MEDICAL COVERAGE POLICY

SERVICE:	**Infertility, Fertility Preservation, Assisted Reproductive Technology**
Policy Number:	**141**
Effective Date:	**05/01/2025**
Last Review:	**04/14/2025**
Next Review:	**04/14/2026**

Important note: *Unless otherwise indicated, medical policies will apply to all lines of business. Medical necessity as defined by this policy does not ensure the benefit is covered. This medical policy does not replace existing federal or state rules and regulations for the applicable service or supply. In the absence of a controlling federal or state coverage mandate, benefits are ultimately determined by the terms of the applicable benefit plan documents. See the member plan specific benefit plan document for a complete description of plan benefits, exclusions, limitations, and conditions of coverage. In the event of a discrepancy, the plan document always supersedes the information in this policy.*

SERVICE: Infertility, Fertility Preservation

PRIOR AUTHORIZATION: Required for fertility preservation services. Genetic / genomic testing may require prior authorization.

POLICY: Please review the plan's EOC (Evidence of Coverage) or Summary Plan Description (SPD) for details.

Most BSWHP Plans provide a benefit for the diagnosis of the cause(s) of infertility, but **NOT** for infertility treatment except as a rider to the contract. Treatment of infertility is not a benefit for most BSWHP Plans. Where it is a benefit, interventions are limited to In vitro fertilization (IVF).

Fertility preservation and storage of reproductive material may not be a benefit for some BSWH Plans. Where it is a benefit, interventions may be limited to standard fertility preservation services, which may include reproductive material retrieval, isolation, and cryopreservation. It does not include hormonal therapies / medications or the storage of such unfertilized genetic materials.

Note: Unless otherwise indicated (see below), this policy will apply to all lines of business.

For Medicare plans, please refer to appropriate Medicare NCD (National Coverage Determination) or LCD (Local Coverage Determination). Medicare NCD or LCD specific InterQual criteria may be used when available. If there are no applicable NCD or LCD criteria, use the criteria set forth below.

For Medicaid plans, please confirm coverage as outlined in the Texas Medicaid Provider Procedures Manual | TMHP (TMPPM) and 1.11 Texas Medicaid Limitations and Exclusions. If there are no applicable criteria to guide medical necessity decision making in the TMPPM, use the criteria set forth below.

Infertility

A. **Definition** - The inability to conceive or carry a pregnancy to live birth without the use of birth control after unprotected sexual intercourse / failure of egg and sperm contact / fertilization and uterine implantation without medical assistance after 12 months if under age 35, or 6 months if age 35 years or older.
B. Infertility may also be justified based on the individual having a medical or other recognized condition as a cause of infertility.
C. Evaluation for infertility may be initiated sooner in patients who have risk factors for infertility.

D. **BSWHP may consider Infertility and Reproductive Technology medically necessary** in the diagnostic workup of an individual with infertility. All tests are not necessary for each individual; rather testing is performed in a stepwise fashion based upon history and prior results.
E. **Evaluation of the male**
   1. History and physical examination
   2. semen analysis: semen volume, concentration, motility, pH, fructose, leukocyte count, microbiology, and morphology.
   3. Laboratory tests: endocrine evaluation (including FSH, total and free testosterone, prolactin, LH, TSH), anti-sperm antibodies, post-ejaculatory urinalysis
   4. Transrectal ultrasound, scrotal ultrasound
   5. Vasography and testicular biopsy for azoospermia
   6. Scrotal exploration
F. **Evaluation of the female**
   1. History and physical examination
   2. Laboratory tests - thyroid stimulating hormone (TSH), prolactin, follicle stimulating hormone (FSH), luteinizing hormone (LH), estradiol, progesterone
   3. Ultrasound of the pelvis
   4. Hysteroscopy
   5. Hysterosalpingography
   6. Sonohysterography
   7. Diagnostic laparoscopy with or without chromotubation

