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#### **OVERVIEW**

The policy addresses medical necessity criteria and coverage guidelines related to the treatment of female infertility using assisted reproductive technology such as artificial intrauterine insemination (IUI) or in vitro fertilization (IVF). While IUI is addressed in this policy, this service is not impacted by benefit limits or the prior authorization process. However, the member must meet eligibility criteria for coverage of IUI.

This policy also addresses the criteria for coverage of donor eggs and sperm, as well as preservation for members undergoing medical treatment that may result in infertility.

#### **Testing for Infertility**

Testing to determine the diagnosis of male or female infertility is a covered service and not applicable to the infertility benefit in this policy.

#### **MEDICAL CRITERIA**

Multiple embryo transfer (MET) in vitro fertilization is medically necessary when one of the following criteria is met:

- Members less than 35 years of age who have diminished ovarian reserve or have had an unsuccessful Single Embryo Transfer (SET).
- Members (any age) who have under gone 2 unsuccessful Single Embryo Transfers IVF treatment cycles using donor eggs
- Members who are 35 years old and prior to 38th birthday after either:
  - o had an unsuccessful first treatment cycle using their own fresh or frozen embryo, OR
  - o had a prior successful IVF treatment cycle followed by a one failed SET
- Members ages 38 years and older undergoing IVF treatment

After 4 IVF cycles (SET or MET) that do not result in pregnancy and delivery, the requesting physician must provide the following information for review to determine if further cycles will be approved:

- Documentation regarding the number and type of all past IVF/IUI attempts.
- Details of a revised IVF methodology and the predicted success rate supported by literature statements of using the revised IVF methodology.
- Documentation that the patient has been informed of the predicted success rate and accepts the proposed services.

## Members not in active infertility treatment, undergoing medical treatment that may result in infertility:

Retrieval and cryopreservation of eggs, embryos and sperm are covered when documentation confirms that member, who is not in active treatment for infertility, will be undergoing medical treatment (e.g., chemotherapy, radiation therapy, gender reassignment) that is likely to result in infertility.

Note: Fees associated with storage are not covered.

## **PRIOR AUTHORIZATION**

Prior authorization is required for BlueCHiP for Medicare and recommended for Commercial products for in vitro fertilization cycle only. No prior authorization is needed for any cycle in which IUI only is rendered.

#### **POLICY STATEMENT**

Services to treat female infertility (IUI and IVF [SET or MET]) are covered for members that meet eligibility criteria. For members that do not meet the following eligibility criteria, services will be denied as not covered as these services would be considered a non-covered benefit.

## Testing for Infertility

Testing to determine the diagnosis of infertility is a covered service and not subject to the infertility benefit in this policy.

For members who meet the eligibility criteria, IVF with MET is medically necessary when the medical criteria above is met. Services not meeting the criteria are not medically necessary as there is no peer review literature or studies that support the use of MET over SET in those instances.

#### Eligibility Criteria

### For services to treat female infertility:

1. A female member must have a documented inability to conceive after a period of 1 year of unprotected intercourse with exposure to sperm or 6 months if 35 years or older.

**Note**: For a member who has miscarried, the duration of time she attempted to conceive prior to achieving that pregnancy shall be included in the calculation of the 1-year or 6-month period above, as applicable.

Also, for female members without male partners or without exposure to sperm, infertility is determined based on the inability to conceive after 6 artificial insemination (AI) (intra-cervical insemination or IUI cycles performed by a qualified specialist using donor sperm). AI cycles with donor sperm are not a covered benefit because the diagnosis of infertility cannot be established until the cycles are completed. The 6 failed cycles must include the following number of documented failed medicated assisted IUI cycles to qualify for IVF services:

Female members younger than 35 years old: 3 medicated IUI cycles Female members 35-39 years old: 2 medicated IUI cycles Female members older than 40: no medicated IUI cycles are required

In addition, all costs associated with these six (6) IUI cycles, including but not limited to the cost of donor sperm, (procurement, processing and storage), prescription medications, and professional, technical and facility charges are at the member's expense.

