



Emery Greene Mullen celebrates her second birthday in February. (Photo courtesy Mullen family.)

UNHINDERED

Watching 2-year-old Emery Greene Mullen toddle about with her sister, you would never guess that doctors were once unsure whether she would be able to walk.

In the womb, Emery was diagnosed with the most severe form of spina bifida. Part of her spinal cord formed outside of the spinal column and was protruding through the skin on her back. In the worst cases, the condition can cause difficulty walking, loss of control of the bowel and bladder, as well as hydrocephalus, where fluid builds up in the brain and must be drained with a shunt.

Allee Mullen, Emery's mother, was 21 weeks pregnant when she learned of her baby's condition. As a nurse in the pediatric ICU at UPMC Children's Hospital of Pittsburgh, she understood the implications immediately.

"It was very devastating," she says. "We spent days with doctors."

Allee Mullen and her husband, Kevin Mullen, talked extensively with the surgeons who would later become their daughter's namesakes: Stephen Emery, professor of obstetrics, gynecology and reproductive sciences, who directs the Center for Innovative Fetal Intervention at UPMC Magee-Womens Hospital, as well as Stephanie Greene, associate professor of neurological surgery and director of perinatal neurosurgery at Children's.

The Mullens decided that Allee should undergo surgery to repair Emery's spinal cord before she was born. It would be the first time the UPMC team attempted the in utero procedure.

Though this is a somewhat new approach, a study published Feb. 8, 2021, in *JAMA Pediatrics* affirms that fetal surgery is likely to improve outcomes for children with spina bifida well into their first decade; these children are more likely to walk and perform self-care tasks independently than are children who had postnatal repairs. Pitt's Amy Houtrow, professor and vice chair of physical medicine and rehabilitation, as well as division chief of pediatric rehabilitation medicine at Children's, was the study's lead author.

Emery is doing just fine. Though she has some problems with her bowel and bladder, as well as slightly irregular motor functions, she gets around like most playful 2-year-olds. "She has surpassed all the expectations that everybody—all the doctors and everybody—had for her. And it's so fun to watch," Allee Mullen says. —Sarah Stager