2016 CLINICAL POLICY GUIDELINES

naf

NATIONAL ABORTION FEDERATION

2016
Clinical Policy Guidelines

1660 L Street, NW, Suite 450
Washington, DC 20036
www.prochoice.org

National Abortion Federation *Clinical Policy Guidelines* can be accessed at www.prochoice.org.

The National Abortion Federation is the professional association of abortion providers. Our mission is to ensure safe, legal, and accessible abortion care, which promotes health and justice for women.

TABLE OF CONTENTS

National Abortion Federation

2016 CLINICAL POLICY GUIDELINES

INTRODUCTION

The mission of the National Abortion Federation (NAF) is to ensure safe, legal, and accessible abortion care, which promotes health and justice for women. An important part of this work is to develop and maintain evidence-based guidelines and standards as well as to educate providers in the latest technologies and techniques. NAF's programs make it possible for patients to receive the highest quality abortion care.

Like its precursors, the 2016 edition of NAF's *Clinical Policy Guidelines* (CPGs) establishes clinical policy guidelines, which are developed by consensus, based on rigorous review of the relevant medical literature and known patient outcomes. These guidelines are intended to provide a basis for ongoing quality assurance, help reduce unnecessary care and costs, help protect providers in malpractice suits, provide ongoing medical education, and encourage research.

NAF's *Clinical Policy Guidelines*, first published in 1996 and revised annually, are based on the methodology described by David Eddy, MD, in *A Manual for Assessing Health Practices and Designing Practice Policies: The Explicit Approach.* Clinical policy guidelines are defined as a systematically developed series of statements which assist practitioners and patients in making decisions about appropriate health care. They represent an attempt to distill a large body of medical knowledge into a convenient and readily usable format.

When the outcomes of an intervention are known, practitioner choices are limited. But when the outcomes of an intervention are uncertain or variable, and/or when patients' preferences for those outcomes are uncertain or variable, practitioners must be given flexibility to tailor a policy to individual cases. This is addressed by having three types of practice policies according to their intended flexibility: standards, recommendations, and options.

1) **STANDARDS** are intended to be applied in virtually all cases. Deviations will be rare and difficult to justify.

2) **RECOMMENDATIONS** are steering in nature. They do not have the force of standards, but when not adhered to, there should be documented, rational clinical justification. They allow some latitude in clinical management.

3) **OPTIONS** are neutral with respect to a treatment choice. They merely note that different interventions are available and that different people make different choices. They may contribute to the educational process, and they require no justification.

NAF's *Clinical Policy Guidelines* include a list of bibliographic and cited references for each section when appropriate, and include discussion material in more controversial areas. These guidelines are meant to be living documents, subject to revision every year as new medical evidence becomes available.

Note: The *Clinical Policy Guidelines* are not intended to educate members regarding legal and regulatory issues, which may affect abortion practice. It is expected that administrators, staff, and clinicians will be aware of pertinent local, state/provincial/ territorial, and national legislation as well as the requirements and limitations of their individual duties and scope of professional practice. NAF provider members should ensure that all employees have access to appropriate resources for information and support.

References:

1. Eddy, DM. Clinical decision making: From theory to practice. Designing a practice policy: Standards, guidelines, and options. *JAMA* 1990, 263:3077.

2. Eddy, DM. A Manual for Assessing Health Practices and Designing Practice Policies: The Explicit Approach. Philadelphia: American College of Physicians, 1992.

3. Field, M & Lohr, K (Eds). *Guidelines for Clinical Practice: From Development to Use*. Washington, DC: National Academy Press, 1992.

4. Garnick, D, *et al*. Can practice guidelines reduce the number and costs of malpractice claims? *JAMA* 1991, 266:2856.

5. Hadorn, D, *et al*. An annotated algorithm approach to clinical guideline development. *JAMA* 1992, 267:3311.

6. Hayward, RS, *et al.* Users' guide to the medical literature VIII: How to use clinical practice guidelines; A. Are the recommendations valid? *JAMA* 1995, 274:570.

7. James, BC. Implementing Practice Guidelines through Clinical Quality Improvement. *Frontiers of Health Services Management* 1993, 10: 1.

8. Leape, LL. Practice guidelines and standards: An overview. *Qual Rev Bull*. 1990, 161:42.

9. Meeker, CI. A consensus-based approach to practice parameters. *Obstet Gynecol* 1992, 79:790.

10. Walker, RD, *et al.* Medical Practice Guidelines. *West J Med* 1994, 161: 39.

11. Woolf, SH. Practice Guidelines: A New Reality in Medicine. I. Recent Developments. *Arch Intern Med* 1990, 150: 1811.

12. Woolf, SH. Practice Guidelines: A New Reality in Medicine. II. Methods of Developing Guidelines. *Arch Intern Med* 1992, 152: 946.

13. Woolf, SH. Practice Guidelines: A New Reality in Medicine. III. Impact on Patient Care. *Arch Intern Med* 1993, 153: 2646.

NOTES ON FORMATTING

As presented here, standards, recommendations, and options are hierarchical in nature. It is therefore expected that clinical practices will favor the highest level of guidance available on a given point. In order to clarify the relationships of Recommendations and/or Options that are subordinate to higher level Standards and/or Recommendations, NAF's guidelines are numbered and formatted according to the following scheme:

Within each section, Standards are numbered consecutively starting with the section number with the standard to the right of a decimal. For example, the first standard in Section 1 will be Standard 1.1.

Recommendations are also numbered consecutively within each main subject heading, with numbers that are placed to the right of a second decimal point. Where a recommendation follows a standard, it is indented below the standard and the number of that standard will be found to the left of the decimal point (e.g., Recommendation 1.1.1). Where the recommendation stands alone and is not related to a specific standard, it is not indented in its placement on the page, and there will be a zero in the position to the left of the decimal point (e.g., Recommendation 1.0.1).

The consecutive numbers denoting Options within each main subject heading are placed to the right of the third decimal point. Where an option follows a preceding standard or recommendation, it is indented below that standard or recommendation and the numbers identifying that option will be found to the right of a third decimal point added to the end of the standard or recommendation (e.g., Option 1.1.0.1 or Option 1.1.1.1). Where the option stands alone and is not related to a specific standard or recommendation, it is not indented in its placement on the page, and zeros will be placed in the position for the standard and recommendation (e.g., Option 1.0.0.1).

1. WHO CAN PROVIDE ABORTIONS

Policy Statement: Abortion is a safe procedure when provided by qualified practitioners.(1)

Standard 1.1. Abortion will be provided by licensed* practitioners. This category is intended to include physicians from various specialties as well as nurse midwives, nurse practitioners, physician assistants, registered nurses, and other health professionals.(2)

Recommendation 1.1.1. Documentation specifying privileges in accordance with each practitioner's scope of practice should be maintained.

Recommendation 1.1.2. Hospital admitting privileges are not needed to provide safe abortion care.

Standard 1.2. All practitioners providing abortions must have received training to competency in abortion care, including the prevention, recognition, and management of complications.

Standard 1.3. Appropriate referrals must be available for patients who cannot be cared for by a practitioner at your facility.†

References:

1. Zane S, Creanga AA, Berg CJ, Pazol K, Suchdev DB, Jamieson DJ, et al. Abortion-related mortality in the united states: 1998–2010. Obstet Gynecol. 2015;126(2):258-65. (http://dx.doi.org/10.1097/aog.0000000000000945)

2. Weitz TA, Taylor D, Desai S, Upadhyay UD, Waldman J, Battistelli MF, et al. Safety of aspiration abortion performed by nurse practitioners, certified nurse midwives, and physician assistants under a california legal waiver. American Journal of Public Health. 2013;103(3):454-61. (http://dx.doi.org/10.2105/ajph.2012.301159)

* The term "licensed" is used here to indicate that a person is lawfully entitled to practice their profession in the place in which the practice takes place. The laws are different throughout the United States, Canada, Mexico, and Colombia.

† This may include the NAF Referral Line.

2. PATIENT EDUCATION, COUNSELING, AND INFORMED CONSENT

Policy Statement: Obtaining informed consent and assessing that the decision to have an abortion is made freely by the patient are essential parts of the abortion process.

Informed Consent

Standard 2.1. The practitioner must ensure that appropriate personnel have a discussion with the patient in which accurate information is provided about the procedure and its alternatives, and the potential risks and benefits. The patient must have the opportunity to have any questions answered to her satisfaction prior to intervention.

Option 2.1.0.1 Information may be provided either on an individual basis or in group sessions.

Standard 2.2. Documentation must show that the patient affirms that she understands the procedure and its alternatives, the potential risks and benefits, and that her decision is voluntary. Although other risks may be addressed, at a minimum, the following risks should be included:

(1) Bleeding, hemorrhage(1)
(2) Perforation(1)
(3) Infection(1, 2)
(4) Continuing pregnancy(1, 3)
(5) Damage to organs including hysterectomy(1)
(6) Death(4, 5)

Patient Education and Counseling

Standard 2.3. Each patient must have a private opportunity to discuss issues and concerns about her abortion.(6-10)

Standard 2.4. A patient must undergo the abortion as expeditiously as possible in accordance with good medical practice.

Standard 2.5. Information about aftercare and contraception must be available to patients at the facility.

Recommendation 2.5.1. Evidence-based guidelines for contraceptive counseling should be followed. (11-13)

Standard 2.6. All reasonable precautions must be taken to ensure the patient's confidentiality.

Recommendation 2.6.1. The patient should be informed of the communication of information to any third party.

Recommendation 2.6.2. A discussion should take place about which individuals or agencies may receive communications regarding services. This discussion should include confidentiality implications of using insurance or governmental health care coverage.

Discussion: Informed consent and abortion counseling are two different processes. The goal of informed consent is to assure that the patient's decision is voluntary and informed. Patient education and counseling includes a discussion of the feelings and concerns expressed by the patient, which may include help with decision-making and contraceptive choices, values clarification, or referral to other professionals. A referral to community services should be available if that becomes necessary or the needs of the patient are outside the scope of training of clinic staff.

Where abortion is safe and legal, the risk of death overall is less than 1 per 100,000 abortions.(4, 14) While the risk of death from safe abortion has remained stable, the maternal mortality ratio (MMR) in the U.S. has been rising steadily since 1987 when the Pregnancy Mortality Surveillance System was implemented.(15)

Risks of pregnancy-related death by country (15, 16)

Country	Maternal mortality ratio*
Canada	7
United states	16
Mexico	38
Colombia	64

*deaths per 100,000 live births

References:

1. Upadhyay UD, Desai S, Zlidar V, Weitz TA, Grossman D, Anderson P, et al. Incidence of emergency department visits and complications after abortion. Obstet Gynecol. 2015;Publish Ahead of Print. (http://dx.doi.org/10.1097/AOG.0000000000000603)

2. Achilles SL, Reeves MF. Prevention of infection after induced abortion: SFP guideline 20102. Contraception. 2011;83(4):295-309. (http://dx.doi.org/10.1016/j.contraception.2010.11.006)

3. Ireland LD, Gatter M, Chen AY. Medical compared with surgical abortion for effective pregnancy termination in the first trimester. Obstet Gynecol. 2015;126(1):22-8. (http://dx.doi.org/10.1097/aog.0000000000000910)

4. Bartlett LA, Berg CJ, Shulman HB, Zane SB, Green CA, Whitehead S, et al. Risk factors for legal induced abortion-related mortality in the united states. Obstet Gynecol. 2004;103(4):729-37. (http://dx.doi.org/10.1097/01.AOG.0000116260.81570.60)

5. Raymond EG, Grimes DA. The comparative safety of legal induced abortion and childbirth in the united states. Obstet Gynecol. 2012;119(2, Part 1):215-9. (http://dx.doi.org/10.1097/AOG.0b013e31823fe923)

6. Perrucci AC. Decision assessment and counseling in abortion care: Philosophy and practice. Lanham: Rowman & Littlefield; 2012.

7. Baker A, Beresford T. Informed consent, patient education, and counseling. In: Paul M, Lichtenberg ES, Borgatta L, Grimes DA, Stubblefield PG, Creinin MD, editors. Management of unintended and abnormal pregnancy: Comprehensive abortion care. Oxford: Wiley-Blackwell; 2009. p. 48-62.

8. Needle R, Walker L. Abortion counseling: A clinician's guide to psychology, legislation, politics, and competency. New York: Springer; 2007.

9. Gold RB, Nash E. State abortion counseling policies and the fundamental principles of informed consent. Guttmacher Policy Review. 2007;10(4):6-13. (http://www.guttmacher.org/pubs/gpr/10/4/gpr100406.html)

10. Baker A. Abortion and options counseling: A comprehensive reference. Granite City: Hope Clinic for Women; 1995.

11. Dehlendorf C, Henderson JT, Vittinghoff E, Grumbach K, Levy K, Schmittdiel J, et al. Association of the quality of interpersonal care during family planning counseling with contraceptive use. Am J Obstet Gynecol. 2016;[epub 28 Jan 2016]. (http://dx.doi.org/10.1016/j.ajog.2016.01.173)

12. World Health Organization Department of Reproductive Health and Research, Johns Hopkins Bloomberg School of Public Health Center for Communication Programs. Family planning: A global handbook for providers (2011 update). Baltimore and Geneva: CCP and WHO; 2011. (http://www.fphandbook.org/)

13. Bedsider. Washington, DC: The National Campaign to Prevent Teen and Unplanned Pregnancy; [cited 2016]. Available from: https://bedsider.org/.

14. Zane S, Creanga AA, Berg CJ, Pazol K, Suchdev DB, Jamieson DJ, et al. Abortion-related mortality in the united states: 1998–2010. Obstet Gynecol. 2015;126(2):258-65. (http://dx.doi.org/10.1097/aog.0000000000000945)

15. Creanga AA, Berg CJ, Syverson C, Seed K, Bruce FC, Callaghan WM. Pregnancy-related mortality in the united states, 2006-2010. Obstet Gynecol. 2015;125(1):5-12. (http://dx.doi.org/10.1097/AOG.0000000000000564)

16. World Health Organization, World Bank Group, UNICEF, United Nations Population Fund. Trends in maternal mortality: 1990 to 2015. Geneva: 2015. (http://www.who.int/reproductivehealth/publications/monitoring/maternal-mortality-2015/en/)

3. INFECTION PREVENTION AND CONTROL

Policy Statement: Patients and health care personnel are at risk for exposure to blood borne pathogens and other potentially infectious material. Infectious material may be transmitted to patients when proper engineering* and work practice controls,† which reduce exposure, are not followed. Proper handling of chemicals and other materials needed for proper disinfection is important to prevent harm to staff. Prevention and treatment of infection will reduce post-abortion morbidity.