- 2. The male and female members attempting to conceive must be presumably healthy without a history of past sterilization (or reversal).
- 3. For female members, a postmenopausal state must not be the cause of infertility, unless the member is under age 43 and had premature ovarian failure.

IVF services after 4 unsuccessful cycles, not using a different technique, would be considered not medically necessary as the there is no peer-reviewed literature to support the continued success of further attempts.

Note: For the purpose of this policy a cycle starts with the initiation of medication to stimulate ovulation and ends with either pregnancy confirmation or failure to conceive by pregnancy test.

For services to treat male infertility: when the member has been confirmed as having male infertility.

## Coverage for Donor Eggs and Sperm Egg Bank

Donor eggs (gametes) are covered when the member meets the criteria for services to treat female infertility. If donor eggs are obtained through an egg bank, reimbursement is provided for the cost of the eggs. Additional services related to the implantation of the embryo are covered and will be billed by the facility and provider preforming the implantation services.

In cases where the facility has not contracted with BCBSRI, the member must use the below-attached claim form for Member submitted claims

## Donor Egg and Sperm Reimbursement Form

#### Egg Donation Facilitation Agency

Services provided by an egg donation facilitation agency are not covered as these charges are not related to the egg donation. These agencies generally facilitate the contractual agreements between the member and the egg donor. Some agencies will also cover transportation costs for the donor which is a not a covered service. Once the donor is identified, all services related to egg retrieval including medication are covered. Egg retrieval and other services related to the implantation will be billed by the participating facility that is providing the implantation.

## **Donor Sperm**

Donor sperm is covered as part of treatment for female infertility when the eligibility criteria for female infertility have been met, and there is a need for donor sperm, either because there is no male partner or the male partner has been diagnosed as infertile

Donor sperm is covered for treatment of male infertility even when there is no female infertility, when the male infertility is confirmed and not the result of a previous sterilization procedure.

Donor sperm can be obtained from a sperm bank or a known donor. Services related to the procurement of the sperm are covered. Fees associated with collection and finding a donor are not covered.

## The following services are not covered:

- · Freezing and storage of blood, gametes, sperm, embryos, or other tissues for future use
- · Reversal of voluntary sterilization
- · Infertility treatment for an individual that previously had a voluntary sterilization procedure
- Women who meet the definition of normal menopause
- · Surrogate parenting

#### **Previous Sterilization**

Services to treat male or female infertility are excluded by contract for individuals who have previously undergone a sterilization procedure. Only in cases where there is medical certainty that a prior sterilization procedure is in no manner related to the present inability to conceive or sustain pregnancy will it be determined that the contractual exclusion is not applicable.

Requests for infertility services for a member who has undergone a previous sterilization procedure will undergo review by a clinician. A determination that the contractual exclusion does apply (i.e., that inability may be related to a previous sterilization procedure) is an administrative denial and does not involve medical necessity review.

## Normal Menopause

BCBSRI considers normal menopause to be exclusionary. Amenorrhea and an elevated *follicle stimulating* hormone (FSH) after age 42 is considered to be equivalent to normal menopause. Menopause occurring prior to age 42 is not considered normal menopause, as defined in this policy.

#### **COVERAGE**

Benefits may vary between groups/contracts. Please refer to the appropriate Evidence of Coverage, Subscriber Agreement, or Benefit Booklet for applicable Infertility Services coverage.

Many BCBSRI plans have yearly benefit limits of 3 IVF attempts in a 12-month period and a lifetime maximum of 8 IVF attempts not resulting in a successful pregnancy.

#### **BACKGROUND**

Infertility treatment is included in the Rhode Island Benchmark Plan that defines the EHBs for RI QHPs. Federal mandates regarding EHBs supersede RI state mandates with regards to removing any annual and lifetime dollar limits.

The following is the State of Rhode Island Mandate regarding coverage of infertility services for females § 27-20-20. Coverage for infertility.

