Medical Policy:
Fetal Surgery

POLICY NUMBER	EFFECTIVE DATE	APPROVED BY
MG.MM.ME.63	2/14/2025	MPC (Medical Policy Committee)

IMPORTANT NOTE ABOUT THIS MEDICAL POLICY:

 The treating physician or primary care provider must submit to ConnectiCare, Inc. the clinical evidence that the patient meets the criteria for the treatment or surgical procedure. Without this documentation and information, ConnectiCare will not be able to properly review the request for prior authorization. This clinical policy is not intended to pre-empt the judgment of the reviewing medical director or dictate to health care providers how to practice medicine. Health care providers are expected to exercise their medical judgment in rendering appropriate care. The clinical review criteria expressed below reflects how ConnectiCare determines whether certain services or supplies are medically necessary. ConnectiCare established the clinical review criteria based upon a review of currently available clinical information (including clinical outcome studies in the peer-reviewed published medical literature, regulatory status of the technology, evidence-based guidelines of public health and health research agencies, evidence-based guidelines and positions of leading national health professional organizations, views of physicians practicing in relevant clinical areas, and other relevant factors). ConnectiCare, Inc. expressly reserves the right to revise these conclusions as clinical information changes, and welcomes further relevant information. Identification of selected brand names of devices, tests and procedures in a medical coverage policy is for reference only and is not an endorsement of any one device, test or procedure over another. Each benefit plan defines which services are covered. The conclusion that a particular service or supply is medically necessary does not constitute a representation or warranty that this service or supply is covered and/or paid for by ConnectiCare, as some plans exclude coverage for services or supplies that ConnectiCare considers medically necessary. If there is a discrepancy between this guideline and a member's benefits plan, the benefits plan will govern. In addition, coverage may be mandated by applicable legal requirements of the State of CT and/or the Federal Government. Coverage may also differ for our Medicare members based on any applicable Centers for Medicare & Medicaid Services (CMS) coverage statements including including National Coverage Determinations (NCD), Local Coverage Determinations (LCD) and/or Local Medical Review Policies (LMRP). All coding and web site links are accurate at time of publication.

Background

Fetal surgery (also referred to as in-utero or prenatal surgery) is a complex surgical intervention performed on the developing fetus in-utero, using open or minimally invasive techniques, to correct fetal abnormalities that interfere with organ development and fetal survival.

Guideline

Fetal surgery is considered medically necessary for any of the following:

- Amniotic band syndrome (ABS)
- Bladder outlet obstruction (BOO)
- Congenital diaphragmatic hernia (CDH)
- Congenital high airway obstruction syndrome (CHAOS)
- Congenital lung masses/malformations, e.g.:
  - Bronchial atresia
  - Bronchogenic cysts
  - Bronchopulmonary sequestration (BPS) (aka lung or pulmonary sequestration)
  - Congenital pulmonary airway malformation (CPAM) (previously known as congenital cystic adenomatoid malformation [CCAM])
- Extralobar pulmonary sequestration (EPS)

- Fetal cystic hygroma
- Fetal renal failure (FRF)
- Hydronephrosis
- Mediastinal teratoma
- Myelomeningocele (spina bifida)
- Pleural Effusion
- Sacrococcygeal Teratoma (SCT)
- Twin anemia-polycythemia sequence (TAPS)
- Twin reversed arterial perfusion (TRAP)
- Twin-Twin Transfusion Syndrome (TTTS)
- Urinary Tract Obstruction (UTO) (aka obstructive uropathy, e.g., congenital posterior urethral valves)

Limitations/Exclusions

The following indications, considered experimental, investigational or unproven will be reviewed on a case-by-case basis upon request (list not all-inclusive):

- Aqueductal stenosis (i.e., hydrocephalus)
- Cleft lip and/or cleft palate
- Congenital heart defects/disease (e.g., aortic stenosis, mitral valve dysplasia/regurgitation, pericardial teratoma)
- Gastroschisis
- Hydronephrosis

The following utero interventions, considered experimental, investigational or unproven, will be reviewed on a case-by-case basis upon request (list not all-inclusive):

