Anthem

Clinical UM Guideline

Subject: Diagnostic Hysteroscopy for Infertility
Guideline #: CG-SURG-34
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Description

This document addresses the use of hysteroscopy for the diagnostic work-up of infertility.

Note: Please see the following related document for additional information:

- LAB.00045 Selected Tests for the Evaluation and Management of Infertility

Clinical Indications

Hysteroscopy

Medically Necessary:

Hysteroscopy is considered **medically necessary** in the evaluation of infertility for any of the following indications:

- Suspected uterine abnormality as evidenced by abnormal hysterosalpingogram or hysterosonogram (for example, but not limited to endometrial polyp, submucosal myoma, intrauterine synechia (scarring) or uterine anomaly (unicornuate, bicornuate, septate uteri); **or**
- Proximal tubal occlusion on hysterosalpingogram; **or**
- Cervical stenosis; **or**
- Inadequate or non-diagnostic hysterosalpingogram or sonohysterogram.

Not Medically Necessary:

Hysteroscopy in the evaluation of infertility is considered **not medically necessary** when the above criteria have not been met*.

***Note:** hysteroscopy for indications other than infertility are not within scope of this document.

Coding

The following codes for treatments and procedures applicable to this guideline are included below for informational purposes. Inclusion or exclusion of a procedure, diagnosis or device code(s) does not constitute or imply member coverage or provider reimbursement policy. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage of these services as it applies to an individual member.

When services may be Medically Necessary when criteria are met:

CPT	
58555	Hysteroscopy, diagnostic (separate procedure)
ICD-10 Procedure	
0UJ88ZZ	Inspection of fallopian tube, via natural or artificial opening endoscopic
0UJD8ZZ	Inspection of uterus and cervix, via natural or artificial opening endoscopic
ICD-10 Diagnosis	
N96	Recurrent pregnancy loss
N97.0-N97.9	Female infertility
N98.0-N98.9	Complications associated with artificial fertilization

When services are Not Medically Necessary:
For the procedure and diagnosis codes listed above when criteria are not met.

Discussion/General Information

The American Society of Reproductive Medicine (ASRM) (2023) defines infertility as the inability to achieve a successful pregnancy based on the medical, sexual, and reproductive history, age, physical findings, diagnostic testing, or any combination of those factors. ASRM also states that infertility can be characterized by a need for medical intervention, including, but not limited to, the use of donor gametes or donor embryos in order to achieve a successful pregnancy either as an individual or with a partner. For those individuals having regular, unprotected intercourse, evaluation should be initiated at 12 months when the female partner is under 35 years of age and at 6 months when the female partner is 35 years of age or older.

Tests to rule out uterine anatomic abnormalities include ultrasound, sonohysterogram, and hysterosalpingogram. Ultrasound can be done to diagnose uterine pathology such as myomas. Sonohysterogram which involves injecting saline into the uterine cavity and then using transvaginal ultrasound to view the uterine cavity can detect pathology such as endometrial polyps, submucous myomas, and synechiae. The hysterosalpingogram involves the use of x-rays and injection of a contrast agent into the cervical canal, uterine cavity, fallopian tubes, and peritoneal cavity to look for blockages. Hysterosalpingogram can also show developmental anomalies of the uterus or acquired anomalies such as endometrial polyps or submucous myomas. A definitive method for the diagnosis and treatment of intrauterine pathology is the hysteroscopy. This exam is invasive and is usually reserved for use after less invasive methods have been unsuccessful.

Hysteroscopy

In a retrospective chart review, Acholonu (2011) reported on the comparison of hysterosalpingogram to sonohysterogram for detection

of polyps, fibroids, adhesions and septae in infertile participants. The reports were then compared to hysteroscopy. All 149 participants underwent hysterosalpingogram and hysteroscopy. A total of 110 participants had abnormalities found on hysteroscopy; whereas hysterosalpingogram detected abnormalities in 64 participants. Ninety-three participants had sonohysterogram and hysteroscopy. Of those 93, 77 showed abnormalities on hysteroscopy, while sonohysterogram showed abnormalities on 63. Those who showed normal hysterosalpingogram or sonohysterogram did not generally go on to have hysteroscopy. Hysterosalpingogram can be an important screening tool for infertile individuals in evaluating the architecture and patency of the fallopian tubes while sonohysterogram can be more reliable for the evaluation of intrauterine abnormalities.