- (a) Any nonprofit medical service contract, plan, or insurance policies delivered, issued for delivery, or renewed in this state, except contracts providing supplemental coverage to Medicare or other governmental programs, that includes pregnancy-related benefits, shall provide coverage for the medically necessary expenses of diagnosis and treatment of infertility for women between the ages of twenty-five (25) and forty-two (42) years and for standard fertility-preservation services when a medically necessary medical treatment may directly or indirectly cause iatrogenic infertility to a covered person. To the extent that a nonprofit medical service corporation provides reimbursement for a test or procedure used in the diagnosis or treatment of conditions other than infertility, those tests and procedures shall not be excluded from reimbursement when provided attendant to the diagnosis and treatment of infertility for women between the ages of twenty-five (25) and forty-two (42) years.; provided, that subscriber copayment, not to exceed twenty percent (20%), may be required for those programs and/or procedures the sole purpose of which is the treatment of infertility.
- (b) For purposes of this section, "infertility" means the condition of an otherwise presumably healthy individual who is unable to conceive or sustain a pregnancy during a period of one year.
- (c) For the purposes of this section, "standard fertility-preservation services" means procedures consistent with established medical practices and professional guidelines published by the American Society for Reproductive Medicine, the American Society of Clinical Oncology, or other reputable professional medical organizations.
- (d) For the purposes of this section, "iatrogenic infertility" means an impairment of fertility by surgery, radiation, chemotherapy, or other medical treatment affecting reproductive organs or processes.
- (e) For the purposes of this section, "may directly or indirectly cause" means treatment with a likely side effect of infertility as established by the American Society for Reproductive Medicine, the American Society of Clinical Oncology, or other reputable professional organizations.
- (f) The health insurance contract may limit coverage to a lifetime cap of one hundred thousand dollars (\$100,000).

#### Definitions:

Artificial Intrauterine Insemination (IUI) – Artificial insemination by IUI process bypasses the cervix, allowing the sperm to target the ova without being slowed or stopped by the lower portions of the reproductive tract. For this reason, ICI (intracervical insemination) is rarely used. When IUI is used in conjunction with ultrasound to track follicular development, the procedure can be timed to maximize the chances for getting pregnant. Fertility drugs may also be used.

Assisted Hatching – One key component of a successful attempt at in vitro fertilization is implantation of the embryo in the uterus. Although the exact steps in implantation are poorly understood, one critical component is thought to be the normal rupture of the surrounding zona pellucida with escape of the developing embryo, termed hatching. It is hypothesized that during the in vitro component of the in vitro fertilization, the zona pellucida becomes hardened, thus impairing the hatching process. Alternatively, some

embryos may have some inherent inability to induce thinning of the zona pellucida before hatching. In either case, mechanical disruption of the zona pellucida (i.e., assisted hatching) has been proposed as a mechanism to improve implantation rates.

Randomized controlled trials (RCTs) and meta-analyses of these trials have not found that assisted hatching significantly improves the live birth rate compared to a control intervention. Meta-analyses of heterogenous studies have found that the clinical pregnancy rate is improved with assisted hatching.

**Blastocyst Transfer** – This refers to the extended culture of oocytes/embryos, i.e., for greater than 4 days. The rationale behind blastocyst transfer is that embryos progressing to the blastocyst stage have a much greater chance of implanting successfully in the uterus and resulting in an ongoing pregnancy. Due to the higher probability of implantation, it is thought that fewer blastocysts can be transferred, ultimately resulting in a decreased incidence of triplets and higher-order pregnancies.

According to evidence from RCTs, observational studies and meta-analyses of published studies, blastocyst transfer results in higher live birth rates compared to cleavage stage transfer. Based on evidence from RCTs of a higher live birth rate than cleavage-stage embryo transfer, as well as on supportive clinical input, blastocyst transfer may be considered medically necessary

Cryopreservation of Ovarian Tissue – Cryopreservation of ovarian tissue or an entire ovary with subsequent auto- or heterotopic transplant has been investigated as a technique to sustain the reproductive function of women or children who are faced with sterilizing procedures, such as chemotherapy, radiation therapy, or surgery, frequently due to malignant diseases. A variety of articles have focused on the technical feasibility of such an option. There are a few individual case reports of return of ovarian function using this technique. (9, 10) There are also several case series describing live births using cryopreserved ovarian tissue. (11-13) However, in general, the technique is not standardized and has not been sufficiently studied to determine the success rate. (14, 15) In 2011, Johnson and Patrizio commented on whole ovary freezing as a technique of fertility preservation in women with disease or disease treatment that threaten their reproductive tract function. (16) They concluded, "Although theoretically optimal from the point of view of maximal follicle protection and preservation, the risks and difficulties involved in whole ovary freezing limit this technique to experimental situations."