- Aortic or pulmonary balloon valvuloplasty
- Arial needle septoplasty
- Endoscopic approach (i.e., fetoscopic cystoscopy) for the treatment of lower UTO
- Fetoscopic laser ablation for type 2 vasa previa
- In-utero gene therapy
- In-utero hematopoietic stem-cell transplantation for stem-cell-related diseases
- Laser, thermocoagulation or radiofrequency ablation techniques for the treatment of sacrococcygeal teratoma
- Percutaneous sclerotherapy
- Shunting for the treatment of fetal cerebral ventriculomegaly

Procedure Codes

59001	Amniocentesis; therapeutic amniotic fluid reduction (includes ultrasound guidance)
59072	Fetal umbilical cord occlusion, including ultrasound guidance
59074	Fetal fluid drainage (eg, vesicocentesis, thoracocentesis, paracentesis), including ultrasound guidance

59076	Fetal shunt placement, including ultrasound guidance
59897	Unlisted fetal invasive procedure, including ultrasound guidance, when performed
S2401	Repair, urinary tract obstruction in the fetus, procedure performed in utero
S2402	Repair, congenital cystic adenomatoid malformation in the fetus, procedure performed in utero
S2403	Repair, extralobar pulmonary sequestration in the fetus, procedure performed in utero
S2404	Repair, myelomeningocele in the fetus, procedure performed in utero
S2405	Repair of sacrococcygeal teratoma in the fetus, procedure performed in utero
S2409	Repair, congenital malformation of fetus, procedure performed in utero, not otherwise classified
S2411	Fetoscopic laser therapy for treatment of twin-to-twin transfusion syndrome

Diagnosis Codes

D18.1	Lymphangioma, any site
D48.0	Neoplasm of uncertain behavior of bone and articular cartilage
O30.021	Conjoined twin pregnancy, first trimester
O30.022	Conjoined twin pregnancy, second trimester
O30.23	Conjoined twin pregnancy, third trimester
O30.029	Conjoined twin pregnancy, unspecified trimester
O33.7XX0	Maternal care for disproportion due to other fetal deformities, not applicable or unspecified
O33.7XX1	Maternal care for disproportion due to other fetal deformities, fetus 1
O33.7XX2	Maternal care for disproportion due to other fetal deformities, fetus 2
O33.7XX3	Maternal care for disproportion due to other fetal deformities, fetus 3
O33.7XX4	Maternal care for disproportion due to other fetal deformities, fetus 4
O33.7XX5	Maternal care for disproportion due to other fetal deformities, fetus 5
O33.7XX9	Maternal care for disproportion due to other fetal deformities, other fetus
O36.8910	Maternal care for other specified fetal problems, first trimester, not applicable or unspecified
O36.8911	Maternal care for other specified fetal problems, first trimester, fetus 1
O36.8912	Maternal care for other specified fetal problems, first trimester, fetus 2
O36.8913	Maternal care for other specified fetal problems, first trimester, fetus 3
O36.8914	Maternal care for other specified fetal problems, first trimester, fetus 4
O36.8915	Maternal care for other specified fetal problems, first trimester, fetus 5
O36.8919	Maternal care for other specified fetal problems, first trimester, other fetus
O36.8920	Maternal care for other specified fetal problems, second trimester, not applicable or unspecified
O36.8921	Maternal care for other specified fetal problems, second trimester, fetus 1