Iatrogenic Infertility and Fertility Preservation

A. **Definition** – Iatrogenic, or medically induced, infertility occurs as a result of a medical procedure performed to treat another problem, most often cancer treated with chemotherapy or radiation.
B. **BSWHP may consider Fertility Preservation services medically necessary in males and females** facing iatrogenic infertility from cancer treatments (i.e., chemotherapy, radiotherapy, or surgery) that the American Society of Clinical Oncology (ASCO) or the American Society for Reproductive Medicine (ASRM) have established may directly or indirectly cause impaired fertility and must meet the following criteria:
   1. Be a standard procedure to preserve fertility consistent with established medical practices or professional guidelines published by the ASCO or the ASRM, **AND**
   2. Be **submitted with diagnosis code Z31.84**, Encounter for fertility preservation procedure, AND
   3. The member has a **diagnosis of cancer**, **AND**
   4. The member has one of the following:
      a. **Planned chemotherapy** treatment with **intermediate / high risk** of directly or indirectly causing impaired fertility (**see appendices A & B**), **OR**
      b. Planned pelvic, abdominal, cranio-spinal, or total body irradiation for the treatment of cancer that may directly or indirectly cause impaired fertility, **OR**
      c. Planned surgical treatment that may have anatomic or vascular changes to the reproductive organs, bladder, colon, prostate, or rectum and may directly or indirectly cause impaired

fertility
5. There is **planned cryopreservation of unfertilized oocytes or sperm**; AND
6. The member is a:
   a. post-pubertal or adult male; OR
   b. pre-pubertal, post-pubertal (i.e., menarche), or pre-menopausal adult female

BSWHP considers the following services experimental, investigational, or unproven for the treatment or evaluation of infertility.

- Acupuncture
- Hyperbaric oxygen therapy for IVF and / or treatment of male factor infertility
- Intravaginal culture of oocytes (e.g., INVOcell)
- Immune treatments (e.g., peri-implantation glucocorticoids, anti-tumor necrosis factor agents, leukocyte immunization, IV immunoglobulins)
- Computer-assisted sperm motion analysis
- Culture of oocyte(s), embryo(s), less than 4 days with co-culture (i.e., co-culturing of embryos/oocytes)
- Direct intraperitoneal insemination, intrafollicular insemination, fallopian tube sperm transfusion
- Endometrial receptivity testing (e.g., Endometrial Function TestTM, integrin testing, Beta-3 integrin test, E-tegrity®, endometrial receptivity array
- Fine needle aspiration mapping
- Hemizona test
- Hyaluronan binding assay
- Sperm viability test (e.g., hypo-osmotic swelling test), when performed as a diagnostic test
- The use of sperm precursors (i.e., round or elongated spermatid nuclei, immature sperm) in the treatment of infertility
- Manual soft tissue therapy for the treatment of pelvic adhesions (WURN Technique®, Clear Passage Therapy)
- Laser-assisted necrotic blastomere removal from cryopreserved embryos
- Reactive oxygen species testing
- Time-lapse monitoring/imaging of embryos (e.g., EmbryoScope, EevaTM Test)
- Uterine transplantation
- Vaginal microbiome testing (e.g., SmartJaneTM screening test)
- Saline-air infused sono-hysterosalpingogram (e.g., femVue®)

BACKGROUND:

Per the American Society for Reproductive Medicine (ASRM), “Infertility” is a condition, or status marked by the inability to achieve a successful pregnancy due to a patient’s medical, sexual, and reproductive history, age, physical findings, or any combination of those factors.

Infertility is commonly defined as the failure to achieve pregnancy after twelve months of unprotected intercourse in women < 35, and after six months in women aged 35 and over. U.S. prevalence is estimated at seven to eight percent. The term primary infertility is applied to a couple who has never achieved a pregnancy, while secondary infertility indicates that at least one previous conception has taken place. Infertility may be due to a male factor(s), female factor(s), or a combination of both. An infertility evaluation involves an investigation of potential problems in both partners with the intent of identifying modifiable factors. Diagnoses and treatments range from the very simple to the highly complex. The causes are generally distributed as follows:

- Male factor - 26%
- Ovulation problems – 21%
- Tubal damage – 14%
- Endometriosis – 6%
- Coital problems – 6%
- Cervical factor – 3%
- Unexplained – 28%

Regarding fertility preservation, ovarian tissue cryopreservation is currently the only way to cryopreserve gametes in prepubertal females. Ovarian tissue cryopreservation is no longer considered experimental and can be used in prepubertal females.