Standard 3.1. Proper engineering and work practice controls must be in place to reduce exposure of patient and staff to infectious agents. Clinics must protect employees and patients from being exposed to biohazardous material.(1-3)

Standard 3.2. Hands must be washed or disinfected before and after patient contact.(4-6)

Standard 3.3. Personal protective equipment must be provided to all staff.(2, 7-10)

- Recommendation 3.3.1. New staff with potential exposure should have an initial training as part of orientation.
- Recommendation 3.3.2. Periodic facility-level training should occur at least every 3 years.
- Recommendation 3.3.3. Hepatitis B vaccine should be provided at no cost to the staff.

Standard 3.4. Exposure control plans must be established and followed.(7, 9, 11)

- Recommendation 3.4.1. Post-exposure evaluation, prophylaxis, and follow-up should be available to exposed patients or staff for any potentially infectious agent, regardless of source.

Standard 3.5. All instruments coming into contact with patients must be properly cleaned and disinfected between patients.(3)

Standard 3.6. All instruments entering the uterus must be sterile.

Standard 3.7. Tubing and manual uterine aspirators must be high-level disinfected or sterilized.(3)

---

* Engineering control—available technology and devices that isolate or remove hazards from the work place, such as puncture-resistant sharps disposal containers.

† Work practice control—an alteration in the way a task is performed that reduces the likelihood that an employee will be exposed to blood or other potentially infectious materials.

Standard 3.8. All surgically removed tissue must be considered biohazardous and be handled, stored, and disposed of in a manner that minimizes the risk of exposure. A protocol for tissue handling, storage, and disposal must be in place.

Standard 3.9. Sharps containers must be readily available.

Standard 3.10. Routine antibiotic prophylaxis must be used for surgical abortion.(12, 13)

Recommendation 3.10.1. All patients having surgical abortions should receive antibiotics pre-procedure.(14-16)

Option 3.10.1.1 Antibiotics may be initiated at the time of insertion of osmotic dilators.

Option 3.10.1.2 Antibiotics may be given to patients choosing medical abortion.(17) Insufficient evidence exists to support routine antibiotic prophylaxis for medical abortion.

Recommendation 3.10.2. Additional antibiotics are not recommended for endocarditis prophylaxis in patients with heart murmurs or other cardiac conditions.(13, 18, 19)

Recommendation 3.10.3. Patients should be offered testing for Chlamydia and gonorrhea.(20) Testing should not delay the procedure.

Option 3.10.3.1 Empiric treatment of Chlamydia may be considered for patients with history, signs, or symptoms of current infection.

Standard 3.11. Diagnosed infection must be appropriately treated.

Recommendation 3.11.1. For documented infections of the reproductive tract, evidence-based regimens should be followed.(20, 21)

Discussion: Regulatory agency policies (see references) may be helpful in developing exposure plans that protect personnel and patients from potentially infectious material. Proper techniques for collection, labeling, and disposal of biohazardous material and for the processing of instruments are integral to any complete plan.

The literature supports universal pre-procedure antibiotic prophylaxis for surgical abortion.(12) Only one large cohort analysis addresses the use of antibiotics in medical abortion.(17, 22)

Expedited partner treatment may be considered for patients with a known diagnosis of a sexual transmitted infection.

References:

1. Public Health Ontario. Best practices for cleaning, disinfection and sterilization of medical equipment/devices in all health care settings. 2010. (http://www.oahpp.ca/resources/pidac-knowledge/)

2. Centers for Disease Control and Prevention. Infection prevention checklist for outpatient settings: Minimal expectations for safe care. 2015. (http://www.cdc.gov/hai/pdfs/guidelines/Ambulatory-Care+Checklist_508_11_2015.pdf)

3. Rutala WA, Weber DJ, Healthcare Infection Control Practices Advisory Committee. Guideline for disinfection and sterilization in healthcare facilities. Center for Disease Control & Prevention, 2008. (http://www.cdc.gov/hicpac/pdf/guidelines/Disinfection_Nov_2008.pdf)

4. Centers for Disease Control and Prevention. Guideline for hand hygiene in health-care settings: Recommendations of the healthcare infection control practices advisory committee and the hicpac/shea/apic/idsa hand hygiene task force. Morbidity and Mortality Weekly Report: 2002. (http://www.cdc.gov/mmwr/pdf/rr/rr5116.pdf)

5. Centers for Disease Control and Prevention. Hand hygiene in healthcare settings [cited 2016]. Available from: http://www.cdc.gov/handhygiene/.

6. World Health Organization. WHO guidelines on hand hygiene in health care. 2009. (http://apps.who.int/iris/bitstream/10665/44102/1/9789241597906_eng.pdf)

7. Canadian Centre for Occupational Health and Safety. Universal precautions and routine practices. 2011. (http://www.ccohs.ca/oshanswers/prevention/universa.html)

8. Centers for Disease Control and Prevention. Bloodborne infectious diseases: Hiv/aids, hepatitis b, hepatitis c. 2013. (www.cdc.gov/niosh/topics/bbp/)

9. Occupational Safety and Health Administration. Bloodborne pathogens and needlestick prevention [cited 2015]. Available from: www.osha.gov/SLTC/bloodbornepathogens/index.html.

10. Ontario Hospital Association. Bloodborne diseases surveillance protocol for ontario hospitals. Pub#206. 2010. (www.oha.com/Services/HealthSafety/Documents/Blood%20Borne%20Diseases%20Protocol%20-%20Reviewed%20and%20Revised%20November%202012.pdf)

11. Occupational Safety and Health Administration. Standard 1910.1030: Bloodborne pathogens. 2001. (www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10051)

12. Sawaya GF, Grady D, Kerlikowske K, Grimes DA. Antibiotics at the time of induced abortion: The case for universal prophylaxis based on a meta-analysis. Obstet Gynecol. 1996;87(5 Pt 2):884-90. (http://www.ncbi.nlm.nih.gov/pubmed/8677129)

13. Van Eyk N, van Schalkwyk J. Antibiotic prophylaxis in gynaecologic procedures. J Obstet Gynaecol Canada. 2012;34(4):382-91. (http://sogc.org/guidelines/antibiotic-prophylaxis-in-gynaecologic-procedures/)

14. Achilles SL, Reeves MF. Prevention of infection after induced abortion: SFP guideline 20102. Contraception. 2011;83(4):295-309. (http://dx.doi.org/10.1016/j.contraception.2010.11.006)

15. Levallois P, Rioux JE. Prophylactic antibiotics for suction curettage abortion: Results of a clinical controlled trial. Am J Obstet Gynecol. 1988;158(1):100-5. (http://www.ncbi.nlm.nih.gov/pubmed/3276193)

16. Darj E, Stralin EB, Nilsson S. The prophylactic effect of doxycycline on postoperative infection rate after first-trimester abortion. Obstet Gynecol. 1987;70(5):755-8. (http://www.ncbi.nlm.nih.gov/pubmed/3658286)

17. Fjerstad M, Trussell J, Sivin I, Lichtenberg ES, Cullins V. Rates of serious infection after changes in regimens for medical abortion. N Engl J Med. 2009;361(2):145-51. (http://dx.doi.org/10.1056/NEJMoa0809146)

18. Guiahi M, Davis A. First-trimester abortion in women with medical conditions: SFP guideline 20122. Contraception. 2012;86(6):622-30. (http://dx.doi.org/10.1016/j.contraception.2012.09.001)

19. Wilson W, Taubert KA, Gewitz M, Lockhart PB, Baddour LM, Levison M, et al. Prevention of infective endocarditis: Guidelines from the american heart association: A guideline from the american heart association rheumatic fever, endocarditis, and kawasaki disease committee, council on cardiovascular disease in the young, and the council on clinical cardiology, council on cardiovascular surgery and anesthesia, and the quality of care and outcomes research interdisciplinary working group. Circulation. 2007;116(15):1736-54. (http://dx.doi.org/10.1161/CIRCULATIONAHA.106.183095)

20. Centers for Disease Control and Prevention. Sexually transmitted diseases treatment guidelines, 2015. Morbidity & Mortality Weekly Report. 2015;64(3):1-137. (http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6403a1.htm)

21. 2015 sexually transmitted diseases treatment guidelines: Centers for Disease Control and Prevention; [cited 2016]. Available from: http://www.cdc.gov/std/tg2015/.

22. Fjerstad M, Trussell J, Lichtenberg ES, Sivin I, Cullins V. Severity of infection following the introduction of new infection control measures for medical abortion. Contraception. 2011;83(4):330-5. (http://dx.doi.org/10.1016/j.contraception.2010.08.022)

4. LABORATORY PRACTICE

Policy Statement: Rh alloimmunization may jeopardize the health of a subsequent pregnancy.(1-8)

Standard 4.1. Rh status testing must be offered to all patients undergoing first-trimester abortion.

Standard 4.2. Rh status must be documented in all patients undergoing second-trimester abortion.

Recommendation 4.2.1. This documentation may be obtained by on-site testing or outside source, or self-report.

Recommendation 4.2.2. A patient whose RH status is unknown and declines Rh testing should sign an informed waiver.

Recommendation 4.2.3. Additional testing for either sensitization or other antibodies is not required in patients undergoing pregnancy termination, including testing for Du ("weak D").

Standard 4.3. Rh immune globulin administration must be offered to Rh(-) patients.

Standard 4.4. If Rh immune globulin is not administered in the facility, one of the following is required:

(a) Informed waiver signed by a patient who declines Rh immune globulin; or
(b) Documentation of other arrangements for administration.

Standard 4.5. Anemia and the risk of bleeding must be evaluated.(9)

Recommendation 4.5.1. Hemoglobin or hematocrit testing should be readily available.

Recommendation 4.5.2. Prior to surgical and medical abortion in the first trimester, hemoglobin/hematocrit and other laboratory evaluation should be done as indicated by medical history and patient symptoms. However, routine hemoglobin or hematocrit has not been shown to improve outcomes.

Recommendation 4.5.3. Prior to administration of methotrexate, a complete blood count (CBC) should be considered for patients with history of blood dyscrasia.

Recommendation 4.5.4. Prior to all abortions **after** the first trimester, a pre-procedure hemoglobin or hematocrit should be checked.

Discussion: No data supports the administration of Rh immune globulin in very early pregnancies (less than eight weeks), or that indicate any harm associated with its administration. Until/unless such data is available, the NAF Rh testing standards must be applied to pregnancies of any gestation.

The use of approved slide/tube/spot methods is acceptable for on-site Rh testing.

References:

1. Baskett TF, Parsons ML. Prevention of rh(d) alloimmunization: A cost-benefit analysis. CMAJ. 1990;142(4):337-9. (http://www.ncbi.nlm.nih.gov/pubmed/2154307)

2. Bowman JM. The prevention of rh immunization. Transfusion medicine reviews. 1988;2(3):129-50. (http://www.ncbi.nlm.nih.gov/pubmed/2856526)

3. Chavez GF, Mulinare J, Edmonds LD. Epidemiology of rh hemolytic disease of the newborn in the united states. JAMA. 1991;265(24):3270-4. (http://www.ncbi.nlm.nih.gov/pubmed/1904504)

4. Gibble JW, Ness PM. Maternal immunity to red cell antigens and fetal transfusion. Clin Lab Med. 1992;12(3):553-76. (http://www.ncbi.nlm.nih.gov/pubmed/1521427)

5. Jabara S, Barnhart KT. Is rh immune globulin needed in early first-trimester abortion? A review. Am J Obstet Gynecol. 2003;188(3):623-7. (http://www.ncbi.nlm.nih.gov/pubmed/12634631)

6. Roberts H, Mitchell R. The use of anti-d prophylaxis in the management of miscarriage in general practice. Health bulletin. 1991;49(4):245-9. (http://www.ncbi.nlm.nih.gov/pubmed/1657828)

7. Selinger M. Immunoprophylaxis for rhesus disease—expensive but worth it? BJOG: An International Journal of Obstetrics & Gynaecology. 1991;98(6):509-12. (http://dx.doi.org/10.1111/j.1471-0528.1991.tb10360.x)

8. ACOG practice bulletin no. 4: Prevention of rh d alloimmunization. Washington, DC: American College of Obstetricians and Gynecologists, 1999 May. Report No.: Contract No.: 4. (http://www.acog.org/Resources_And_Publications/Practice_Bulletins/Committee_on_Practice_Bulletins_--_Obstetrics/Prevention_of_Rh_D_Alloimmunization)

9. Kerns J, Steinauer J. Management of postabortion hemorrhage: SFP guideline 20131. Contraception. 2013;87(3):331-42. (http://dx.doi.org/10.1016/j.contraception.2012.10.024)

5. LIMITED SONOGRAPHY IN ABORTION CARE

Policy Statement: The use of ultrasound is not a requirement for the provision of first-trimester abortion care. Proper use of ultrasound may inform clinical decision-making in abortion care.

Standard 5.1. Staff members who perform ultrasound exams and clinicians who interpret those exams must either show documentation of proficiency or complete a program of training. Training must include a period of supervision. Documentation of this training must be maintained.

Option 5.1.0.1. The *Ultrasound Training in Abortion Care* CD-ROM developed by ARMS, NAF, and CAPS is a good resource for training and may be utilized as part of a training program.(1)

Standard 5.2. A system of proficiency review must be in place for staff members who perform ultrasound exams and clinicians who interpret those exams.

Standard 5.3. Patients must be informed of the purpose and limitations of the ultrasound exam in the abortion care setting.

Standard 5.4. Patients must be informed of the sonographic diagnosis, including early pregnancy failure.(2, 3)

Standard 5.5. The findings of all ultrasound exams and the interpretation of those findings must be documented in the medical record. This documentation must also include the name(s) of staff who performed and interpreted the exam.(4)

Recommendation 5.5.1. Ultrasound images should be included as part of the documentation, particularly for the purposes of proficiency review.

Recommendation 5.5.2. A standard form for documenting findings and interpretation should be used.

