

Colorado Fetal Care Center



2023 OUTCOMES

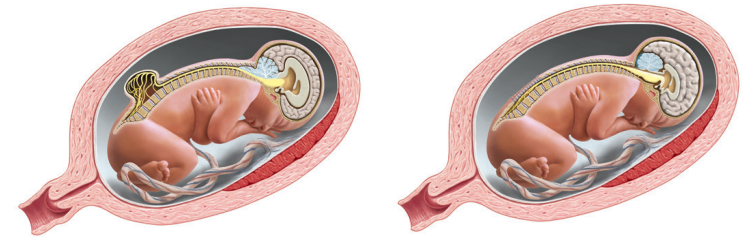
Myelomeningocele





The Colorado Fetal Care Center delivers some of the safest, highest-quality and most innovative fetal care available. From perinatal medicine to neonatal and pediatric subspecialty care, we offer a full array of services for parents, babies and families. We work with maternal fetal medicine specialists, midwives, obstetricians and family physicians locally and across the country and consider them an integral part of our team.

Our team has extensive experience with repairing conditions such as myelomeningocele, or MMC. In fact, the Colorado Fetal Care Center houses a fully integrated team of fetal neurosurgeons, fetal and maternal anesthesiologists, fetal cardiologists, neonatologists, pediatric surgeons and maternal fetal medicine specialists with fetal surgical expertise. Our carefully designed, innovative approaches help us ensure the best possible outcome for every baby. In many cases, our fetal experts can treat MMC before a baby is even born and can help families navigate cases with additional anatomic defects or anomalies. We are always on the forefront of the latest research and treatments to bring you and your baby the best care, which is why we recently just became one of only a few children's hospitals in the country to offer fetoscopic MMC repair.



(Jan. 2012-Dec. 2022)

Clinical Outcomes	Children's Colorado	MOMS Trial
Dehiscence at repair site	7%	13%
Shunt at one year	30.6%	40%
Delivery at Children's Colorado	34.3%	N/A
Post-op length of stay	4.6	NR
Gestational age, weeks	32.1	34.1 +/- 3.1

(Jan. 2012-Dec. 2022)

Patient Characteristics at Time of Repair	Children's Colorado	MOMS Trial
Maternal age, years	29	29.3 +/- 5.3
Gestation age, weeks	24.2	24
Body mass index, kg/m2	27.6	26.2 +/- 3.7

38%

Shunt rate in 2022 (MOMS trial benchmark)

108

Fetal MMC surgeries since 2012

37

Babies with prenatal MMC repairs delivered onsite since 2012



Diagnostics

Accurate diagnosis is the first step in creating a complete MMC care plan. Over the last decade, our team has worked relentlessly to improve detection and treatment of fetal conditions, and our imaging services have grown significantly.

Today we offer virtually every fetal diagnostic test and treatment available. In diagnosing MMC, the first test we usually perform is an ultrasound. We'll look for indicators like an abnormally shaped head, lack of movement in the lower extremities, clubfoot or a visible sac on the spine. We'll also perform a fetal MRI, which helps determine severity; a fetal echocardiogram, which shows any related heart disease; and an amniocentesis, which helps determine if there's a genetic cause.



3,000+

Ultrasounds
performed in 2023



1,800+

Fetal echos
performed in 2023



300+

Fetal MRIs in 2023

Genetic screening

Unborn babies with congenital anomalies have an increased risk for an underlying genetic syndrome. That's why genetic counseling is a part of all new patient visits at the Colorado Fetal Care Center. Our dedicated genetic counselors work with families and care teams to interpret test results when a genetic syndrome may be possible. Additionally, when a family wishes to pursue fetal surgery for MMC, normal genetic testing is required to determine candidacy for in utero repair. Genetic testing ensures our team is providing the best possible care, as babies with genetic syndromes may have a higher risk for complications from in utero surgery.