This technique has not been standardized, and there is insufficient published data that cryopreservation of ovarian tissue is an effective and safe reproductive technique.

Cryopreservation of Oocytes – Cryopreservation of oocytes was originally investigated primarily as an alternative to embryo cryopreservation due to ethical or religious reasons. More recently, it has been examined as a fertility preservation option for reproductive-age women undergoing cancer treatment, both single women and those who do not want the option of embryo cryopreservation. The mature oocyte is very fragile due to its large size, high water content, and chromosomal arrangement. For example, the mature oocyte is arrested in meiosis, and as such, the chromosomes are lined up in a meiotic spindle. This spindle apparatus is easily damaged both in freezing and thawing. Survival after thawing may also be associated with sublethal damage, which may further impact on the quality of the subsequent embryo. Moreover, due to the large amount of water, when the oocyte is frozen, ice crystals can form that can damage the integrity of the cell. To reduce or prevent ice crystals, oocytes are dehydrated using cryoprotectants, which replace the water in the cell. The most common method of freezing oocytes is a controlled-rate slow-cooling method. A newer technique involves a flash-freezing process known as vitrification. This technique is faster, yet requires a higher concentration of cryoprotectants.

There are insufficient published data on the safety and efficacy of cryopreservation of oocytes; data are only available from select clinical settings and select populations.

Cryopreservation of Testicular Tissue – Testicular sperm extraction refers to the collection of sperm from testicular tissue in men with azoospermia. Extraction of testicular sperm may be performed at the time of a diagnostic biopsy or performed as a subsequent procedure, specifically for the collection of spermatozoa. The spermatozoa may be isolated immediately and a portion used for an intracytoplasmic sperm injection (ICSI) procedure at the time of oocyte retrieval from the partner, with the remainder cryopreserved. Alternatively, the entire tissue sample can be cryopreserved with portion thawed and sperm isolation performed at subsequent ICSI cycles. This technique appears to be a well-established component of the overall ICSI procedure; cryopreservation of either the isolated sperm or the tissue sample eliminates the need for multiple biopsies to obtain fresh tissue in the event of a failed initial ICSI cycle. (32) However, a unique application of cryopreservation of testicular tissue is its use to potentially preserve the reproductive capacity in prepubertal boys undergoing cancer chemotherapy; the typical cryopreservation of an ejaculate is not an option in these patients. It is hoped that re-implantation of the frozen-thawed testicular stem cells will re-initiate spermatogenesis, or alternatively, spermatogenesis could be attempted in vitro, using frozen-thaw spermatogonia. While these strategies have been explored in animals, there are inadequate human studies. (33, 34) Cryopreservation of testicular tissue in adult men with ozoospermia is a well-established component of the ICSI procedure.

Embryo Co-Culture – In routine IVF procedures, the embryo is transferred to the uterus on day 2 or 3 of development, when it has between 4 and 8 cells. However, with this approach the implantation rate is estimated to be between 5% and 30%, potentially related to the fact that under normal conditions the embryo reaches the uterus at a blastocyst stage of development. Embryo co-culture techniques, used successfully in domestic animals, represent an effort to improve the culture media for embryos such that a greater

proportion of embryos will reach the blastocyst stage, in hopes of improving the implantation and pregnancy rate. In addition, if coculture results in a higher implantation rate, fewer embryos could be transferred at each cycle, resulting in a decreased incidence of
multiple pregnancies. A variety of co-culture techniques have been investigated, involving the use of feeder cell layers derived from a
range of tissues, including the use of human reproductive tissues (i.e., oviducts) to non-human cells (i.e., fetal bovine uterine or
oviduct cells) to established cell lines (i.e., Vero cells or bovine kidney cells). However, no standardized method of co-culture has
emerged, and no controlled trials have evaluated an improved implantation or pregnancy rate associated with co-culture. (3-8) For
example, Wetzels and colleagues reported on a study that randomized IVF treatments to include co-culture with human fibroblasts or
no culture. (8) Patients in the 2 groups were stratified according to age (older or younger than 36 years) and prior IVF attempts (yes
vs. no). The authors reported that fibroblast co-culture did not affect the implantation or the pregnancy rate. Updated literature
reviews did not identify any additional published studies that would prompt reconsideration of the relevant policy statement. There is
a lack of controlled trials demonstrating improved outcomes with co-culture, and no standardized method of co-culture has emerged
in the literature.