Standard 5.6. A limited first-trimester ultrasound exam must include the following:

(1) a full scan of the uterus in both the transverse and longitudinal planes to confirm an intrauterine pregnancy;
(2) evaluation of pregnancy number;
(3) measurements to document gestational age; and
(4) evaluation of pregnancy landmarks, such as yolk sac or the presence or absence of fetal/embryonic cardiac activity.

Recommendation 5.6.1. When clinically indicated, evaluation of other pelvic structures (i.e., adnexal structures and the cul de sac) should be performed and documented or an appropriate referral should be made for further evaluation.

Standard 5.7. A limited second-trimester ultrasound exam must include the following:

(1) views to document intrauterine location of the pregnancy;
(2) evaluation of fetal number;
(3) fetal measurements to document gestational age;
(4) evaluation of fetal cardiac activity; and
(5) placental location.

Recommendation 5.7.1. When a patient with a prior uterine scar is found to have placenta previa or a low anterior placenta, or when other placental abnormality is suspected, additional sonographic imaging should be performed on-site or an appropriate referral made.(5-7)

Standard 5.8. Ultrasound equipment must be properly maintained.

Standard 5.9. Ultrasound transducers must be disinfected between patients.

Discussion: According to the American Institute of Ultrasound in Medicine (AIUM), in collaboration with the American College of Obstetricians and Gynecologists and the American College of Radiology, a "limited ultrasound examination" is performed when a specific question requires investigation.(4, 8, 9)

References:

1. Deutchman M, Reeves M, Fjerstad M. Ultrasound in abortion care training program (cd-rom and workbook). Affiliates Risk Management Services, Inc., 2007.

2. Goldstein SR, Reeves MF. Assessing pregnancy status and gestational age. In: Paul M, Lichtenberg S, Borgatta L, Grimes D, Stubblefield P, Creinin M, editors. Management of unintended and abnormal pregnancy: Comprehensive abortion care. London: Wiley-Blackwell; 2009.

3. Perriera L, Reeves MF. Ultrasound criteria for diagnosis of early pregnancy failure and ectopic pregnancy. Seminars in Reproductive Medicine. 2008;26(5):373-82. (http://dx.doi.org/10.1055/s-0028-1087103)

4. American Institute of Ultrasound in Medicine. AIUM practice parameter for the performance of obstetric ultrasound examinations. Laurel, MD: American Institute of Ultrasound in Medicine, 2013. (http://www.aium.org/resources/guidelines/obstetric.pdf)

5. Rac MWF, Dashe JS, Wells CE, Moschos E, McIntire DD, Twickler DM. Ultrasound predictors of placental invasion: The placenta accreta index. Am J Obstet Gynecol. 2015;212(3):343.e1-.e7. (http://dx.doi.org/http://dx.doi.org/10.1016/j.ajog.2014.10.022)

6. Bowman ZS, Eller AG, Kennedy AM, Richards DS, Winter Iii TC, Woodward PJ, et al. Accuracy of ultrasound for the prediction of placenta accreta. Am J Obstet Gynecol. 2014;211(2):177.e1-.e7. (http://dx.doi.org/http://dx.doi.org/10.1016/j.ajog.2014.03.029)

7. Esakoff TF, Sparks TN, Kaimal AJ, Kim LH, Feldstein VA, Goldstein RB, et al. Diagnosis and morbidity of placenta accreta. Ultrasound in Obstetrics and Gynecology. 2011;37(3):324-7. (http://dx.doi.org/10.1002/uog.8827)

8. American Institute of Ultrasound in Medicine. AIUM official statement: Limited obstetrical ultrasound. American Institute of Ultrasound in Medicine, 2009. (http://www.aium.org/officialStatements/19)

9. ACOG practice bulletin no. 101: Ultrasonography in pregnancy. Obstet Gynecol. 2009;113(2, Part 1):451-61. (http://dx.doi.org/10.1097/AOG.0b013e31819930b0)

6. EARLY MEDICAL ABORTION

Policy Statement: Medical induction is an effective method for early abortion.(1-8) Adequate counseling and follow-up care will enhance its safety and acceptability.

Standard 6.1. Initial evaluation must include pertinent medical history.

Standard 6.2. The patient must be informed about the efficacy, side effects, and risks, including excessive bleeding, infection, and teratogenicity of the medications used.(9)

Recommendation 6.2.1. Patients should be informed that no evidence-based way to reverse mifepristone exists.(10)

Recommendation 6.2.2. Breastfeeding should not be a contraindication to medical abortion with mifepristone and misoprostol. Breastfeeding may continue uninterrupted.(11)

Standard 6.3. The patient must be informed of the need to ensure the success of the abortion.

Standard 6.4. The patient must be informed that a uterine aspiration may be necessary.

Standard 6.5. Patient instructions must include written and oral information about use of medications at home and symptoms of abortion complications.

Standard 6.6. The facility must provide an emergency contact service on a 24-hour basis and must offer or assure referral for uterine aspiration if indicated.

Standard 6.7. Confirmation of pregnancy must be documented. Gestational age must be verified to be within the limits of the facility medical abortion protocol.

Standard 6.8. If an ultrasound has been performed and an intrauterine gestation has not been confirmed, ectopic pregnancy must be considered. Additional evaluation should follow a protocol as outlined in CPG section 8 Management of Pregnancy of Uncertain Location. Starting the medical abortion regimen does not need to be delayed.

Standard 6.9. Combined mifepristone-misoprostol regimens are more effective than misoprostol alone or methotrexate and misoprostol. An evidence-based medical abortion regimen must be used.(12-14)

Recommendation 6.9.1. Where mifepristone is available, a combined mifepristone-misoprostol regimen should be used.(1-7, 15, 16)

Recommendation 6.9.2. If a misoprostol-alone or methotrexate-misoprostol regimen is offered when mifepristone is available, full information on the differences between the chosen regimen and mifepristone-misoprostol regimens should be addressed with the patient and informed consent obtained.(17)

Recommendation 6.9.3. A dose of 200 mg of mifepristone is recommended for combined mifepristone-misoprostol regimen.(7, 14)

Option 6.9.3.1. Mifepristone may be taken outside the clinic setting.(18)

Recommendation 6.9.4. When mifepristone and vaginal, buccal, or sublingual misoprostol are used, the regimen is recommended for gestations up to 70 days.(19-23)

Recommendation 6.9.5. When mifepristone and oral misoprostol are used, the regimen is recommended for gestations up to 56 days.(24)

Recommendation 6.9.6. A regimen of misoprostol alone may be used by vaginal, buccal, or sublingual routes for gestations up to 63 days.(12-14, 25-29)

Recommendation 6.9.7. When methotrexate and misoprostol are used, an evidence-based regimen using vaginal, buccal, or sublingual misoprostol is recommended for gestations up to 63 days.(7, 30-32)

Standard 6.10. Patient comfort level during the medical abortion process must be considered.

Recommendation 6.10.1. Analgesia or other comfort measures should be discussed and offered as needed unless there are contraindications. Ibuprofen is more effective than acetaminophen for pain control.(33-35)

Standard 6.11. Success of the medical abortion must be assessed by ultrasonography, hCG testing, or clinical means in the office, by telephone, or electronic communication.(36-38)

Recommendation 6.11.1. Follow-up evaluation should be scheduled within 14 days after starting medical abortion.(7)

Recommendation 6.11.2. High-sensitivity urine hCG testing should not be checked within 3 weeks of medical abortion.(39-41)

Option 6.11.2.1. Multi-level urine pregnancy tests may be used.(42-44)

Recommendation 6.11.3. Ultrasonography or hCG levels should be used to evaluate completion of the abortion when expected bleeding does not occur after medications.

Recommendation 6.11.4. Endometrial thickness alone should not be used to guide management after medical abortion.(45, 46)

Recommendation 6.11.5. A second dose of misoprostol (800 mcg) may be given for persistent gestational sac or continuing pregnancy.(47, 48)

Recommendation 6.11.6. Prolonged courses of misoprostol should not be given routinely to improve success.(49, 50)

Standard 6.12. Medications dispensed and prescribed must be documented.

Standard 6.13. If the patient has failed to follow-up as planned, clinic staff must document attempts to reach the patient. All attempts to contact the patient must be documented in the patient's medical record.

Discussion: Many patients prefer pharmacological methods of terminating early pregnancies rather than suction curettage.

References:

1. Chong E, Tsereteli T, Nguyen NN, Winikoff B. A randomized controlled trial of different buccal misoprostol doses in mifepristone medical abortion. Contraception. 2012;86(3):251-6. (http://dx.doi.org/10.1016/j.contraception.2011.12.012)

2. Raghavan S, Comendant R, Digol I, Ungureanu S, Dondiuc I, Turcanu S, et al. Comparison of 400 mcg buccal and 400 mcg sublingual misoprostol after mifepristone medical abortion through 63 days' lmp: A randomized controlled trial. Contraception. 2010;82(6):513-9. (http://dx.doi.org/10.1016/j.contraception.2010.05.013)

3. Raghavan S, Comendant R, Digol I, Ungureanu S, Friptu V, Bracken H, et al. Two-pill regimens of misoprostol after mifepristone medical abortion through 63 days' gestational age: A randomized controlled trial of sublingual and oral misoprostol. Contraception. 2009;79(2):84-90. (http://dx.doi.org/10.1016/j.contraception.2008.09.001)

4. Raymond EG, Shannon C, Weaver MA, Winikoff B. First-trimester medical abortion with mifepristone 200 mg and misoprostol: A systematic review. Contraception. 2013;87(1):26-37. (http://dx.doi.org/10.1016/j.contraception.2012.06.011)

5. Shannon C, Wiebe E, Jacot F, Guilbert E, Dunn S, Sheldon WR, et al. Regimens of misoprostol with mifepristone for early medical abortion: A randomised trial. BJOG. 2006;113(6):621-8. (http://dx.doi.org/10.1111/j.1471-0528.2006.00948.x)

6. von Hertzen H, Huong NT, Piaggio G, Bayalag M, Cabezas E, Fang AH, et al. Misoprostol dose and route after mifepristone for early medical abortion: A randomised controlled noninferiority trial. BJOG. 2010;117(10):1186-96. (http://dx.doi.org/10.1111/j.1471-0528.2010.02636.x)

7. Creinin MD, Grossman DA, Society of Family Planning, American College of Obstetricians and Gynecologists. Practice bulletin no. 143: Medical management of first-trimester abortion. Obstet Gynecol. 2014;123(3):676-92. (http://dx.doi.org/10.1097/01.AOG.0000444454.67279.7d)

8. Niinimaki M, Suhonen S, Mentula M, Hemminki E, Heikinheimo O, Gissler M. Comparison of rates of adverse events in adolescent and adult women undergoing medical abortion: Population register based study. BMJ. 2011;342:d2111. (http://www.ncbi.nlm.nih.gov/pubmed/21508042)

9. Gonzalez CH, Vargas FR, Perez AB, Kim CA, Brunoni D, Marques-Dias MJ, et al. Limb deficiency with or without mobius sequence in seven brazilian children associated with misoprostol use in the first trimester of pregnancy. American Journal of Medical Genetics. 1993;47(1):59-64. (http://www.ncbi.nlm.nih.gov/pubmed/8368254)

10. Grossman D, White K, Harris L, Reeves M, Blumenthal PD, Winikoff B, et al. Continuing pregnancy after mifepristone and "reversal" of first-trimester medical abortion: A systematic review. Contraception. 2015;92(3):206-11. (http://dx.doi.org/10.1016/j.contraception.2015.06.001)

11. Saav I, Fiala C, Hamalainen JM, Heikinheimo O, Gemzell-Danielsson K. Medical abortion in lactating women--low levels of mifepristone in breast milk. Acta Obstet Gynecol Scand. 2010;89(5):618-22. (http://dx.doi.org/10.3109/00016341003721037)

12. Ngoc NTN, Blum J, Raghavan S, Nga NTB, Dabash R, Diop A, et al. Comparing two early medical abortion regimens: Mifepristone+misoprostol vs. Misoprostol alone. Contraception. 2011;83(5):410-7. (http://dx.doi.org/10.1016/j.contraception.2010.09.002)

13. Blum J, Raghavan S, Dabash R, Ngoc NT, Chelli H, Hajri S, et al. Comparison of misoprostol-only and combined mifepristone-misoprostol regimens for home-based early medical abortion in tunisia and vietnam. International Journal of Gynaecology and Obstetrics. 2012;118(2):166-71. (http://dx.doi.org/10.1016/j.ijgo.2012.03.039)

14. Department of Reproductive Health and Research. Safe abortion: Technical and policy guidance for health systems. 2nd ed. Geneva: World Health Organization,; 2012. (http://www.who.int/reproductivehealth/publications/unsafe_abortion/9789241548434/en/index.html)

15. Creinin MD, Fox MC, Teal S, Chen A, Schaff EA, Meyn LA, et al. A randomized comparison of misoprostol 6 to 8 hours versus 24 hours after mifepristone for abortion. Obstet Gynecol. 2004;103(5 Pt 1):851-9. (http://dx.doi.org/10.1097/01.AOG.0000124271.23499.84)

16. Schaff EA, Fielding SL, Westhoff C, Ellertson C, Eisinger SH, Stadalius LS, et al. Vaginal misoprostol administered 1, 2, or 3 days after mifepristone for early medical abortion: A randomized trial. JAMA. 2000;284(15):1948-53. (http://dx.doi.org/10.1001/jama.284.15.1948)

17. Wiebe E, Dunn S, Guilbert E, Jacot F, Lugtig L. Comparison of abortions induced by methotrexate or mifepristone followed by misoprostol. Obstet Gynecol. 2002;99(5 Pt 1):813-9. (http://www.ncbi.nlm.nih.gov/pubmed/11978292)

18. Conkling K, Karki C, Tuladhar H, Bracken H, Winikoff B. A prospective open-label study of home use of mifepristone for medical abortion in nepal. International Journal of Gynecology & Obstetrics. 2015;128(3):220-3. (http://dx.doi.org/10.1016/j.ijgo.2014.09.022)

19. Boersma AA, Meyboom-de Jong B, Kleiverda G. Mifepristone followed by home administration of buccal misoprostol for medical abortion up to 70 days of amenorrhoea in a general practice in curaçao. The European Journal of Contraception and Reproductive Health Care. 2011;16(2):61-6. (http://dx.doi.org/doi:10.3109/13625187.2011.555568)

