

# International Federation of Fertility Societies

## Global Standards of Infertility Care

### Standard 7.

#### Assessment of tubal patency

#### Recommendations for Practice

Name	Tubal patency assessment
Version number	7.0/IFFS/Standards
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#### Introduction:

The goal of IFFS Guidelines are to provide policy- and decision-makers and the clinical and scientific community with a set of recommendations that can be used as a basis for developing or revising institutional or national guidelines on selected practice recommendations for infertility practice.

The document addresses minimal standards of practice but does not provide rigid guidelines but rather gives recommendations that provide the basis for rationalizing the provision of infertility services in view of the most up-to-date information available.

Because country situations and programme environments vary so greatly, it is inappropriate to set firm international guidelines on infertility practice. However, it is expected that institutional and national programmes will use these guidance documents for updating or developing their own infertility guidelines in the light of their national health policies, needs, priorities and resources. The intent is to help improve access to, quality of, and safety of infertility and assisted conception services. These improvements must be made within the context of users' informed choice and

medical safety. Adaptation is not always an easy task and is best done by those well-acquainted with prevailing health conditions, behaviours, and cultures.

**Rationale:**

Damage to the fallopian tubes is a common cause of infertility. Tubal damage or dysfunction may result from a variety of causes but the most common is ascending pelvic inflammatory disease resulting from sexually transmitted infections (STD's). The prevalence of tubal damage is increasing due to a worldwide increase in STD's<sup>i,ii</sup>. Assessment of tubal function forms an important part of the initial assessment of fertility in order to assess the most appropriate treatment<sup>iii,iv</sup>. Methods with least risk to the patient, maximum sensitivity and specificity and cost effectiveness are preferred.

**Recommendation for practice:**

a) **Non-invasive tests**

1. **Serology:** Chlamydia serology for testing (CAT) Chlamydia antibodies is an acceptable approach but should take account of the prevalence in the population to be tested and the specificity of the test methodology.

2. **Molecular Biology:** Tuberculous Polymerized Chain Reaction (TB PCR) of genital secretion like endometrial biopsy, endocervical secretions and fluid from pelvic peritoneal cavity may be reliable markers for tubal damage due to Mycobacterium tuberculosis in endemic areas with high prevalence rates.

b) **Invasive tests**

It is recommended that before invasive tests of tubal patency are undertaken the patient should be screened for STD's/STI's and /or given prophylactic antibiotics for prevention of Chlamydia and Gonococcus. In addition operators should ensure that there is no possibility of a pregnancy immediately prior to undertaking the test, preferably by detection of urinary or serum hCG.

1. **Hysterosalpingography (HSG)** is a reliable, widely available and cost effective investigation for evaluating fallopian tubes patency and the uterine cavity. The procedure should be performed by an operator with appropriate training and knowledge including an understanding of the radiological hazards and appropriate gynaecological expertise

2. **Sonohysterosalpingography (HyCoSy)** with use of normal saline with air bubbles or contrast media is an alternative to HSG for assessing tubal patency. Images of sonography are inferior to fluoroscopy although the sensitivity and specificity for detection to tubal patency is comparable to HSG. The procedure can be performed as an outpatient by an operator suitably trained in pelvic ultrasound and is generally well tolerated. It has the advantage over HSG in not requiring X-ray equipment and film processing but is not able to assess tubal mucosa.

3. **Endoscopic Evaluation of Fallopian Tube.** Laparoscopy with chromopertubation using dilute solution of Methylene blue or Indigo carmine is an acceptable technique for assessment of tubal patency. This procedure has the advantage of identifying tubal phimosis and peritubal adhesions in addition to identifying other pelvic disorders such as endometriosis . However, this is an invasive procedure with the intrinsic risks of abdominal surgery and should only be performed by doctors certified to undertake this technique. This technique can be combined with therapeutic procedures and planning should take into account this possibility.

4. Other techniques are not recommended in routine practice and should only be considered in a research / academic context:

- a. Fertiloscopy carried out under local anaesthesia or neuroleptanalgesia involves endoscopy through posterior vaginal fornix, hydrolaparoscopy together with dye test. The accuracy of diagnosis and safety of the procedure requires further evaluation before it can be recommended in routine practice.
- b. Transuterine falloposcopy, microendoscopy of fallopian tube and direct visualization of entire length of fallopian tube can be performed. This is more discriminatory test of tubal pathology but associated with highly sophisticated instruments and significant expertise. This test cannot be recommended in routine practice.

- c. Radioactive Isotope Studies: Radio-nuclide Hysterosalpingography with technetium-99 pertechnetate is an accurate method for functional study of fallopian tube patency with low radiation dose. This has the disadvantages of HSG with the additional problems posed by radio-isotope management. This test cannot be recommended in routine practice.

## **Key Recommendations**

1. Basic Evaluation may include Chlamydia Antibody Testing and Tuberculous Polymerized chain reaction (TBPCR) in endemic areas with high prevalence.
2. Hysterosalpingography or sonosalpingography are recommended as these are less invasive, cost effective and can be performed as an outpatient procedure without anaesthesia.
3. Women who are thought to have co morbidities should be offered laparoscopy with assessment of tubal patency. Planning for therapeutic procedures simultaneously is advised.
4. Fertiloscopy, Falloposcopy and radioactive isotope studies need further research before they can be recommended for routine use.

**Implementation:** Recommendation for Practice 7.0 will be circulated in the following ways:

1. Publication in the IFFS website and newsletter
2. Inclusion in the IFFS World Assisted Conception Survey
3. Circulation to all member countries secretaries
4. WHO and FIGO for inclusion in relevant publications

## References:

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<sup>i</sup> Sevgi O. Aral and Mead Over, with Lisa Manhart and King K. Holmes, "Sexually Transmitted Infections." 2006. *Disease Control Priorities in Developing Countries (2nd Edition)*, ed. , 311-330. New York: Oxford University Press. DOI: 10.1596/978-0-821-36179-5/Chpt-17.

<sup>ii</sup> World Health Organization 2001a. *Global Prevalence and Incidence of Selected Curable Sexually Transmitted Infections: Overview and Estimates*. Geneva: WHO.

<sup>iii</sup> National Collaborating Centre for Women's and Children's Health; Clinical Guideline "Fertility: assessment and treatment for people with fertility problems" Feb 2004

<sup>iv</sup> Optimal evaluation of the infertile female; The Practice Committee of the American Society for Reproductive Medicine; May 2003