In a 2016 randomized-controlled trial by Smit and colleagues, the authors reported on whether routine hysteroscopy before the first treatment cycle of in-vitro fertilization affects the livebirth rate. Participants were included if they had a previous normal transvaginal ultrasound and were scheduled to receive in-vitro fertilization for infertility. The participants were randomized 1:1 to either hysteroscopy and then in-vitro fertilization or immediate in-vitro fertilization. A total of 325 participants received hysteroscopy and then in-vitro fertilization, while 364 participants received in-vitro fertilization only. With an 18 month follow-up, the primary outcome was ongoing pregnancy resulting in livebirth, defined as delivery of a live fetus after 24 weeks gestation. After 18 months, 209 participants who had hysteroscopy followed by in-vitro fertilization met the primary outcome measure while 200 participants who had immediate in-vitro fertilization met the primary outcome measure. The authors concluded that a routine hysteroscopy does not improve livebirth rate in those who have a normal transvaginal ultrasound before receiving in-vitro fertilization, therefore those who have a normal transvaginal ultrasound should not be offered routine hysteroscopy.

A similar trial in 2016 by El-Toukhy and colleagues also reported on whether or not hysteroscopy done prior to starting a cycle of in-vitro fertilization could improve the outcome in those who had already had two to four unsuccessful cycles of in-vitro fertilization. The included participants had all previously had normal transvaginal ultrasounds. The primary outcome measure was the livebirth rate, defined as those who had at least one live baby beyond 24 weeks gestation after one cycle of in-vitro fertilization. In this randomized controlled trial, 301 participants received hysteroscopy prior to in-vitro fertilization and 290 participants received in-vitro fertilization only. A total of 133 participants in the hysteroscopy group became pregnant after in-vitro fertilization with 102 participants meeting the primary outcome measure. In the in-vitro fertilization only group, 136 participants became pregnant and 102 met the primary outcome measure. The authors concluded that hysteroscopy (after a normal transvaginal ultrasound) and unsuccessful in-vitro fertilization cycles did not improve livebirth rate.

A Cochrane Library systematic review assessed the effectiveness and safety of screening hysteroscopy in subfertile individuals undergoing evaluation for infertility, and subfertile individuals undergoing IUI or IVF (Kalmath, 2019). The review included ten trials that included 1836 individuals who had a screening hysteroscopy and 1914 individuals who had no hysteroscopy prior to IVF. They reported that the main limitations in the quality of evidence were inadequate reporting of study methods and higher statistical heterogeneity. They also observed that 8 of the 10 trials had unclear risk of bias for allocation concealment. Their conclusions stated:

> At present, there is no high-quality evidence to support the routine use of hysteroscopy as a screening tool in the general population of subfertile women with a normal ultrasound or hysterosalpingogram in the basic fertility work-up for improving reproductive success rates.
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> In women undergoing IVF, low-quality evidence, including all of the studies reporting these outcomes, suggests that performing a screening hysteroscopy before IVF may increase live birth and clinical pregnancy rates. However, pooled results from the only two trials with a low risk of bias did not show a benefit of screening hysteroscopy before IVF.
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> Since the studies showing an effect are those with unclear allocation concealment, we are uncertain whether a routine screening hysteroscopy increases live birth and clinical pregnancy, be it for all women, or those with two or more failed IVF attempts. There is insufficient data to draw conclusions about the safety of screening hysteroscopy.

