturers without considering performance and outcomes data. This can limit access and discourage smaller companies from innovating for infants.

Encouraging competition, promoting innovation and ensuring access can go a long way toward furthering devices and medications for infants—and saving lives.