20. Gouk EV, Lincoln K, Khair A, Haslock J, Knight J, Cruickshank DJ. Medical termination of pregnancy at 63 to 83 days gestation. Br J Obstet Gynaecol. 1999;106(6):535-9. (http://www.ncbi.nlm.nih.gov/pubmed/10426609)

21. Winikoff B, Dzuba IG, Chong E, Goldberg AB, Lichtenberg ES, Ball C, et al. Extending outpatient medical abortion services through 70 days of gestational age. Obstet Gynecol. 2012;120(5):1070-6. (http://www.ncbi.nlm.nih.gov/pubmed/23090524)

22. Bracken H, Dabash R, Tsertsvadze G, Posohova S, Shah M, Hajri S, et al. A two-pill sublingual misoprostol outpatient regimen following mifepristone for medical abortion through 70 days' lmp: A prospective comparative open-label trial. Contraception. 2014;89(3):181-6. (http://dx.doi.org/10.1016/j.contraception.2013.10.018)

23. Sanhueza Smith P, Pena M, Dzuba IG, Martinez ML, Peraza AG, Bousieguez M, et al. Safety, efficacy and acceptability of outpatient mifepristone-misoprostol medical abortion through 70 days since last menstrual period in public sector facilities in mexico city. Reprod Health Matters. 2015;22(44 Suppl 1):75-82. (http://dx.doi.org/10.1016/S0968-8080(15)43825-X)

24. Winikoff B, Dzuba IG, Creinin MD, Crowden WA, Goldberg AB, Gonzales J, et al. Two distinct oral routes of misoprostol in mifepristone medical abortion: A randomized controlled trial. Obstet Gynecol. 2008;112(6):1303-10. (http://dx.doi.org/10.1097/AOG.0b013e31818d8eb4)

25. von Hertzen H, Piaggio G, Huong NT, Arustamyan K, Cabezas E, Gomez M, et al. Efficacy of two intervals and two routes of administration of misoprostol for termination of early pregnancy: A randomised controlled equivalence trial. Lancet. 2007;369(9577):1938-46. (http://dx.doi.org/10.1016/S0140-6736(07)60914-3)

26. Kulier R, Kapp N, Gulmezoglu AM, Hofmeyr GJ, Cheng L, Campana A. Medical methods for first trimester abortion. Cochrane Database Syst Rev. 2011;11:CD002855. (http://dx.doi.org/10.1002/14651858.CD002855.pub4)

27. Singh K, Fong YF, Dong F. A viable alternative to surgical vacuum aspiration: Repeated doses of intravaginal misoprostol over 9 hours for medical termination of pregnancies up to eight weeks. BJOG. 2003;110(2):175-80. (http://www.ncbi.nlm.nih.gov/pubmed/12618162)

28. Salakos N, Kountouris A, Botsis D, Rizos D, Gregoriou O, Detsis G, et al. First-trimester pregnancy termination with 800 microg of vaginal misoprostol every 12 h. Eur J Contracept Reprod Health Care. 2005;10(4):249-54. (http://dx.doi.org/10.1080/13625180500178676)

29. Rodriguez MI, Seuc A, Kapp N, von Hertzen H, Huong NTM, Wojdyla D, et al. Acceptability of misoprostol-only medical termination of pregnancy compared with vacuum aspiration: An international, multicentre trial. BJOG: an International Journal of Obstetrics & Gynaecology. 2012;119(7):817-23. (http://dx.doi.org/10.1111/j.1471-0528.2012.03310.x)

30. Aldrich T, Winikoff B. Does methotrexate confer a significant advantage over misoprostol alone for early medical abortion? A retrospective analysis of 8678 abortions. Bjog. 2007;114(5):555-62. (http://dx.doi.org/10.1111/j.1471-0528.2007.01274.x)

31. Carbonell Esteve JL, Varela L, Velazco A, Tanda R, Sanchez C. 25 mg or 50 mg of oral methotrexate followed by vaginal misoprostol 7 days after for early abortion: A randomized trial. Gynecol Obstet Invest. 1999;47(3):182-7. (http://www.ncbi.nlm.nih.gov/pubmed/10087413)

32. Wiebe ER. Oral methotrexate compared with injected methotrexate when used with misoprostol for abortion. Am J Obstet Gynecol. 1999;181(1):149-52. (http://www.ncbi.nlm.nih.gov/pubmed/10411811)

33. Livshits A, Machtinger R, David LB, Spira M, Moshe-Zahav A, Seidman DS. Ibuprofen and paracetamol for pain relief during medical abortion: A double-blind randomized controlled study. Fertility and sterility. 2009;91(5):1877-80. (http://dx.doi.org/10.1016/j.fertnstert.2008.01.084)

34. Weber B, Fontan JE. Acetaminophen as a pain enhancer during voluntary interruption of pregnancy with mifepristone and sulprostone. Eur J Clin Pharmacol. 1990;39(6):609. (http://www.ncbi.nlm.nih.gov/pubmed/2095349)

35. Weber B, Fontan JE, Scheller E, Debu E, Dufour B, Majorel P, et al. [abortion induced by mifepristone and sulprostone combination: Attempting analgesia with acetominophen or dipropyline]. Contracept Fertil Sex (Paris). 1990;18(12):1073-6. (http://www.ncbi.nlm.nih.gov/pubmed/12283629)

36. Bracken H, Clark W, Lichtenberg ES, Schweikert SM, Tanenhaus J, Barajas A, et al. Alternatives to routine ultrasound for eligibility assessment prior to early termination of pregnancy with mifepristone–misoprostol. BJOG: an International Journal of Obstetrics & Gynaecology. 2011;118(1):17-23. (http://dx.doi.org/10.1111/j.1471-0528.2010.02753.x)

37. Cameron ST, Glasier A, Dewart H, Johnstone A, Burnside A. Telephone follow-up and self-performed urine pregnancy testing after early medical abortion: A service evaluation. Contraception. 2012;86(1):67-73. (http://dx.doi.org/10.1016/j.contraception.2011.11.010)

38. Clark W, Bracken H, Tanenhaus J, Schweikert S, Lichtenberg ES, Winikoff B. Alternatives to a routine follow-up visit for early medical abortion. Obstet Gynecol. 2010;115(2 Pt 1):264-72. (http://dx.doi.org/10.1097/AOG.0b013e3181c996f3)

39. Godfrey EM, Anderson A, Fielding SL, Meyn L, Creinin MD. Clinical utility of urine pregnancy assays to determine medical abortion outcome is limited. Contraception. 2007;75(5):378-82. (http://ovidsp.ovid.com/ovidweb.cgi?T=JS&NEWS=N&PAGE=fulltext&AN=17434020&D=medl)

40. Perriera LK, Reeves MF, Chen BA, Hohmann HL, Hayes J, Creinin MD. Feasibility of telephone follow-up after medical abortion. Contraception. 2010;81(2):143-9. (http://linkinghub.elsevier.com/retrieve/pii/S0010782409003874)

41. Parashar P, Iversen OE, Midboe G, Myking O, Bjorge L. Medical abortion in the first trimester: The use of serum hCG and endometrial thickness as markers of completeness. European Journal of Contraception and Reproductive Health Care. 2007;12(4):366-71. (http://dx.doi.org/10.1080/13625180701536300)

42. Oppegaard KS, Qvigstad E, Fiala C, Heikinheimo O, Benson L, Gemzell-Danielsson K. Clinical follow-up compared with self-assessment of outcome after medical abortion: A multicentre, non-inferiority, randomised, controlled trial. Lancet. 2015;385(9969):698-704. (http://dx.doi.org/10.1016/S0140-6736(14)61054-0)

43. Lynd K, Blum J, Ngoc NT, Shochet T, Blumenthal PD, Winikoff B. Simplified medical abortion using a semi-quantitative pregnancy test for home-based follow-up. International journal of gynaecology and obstetrics: the official organ of the International Federation of Gynaecology and Obstetrics. 2013;121(2):144-8. (http://dx.doi.org/10.1016/j.ijgo.2012.11.022)

44. Blum J, Shochet T, Lynd K, Lichtenberg ES, Fischer D, Arnesen M, et al. Can at-home semi-quantitative pregnancy tests serve as a replacement for clinical follow-up of medical abortion? A US study. Contraception. 2012;86(6):757-62. (http://dx.doi.org/10.1016/j.contraception.2012.06.005)

45. Reeves MF, Fox MC, Lohr PA, Creinin MD. Endometrial thickness following medical abortion is not predictive of subsequent surgical intervention. Ultrasound in Obstetrics and Gynecology. 2009;34(1):104-9. (http://dx.doi.org/10.1002/uog.6404)

46. Reeves MF, Lohr PA, Harwood BJ, Creinin MD. Ultrasonographic endometrial thickness after medical and surgical management of early pregnancy failure. Obstet Gynecol. 2008;111(1):106-12. (http://dx.doi.org/10.1097/01.AOG.0000296655.26362.6d)

47. Chen MJ, Creinin MD. Mifepristone with buccal misoprostol for medical abortion: A systematic review. Obstet Gynecol. 2015;126(1):12-21. (http://dx.doi.org/10.1097/aog.0000000000000897)

48. Reeves MF, Kudva A, Creinin MD. Medical abortion outcomes after a second dose of misoprostol for persistent gestational sac. Contraception. 2008;78(4):332-5. (http://dx.doi.org/10.1016/j.contraception.2008.06.002)

49. Honkanen H, Ranta S, Ylikorkala O, Heikinheimo O. The kinetics of serum hCG and progesterone in response to oral and vaginal administration of misoprostol during medical termination of early pregnancy. Human reproduction (Oxford, England). 2002;17(9):2315-9. (http://www.ncbi.nlm.nih.gov/pubmed/12202418)

50. von Hertzen H, Honkanen H, Piaggio G, Bartfai G, Erdenetungalag R, Gemzell-Danielsson K, et al. WHO multinational study of three misoprostol regimens after mifepristone for early medical abortion. I: Efficacy. BJOG: an International Journal of Obstetrics & Gynaecology. 2003;110(9):808-18.

7. First-Trimester Surgical Abortion

Policy Statement: Induced abortion is one of the safest surgical procedures. The following guidelines are intended to outline procedures that maximize this safety.

Standard 7.1. Pertinent medical history must be obtained.

Standard 7.2. Pregnancy must be confirmed and gestational age must be assessed.

Recommendation 7.2.1. When gestational age cannot be reasonably determined by other means, ultrasonography should be used.

Option 7.2.1.1. Ultrasonography, can verify an intrauterine pregnancy and determine gestational age, using a consistent and published table of fetal measurements.(1, 2)

Standard 7.3. Appropriate initial evaluation must be performed. Baseline blood pressure and pulse must be obtained for all patients.

Recommendation 7.3.1. Physical exam should be done as indicated by medical history and patient symptoms.

Standard 7.4. All instruments entering the uterine cavity must be sterile.

Option 7.4.0.1. The vagina may be cleansed with a bacteriocidal agent though randomized trials have failed to show a benefit to this practice.(3)

Standard 7.5. The cervix should be appropriately dilated for the gestational age.

Recommendation 7.5.1. Cervical dilation may be achieved through the use of rigid cervical dilators. Tapered dilators such as Pratt or Denniston dilators are recommended over non-tapered dilators such as Hegar dilators.(4)

Recommendation 7.5.2. When misoprostol is used for cervical preparation, a dose of 400 mcg should be used.(5-7) The cervical effects of misoprostol are variable but generally require administration more than 60 minutes prior to the procedure.

Option 7.5.2.1. The routine use of 400 mcg misoprostol before procedures may reduce rare complications but must be balanced against increased pain and other side effects for all patients.(8)

Option 7.5.2.2. Osmotic dilators may be considered when cervical dilation is expected to be difficult.(9)

Standard 7.6. First-trimester surgical abortion must be performed by aspiration of the uterus, not by sharp curettage.(10-12)

Recommendation 7.6.1. Uterine aspiration is effective throughout the first trimester including prior to confirmation of a definitive intrauterine pregnancy on ultrasound.(13)

Standard 7.7. The procedure and all medications given must be documented.

Discussion: Laboratory evaluation, examination of products of conception, and post-procedure care are discussed in other relevant sections.

References:

1. Perriera L, Reeves MF. Ultrasound criteria for diagnosis of early pregnancy failure and ectopic pregnancy. Seminars in Reproductive Medicine. 2008;26(5):373-82. (http://dx.doi.org/10.1055/s-0028-1087103)

2. Goldstein SR, Reeves MF. Assessing pregnancy status and gestational age. In: Paul M, Lichtenberg S, Borgatta L, Grimes D, Stubblefield P, Creinin M, editors. Management of unintended and abnormal pregnancy: Comprehensive abortion care. London: Wiley-Blackwell; 2009.

3. Achilles SL, Reeves MF. Prevention of infection after induced abortion: SFP guideline 20102. Contraception. 2011;83(4):295-309. (http://dx.doi.org/10.1016/j.contraception.2010.11.006)

4. Hulka JF, Lefler HT, Jr., Anglone A, Lachenbruch PA. A new electronic force monitor to measure factors influencing cervical dilation for vacuum curettage. Am J Obstet Gynecol. 1974;120(2):166-73. (http://www.ncbi.nlm.nih.gov/pubmed/4411687)

5. Singh K, Fong YF, Prasad RN, Dong F. Evacuation interval after vaginal misoprostol for preabortion cervical priming: A randomized trial. Obstet Gynecol. 1999;94(3):431-4.

6. Sharma S, Refaey H, Stafford M, Purkayastha S, Parry M, Axby H. Oral versus vaginal misoprostol administered one hour before surgical termination of pregnancy: A randomised controlled trial. BJOG. 2005;112(4):456-60. (http://dx.doi.org/10.1111/j.1471-0528.2005.00255.x)

7. Sääv I, Kopp Kallner H, Fiala C, Gemzell-Danielsson K. Sublingual versus vaginal misoprostol for cervical dilatation 1 or 3 h prior to surgical abortion: A double-blinded rct. Human Reproduction. 2015;30(6):1314-22. (http://dx.doi.org/10.1093/humrep/dev071)

8. Meirik O, Huong NTM, Piaggio G, Bergel E, von Hertzen H. Complications of first-trimester abortion by vacuum aspiration after cervical preparation with and without misoprostol: A multicentre randomised trial. The Lancet. 2012;379(9828):1817–24. (http://dx.doi.org/10.1016/S0140-6736(11)61937-5)

9. Allen RH, Goldberg AB. Cervical dilation before first-trimester surgical abortion (<14 weeks' gestation): SFP guideline 20071. Contraception. 2007;76(2):139-56. (http://dx.doi.org/10.1016/j.contraception.2007.05.001)

10. International Federation of Gynecology and Obstetrics. Consensus statement on uterine evacuation: Uterine evacuation: Use vacuum aspiration or medications, not sharp curettage. London: FIGO, 2011.