In a 2019 meta-analysis by Mao and colleagues, the authors reported on eight studies (three randomized controlled trials, three nonrandomized prospective studies, and two retrospective cohort studies) to determine if hysteroscopy before starting in-vitro fertilization in individuals with recurrent implantation failure can improve the implantation rate, clinical pregnancy rate, live birth rate, and reduce miscarriage rate. Included in the studies were individuals with normal ultrasound of the uterine cavity and individuals with at least two failed in-vitro fertilization attempts; a diagnostic hysteroscopy before starting an in-vitro fertilization cycle. Participants in the control groups in the studies did not receive hysteroscopy. Study totals included 3932 individuals with recurrent implantation failure. There were 1841 participants in the hysteroscopy group and 2091 participants in the control group. Four studies provided information about implantation rate. There was no heterogeneity among the four studies. An overall analysis showed that the implantation rate was higher in the hysteroscopy group compared to the control group (pooled odds ratio [OR] =1.22, 95% confidence interval [CI]: 1.02-1.45, p=0.025). Seven studies provided data regarding pregnancy rate. Overall analysis showed that clinical pregnancy rate was higher in the group that received hysteroscopy when compared with the control group (pooled OR=1.64, 95% CI: 1.30-2.07, p<0.001). There were five studies that provided live birth rate data. Pooled results from five studies showed there was no statistical significance in live birth rate (pooled OR=1.30, 95% CI: 0.90-1.88, p=0.168). A subgroup analysis of the two randomized controlled trials and the three non-randomized studies showed no significant difference in the live birth rate between the two groups. Four studies provided data regarding miscarriage rate. There was no heterogeneity noted among the four studies. Pooled results revealed no significant difference in the miscarriage rate between the two groups (pooled OR=0.94, 95% CI: 0.66-1.35, p=0.744). The subgroup analysis of the randomized controlled trials and the non-randomized trials also showed no significant difference in the miscarriage rate between the two groups. The results of this meta-analysis indicated that hysteroscopy improved implantation rate and clinical pregnancy rate, however did not improve live birth rate or reduce the rate of miscarriage. One limitation of this meta-analysis is the small number of studies included. Also, the authors did not examine whether or not abnormalities were found on hysteroscopy and what effect, if any, they may have had on the outcomes of in-vitro fertilization. It is also noted there were different definitions of recurrent implantation failure among the studies. Further research with randomized controlled trials is necessary to help define the role of hysteroscopy in individuals with recurrent implantation failure.

Definitions

Adnexal mass: A tumor or mass that occurs on any of the organs next to the uterus.

Dysmenorrhea: Painful menstrual cramps.

Hydrosalpinx: A blocked, dilated, and fluid-filled fallopian tube.

Hysteroscopy: A surgical procedure used to diagnose or treat problems of the uterus. A hysteroscope is a thin, lighted telescope-like device that is inserted in the vagina and then into the uterus. The hysteroscope transmits the image of the uterus onto a screen and can assist with diagnosis of uterine problems.

Infertility: A disease of the reproductive system causing an inability to achieve a successful pregnancy.

- CDC, WHO, and ACOG define infertility as a disease defined by the failure to achieve a successful pregnancy after 12 months or more of regular unprotected intercourse.
- ASRM defines infertility as any one of the following:
    - The inability to achieve a successful pregnancy based on an individual's medical, sexual, and reproductive history, age, physical findings, diagnostic testing, or any combination of those factors.
    - The need for medical intervention, including, but not limited to, the use of donor gametes or donor embryos in order to achieve a successful pregnancy either as an individual or with a partner.
    - In those having regular, unprotected intercourse and without any known etiology for either partner suggestive of impaired reproductive ability, evaluation should be initiated at 12 months when the female partner is under 35 years of age and at 6 months when the female partner is 35 years of age or older.

Myoma: A benign tumor of the smooth cells of the myometrium.

References

Peer Reviewed Publications:

1. Acholonu UC, Silberzweig J, Stein DE, Keltz M. Hysterosalpingography versus sonohysterography for intrauterine abnormalities. JSLS. 2011; 15(4):471-474.
2. Armstrong SC, Showell M, Stewart EA, et al. Baseline anatomical assessment of the uterus and ovaries in infertile women: a systematic review of the evidence on which assessment methods are the safest and most effective in terms of improving fertility outcomes. Hum Reprod Update. 2017; 23(5):533-547.
3. El-Toukhy T, Campo R, Khalaf Y, et al. Hysteroscopy in recurrent in-vitro fertilisation failure (TROPHY): a multicentre, randomised controlled trial. Lancet. 2016; 387(10038):2614-2621.
4. Indraccolo U, Greco P, Scutiero G, et al. The role of hysteroscopy in the diagnostic work-up of infertile asymptomatic patients. Clin Exp Obstet Gynecol. 2014; 41(2):124-127.
5. Mao X, Wu L, Chen Q, et al. Effect of hysteroscopy before starting in-vitro fertilization for women with recurrent implantation failure: a meta-analysis and systematic review. Medicine (Baltimore). 2019; 98(7):e14075.
6. Schrager S, Falleroni J, Edgoose J. Evaluation and treatment of endometriosis. Am Fam Physician. 2013; 87(2):107-113.
7. Smit JG, Kasius JC, Eijkemans MJ, et al. Hysteroscopy before in-vitro fertilisation (inSIGHT): a multicentre, randomised controlled trial. Lancet. 2016; 387(10038):2622-2269.