## **Fertility Treatment**

Once the condition of infertility or recurrent pregnancy loss has been established fertility services typically include artificial intrauterine insemination, and assisted reproductive technology (ART) services such as in vitro fertilization, including assisted oocyte fertilization, also known as intra-cytoplasmic sperm injection, frozen/cryo embryo transfer, preimplantation genetic testing, zygote intra-fallopian transfer and gamete intra-fallopian transfer, donor oocyte procedures, and assisted embryo hatching.

In Vitro Fertilization (IVF) – In vitro fertilization is a method of assisted reproduction that involves combining an egg with sperm in a laboratory dish. If the egg fertilizes and begins cell division, the resulting embryo is transferred into the woman's uterus where it will hopefully implant in the uterine lining and further develop. IVF bypasses the fallopian tubes and is usually the treatment choice for women who have badly damaged or absent tubes.

Services received as part of an IVF procedure may include office visits, drugs, lab and pathology, surgical procedures, etc. Mechanically assisted fertilization (MAF) may be performed as part of an IVF procedure. Such procedures include Zona "drilling" or (PZD) where the zona pellucida of the oocyte is mechanically interrupted so as to assist sperm entry, and intracytoplasmic sperm injection.

Modifications of the IVF procedure include such procedures as GIFT (gamete intrafallopian transfer), ZIFT (zygote intrafallopian transfer), PROST (pronuclear stage transfer), TEST (tubal embryo stage transfer), and TET (tubal embryo transfer). While many of the services received during these procedures are similar to IVF, in GIFT, eggs and sperm are transferred to the fallopian tube where fertilization occurs. In ZIFT, PROST, TEST, and TET, fertilized embryos are transferred at various stages of development into the fallopian tube, either from the fimbrial end via laparoscopy or through catheterization of the uterine end, the latter with or without ultrasound guidance.

## A typical IVF may consist of the steps noted below, all of which take place during one menstrual cycle:

1. Controlled ovarian hyperstimulation.

Fertility drugs are administered to the women to stimulate the ovaries so that multiple follicles and eggs develop. In a normal cycle, the ovaries typically make and release only one egg.

2. Egg retrieval.

The eggs are typically removed from the ovaries in an outpatient surgical setting. The fertility doctor uses a needle passed through the vagina under ultrasound guidance to aspirate the fluid from the follicles and pull out the egg.

In vitro fertilization.

The eggs are placed with sperm in the laboratory dish, or the embryologist may use a procedure known as intracytoplasmic sperm injection (ICSI) in which one sperm is injected directly into the egg for fertilization.

4. Uterine embryo transfer.

The embryos are transferred into the woman's uterus using a tiny catheter and ultrasound guidance.

5. Monitoring and support.

The fertility specialists will monitor the woman to check blood levels to assess the quality of the uterine lining. If the woman gets pregnant, she will have an ultrasound two weeks after a positive result to check for the fetal heartbeat.

**IVF Cycle Timeline** – Below is an outline of a typical IVF cycle outline:

- Birth control pills (approx. 14-21 days)
- Medication to stimulate ovulation (approx. 12-15 days)
- Baseline ultrasound; stimulation (approx. 10-12 days);
- Trigger shot; egg retrieval (36-37 hours after trigger shot);

- Embryo transfer (3-5 days after retrieval);
- Pregnancy test (14 days after retrieval);
- Ultrasounds 1st approx. 6 ½-7 weeks pregnant, 2nd approx. 7 ½-8 ½ weeks pregnant
- Release to OB at 8-10 weeks pregnant