11. Department of Reproductive Health and Research. Safe abortion: Technical and policy guidance for health systems. 2nd ed. Geneva: World Health Organization,; 2012. (http://www.who.int/reproductivehealth/publications/unsafe_abortion/9789241548434/en/index.html)

12. Paul M, Lichtenberg ES, Borgatta L, Grimes DA, Stubblefield PG, Creinin MD. Management of unintended and abnormal pregnancy: Comprehensive abortion care. Oxford: Wiley-Blackwell; 2009.

13. Lichtenberg ES, Paul M. Surgical abortion prior to 7 weeks of gestation: SFP guideline 20132. Contraception. 2013;88(1):7-17. (http://dx.doi.org/doi:10.1016/j.contraception.2013.02.008)

8. MANAGEMENT OF PREGNANCY OF UNCERTAIN LOCATION

Policy Statement: The early identification of ectopic pregnancy will reduce morbidity related to rupture and increase the likelihood of successful non-surgical management. Failure to identify a definitive intrauterine pregnancy or presenting signs and symptoms, such as vaginal bleeding or pelvic pain, should alert providers to the importance of following policies and procedures for ruling out ectopic pregnancy.

Standard 8.1. The patient must be evaluated in order to assess for the risk of ectopic implantation in early pregnancy.(1-3)

Recommendation 8.1.1. Evaluation should involve assessment of the history in combination with one or more of the following: physical exam, sonography, serial quantitative hCGs, and/or uterine aspiration.(4)

Recommendation 8.1.2. Failure to identify a definite intrauterine pregnancy should not delay abortion care at early gestations.(5-7)

Standard 8.2. Each facility must have a written protocol to evaluate ectopic pregnancy. All relevant staff at the site must be familiar with the protocol.

Recommendation 8.2.1. This protocol may include referrals as appropriate.

Option 8.2.1.1. Posting a clinical algorithm for the evaluation of possible ectopic pregnancy may be useful.(4, 8)

Standard 8.3. All patients with a pregnancy of uncertain location must be informed of the options for evaluation and management. The symptoms and dangers associated with ectopic pregnancy, and a plan for when and how to seek emergency medical attention must be reviewed and documented.

Recommendation 8.3.1. Each facility should have a patient education handout describing ectopic warning signs and the medical record should reflect that the patient has received this handout.

Standard 8.4. When a medical or aspiration abortion is initiated for a patient with a pregnancy of uncertain location, resolution of the pregnancy must be verified and documented. This may be demonstrated by either the examination of aspirated tissue or by following serial beta-hCG levels according to evidence-based regimens.

Standard 8.5. Patient follow-up must continue until one of the following:

(1) the diagnosis of ectopic pregnancy has been excluded;
(2) clinical resolution of a possible ectopic pregnancy has been ensured; or
(3) transfer of care to an appropriate provider has been made and documented.

Standard 8.6. Patients experiencing symptoms suspicious for ruptured ectopic pregnancy must be evaluated emergently.

Discussion: A combination of clinical assessment, pelvic ultrasound, serum quantitative hCG, and/or examination of uterine aspirate is often needed to distinguish between an early intrauterine gestation, a miscarriage, and an ectopic pregnancy.(1) With normal early gestations, pre-procedure ultrasound may fail to identify an intrauterine pregnancy, leaving the clinician uncertain about the viability and location of the pregnancy. Although a gestational sac can usually be seen 4 to 5 weeks from LMP on transvaginal ultrasound, it may be confused with a pseudo-sac associated with an ectopic pregnancy.(9, 10) Although visualization of a yolk sac or embryo is needed to definitely confirm an intrauterine pregnancy on ultrasound,(11) the lack of visualization of these structures should not delay abortion care.

In the emergency department, from 7 to 20% of patients with a pregnancy of uncertain location are subsequently found to have an ectopic pregnancy.(9) Although it is an important cause of pregnancy-related morbidity and mortality, ectopic implantation has been reported to occur in less than 1% of pregnancies in patients presenting for induced abortion.(5, 12)

Following aspiration abortion, if sufficient POC are not identified, one option for additional evaluation is the use of quantitative hCG testing. A baseline hCG can be obtained and a second hCG can be done in 24-48 hours. If there is a decrease of 50% or more, no further ectopic follow up is necessary.(13-15) Otherwise, further evaluation should be initiated including consideration of ectopic pregnancy.

Similarly, following medical abortion, hCG can be used to rule out ongoing intrauterine and ectopic pregnancy simultaneously.(16, 17)

References:

1. Kulp JL, Barnhart KT. Ectopic pregnancy. In: Paul M, Lichtenberg S, Borgatta L, Grimes D, Stubblefield P, Creinin M, editors. Management of unintended and abnormal pregnancy: Comprehensive abortion care. London: Wiley-Blackwell; 2009.

2. Nama V, Manyonda I. Tubal ectopic pregnancy: Diagnosis and management. Archives of gynecology and obstetrics. 2009;279(4):443-53. (http://dx.doi.org/10.1007/s00404-008-0731-3)

3. Barnhart KT, Sammel MD, Gracia CR, Chittams J, Hummel AC, Shaunik A. Risk factors for ectopic pregnancy in women with symptomatic first-trimester pregnancies. Fertil Steril. 2006;86(1):36-43. (http://dx.doi.org/10.1016/j.fertnstert.2005.12.023)

4. Gracia CR, Barnhart KT. Diagnosing ectopic pregnancy: Decision analysis comparing six strategies. Obstet Gynecol. 2001;97(3):464-70. (http://journals.lww.com/greenjournal/Fulltext/2001/03000/Diagnosing_Ectopic_Pregnancy__Decision_Analysis.28.aspx)

5. Edwards J, Carson SA. New technologies permit safe abortion at less than six weeks' gestation and provide timely detection of ectopic gestation. Am J Obstet Gynecol. 1997;176(5):1101-6. (http://www.ncbi.nlm.nih.gov/pubmed/9166176)

6. Goldstone P, Michelson J, Williamson E. Effectiveness of early medical abortion using low-dose mifepristone and buccal misoprostol in women with no defined intrauterine gestational sac. Contraception. 2013;87(6):855-8. (http://dx.doi.org/10.1016/j.contraception.2012.10.013)

7. Fjerstad M, Sivin I, Lichtenberg ES, Trussell J, Cleland K, Cullins V. Effectiveness of medical abortion with mifepristone and buccal misoprostol through 59 gestational days. Contraception. 2009;80(3):282-6. (http://dx.doi.org/10.1016/j.contraception.2009.03.010)

8. Seeber BE, Barnhart KT. Suspected ectopic pregnancy. Obstet Gynecol. 2006;107(2 Pt 1):399-413. (http://dx.doi.org/10.1097/01.AOG.0000198632.15229.be)

9. Barnhart KT. Clinical practice. Ectopic pregnancy. N Engl J Med. 2009;361(4):379-87. (http://dx.doi.org/10.1056/NEJMcp0810384)

10. Perriera L, Reeves MF. Ultrasound criteria for diagnosis of early pregnancy failure and ectopic pregnancy. Seminars in Reproductive Medicine. 2008;26(5):373-82. (http://dx.doi.org/10.1055/s-0028-1087103)

11. Goldstein SR, Reeves MF. Assessing pregnancy status and gestational age. In: Paul M, Lichtenberg S, Borgatta L, Grimes D, Stubblefield P, Creinin M, editors. Management of unintended and abnormal pregnancy: Comprehensive abortion care. London: Wiley-Blackwell; 2009.

12. Hakim-Elahi E, Tovell HM, Burnhill MS. Complications of first-trimester abortion: A report of 170,000 cases. Obstet Gynecol. 1990;76(1):129-35. (http://www.ncbi.nlm.nih.gov/pubmed/2359559)

13. Midgley AR, Jr., Jaffe RB. Regulation of human gonadotropins. Ii. Disappearance of human chorionic gonadotropin following delivery. J Clin Endocrinol Metab. 1968;28(12):1712-8. (http://www.ncbi.nlm.nih.gov/pubmed/5749054)

14. Steier JA, Bergsjø P, Myking OL. Human chorionic gonadotropin in maternal plasma after induced abortion, spontaneous abortion, and removed ectopic pregnancy. Obstet Gynecol. 1984;64(3):391-4. (http://www.ncbi.nlm.nih.gov/pubmed/6462569)

15. Rizkallah T, Gurpide E, Vande Wiele RL. Metabolism of hcg in man. J Clin Endocrinol Metab. 1969;29(1):92-100. (http://www.ncbi.nlm.nih.gov/pubmed/5762326)

16. Fiala C, Safar P, Bygdeman M, Gemzell-Danielsson K. Verifying the effectiveness of medical abortion; ultrasound versus hCG testing. European Journal of Obstetrics, Gynecology, & Reproductive Biology. 2003;109(2):190-5. (http://dx.doi.org/10.1016/S0301-2115(03)00012-5)

17. Honkanen H, Ranta S, Ylikorkala O, Heikinheimo O. The kinetics of serum hCG and progesterone in response to oral and vaginal administration of misoprostol during medical termination of early pregnancy. Human reproduction (Oxford, England). 2002;17(9):2315-9. (http://www.ncbi.nlm.nih.gov/pubmed/12202418)

9. ABORTION BY DILATION AND EVACUATION

Policy Statement: Abortion by dilation and evacuation (D&E) after 14 weeks from LMP is a safe outpatient surgical procedure when performed by appropriately trained clinicians in medical offices, freestanding clinics, ambulatory surgery centers, and hospitals.(1-6)

Standard 9.1. Pertinent medical history must be obtained and relevant physical examination must be performed.

Recommendation 9.1.1. Obesity without other comorbidities should not be used to restrict access to D&E since complications do not increase with increasing body-mass index.(7)

Standard 9.2. Gestational age must be verified by ultrasonography, using a consistent and published table of fetal measurements, prior to the termination of a pregnancy clinically estimated to be more than 14 weeks from LMP.

Standard 9.3. The patient must be appropriately evaluated and prepared for the procedure.

Recommendation 9.3.1. Intravenous access should be established prior to evacuation.

Recommendation 9.3.2. When feticidal injections are employed, they should be provided through a standard protocol.(8-15)

Option 9.3.2.1. Intra-amniotic or intra-fetal injection of digoxin may be administered either transabdominally or transvaginally to cause fetal demise.(16-18)

Option 9.3.2.2. Intracardiac potassium chloride may be used to cause fetal demise.(15)

Standard 9.4. When osmotic dilators, misoprostol, and/or other cervical ripening agents are used, a plan for emergency care prior to the evacuation procedure must be in place and communicated to the patient.

Standard 9.5. Appropriate dilation of the cervix must be obtained gently and gradually.(19, 20)

Recommendation 9.5.1. Osmotic dilators, misoprostol, mifepristone and/or other cervical ripening agents should be used to facilitate adequate dilation.(21-24)

Recommendation 9.5.2. Each dose of misoprostol should not be more than 400 mcg.(24-28) Sublingual administration is

associated with more pain than other routes of administration.(29)

Option 9.5.2.1. Dilapan and/or misoprostol may be used for same-day cervical dilation.(25, 27, 28, 30)

Standard 9.6. All instruments entering uterine cavity must be sterile.

Standard 9.7. Evidence-based practices must be used to lower the risk of complications.

Recommendation 9.7.1. Intra-procedure ultrasonography should be used to aid in visualizing instruments, locating fetal parts, verifying an empty uterus, reducing the risk of uterine perforation, and shortening the procedure.(31-33)

Recommendation 9.7.2. Inhaled anesthesia should be avoided if possible due to the increase risk of hemorrhage.(34, 35)

Standard 9.8. Uterotonics must be available to aid in control of uterine bleeding.(36)

Recommendation 9.8.1. A prophylactic vasoconstrictor, such as vasopressin, should be used intracervically or paracervically to reduce blood loss.(37)

Standard 9.9. Examination of the uterine contents must be performed to identify the placenta and all major fetal parts.

Recommendation 9.9.1. If the above are not identified, ultrasonographic evaluation and uterine exploration under ultrasound guidance should be considered.

Recommendation 9.9.2. The facility and/or clinician should continue care of the patient until completion of the abortion or transfer of care to an appropriate provider is made.

Discussion: Clinicians must tailor surgical techniques to suit individual circumstances mindful of current legal implications and the need to maintain patient safety. As always, it is incumbent upon each clinician to be aware of the laws pertinent to their clinical practices.

References:

1. American College of Obstetrics & Gynecology. Practice bulletin no. 135: Second-trimester abortion. Obstet Gynecol. 2013;121(6):1394-406. (http://dx.doi.org/10.1097/01.AOG.0000431056.79334.cc)

2. Bryant AG, Grimes DA, Garrett JM, Stuart GS. Second-trimester abortion for fetal anomalies or fetal death: Labor induction compared with dilation and evacuation. Obstet Gynecol. 2011;117(4):788-92. (http://dx.doi.org/10.1097/AOG.0b013e31820c3d26)

3. Grimes DA, Schulz KF, Cates W, Jr., Tyler CW, Jr. Mid-trimester abortion by dilatation and evacuation: A safe and practical alternative. N Engl J Med. 1977;296(20):1141-5. (http://dx.doi.org/10.1056/NEJM197705192962004)

4. Grimes DA, Cates W, Jr., Tyler CW, Jr. Comparative risk of death from legally induced abortion in hospitals and nonhospital facilities. Obstet Gynecol. 1978;51(3):323-6. (http://www.ncbi.nlm.nih.gov/pubmed/628534)

5. Cates W, Jr., Schulz KF, Grimes DA, Horowitz AJ, Lyon FA, Kravitz FH, et al. Dilatation and evacuation procedures and second-trimester abortions. The role of physician skill and hospital setting. JAMA. 1982;248(5):559-63. (http://www.ncbi.nlm.nih.gov/pubmed/6285012)

6. Grimes DA, Schulz KF. Morbidity and mortality from second-trimester abortions. Journal of Reproductive Medicine. 1985;30(7):505-14. (http://www.ncbi.nlm.nih.gov/pubmed/3897528)

7. Lederle L, Steinauer JE, Montgomery A, Aksel S, Drey EA, Kerns JL. Obesity as a risk factor for complications after second-trimester abortion by dilation and evacuation. Obstet Gynecol. 2015;126(3):585-92. (http://dx.doi.org/10.1097/aog.0000000000001006)

8. Diedrich J, Drey E, for the Society of Family Planning. Induction of fetal demise before abortion: SFP guideline 20101. Contraception. 2010;81(6):462-73. (http://dx.doi.org/10.1016/j.contraception.2010.01.018)

9. NAF clinical practice bulletin 2: Digoxin administration. Washington, DC: National Abortion Federation, 2007 Contract No.: 2.