Post-pubertal and adult males should be offered sperm cryopreservation. Semen collection by masturbation is feasible and successful in the majority of adult and post-pubertal males. Semen collection should be performed prior to the administration of gonadotoxic therapies because the quality of the sample and sperm DNA integrity may be compromised after a single treatment. Surgical sperm extraction is an alternative strategy for males who cannot ejaculate via any technique. Hormonal gonado-protection / hormonal therapy is not successful in preserving fertility in males and is not recommended (ASCO). Testicular tissue cryopreservation and reimplantation or grafting of human testicular tissue is considered experimental (ASCO).

MANDATES:

1. TIC 1366.003-1366.004; 28 TAC 11.510(1) – Unless rejected in writing by the group contract holder, any evidence of coverage (EOC) providing coverage for pregnancy related procedures must offer and make available coverage for outpatient expenses that may arise from in vitro fertilization procedures.

2. Texas House Bill 1649, TIC, Health Insurance and Other Health Coverage, Subtitle E, 1366.101 – 1366.103 – A health benefit plan must provide coverage for fertility preservation services to a covered person who will receive a medically necessary treatment for cancer, including surgery, chemotherapy, or radiation, that the American Society of Clinical Oncology or the American Society for Reproductive Medicine has established may directly or indirectly cause impaired fertility. The fertility preservation

services must be standard procedures to preserve fertility consistent with established medical practices or professional guidelines published by the American Society of Clinical Oncology or the American Society for Reproductive Medicine.

CODES:

Important note: *Due to the wide range of applicable diagnosis codes and potential changes to codes, an inclusive list may not be presented, but the following codes may apply. Inclusion of a code in this section does not guarantee that it will be reimbursed, and patient must meet the criteria set forth in the policy language.*

****Only the codes marked by an asterisk [*] apply to Iatrogenic Fertility / Fertility preservation benefit; hormonal therapy and storage are not included.***

CPT Codes	54500 - Biopsy of testis, needle (separate procedure) 54505- Biopsy of testis, incisional (separate procedure) 54800 - Biopsy of epididymis, needle 55200 - Vasotomy, cannulization with or without incision of vas, unilateral or bilateral (separate procedure) 55870 – Electroejaculation* 58970 - Follicle Puncture for Oocyte retrieval, any Method (IVF)* 58974 - Embryo transfer, intrauterine 58976 - Gamete, zygote, or embryo intrafallopian transfer, any method 76948 - Ultrasonic guidance for aspiration of ova, imaging supervision and interpretation* 83001 - Gonadotropin; follicle stimulating hormone (FSH) 83002 - Gonadotropin; luteinizing hormone (LH) 89250 - Culture of oocyte(s)/embryo(s), less than 4 days 89251 - Culture of oocyte(s)/Embryo(s), less than 4 days; with co-culture of oocyte(s)/embryo(s) 89253 - Assisted embryo hatching, micro-techniques (any method) 89254 - Oocyte identification from follicular fluid* 89255 - Preparation of embryo for transfer (any method) 89257 - Sperm identification from aspiration (other than seminal fluid)* 89258 - Cryopreservation; embryo(s) 89259 - Cryopreservation; sperm* 89260 - Sperm isolation; simple prep (e.g., sperm-wash and swim-up) for insemination or diagnosis with semen analysis 89261 - Sperm isolation; complex prep (eg, Percoll gradient, albumin gradient) for insemination or diagnosis with semen analysis 89264- Sperm identification from testis tissue, fresh or cryopreserved 89268 - Insemination of oocytes 89272 - Extended culture of oocyte(s)/embryo(s), 4-7 days 89280 - Assisted oocyte fertilization, micro-technique; less than or equal to 10 oocytes 89281 - Assisted oocyte fertilization, micro-technique; greater than 10 oocytes 89290 - Biopsy, oocyte polar body or embryoblastomere, micro-technique (for preimplantation genetic diagnosis); less than or equal to 5embryos 89291 - Greater than 5 embryos 89320 - Semen analysis; volume, count, motility, and differential