Intracytoplasmic Sperm Injection (ICSI) for male factor infertility – ICSI is performed in cases of male factor infertility when either insufficient numbers of sperm, abnormal morphology, or poor motility preclude unassisted in vitro fertilization. Using ICSI, fertilization rates of up to 76% have been reported, considerably better than the competing technique of sub-zonal insemination (up to 18%), in which sperm are injected into the perivitelline space (as opposed to into the oocyte itself), and by definition better than the negligible to absent fertilization rates seen in patients with male factor infertility. Fertilization rates represent an intermediate outcome; the final outcome is the number of pregnancies per initiated cycle or per embryo transfer, reported in the largest series as 44.7% and 49.6%, respectively. (26-30) These rates are very competitive with those of the standard in vitro fertilization. A 2012 committee opinion of the American Society of Reproductive Medicine and Society for Assisted Reproductive Technology stated that ICSI is a safe and effective treatment for male factor infertility. (31) The document also stated that ICSI for unexplained fertility, low oocyte yield and advanced maternal age does not improve clinical outcomes. The opinion included a statement that ICSI may be beneficial for patients undergoing *in vitro* fertilization with preimplantation genetic testing, *in vitro* matured oocytes and cryopreserved oocytes.

There are data indicating that intracytoplasmic sperm injection for male factor infertility has a relatively high rate of successful pregnancy.

Intracytoplasmic sperm injection has a relatively high rate of successful live births for treatment of male factor infertility due to low sperm count and/or impaired sperm motility. ICSI for male factor infertility and cryopreservation of testicular tissue in adult men with azoospermia as part of an ICSI injection procedure received support from clinical reviewers. These techniques may be considered medically necessary.

The evidence is insufficient to permit conclusions concerning the effectiveness of the following reproductive techniques: assisted hatching; co-culture of embryos; cryopreservation of ovarian tissue or oocytes; cryopreservation of testicular tissue in prepubertal boys; and storage and thawing of ovarian tissue, oocytes, or testicular tissue. For these procedures, there is a lack of published data on live birth rates, the incidence of multiples and neonatal and child outcomes, compared to established reproductive techniques. Therefore, these procedures are considered not medically necessary

Single Embryo Transfer – the transfer of a single embryo at either the cleavage stage (day 2 or 3 after an egg retrieval) or blastocyst stage (day 5 or 6 after an egg retrieval), that is selected from a larger number of available embryos. This is the best way to reduce the health risks of multiple gestations.

In a clinical based study A total of 886,686 fresh, nondonor cycles reported to the National Assisted Reproductive Technology Surveillance System during 1999–2010, of which 17,166 met criteria for elective single Embryo Transfer (ET). The main measure of the study was to determine the rates of elective single ET and good perinatal outcome (term, singleton infant with normal birth weight). In 2010, elective single ET comprised 5.6% of all fresh transfers, representing an eightfold increase since publication of first guidelines in 2004 recommending elective single ET. Compared with other ETs, elective single ETs were nearly twice as likely to result in a good perinatal outcome (37.1% vs. 18.9%, respectively). Among women using elective single ET, those aged <35 and 35–37 years had a good perinatal outcome (40.2% and 32.5%, respectively). In multivariable, log-binomial analyses, factors positively associated with a good perinatal outcome included male factor infertility, day 5 ET, and having ≥3 supernumerary embryos for cryopreservation. Between 1999 and 2010, national rates of elective single ET increased. Given the frequency of good perinatal outcomes among women aged 35–37 years, guidelines for elective single ET could be expanded to include patients in this age group with favorable prognoses.

Surrogate – An embryo is placed in the womb of a woman other than the member, and the "surrogate" (not the member) carries the baby. In the case of a surrogate, the embryo does not come from the female member's egg, so the baby is not biologically related to the member. A gestational surrogate is a variation where the egg is donated from one woman other than the member and the embryo is placed into a different woman that is not the member or the egg donor. A usual surrogate is the egg donor and then carries the pregnancy. All services related to surrogate pregnancy are not covered.