10. Senat MV, Fischer C, Bernard JP, Ville Y. The use of lidocaine for fetocide in late termination of pregnancy. BJOG. 2003;110(3):296-300. (http://dx.doi.org/10.1046/j.1471-0528.2003.02217.x)

11. Jackson RA, Teplin VL, Drey EA, Thomas LJ, Darney PD. Digoxin to facilitate late second-trimester abortion: A randomized, masked, placebo-controlled trial. Obstet Gynecol. 2001;97(3):471-6. (http://www.ncbi.nlm.nih.gov/pubmed/11239659)

12. Drey EA, Thomas LJ, Benowitz NL, Goldschlager N, Darney PD. Safety of intra-amniotic digoxin administration before late second-trimester abortion by dilation and evacuation. Am J Obstet Gynecol. 2000;182(5):1063-6. (http://www.ncbi.nlm.nih.gov/pubmed/10819828)

13. Nucatola D, Roth N, Gatter M. A randomized pilot study on the effectiveness and side-effect profiles of two doses of digoxin as fetocide when administered intraamniotically or intrafetally prior to second-trimester surgical abortion. Contraception. 2010;81(1):67-74. (http://dx.doi.org/10.1016/j.contraception.2009.08.014)

14. Molaei M, Jones HE, Weiselberg T, McManama M, Bassell J, Westhoff CL. Effectiveness and safety of digoxin to induce fetal demise prior to second-trimester abortion. Contraception. 2008;77(3):223-5. (http://dx.doi.org/10.1016/j.contraception.2007.10.011)

15. Pasquini L, Pontello V, Kumar S. Intracardiac injection of potassium chloride as method for feticide: Experience from a single uk tertiary centre. BJOG. 2008;115(4):528-31. (http://dx.doi.org/10.1111/j.1471-0528.2007.01639.x)

16. Gariepy AM, Chen BA, Hohmann HL, Achilles SL, Russo JA, Creinin MD. Transvaginal administration of intraamniotic digoxin prior to dilation and evacuation. Contraception. 2013;87(1):76-80. (http://dx.doi.org/10.1016/j.contraception.2012.07.019)

17. Dean G, Colarossi L, Lunde B, Jacobs AR, Porsch LM, Paul ME. Safety of digoxin for fetal demise before second-trimester abortion by dilation and evacuation. Contraception. 2012;85(2):144-9. (http://dx.doi.org/10.1016/j.contraception.2011.05.016)

18. Tocce K, Sheeder JL, Edwards LJ, Teal SB. Feasibility, effectiveness and safety of transvaginal digoxin administration prior to dilation and evacuation. Contraception. 2013;88(6):706-11. (http://dx.doi.org/10.1016/j.contraception.2013.08.005)

19. Newmann S, Dalve-Endres A, Drey EA. Cervical preparation for surgical abortion from 20 to 24 weeks' gestation: SFP guideline 20073. Contraception. 2008;77(4):308-14. (http://dx.doi.org/10.1016/j.contraception.2008.01.004)

20. Autry AM, Hayes EC, Jacobson GF, Kirby RS. A comparison of medical induction and dilation and evacuation for second-trimester abortion. Am J Obstet Gynecol. 2002;187(2):393-7. (http://dx.doi.org/10.1067/mob.2002.123887)

21. Borgatta L, Roncari D, Sonalkar S, Mark A, Hou MY, Finneseth M, et al. Mifepristone vs. Osmotic dilator insertion for cervical preparation prior to surgical abortion at 14–16 weeks: A randomized trial. Contraception. 2012;86(5):567-71. (http://dx.doi.org/10.1016/j.contraception.2012.05.002)

22. Carbonell JL, Gallego FG, Llorente MP, Bermudez SB, Sala ES, Gonzalez LV, et al. Vaginal vs. Sublingual misoprostol with mifepristone for cervical priming in second-trimester abortion by dilation and evacuation: A randomized clinical trial. Contraception. 2007;75(3):230-7. (http://dx.doi.org/10.1016/j.contraception.2006.11.007)

23. Shaw KA, Shaw JG, Hugin M, Velasquez G, Hopkins FW, Blumenthal PD. Adjunct mifepristone for cervical preparation prior to dilation and evacuation: A randomized trial. Contraception. 2015;91(4):313-9. (http://dx.doi.org/10.1016/j.contraception.2014.11.014)

24. Goldberg AB, Fortin JA, Drey EA, Dean G, Lichtenberg ES, Bednarek PH, et al. Cervical preparation before dilation and evacuation using adjunctive misoprostol or mifepristone compared with overnight osmotic dilators alone: A randomized controlled trial. Obstet Gynecol. 2015;126(3):599-609. (http://dx.doi.org/10.1097/aog.0000000000000977)

25. Grossman D, Constant D, Lince-Deroche N, Harries J, Kluge J. A randomized trial of misoprostol versus laminaria before dilation and evacuation in south africa. Contraception. 2014;90(3):234-41. (http://dx.doi.org/10.1016/j.contraception.2014.05.003)

26. Edelman AB, Buckmaster JG, Goetsch MF, Nichols MD, Jensen JT. Cervical preparation using laminaria with adjunctive buccal misoprostol before second-trimester dilation and evacuation procedures: A randomized clinical trial. Am J Obstet Gynecol. 2006;194(2):425-30. (http://dx.doi.org/10.1016/j.ajog.2005.08.016)

27. Lyus R, Lohr PA, Taylor J, Morroni C. Outcomes with same-day cervical preparation with dilapan-s osmotic dilators and vaginal misoprostol before dilatation and evacuation at 18 to 21+6 weeks' gestation. Contraception. 2013;87(1):71-5. (http://dx.doi.org/10.1016/j.contraception.2012.07.006)

28. Goldberg AB, Drey EA, Whitaker AK, Kang MS, Meckstroth KR, Darney PD. Misoprostol compared with laminaria before early second-trimester surgical abortion: A randomized trial. Obstet Gynecol. 2005;106(2):234-41. (http://www.ncbi.nlm.nih.gov/pubmed/16055570)

29. Sääv I, Kopp Kallner H, Fiala C, Gemzell-Danielsson K. Sublingual versus vaginal misoprostol for cervical dilatation 1 or 3 h prior to surgical abortion: A double-blinded rct. Human Reproduction. 2015;30(6):1314-22. (http://dx.doi.org/10.1093/humrep/dev071)

30. Maurer KA, Jacobson JC, Turok DK. Same-day cervical preparation with misoprostol prior to second trimester d&e: A case series. Contraception. 2013;88(1):116-21. (http://dx.doi.org/10.1016/j.contraception.2012.12.010)

31. Darney PD, Sweet RL. Routine intraoperative ultrasonography for second trimester abortion reduces incidence of uterine perforation. Journal of Ultrasound in Medicine. 1989;8(2):71-5. (http://www.ncbi.nlm.nih.gov/pubmed/2651693)

32. Darney PD, Atkinson E, Hirabayashi K. Uterine perforation during second-trimester abortion by cervical dilation and instrumental extraction: A review of 15 cases. Obstet Gynecol. 1990;75(3 Pt 1):441-4. (http://www.ncbi.nlm.nih.gov/pubmed/2304715)

33. World Health Organization. Safe abortion: Technical and policy guidance for health systems. Geneva: 2012. (http://www.who.int/reproductivehealth/publications/unsafe_abortion/9789241548434/en/index.html)

34. MacKay HT, Schulz KF, Grimes DA. Safety of local versus general anesthesia for second-trimester dilatation and evacuation abortion. Obstet Gynecol. 1985;66(5):661-5. (http://www.ncbi.nlm.nih.gov/pubmed/4058825)

35. Kumarasinghe N, Harpin R, Stewart AW. Blood loss during suction termination of pregnancy with two different anaesthetic techniques. Anaesth Intensive Care. 1997;25(1):48-50. (http://www.ncbi.nlm.nih.gov/pubmed/9075514)

36. Kerns J, Steinauer J. Management of postabortion hemorrhage: SFP guideline 20131. Contraception. 2013;87(3):331-42. (http://dx.doi.org/10.1016/j.contraception.2012.10.024)

37. Schulz KF, Grimes DA, Christensen DD. Vasopressin reduces blood loss from second-trimester dilatation and evacuation abortion. Lancet. 1985;2(8451):353-6. (http://www.ncbi.nlm.nih.gov/pubmed/2862514)

10. SECOND-TRIMESTER INDUCTION ABORTION

Policy Statement: Medical induction abortion is a safe and effective method for termination of pregnancies beyond the first trimester when performed by trained clinicians in medical offices, freestanding clinics, ambulatory surgery centers, and hospitals. Feticidal agents may be particularly important when issues of viability arise.

Standard 10.1. Pertinent medical history must be obtained and relevant physical examination must be performed.

Standard 10.2. Gestational age must be verified by ultrasonography, using a consistent and published table of fetal measurements, prior to the termination of a pregnancy clinically estimated to be more than 14 weeks from LMP.

Standard 10.3. The patient must be appropriately evaluated and prepared for the procedure.

Recommendation 10.3.1. Intravenous access should be established prior to induction.

Recommendation 10.3.2. When feticidal injections are employed, they should be provided through a standard protocol.(1-7)

Option 10.3.2.1. Intra-amniotic or intra-fetal injection of digoxin may be administered either transabdominally or transvaginally to cause fetal demise. (8-10)

Option 10.3.2.2. Intracardiac potassium chloride may be used to cause fetal demise.(7)

Standard 10.4. Evidence-based regimens of medical induction must be used.

Recommendation 10.4.1. Mifepristone 200 mg followed by misoprostol should be used, when available and feasible.(11-14)

Option 10.4.1.1. Misoprostol may also be used alone.(15)

Option 10.4.1.2. The initial dose of misoprostol may be more effective if administered vaginally,(15) particularly in nulliparous patients.(16)

Option 10.4.1.3. Subsequent doses of 400 mcg misoprostol may be most effective when given every 3-4 hours and are equally effective by vaginal, buccal, or sublingual routes.(15)

Option 10.4.1.4. Oxytocin may be used as an adjunctive agent to induce labor or alone when misoprostol is contraindicated.

Recommendation 10.4.2. Osmotic dilators should not be used as they do not shorten the induction time but increase pain.(12, 17-19)

Recommendation 10.4.3. Intra-amniotic injection or instillation methods should be avoided as they are less effective and result in more complications than mifepristone-misoprostol or misoprostol-alone regimens.(20)

Standard 10.5. Once regular contractions have been confirmed, patients must be observed by health care staff trained to monitor contractions and expulsion, and who can recognize emergent situations.

Standard 10.6. A trained clinician must be available from initiation of induction until post-abortion discharge.

Standard 10.7. Access to surgical management or appropriate referral must be available in the event that surgical intervention is required.

Standard 10.8. Uterotonics must be available to aid in control of uterine bleeding.

Standard 10.9. Examination of the uterine contents must be performed to identify the placenta and all major fetal parts.

Recommendation 10.9.1. If the above are not identified, ultrasonographic evaluation and (repeat) uterine exploration under ultrasound guidance should be considered.

Standard 10.10. The facility and/or clinician should continue care of the patient until completion of the abortion or transfer of care to an appropriate provider is made.

Discussion: Numerous studies have found that the use of misoprostol does not increase the risk of uterine rupture in a previously scarred uterus in the second trimester compared to other induction agents, even with three or more prior Cesarean deliveries.(21) The risk of uterine rupture during second-trimester induction in patients with a scarred uterus is roughly 0.3%, and is not higher than among patients without a prior Cesarean delivery.(22)

Clinicians must tailor surgical techniques to suit individual circumstances mindful of current legal implications and the need to maintain patient safety. As always, it is incumbent upon each clinician to be aware of the laws pertinent to their clinical practices.

References:

1. NAF clinical practice bulletin 2: Digoxin administration. Washington, DC: National Abortion Federation, 2007 Contract No.: 2.