Screening tests

- cfDNA
- Carrier screening

Diagnostic tests

- FISH
- Karyotype
- Microarray

For families who choose not to pursue prenatal diagnostic testing or for babies born without a prenatal diagnosis, Children's Colorado offers an on-call team of genetic and metabolic physicians and nurses as well as a genetic counselor who can coordinate postnatal genetic evaluation. The team provides some of the most comprehensive genetic tests available, including rapid whole-genome sequencing. If a genetic diagnosis is identified, the team can help guide next steps for care. If a diagnosis isn't identified, the team can help coordinate further testing and follow-ups.

Fetal surgery

By caring for various fetal anomalies during pregnancy, we allow babies to start healing before they're even born. That way, they have a better chance at the best possible outcomes. When families come to us for care, we work closely with them to determine what treatments or interventions may be available for their baby's diagnosis, including the most advanced fetal surgery options. For MMC, we offer two types of fetal surgery — open MMC repair and fetoscopic MMC repair. We are the only center in the region to offer both repair options for families and counsel each on a case-by-case basis to determine what treatment is best for their unique case. If families are a candidate for fetal intervention, we will closely review all benefits and risks to help them make the best decision for the next steps in their care plan.



Labor and delivery

Though the majority of our MMC patients can deliver at their local hospital, should they need to deliver at Children's Colorado, they will have the benefit of being at one of the only freestanding children's hospitals in the nation with a dedicated labor and delivery unit. We provide a fully integrated, comfortable space for parents of high-risk babies that offers care from prenatal diagnostic testing to postpartum. Our dedicated team of maternal fetal and obstetric providers, anesthesiologists, neonatologists and maternal fetal nurses specializes in caring for new and expecting patients through delivery and beyond. What's more, parents can stay in the same room for the duration of their stay.

Our space includes 12 rooms for labor and delivery, postpartum recovery and infant stabilization, plus triage and ultrasound rooms. That's in addition to two operating rooms for surgery: one for cesarean sections and one fetal surgery suite with space for as many as 35 clinicians at once.

Neonatal follow-up

The Spinal Defects and Spinal Injuries Clinic offers comprehensive care for infants and children with MMC and related neural tube defects. Given that this condition is often associated with lifelong challenges, it is important to have a group of multidisciplinary care providers who consider all the ways MMC will impact a child's life as they grow. Our clinical team includes specialists from neurology, rehabilitation, orthopedics, pulmonology, nutrition, psychology and more to help children live happy, healthy lives.



Research and trials

As one of the largest university-affiliated healthcare research complexes in the world, we're continually working to develop new therapies across the perinatal spectrum. Our fetal surgeons were the first in the world to use 3D printing to make custom patches for MMC. Also called prefabrication, this process makes patches using information from a baby's MRI. Prefabrication allows for preoperative planning, greatly reduces operating time and standardizes the procedure — all of which significantly increase our precision and minimize the risks for babies. Some of our active MMC research trials include:

44

Active research studies

Management of myelomeningocele-plus

This study aims to learn more about prenatal spina bifida repair and development following fetal surgery. The possible benefits of research from this study include learning more about what causes spina bifida and other diseases, how to prevent them and how to treat them.

Sleep-disordered breathing (SDB) in patients with myelomeningocele

This multi-center study aims to learn more about early diagnosis and treatment of SDB and how it impacts sleep development and quality of life in MMC patients.

Partnership

While some patients will deliver at our Colorado Fetal Care Center, for the patients returning back home, our work doesn't stop when they leave our care. We continue to connect with patients and their local care teams throughout pregnancy to ensure a seamless transition of care, provide information, answer questions and ensure the best possible outcomes. We remain connected, while the patient can still deliver their baby in their home community.

Contact us

We happily accept referrals, consultations and requests for second opinions. We'll give you an honest appraisal of the best care options for your patients and families.



720-777-4463



childrenscolorado.org/Fetal-Care

Learn more

Scan the QR code below to read more detailed information about the Colorado Fetal Care Center's work, including our services, capabilities, innovations and more.



Colorado Fetal Care Center



Children's Hospital Colorado

Maternal Fetal Medicine
Labor and Delivery
Fetal Surgery
Fetal Cardiology
Neonatology
Pediatric Subspecialty Care

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