Government Agency, Medical Society, and Other Authoritative Publications:

1. American College of Obstetrics and Gynecologists (ACOG). Practice bulletin no. 114: Management of endometriosis. Obstet Gynecol. 2010; 116(1):223-236. Reaffirmed 2020.
2. American College of Radiology. Practice guideline for the performance of hysterosalpingography. Revised 2022. Available at: http://www.acr.org/Quality-Safety/Standards-Guidelines. Accessed on December 20, 2023.
3. American College of Radiology. Practice parameter for the performance of sonohysterography and hysterosalpingo-contrast-sonography (HyCoSy). 2020. Available at: http://www.acr.org/Quality-Safety/Standards-Guidelines. Accessed on December 20, 2023.
4. American College of Radiology. ACR Appropriateness Criteria®. Female Infertility. 2019. Available at: https://acsearch.acr.org/docs/3093336/Narrative/. Accessed on December 20, 2023.
5. Kamath MS, Bosteels J, D'Hooghe TM, et al. Screening hysteroscopy in subfertile women and women undergoing assisted reproduction. Cochrane Database Syst Rev. 2019. 16;(4):CD012856.
6. Practice Committee of the American Society for Reproductive Medicine. Fertility evaluation of infertile women: a committee opinion. Fertil Steril. 2021; 116(5):1255-1265.

Websites for Additional Information

1. American Society for Reproductive Medicine. Available at:http://www.asrm.org/. Accessed on December 20, 2023.

History

Status	Date	Action
Reviewed	02/15/2024	Medical Policy & Technology Assessment Committee (MPTAC) review. Revised Description, Discussion/General Information, Definitions and References sections.
Revised	02/16/2023	MPTAC review. Revised title to "Diagnostic Hysteroscopy for Infertility." Revised scope and Clinical Indications to remove laparoscopy. Updated Description, Discussion/General Information, Definitions, and References sections. Updated Coding section to remove 49320, 0UJ84ZZ, 0UJD4ZZ, 0WJJ4ZZ no longer applicable.
Reviewed	05/12/2022	MPTAC review. Updated Discussion/General Information and References sections.
Revised	05/13/2021	MPTAC review. Clarification to NMN statements (removed bullets in NMN statements). Updated Discussion/General Information and References sections. Reformatted Coding section; removed diagnosis codes N88.2, R93.5, R93.8 not specific to infertility.
Reviewed	05/14/2020	MPTAC review. Updated Discussion/General Information and References sections.
Reviewed	06/06/2019	MPTAC review. Updated Discussion/General Information and References sections.
Reviewed	07/26/2018	MPTAC review. The document header wording updated from "Current Effective Date" to "Publish Date." Updated References section.
Reviewed	08/03/2017	MPTAC review. Updated Discussion/General Information and References sections.
Reviewed	08/04/2016	MPTAC review. Updated Description, Discussion/General Information, Definitions and Reference sections. Removed ICD-9 codes from Coding section.
Reviewed	08/06/2015	MPTAC review. Updated Discussion/General Information and References.
Reviewed	08/14/2014	MPTAC review. Updated References.
New	08/08/2013	MPTAC review. Initial document development.

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patterns, each plan may choose whether to adopt a particular Clinical UM Guideline. To determine if review is required for this Clinical UM Guideline, please contact the customer service number on the member's card.

Alternatively, commercial or FEP plans or lines of business which determine there is not a need to adopt the guideline to review services generally across all providers delivering services to Plan’s or line of business’s members may instead use the clinical guideline for provider education and/or to review the medical necessity of services for any provider who has been notified that his/her/its claims will be reviewed for medical necessity due to billing practices or claims that are not consistent with other providers, in terms of frequency or in some other manner.