#### **CODING**

### BlueCHip for Medicare and Commercial Products

The following infertility/in vitro fertilization services CPT Codes are covered under the member's infertility benefit when the benefit and medical necessity criteria are met:

58970 Follicle puncture for oocyte retrieval, any method 58974 Embryo transfer, intrauterine 58976 Gamete, zygote or embryo intrafallopian transfer, any method

76948 Ultrasonic Guidance for aspiration of ova, imaging supervision and interpretation

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, microtechniques (any method)

| 89254 | Oocyte identification from follicular fluid  |
|-------|--|
| 89280 | Assisted oocyte fertilization, microtechnique; less than or equal to 10 oocytes  |
| 89281 | Assisted oocyte fertilization, microtechnique; greater than 10 oocytes   |
| 89255 | Preparation of embryo for transfer (any method)  |
| 89268 | Insemination of oocytes  |
| 89272 | Extended culture of oocyte(s)/embryo(s), 4-7 days  |
| 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   |
| 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   |
| S4025 | Donor services for in vitro fertilization (sperm or embryo), case rate   |
| S4017 | Incomplete cycle, treatment cancelled prior to stimulation, case rate  |
| S4018 | Frozen embryo transfer procedure cancelled before transfer, case rate (NSR)  |
| S4023 | Donor egg cycle, incomplete, case rate   |
| S4042 | Management of ovulation induction (interpretation of diagnostic tests and studies, non-face-to-face medical              |
|       | management of the patient), per cycle  |

Note: BCBSRI-participating facilities primarily use "S" codes when reporting infertility/in vitro fertilization services.

## The following codes are male infertility services and no preauthorization is needed. Services are covered under the members infertility benefit:

| 558/0 | Electroejaculation  |
|-------|---|
| 58321 | Artificial insemination; intra-cervical   |
| 58322 | Artificial insemination; intra-uterine  |
| 58323 | Sperm washing for artificial insemination   |
| 89257 | Sperm identification from aspiration (other than seminal fluid)   |
| 89260 | Sperm isolation; simple prep (e.g., sperm wash and swim-up) for insemination or diagnosis with semen analysis     |
| 89261 | Sperm isolation; complex prep (e.g., Percoll gradient, albumin gradient) for insemination or diagnosis with semen |
|       | analysis  |
| 89264 | Sperm identification from testis tissue, fresh or cryopreserved   |
| S3655 | Antisperm antibodies test (immunobead)  |
| S4026 | Procurement of donor sperm from sperm bank  |
| 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   |
|       |   |

#### The following codes for tests and procedures are non-covered:

## Note: For members undergoing medical treatment that may result in infertility, all of the codes are covered except for CPT code for storage.

| CI I COC | ic for storage.   |
|----------|---|
| 0058T    | Cryopreservation; reproductive tissue, ovarian  |
| 0059T    | Cryopreservation;oocyte(s)  |
| 55400    | Vasovasostomy, vasovasorrhaphy NOTE: If 55400 Vasovasostomy/vasovasorrhaphy is performed for other than           |
|          | reversal of sterilization, it may be reviewed by a clinician.   |
| 88240    | Cryopreservation, freezing and storage of cells, each cell line   |
| 88241    | Thawing and expansion of frozen cells, each aliquot   |
| 89258    | Cryopreservation; embryo(s)   |
| 89259    | Cryopreservation; sperm   |
| 89290    | Biopsy, oocyte polar body or embryo blastomere, microtechnique (for pre-implantation genetic diagnosis PGD); less |
|          | than or equal to 5 embryos  |
| 89291    | Biopsy, oocyte polar body or embryo blastomere, microtechnique (for pre-implantation genetic diagnosis PGD);      |
|          | greater than 5 embryos  |
| 89335    | Cryopreservation, reproductive tissue, testicular   |
| 89342    | Storage (per year); embryo(s)   |
| 89343    | Storage (per year); sperm/semen   |
| 89344    | Storage (per year); reproductive tissue, testicular/ovarian   |
| 89346    | Storage (per year); oocyte  |
| 89337    | Cryopreservation, mature oocyte(s)  |
| 89354    | Thawing of cryopreserved; reproductive tissue; testicular/ovarian   |
| 89356    | Thawing of cryopreserved; oocytes, each aliquot   |
| S4027    | Storage of previously frozen embryos  |
|          |   |