O36.8922	Maternal care for other specified fetal problems, second trimester, fetus 2
O36.8923	Maternal care for other specified fetal problems, second trimester, fetus 3
O36.8924	Maternal care for other specified fetal problems, second trimester, fetus 4
O36.8925	Maternal care for other specified fetal problems, second trimester, fetus 5
O36.8929	Maternal care for other specified fetal problems, second trimester, other fetus
O36.8930	Maternal care for other specified fetal problems, third trimester, not applicable or unspecified
O36.8931	Maternal care for other specified fetal problems, third trimester, fetus 1
O36.8932	Maternal care for other specified fetal problems, third trimester, fetus 2
O36.8933	Maternal care for other specified fetal problems, third trimester, fetus 3
O36.8934	Maternal care for other specified fetal problems, third trimester, fetus 4
O36.8935	Maternal care for other specified fetal problems, third trimester, fetus 5
O36.8939	Maternal care for other specified fetal problems, third trimester, other fetus
O36.8990	Maternal care for other specified fetal problems, unspecified trimester, not applicable or unspecified
O36.8991	Maternal care for other specified fetal problems, unspecified trimester, fetus 1
O36.8992	Maternal care for other specified fetal problems, unspecified trimester, fetus 2
O36.8993	Maternal care for other specified fetal problems, unspecified trimester, fetus 3
O36.8994	Maternal care for other specified fetal problems, unspecified trimester, fetus 4
O36.8995	Maternal care for other specified fetal problems, unspecified trimester, fetus 5
O36.8999	Maternal care for other specified fetal problems, unspecified trimester, other fetus
O43.021	Fetus-to-fetus placental transfusion syndrome, first trimester
O43.022	Fetus-to-fetus placental transfusion syndrome, second trimester
O43.023	Fetus-to-fetus placental transfusion syndrome, third trimester
O43.029	Fetus-to-fetus placental transfusion syndrome, unspecified trimester
P02.3	Newborn affected by placental transfusion syndromes
P28.89	Other specified respiratory conditions of newborn
Q05.0	Cervical spina bifida with hydrocephalus
Q05.1	Thoracic spina bifida with hydrocephalus
Q05.2	Lumbar spina bifida with hydrocephalus
Q05.3	Sacral spina bifida with hydrocephalus
Q05.4	Unspecified spina bifida with hydrocephalus
Q05.5	Cervical spina bifida without hydrocephalus
Q05.6	Thoracic spina bifida without hydrocephalus
Q05.7	Lumbar spina bifida without hydrocephalus
Q05.8	Sacral spina bifida without hydrocephalus

Q05.9	Spina bifida, unspecified
Q07.00	Arnold-Chiari syndrome without spina bifida or hydrocephalus
Q07.01	Arnold-Chiari syndrome with spina bifida
Q07.02	Arnold-Chiari syndrome with hydrocephalus
Q07.03	Arnold-Chiari syndrome with spina bifida and hydrocephalus
Q07.8	Other specified congenital malformations of nervous system
Q07.9	Congenital malformation of nervous system, unspecified
Q18.8	Other specified congenital malformations of face and neck
Q33.0	Congenital cystic lung
Q33.2	Sequestration of lung
Q33.3	Agenesis of lung
Q33.6	Congenital hypoplasia and dysplasia of lung
Q62.31	Congenital ureterocele, orthotopic
Q62.32	Cecoureterocele
Q62.39	Other obstructive defects of renal pelvis and ureter
Q64.2	Congenital posterior urethral valves
Q64.31	Congenital bladder neck obstruction
Q64.32	Congenital stricture of urethra
Q64.33	Congenital stricture of urinary meatus
Q64.39	Other atresia and stenosis of urethra and bladder neck
Q89.4	Conjoined twins
Q89.8	Other specified congenital malformations
R89.7	Abnormal histological findings in specimens from other organs, systems and tissues

References

Holcomb & Ashcraft's Pediatric Surgery, 7th Ed., Elsevier Pub. 2020, Chapter on "Fetal Surgery."

Pediatric Surgery, 2nd Ed., Coppola et al Eds., Springer Pub. 2022, Chapter on "Fetal Surgery and Interventions," pp. 263-272.

Patel, et al: Procedural, pregnancy, and short-term outcomes after fetal aortic valvuloplasty, Catheterization and Cardiovascular Interventions, 96(3); 626-632, 2020.

Pickard, et al: Fetal Aortic Valvuloplasty for Evolving Hypoplastic Left Heart Syndrome: A Decision Analysis, Circulation, Cardiovascular Quality and Outcomes, 13(4): epub 2020.

Specialty matched clinical peer review.

Revision History

Company	DATE	REVISION
ConnectiCare	Feb. 14, 2025	Added fetal cystic hygroma as covered indication
EmblemHealth ConnectiCare	Dec. 8, 2023	New policy