2. Diedrich J, Drey E, for the Society of Family Planning. Induction of fetal demise before abortion: SFP guideline 20101. Contraception. 2010;81(6):462-73. (http://dx.doi.org/10.1016/j.contraception.2010.01.018)

3. Jackson RA, Teplin VL, Drey EA, Thomas LJ, Darney PD. Digoxin to facilitate late second-trimester abortion: A randomized, masked, placebo-controlled trial. Obstet Gynecol. 2001;97(3):471-6. (http://www.ncbi.nlm.nih.gov/pubmed/11239659)

4. Drey EA, Thomas LJ, Benowitz NL, Goldschlager N, Darney PD. Safety of intra-amniotic digoxin administration before late second-trimester abortion by dilation and evacuation. Am J Obstet Gynecol. 2000;182(5):1063-6. (http://www.ncbi.nlm.nih.gov/pubmed/10819828)

5. Nucatola D, Roth N, Gatter M. A randomized pilot study on the effectiveness and side-effect profiles of two doses of digoxin as fetocide when administered intraamniotically or intrafetally prior to second-trimester surgical abortion. Contraception. 2010;81(1):67-74. (http://dx.doi.org/10.1016/j.contraception.2009.08.014)

6. Molaei M, Jones HE, Weiselberg T, McManama M, Bassell J, Westhoff CL. Effectiveness and safety of digoxin to induce fetal demise prior to second-trimester abortion. Contraception. 2008;77(3):223-5. (http://dx.doi.org/10.1016/j.contraception.2007.10.011)

7. Pasquini L, Pontello V, Kumar S. Intracardiac injection of potassium chloride as method for feticide: Experience from a single uk tertiary centre. BJOG. 2008;115(4):528-31. (http://dx.doi.org/10.1111/j.1471-0528.2007.01639.x)

8. Gariepy AM, Chen BA, Hohmann HL, Achilles SL, Russo JA, Creinin MD. Transvaginal administration of intraamniotic digoxin prior to dilation and evacuation. Contraception. 2013;87(1):76-80. (http://dx.doi.org/10.1016/j.contraception.2012.07.019)

9. Dean G, Colarossi L, Lunde B, Jacobs AR, Porsch LM, Paul ME. Safety of digoxin for fetal demise before second-trimester abortion by dilation and evacuation. Contraception. 2012;85(2):144-9. (http://dx.doi.org/10.1016/j.contraception.2011.05.016)

10. Tocce K, Sheeder JL, Edwards LJ, Teal SB. Feasibility, effectiveness and safety of transvaginal digoxin administration prior to dilation and evacuation. Contraception. 2013;88(6):706-11. (http://dx.doi.org/10.1016/j.contraception.2013.08.005)

11. Department of Reproductive Health and Research. Safe abortion: Technical and policy guidance for health systems. 2nd ed. Geneva: World Health Organization,; 2012. (http://www.who.int/reproductivehealth/publications/unsafe_abortion/9789241548434/en/index.html)

12. Borgatta L, Kapp N. Labor induction abortion in the second trimester: SFP guideline 20111. Contraception. 2011;84(1):4-18. (http://dx.doi.org/10.1016/j.contraception.2011.02.005)

13. Ngoc NT, Shochet T, Raghavan S, Blum J, Nga NT, Minh NT, et al. Mifepristone and misoprostol compared with misoprostol alone for second-trimester abortion: A randomized controlled trial. Obstet Gynecol. 2011;118(3):601-8. (http://dx.doi.org/10.1097/AOG.0b013e318227214e)

14. Nilas L, Glavind-Kristensen M, Vejborg T, Knudsen UB. One or two day mifepristone-misoprostol interval for second trimester abortion. Acta Obstet Gynecol Scand. 2007;86(9):1117-21. (http://dx.doi.org/10.1080/00016340701505002)

15. Wildschut H, Both MI, Medema S, Thomee E, Wildhagen MF, Kapp N. Medical methods for mid-trimester termination of pregnancy. Cochrane Database Syst Rev. 2011;1:CD005216. (http://dx.doi.org/10.1002/14651858.CD005216.pub2)

16. von Hertzen H, Piaggio G, Wojdyla D, Nguyen TM, Marions L, Okoev G, et al. Comparison of vaginal and sublingual misoprostol for second trimester abortion: Randomized controlled equivalence trial. Human reproduction (Oxford, England). 2009;24(1):106-12. (http://dx.doi.org/10.1093/humrep/den328)

17. Borgatta L, Chen AY, Vragovic O, Stubblefield PG, Magloire CA. A randomized clinical trial of the addition of laminaria to misoprostol and hypertonic saline for second-trimester induction abortion. Contraception. 2005;72(5):358-61. (http://dx.doi.org/10.1016/j.contraception.2005.04.016)

18. Jain JK, Mishell JDR. A comparison of misoprostol with and without laminaria tents for induction of second-trimester abortion. Am J Obstet Gynecol. 1996;175(1):173-7. (http://dx.doi.org/10.1016/S0002-9378(96)70270-3)

19. Prairie BA, Lauria MR, Kapp N, Mackenzie T, Baker ER, George KE. Mifepristone versus laminaria: A randomized controlled trial of cervical ripening in midtrimester termination. Contraception. 2007;76(5):383-8. (http://dx.doi.org/10.1016/j.contraception.2007.07.008)

20. Hou S-P, Fang A-H, Chen Q-F, Huang Y-M, Chen O-j, Cheng L-N. Termination of second-trimester pregnancy by mifepristone combined with misoprostol versus intra-amniotic injection of ethacridine lactate (rivanol®): A systematic review of chinese trials. Contraception. 2011;84(3):214-23. (http://dx.doi.org/10.1016/j.contraception.2011.01.018)

21. Fawzy M, Abdel-Hady E-S. Midtrimester abortion using vaginal misoprostol for women with three or more prior cesarean deliveries. International Journal of Gynecology & Obstetrics. 2010;110(1):50-2. (http://dx.doi.org/10.1016/j.ijgo.2010.02.008)

22. Goyal V. Uterine rupture in second-trimester misoprostol-induced abortion after cesarean delivery: A systematic review. Obstet Gynecol. 2009;113(5):1117-23. (http://dx.doi.org/10.1097/AOG.0b013e31819dbfe2)

11. ANALGESIA AND SEDATION

Policy Statement: Anxiolysis, analgesia, or anesthesia should be provided during abortion procedures for any patient for whom the benefits outweigh the risks, with the aim of providing the appropriate level of analgesia and sedation required for each patient's needs. Patients should be involved in a shared decision-making process about pain control and sedation during the procedure.(1-14)

ON THE USE OF SEDATION IN GENERAL - All medications used in procedural sedation have the potential for serious risk. This risk may be reduced to a minimum by adherence to established practice guidelines. Guidelines developed by other organizations concern themselves with anesthesia and sedation delivered primarily in hospital settings and to patients varying widely in age and general health. Regardless of the drug or route of administration, the degree of central nervous system (CNS) depression is the basis for the NAF guidelines.

These guidelines do not address the use of deep sedation or general anesthesia except to identify basic monitoring practices and appropriate providers of such care, who are expected to follow their professional standards in the delivery of anesthesia services. It is expected that those individuals providing deep sedation or general anesthesia will have appropriate emergency medication and equipment in place to ensure the safe care of a patient in the event of an anesthesia complication.

The promulgation of guidelines for the delivery and monitoring of anesthesia care issued by organizations such as the American Society of Anesthesiologists (ASA)(15), the Canadian Anesthesiologists' Society (CSA)(16), the American Dental Society of Anesthesiologists (ADSA), American Society of Gastrointestinal Endoscopists, and others have clarified many of the issues related to anesthesia care.

Patient comfort and reduced anxiety are significantly affected by patient counseling and by the presence of family, friends, and supportive staff, and are not solely dependent on pharmacologic measures. Alternative modalities (such as relaxation techniques, acupuncture, hypnosis) may be helpful for some patients. The focus of NAF guidelines for analgesia and sedation, however, is on the safe provision of pharmacologic methods generally used in outpatient abortion facilities.

Definitions(10)

1. Local Anesthesia - Elimination or reduction of sensation, especially pain, in one part of the body by topical application or local injection of a drug. In the context of abortion practice, local anesthesia almost always involves a paracervical block.

2. Minimal Sedation (Anxiolysis) - is a drug-induced state during which patients respond normally to verbal commands. Although cognitive function and physical

coordination may be impaired, airway reflexes, ventilatory, and cardiovascular functions are unaffected.

3. Moderate Sedation/Analgesia - is a drug-induced depression of consciousness during which patients respond purposefully* to verbal commands, either alone or accompanied by light tactile stimulation. No interventions are required to maintain a patent airway, and spontaneous ventilation is adequate. Cardiovascular function is usually maintained but may be impaired. This level of sedation was previously referred to as "Conscious Sedation." However, this term is no longer recommended.

4. Deep Sedation/Analgesia - is a drug-induced depression of consciousness during which patients cannot be easily aroused but respond purposefully following repeated or painful stimulation. The ability to independently maintain ventilatory function may be impaired. Patients may require assistance in maintaining a patent airway, and spontaneous ventilation may be inadequate. Cardiovascular function is usually maintained but may be impaired.

5. General Anesthesia - is a drug-induced loss of consciousness during which patients are not arousable, even by painful stimulation. The ability to independently maintain ventilatory function is often impaired. Patients often require assistance in maintaining a patent airway, and positive pressure ventilation may be required because of depressed spontaneous ventilation or drug-induced depression of neuromuscular function. Cardiovascular function may be impaired.

Because sedation is a continuum, it is not always possible to predict how an individual patient will respond. Hence, practitioners intending to produce any level of sedation should be able to rescue patients whose level of sedation becomes deeper than initially intended. *Rescue* corrects adverse physiologic consequences of the deeper-than-intended level of sedation (such as hypoventilation, hypoxia, and hypotension) and returns the patient to the originally intended level of sedation.

Standard 11.1. When minimal, moderate, deep sedation, or general anesthesia is to be given, patients must be given information about the risks, benefits, and side effects of the medications to be used.

Recommendation 11.1.1. Documentation should include precautions relevant to transient mental impairment.

Option 11.1.1.1. An informed consent form specific for analgesia and sedation may be used.

* Reflex withdrawal from a painful stimulus is NOT considered a purposeful response.

Standard 11.2. Prior to moderate sedation, a pre-sedation evaluation of the patient must take place.

Recommendation 11.2.1. Evaluation should include a relevant history and review of systems, medication review, targeted exam of the heart, lung, and airway, baseline vital signs, and last food intake.

Recommendation 11.2.2. For patients receiving moderate sedation who are not at increased risk of aspiration, time from last meal should not limit access to abortion care.(17-19)

Recommendation 11.2.3. A reduced level of sedation, an alternate abortion procedure, or provision of care by an anesthesia professional should be considered for patients with an atypical airway assessment or ASA P-3 or greater.

Standard 11.3. No additional evaluation is needed prior to paracervical block and/or NSAID administration.

Standard 11.4. The supervising practitioner must be immediately available when sedation is administered.

Standard 11.5. When local anesthesia or sedation is provided, the practitioner responsible for the treatment of the patient and/or the administration of drugs must be appropriately trained, with approval by the medical director or their designee.

Standard 11.6. To administer moderate sedation, a provider must have the following: licensure as appropriate, basic airway skills, the ability to monitor and effectively rescue patients in an emergency, and the ability to screen patients appropriately for sedation.

Standard 11.7. The potential need for intravenous access must be considered prior to administering any level of sedation.

Recommendation 11.7.1. When more than minimal sedation is intended, intravenous access should be maintained at least until discharge criteria are met (Standard 12.4).

Standard 11.8. Pulse oximetry, with appropriate alarms, must be employed when moderate or deeper levels of sedation are used.

Standard 11.9. When sedation is provided, monitoring must be adequate to detect the respiratory, cardiovascular, and neurological effects of the drugs being administered, and this monitoring must be documented.

Recommendation 11.9.1. The patient should be checked frequently for verbal responsiveness.

Standard 11.10. When moderate sedation or deeper is provided, a person other than the clinician performing the procedure, and who is trained to monitor appropriate physiological parameters, must be present. This person must not be performing duties other than monitoring the patient.

Moderate Sedation

Standard 11.11. When moderate sedation is intended, sedation medication must be started at a reasonable low dose and titrated as needed, based on individual circumstances, such as weight and drug tolerance.(18, 20-22)

Recommendation 11.11.1. The following table should be used for guidance for these commonly used drugs when used for moderate sedation. Similar ranges of other opioids and benzodiazepines may be used.

Drug	Usual initial dose	Max initial dose	Usual incremental Dose	Max incremental Dose
Fentanyl	50-100 mcg	200 mcg	50-100 mcg	100 mcg
Midazolam	1-3 mg	4 mg	1-2 mg	2 mg

Standard 11.12. When moderate sedation is administered, at least one individual with documented airway skills must be present in the procedure room.

Deep Sedation or General Anesthesia

Standard 11.13. Supplemental oxygen must be used with deep sedation and general anesthesia.

Standard 11.14. The practitioner administering deep sedation or general anesthesia must not be the practitioner performing the abortion.

Recommendation 11.14.1. For deep sedation and general anesthesia, the following should be monitored: continuous pulse oximetry, intermittent blood pressure, electrocardiography, and respiration, either by measuring end-tidal CO_2 or clinical observation.

Recommendation 11.14.2. The capability to monitor temperature should be available.

Standard 11.15. Any individual responsible for administering, supervising, or monitoring a patient receiving any level of sedation must have current, health care provider level basic life support (BLS) certification.

Standard 11.16. The practitioner administering deep sedation or general anesthesia must adhere to established professional standards of care.(23)

Nitrous Oxide

Standard 11.17. N_2O must be self-administered by the patient or by a qualified anesthesia provider.

Standard 11.18. If not self-administered, the provision of N_2O must follow guidelines for patient monitoring for moderate sedation.

Standard 11.19. Equipment for the delivery of N_2O/O_2 must:
(1) provide a concentration of N_2O of no more than 70% inspired;
(2) provide a minimum of 30% O_2; and
(3) be checked and calibrated regularly.

Recommendation 11.19.1. The concentration of nitrous oxide should not routinely exceed 50% in the absence of qualified anesthesia personnel.

Recommendation 11.19.2. Equipment for the delivery of N_2O/O_2 should include an oxygen analyzer.

Recommendation 11.19.3. Due to the potential for occupational exposure, room or personnel monitoring for levels of N_2O should be conducted.

Emergency Equipment

Standard 11.20. Functioning equipment and current medications must be available on-site to handle medical emergencies and must include: an oxygen delivery system, oral airways, epinephrine, and antihistamines.

Standard 11.21. In settings where benzodiazepines and opioids are used, appropriate antagonists, bronchodilators, and bag-valve masks capable of delivering supplemental oxygen must be available.

Recommendation 11.21.1. Facilities should have a specified area for emergency equipment, which includes oxygen, medications, and supplies. A protocol and time schedule for checking equipment and removing expired medications must be in place.

Standard 11.22. In settings where deep sedation and general anesthesia are used, it is expected that providers maintain the appropriate medication and equipment required for an anesthesia emergency.

Recommendation 11.22.1. A defibrillator should be available.

Discussion: We now have several studies showing that food intake does not increase the risk of moderate sedation.(17-19)

ON THE USE OF N_2O/O_2 - Nitrous oxide has a long history of use for analgesia and sedation, as well as an excellent safety record in the hands of both anesthesiologists and non-anesthesiologists. Occupational exposure to N_2O has been associated with increased risks of neurologic impairment, spontaneous abortion, subfertility, and hepatic and renal disease. Recommendations for safe use of nitrous oxide can be found in the reference section. In addition to employing adequate ventilation and scavenger systems, it is also recommended to deliver 100% oxygen to the patient for five minutes before removing the mask. This will purge the system, and the patient, of any residual nitrous oxide. Occupational exposure can be monitored by asking staff members to wear personal dosimetry badges or by placing an infrared spectrophotometer in the room. Although there is no OSHA standard for N_2O, NIOSH recommends that airborne levels of N_2O be kept below 25 ppm (1995) through well-designed scavenger systems and other engineering controls, equipment maintenance, exposure monitoring, and safe work practices.