S4040 Monitoring and storage of cryopreserved embryos, per 30

#### The following codes are covered but not separately reimbursed:

| 89352 | Thawing | of cryo | preserved; | embryo(    | s) |
|-------|---------|---------|------------|------------|----|
| 07334 | THAWHIE | OI CIVO | DICSCIVCU, | CITIDITYOU | 0) |

89353 Thawing of cryopreserved; sperm/semen, each aliquot

S4037 Cryopreserved embryo transfer, case rate

# The following services may also be used for the diagnostic evaluation of infertility and therefore not considered part of the infertility benefit. These services are covered under the applicable benefit.

| 55200 | Vasotomy, cannulization with or without incision of Vas, unilateral or bilateral (separate procedure) (surgery)        |
|-------|--|
| 58750 | Tubotubal anastomosis  |
| 88349 | Electron microscopy; scanning (lab)  |
| 89300 | Semen analysis; presence and/or motility of sperm including Huhner test (post coital) (lab)                            |
| 89310 | Semen analysis; motility and count (not including Huhner test) (lab)   |
| 89320 | Semen analysis; complete (volume, count, motility and differential) (lab)  |
| 89321 | Semen analysis, presence and/or motility of sperm  |
| 89322 | Semen analysis: volume, count, and differential using strict morphologic criteria (e.g.,Kruger) (lab)                  |
| 89325 | Sperm antibodies (lab)   |
| 89329 | Sperm evaluation; hamster penetration test (lab)   |
| 89330 | Sperm evaluation; cervical mucus penetration test, with or without spinnbarkeit test (lab)                             |
| 89331 | Sperm evaluation; for retrograde ejaculation, urine (sperm concentration, motility, and morphology as indicated) (lab) |
| 58350 | Chromotubation of oviduct, including materials   |

## Providers filing for sperm evaluation, hyaluronan binding assay should file the following unlisted CPT Category I code:

89398 Unlisted reproductive medicine laboratory procedure

Note: Since there is no applicable CPT code for TESE (testicular sperm extraction) or TESA (testicular sperm aspiration), MESA (maximum entropy spectral estimation) claims will be submitted with an unlisted code and the claim will follow the standard unlisted procedure format.

#### **RELATED POLICIES**

Gender Reassignment

### **PUBLISHED**

Provider Update, May 2018 Provider Update, March 2017 Provider Update, June 2016 Provider Update, March 2016 Provider Update, August 2015 Provider Update, November 2013 Provider Update, April 2012 Provider Update, March 2011

Provider Update, August 2010

## **REFERENCES**

- Rhode Island General Law (RIGL) 27-20-20: Coverage for Infertility. http://www.rilin.state.ri.us/Statutes/TITLE27/27-20/27-20-20.HTM
- 2. Physician Expense for Surgery, Childbirth, and Treatment for Infertility. Section 20-1. Rev. 1, 10-01-03) B3-2005.l. Treatment for Infertility. <a href="http://www.cms.hhs.gov/manuals/Downloads/bp102c15.pdf">http://www.cms.hhs.gov/manuals/Downloads/bp102c15.pdf</a>
- 3. Blackwell, R. et al. American Journal of Obstetrics & Gynecology. 182 (4): 891-895, April 2000. <a href="http://pt.wkhealth.com/pt/re/ajog/abstract.00000447-200004000-">http://pt.wkhealth.com/pt/re/ajog/abstract.00000447-200004000-</a>

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| judgment in the treatment of your patients. Benefits and eligibility are and/or the employer agreement, and those documents will supersede the benefits, call the provider call center. If you provide services to a member medically necessary services which are non-covered benefits), you may not and they have agreed in writing in advance to continue with the treatment the applicable provisions. This policy is current at the time of publication | es only. It is not a guarantee of payment or a substitute for your medical determined by the member's subscriber agreement or member certificate the provisions of this medical policy. For information on member-specific per which are determined to not be medically necessary (or in some cases of charge the member for the services unless you have informed the member not at their own expense. Please refer to your participation agreement(s) for on; however, medical practices, technology, and knowledge are constantly my reason and at any time, with or without notice. Blue Cross & Blue Shield |
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