	89337 - Cryopreservation, mature oocyte(s)* 89342 - Storage, (per year) for embryo(s) 89344 - Storage, (per year) for reproductive tissue, testicular/ovarian 89346 - Storage, (per year) for oocyte(s) 89352 - Thawing of cryopreserved; embryo(s) 89353 - Thawing of cryopreserved; sperm/semen, each aliquot 89354 - Thawing of cryopreserved; reproductive tissue, testicular/ovarian 89356 - Thawing of cryopreserved; oocytes, each aliquot
HCPCS Codes	0058T - Cryopreservation; reproductive tissue, ovarian* G0027 - Semen analysis; presence and/or motility of sperm excluding Huhner J0725 - Injection, chorionic gonadotropin, per 1,000 USP units J3355 - Injection, urofollitropin, 75 IU Q0115 - Postcoital direct, qualitative examinations of vaginal or cervical mucous S0122 - Injection, menotropins, 75 IU S0126 - Injection, follitropin alfa, 75 IU S0128 - Injection, follitropin beta, 75 IU S0132 - Injection, ganirelix acetate, 250 mcg S4011 - In vitro fertilization; including but not limited to identification and incubation of mature oocytes, fertilization with sperm, incubation of embryo(s), and subsequent visualization for determination of development S4013 - Complete cycle, gamete intrafallopian transfer (GIFT), case rate S4014 - Complete cycle, zygote intrafallopian transfer (ZIFT), case rate S4015 - Complete in vitro fertilization cycle, not otherwise specified, case rate S4016 - Frozen in vitro fertilization cycle, case rate S4017 - Incomplete cycle, treatment cancelled prior to stimulation, case rate S4018 - Frozen embryo transfer procedure cancelled before transfer, case rate S4020 - In vitro fertilization procedure cancelled before aspiration, case rate S4021 - In vitro fertilization procedure cancelled after aspiration, case rate S4022 - Assisted oocyte fertilization, case rate S4023 - Donor egg cycle, incomplete, case rate S4025 - Donor services for in vitro fertilization (sperm or embryo), case rate S4026 - Procurement of donor sperm from sperm bank S4027 - Storage of previously frozen embryos S4028 - Microsurgical epididymal sperm aspiration (MESA) S4030 - Sperm procurement and cryopreservation services; initial visit S4031 - Sperm procurement and cryopreservation services; subsequent visit S4035 - Stimulated intrauterine insemination (IUI), case rate S4037 - Cryopreserved embryo transfer, case rate S4040 - Monitoring and storage of cryopreserved embryos, per 30 days S4042 - Management of ovulation induction (interpretation of diagnostic tests and studies, non-face-to-face medical management of the patient), per cycle
ICD10 Codes	E23.0- Hypopituitarism N46.01- Organic azoospermia N46.021 - Azoospermia due to drug therapy N46.022 - Azoospermia due to infection N46.023 - Azoospermia due to obstruction of efferent ducts

	N46.024 - Azoospermia due to radiation N46.025 - Azoospermia due to systemic disease N46.029 - Azoospermia due to other extratesticular causes N46.11 - Organic oligospermia N46.121 - Oligospermia due to drug therapy N46.122 - Oligospermia due to infection N46.123 - Oligospermia due to obstruction of efferent ducts N46.124 - Oligospermia due to radiation N46.125 - Oligospermia due to systemic disease N46.129 - Oligospermia due to other extratesticular causes N46.8 - Other male infertility N46.9 - Male infertility, unspecified N97.0 - Female infertility associated with an ovulation N97.1 - Female infertility of tubal origin N97.2 - Female infertility of uterine origin N97.8 - Female infertility of other origin N97.9 - Female infertility, unspecified N98.1 - Hyperstimulation of ovaries Z31.41 - Encounter for fertility testing female Z31.81 - Encounter for fertility testing male Z31.84 - Encounter for fertility preservation procedure*

POLICY HISTORY:

Status	Date	Action
New	01/01/2011	New policy
Reviewed	12/12/2011	Reviewed
Reviewed	10/04/2012	Reviewed. References updated.
Reviewed	07/11/2013	No changes
Reviewed	05/22/2014	No changes
Reviewed	05/28/2015	No changes
Reviewed	06/09/2016	No changes
Reviewed	05/16/2017	Limited corrections to criteria
Reviewed	04/17/2018	Updated code list. Medically necessary services outlined, exclusion list updated.
Reviewed	07/25/2019	Minor updates and corrections
Reviewed	09/24/2020	Re-formatted for SWHP/FirstCare
Reviewed	09/23/2021	No changes
Revised	02/24/2022	Revised to include specific IVF coverage
Updated	07/28/2022	Corrected an exclusion that was in error
Reviewed	02/23/2023	No changes

Updated	03/11/2024	Clarified infertility definition to be more inclusive, included language and appendices for HB1649 fertility preservation, including applicable codes, and adjusted title of policy to include fertility preservation. Formatting changes and added hyperlinks to TMPPM resources, beginning and ending note sections updated to align with CMS requirements and business entity changes.
Reviewed	04/14/2025	Referenced a specific section of TMPPM; minor formatting changes

REFERENCES:

The following scientific references were utilized in the formulation of this medical policy. BSWHP will continue to review clinical evidence surrounding immune globulin and may modify this policy at a later date based upon the evolution of the published clinical evidence. Should additional scientific studies become available, and they are not included in the list, please forward the reference(s) to BSWHP so the information can be reviewed by the Medical Coverage Policy Committee (MCPC) and the Quality Improvement Committee (QIC) to determine if a modification of the policy is in order.

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17. Ding J, Shang X, Zhang Z, et al. FDA-approved medications that impair human spermatogenesis. *Oncotarget*. 2016;8(6):10714-10725. doi:10.18632/oncotarget.12956
18. How cancer and cancer treatment can affect fertility in males. American Cancer Society. https://www.cancer.org/cancer/managing-cancer/side-effects/fertility-and-sexual-side-effects/fertility-and-men-with-cancer/how-cancer-treatments-affect fertility.
19. Tournaye H, Dohle GR, Barratt CLR. Fertility preservation in men with cancer. *The Lancet*. 2014;384(9950):1295-1301. doi:10.1016/s0140-6736(14)60495-5

***Note**:*
Health Maintenance Organization (HMO) products are offered through Scott and White Health Plan dba Baylor Scott & White Health Plan, and Scott & White Care Plans dba Baylor Scott & White Care Plan. Insured PPO and EPO products are offered through Baylor Scott & White Insurance Company. Scott and White Health Plan dba Baylor Scott & White Health Plan serves as a third-party administrator for self-funded employer-sponsored plans. Baylor Scott & White Care Plan and Baylor Scott & White Insurance Company are wholly owned subsidiaries of Scott and White Health Plan. These companies are referred to collectively in this document as Baylor Scott & White Health Plan.

RightCare STAR Medicaid is offered through Scott and White Health Plan in the Central Texas Medicaid Rural Service Area (MRSA); FirstCare STAR is offered through SHA LLC dba FirstCare Health Plans (FirstCare) in the Lubbock and West MRSAs; and FirstCare CHIP is offered through FirstCare in the Lubbock Service Area.

Appendix A – Chemotherapeutic Agents That May Result in Intermediate / High Risk of Direct or Indirect Fertility Impairment in Females

bevacizumab	chlorambucil	doxorubicin	paclitaxel
busulfan	cisplatin	ifosfamide	procarbazine
cabazitaxel	cyclophosphamide	lomustine	temozolomide
carboplatin	dacarbazine	melphalan	thiotepa
carmustine	docetaxel	mitomycin	

Appendix B – Chemotherapeutic Agents That May Result in Intermediate / High Risk of Direct or Indirect Fertility Impairment in Males

busulfan	cytarabine	gemcitabine	oxaliplatin
carboplatin	cytosine arabinoside	ifosfamide	procarbazine
carmustine	dacarbazine	lomustine	thiotepa
chlorambucil	dactinomycin	melphalan	vinblastine
cisplatin	daunorubicin	mitoxantrone	vincristine

cyclophosphamide	doxorubicin	mechlorethamine	oxaliplatin