References:

1. Atrash HK, Cheek TG, Hogue CJ. Legal abortion mortality and general anesthesia. Am J Obstet Gynecol. 1988;158(2):420-4. (http://www.ncbi.nlm.nih.gov/pubmed/2829630)

2. Bell GD, McCloy RF, Charlton JE, Campbell D, Dent NA, Gear MW, et al. Recommendations for standards of sedation and patient monitoring during gastrointestinal endoscopy. Gut. 1991;32(7):823-7. (http://www.ncbi.nlm.nih.gov/pubmed/1855692)

3. Dodson SR, Hensley FA, Jr., Martin DE, Larach DR, Morris DL. Continuous oxygen saturation monitoring during cardiac catheterization in adults. Chest. 1988;94(1):28-31. (http://www.ncbi.nlm.nih.gov/pubmed/3383653)

4. Eichhorn JH, Cooper JB, Cullen DJ, Maier WR, Philip JH, Seeman RG. Standards for patient monitoring during anesthesia at harvard medical school. JAMA. 1986;256(8):1017-20. (http://www.ncbi.nlm.nih.gov/pubmed/3735628)

5. Holzman RS, Cullen DJ, Eichhorn JH, Philip JH. Guidelines for sedation by nonanesthesiologists during diagnostic and therapeutic procedures. The risk management committee of the department of anaesthesia of harvard medical school. J Clin Anesth. 1994;6(4):265-76. (http://www.ncbi.nlm.nih.gov/pubmed/7946362)

6. Lavies NG, Creasy T, Harris K, Hanning CD. Arterial oxygen saturation during upper gastrointestinal endoscopy: Influence of sedation and operator experience. Am J Gastroenterol. 1988;83(6):618-22. (http://www.ncbi.nlm.nih.gov/pubmed/3287901)

7. Morlote EB, Zweng TN, Strodel WE. Hemodynamic monitoring and pulse oximetry during percutaneous gastrostomy and jejunostomy: Necessity or nuisance? Surgical endoscopy. 1991;5(3):130-4. (http://www.ncbi.nlm.nih.gov/pubmed/1763399)

8. Raemer DB, Warren DL, Morris R, Philip BK, Philip JH. Hypoxemia during ambulatory gynecologic surgery as evaluated by the pulse oximeter. J Clin Monit. 1987;3(4):244-8. (http://www.ncbi.nlm.nih.gov/pubmed/3681357)

9. Singer R, Thomas PE. Pulse oximeter in the ambulatory aesthetic surgical facility. Plast Reconstr Surg. 1988;82(1):111-5. (http://www.ncbi.nlm.nih.gov/pubmed/3380901)

10. American Society of Anesthesiologists. Continuum of depth of sedation, definitions of general anesthesia and levels of sedation/analgesia. 2009. (http://www.asahq.org/~/media/sites/asahq/files/public/resources/standards-guidelines/continuum-of-depth-of-sedation-definition-of-general-anesthesia-and-levels-of-sedation-analgesia.pdf)

11. American Society of Anesthesiologists. Guidelines for ambulatory anesthesia and surgery. 2008. (http://www.asahq.org/~/media/legacy/for%20members/documents/standards%20guidelines%20stmts/ambulatory%20anesthesia%20and%20surgery.pdf)

12. American Society of Anesthesiologists. Physical status classification system [cited 2016]. Available from: http://www.asahq.org/resources/clinical-information/asa-physical-status-classification-system.

13. American Society of Anesthesiologists. Standards for basic anesthetic monitoring. 2011. (http://www.asahq.org/~/media/sites/asahq/files/public/resources/standards-guidelines/standards-for-basic-anesthetic-monitoring.pdf)

14. Rosenberg MB, Campbell RL. Guidelines for intraoperative monitoring of dental patients undergoing conscious sedation, deep sedation, and general anesthesia. Oral Surg Oral Med Oral Pathol. 1991;71(1):2-8. (http://dx.doi.org/10.1016/0030-4220(91)90511-A)

15. American Society of Anesthesiologists. Practice guidelines for sedation and analgesia by non-anesthesiologists. Anesthesiology. 2002;96(4):1004-17. (http://www.ncbi.nlm.nih.gov/pubmed/11964611)

16. Merchant R, Chartrand D, Dain S, Dobson G, Kurrek M, Lagace A, et al. Guidelines to the practice of anesthesia revised edition 2013. Can J Anaesth. 2013;60(1):60-84. (http://dx.doi.org/10.1007/s12630-012-9820-7)

17. Aksel S, Vargas JE, Drey EA, Simon SG, Steinauer JE, Carlisle AS, et al. Fasting stomach volume in the late second and third trimesters of pregnancy versus nonpregnant controls. Contraception. 2014;90(3):294. (http://dx.doi.org/10.1016/j.contraception.2014.05.209)

18. Wilson LC, Chen BA, Creinin MD. Low-dose fentanyl and midazolam in outpatient surgical abortion up to 18 weeks of gestation. Contraception. 2009;79(2):122-8. (http://dx.doi.org/10.1016/j.contraception.2008.08.005)

19. Wiebe ER, Byczko B, Kaczorowski J, McLane AL. Can we safely avoid fasting before abortions with low-dose procedural sedation? A retrospective cohort chart review of anesthesia-related complications in 47,748 abortions. Contraception. 2012;87(1):51-4. (http://dx.doi.org/10.1016/j.contraception.2012.06.012)

20. Jackson E, Kapp N. Pain control in first-trimester and second-trimester medical termination of pregnancy: A systematic review. Contraception. 2011;83(2):116-26. (http://dx.doi.org/10.1016/j.contraception.2010.07.014)

21. Renner RM, Jensen JT, Nichols MD, Edelman AB. Pain control in first-trimester surgical abortion: A systematic review of randomized controlled trials. Contraception. 2010;81(5):372-88. (http://dx.doi.org/10.1016/j.contraception.2009.12.008)

22. Allen RH, Fitzmaurice G, Lifford KL, Lasic M, Goldberg AB. Oral compared with intravenous sedation for first-trimester surgical abortion: A randomized controlled trial. Obstet Gynecol. 2009;113(2 Pt 1):276-83. (http://dx.doi.org/10.1097/AOG.0b013e3181938758)

23. Dean G, Jacobs AR, Goldstein RC, Gevirtz CM, Paul ME. The safety of deep sedation without intubation for abortion in the outpatient setting. J Clin Anesth. 2011;23(6):437-42. (http://dx.doi.org/10.1016/j.jclinane.2011.05.001)

12. POST-PROCEDURE CARE

Policy Statement: Appropriate and accessible post-procedure and follow-up care is essential to patients' wellbeing.

Standard 12.1. Contraception must be discussed.

Recommendation 12.1.1. When desired by the patient, intrauterine contraception or contraceptive implants should be initiated immediately after first-trimester uterine evacuation(1) or second trimester D&E.(2, 3)

Recommendation 12.1.2. When desired by the patient after medical abortion, intrauterine contraception should be initiated as soon as expulsion of the pregnancy is confirmed.(4-6)

Recommendation 12.1.3. When desired by the patient, contraceptive implants should be initiated on the day of mifepristone administration for medical abortion.(7)

Standard 12.2. All patients receiving more than minimal sedation or in the second trimester must be continuously observed during the recovery period by a health care worker trained in post-procedure care.

Standard 12.3. Patients who received sedation or exhibit signs of instability should remain in the care of an appropriately trained individual until no longer at risk for hemodynamic instability or respiratory depression.

Standard 12.4. A clinician must remain in the facility until all patients are medically stable.

Standard 12.5. The following criteria must be documented prior to discharge: the patient must be ambulatory with a stable blood pressure and pulse, and bleeding and pain must be controlled.

Standard 12.6. The patient must be given oral and written instructions outlining what to expect post-procedure, self-care, and signs and symptoms of complications.

Recommendation 12.6.1. Patients who receive sedation should have access to this information prior to the administration of medication.

Standard 12.7. The facility must provide an emergency contact service on a 24-hour basis, where calls are triaged in accordance with written policies. A recorded message alone is unacceptable.

Standard 12.8. Any non-clinician involved with first-call triage must be trained to take a post-abortion health history and follow clear written guidelines indicating when immediate consultation with a clinician is indicated.

Standard 12.9. Any patient who gives a history suggestive of a post-procedure complication must have access to a clinician. The facility must establish a pathway for physician referral if indicated.

Recommendation 12.9.1. Uterotonic agents should be given as indicated and not on a routine basis. When used, an evidence-based regimen should be followed.

Recommendation 12.9.2. An optional follow-up appointment should be offered. However, no evidence suggests that routine post-procedure visits are helpful.(8, 9)

References:

1. Bednarek PH, Creinin MD, Reeves MF, Cwiak C, Espey E, Jensen JT. Immediate versus delayed IUD insertion after uterine aspiration. N Engl J Med. 2011;364(23):2208-17. (http://dx.doi.org/doi:10.1056/NEJMoa1011600)

2. Hohmann HL, Reeves MF, Chen BA, Perriera LK, Hayes JL, Creinin MD. Immediate versus delayed insertion of the levonorgestrel-releasing intrauterine device following dilation and evacuation: A randomized controlled trial. Contraception. 2012;85(3):240-5. (http://dx.doi.org/10.1016/j.contraception.2011.08.002)

3. Cremer M, Bullard KA, Mosley RM, Weiselberg C, Molaei M, Lerner V, et al. Immediate vs. Delayed post-abortal copper t 380a IUD insertion in cases over 12 weeks of gestation. Contraception. 2011;83(6):522-7. (http://dx.doi.org/10.1016/j.contraception.2010.10.005)

4. Shimoni N, Davis A, Westhoff C. Can ultrasound predict IUD expulsion after medical abortion? Contraception. 2014;89(5):434-9. (http://dx.doi.org/10.1016/j.contraception.2014.01.006)

5. Shimoni Na, Davis A, Ramos ME, Rosario L, Westhoff C. Timing of copper intrauterine device insertion after medical abortion: A randomized controlled trial. Obstet Gynecol. 2011;118(3):623-8. (http://dx.doi.org/10.1097/AOG.0b013e31822ade67)

6. Sääv I, Stephansson O, Gemzell-Danielsson K. Early versus delayed insertion of intrauterine contraception after medical abortion — a randomized controlled trial. PLoS ONE. 2012;7(11):e48948. (http://dx.doi.org/10.1371/journal.pone.0048948)

7. Raymond EG, Weaver MA, Tan Y-L, Louie KS, Bousiéguez M, Lugo-Hernández EM, et al. Effect of immediate compared with delayed insertion of etonogestrel implants on medical abortion efficacy and repeat pregnancy: A randomized controlled trial. Obstet Gynecol. 2016;127(2):306-12. (http://dx.doi.org/10.1097/aog.0000000000001274)

8. Gatter M, Roth N, Safarian C, Nucatola D. Eliminating the routine postoperative surgical abortion visit. Contraception. 2012;86(4):397-401. (http://dx.doi.org/10.1016/j.contraception.2012.02.016)

9. Grossman D, Ellertson C, Grimes DA, Walker D. Routine follow-up visits after first-trimester induced abortion. Obstet Gynecol. 2004;103(4):738-45. (http://dx.doi.org/10.1097/01.AOG.0000115511.14004.19)

13. EVALUATION OF EVACUATED UTERINE CONTENTS

Policy Statement: Identification of appropriate products of conception (POC) following evacuation abortion procedures confirms termination of an intrauterine pregnancy.

Standard 13.1. Termination of pregnancy must be confirmed prior to the patient leaving the facility or further evaluation must be initiated.

- Recommendation 13.1.1. Evacuated uterine contents should be examined before the patient leaves the facility.
- Recommendation 13.1.2. In first-trimester terminations, flotation of tissue should be used to identify products of conception, including gestational sac.
  - Option 13.1.2.1. Backlighting of tissue may be useful.
  - Option 13.1.2.2. Sending the evacuated uterine contents for additional pathological examination is not required.(1)

Standard 13.2. When insufficient tissue or incomplete products of conception are obtained, the patient must be reevaluated.

- Recommendation 13.2.1. Re-aspiration, serial quantitative hCG, and/or ultrasonographic examination should be considered.(2-4)
- Recommendation 13.2.2. In the first trimester, ectopic pregnancy should be considered.

Discussion: One option for additional evaluation if sufficient POC are not identified is the use of serum quantitative hCG tests. A baseline hCG can be drawn and a second hCG can be done in 24-48 hours. If there is a decrease of 50% or more, no further ectopic follow up is necessary. Otherwise, further evaluation should be initiated including consideration of ectopic pregnancy. In this situation, Section 8 (Management of Pregnancy of Uncertain Location) may be useful.

References:

1. Paul M, Lackie E, Mitchell C, Rogers A, Fox M. Is pathology examination useful after early surgical abortion? Obstet Gynecol. 2002;99(4):567-71. (http://www.ncbi.nlm.nih.gov/pubmed/12039112)

2. Barnhart K, Sammel MD, Chung K, Zhou L, Hummel AC, Guo W. Decline of serum human chorionic gonadotropin and spontaneous complete abortion: Defining the normal curve. Obstet Gynecol. 2004;104(5 Pt 1):975-81. (http://dx.doi.org/10.1097/01.AOG.0000142712.80407.fd)

3. van der Lugt B, Drogendijk A. The disappearance of human chorionic gonadotropin from plasma and urine following induced abortion. Acta Obstet Gynecol Scand. 1985;64(7):547-52. (http://www.ncbi.nlm.nih.gov/pubmed/2417443)

4. Steier JA, Bergsjø P, Myking OL. Human chorionic gonadotropin in maternal plasma after induced abortion, spontaneous abortion, and removed ectopic pregnancy. Obstet Gynecol. 1984;64(3):391-4. (http://www.ncbi.nlm.nih.gov/pubmed/6462569)

14. EMERGENCY PROCEDURES

Policy Statement: Appropriate management of abortion emergencies reduces morbidity and mortality.

Standard 14.1. Protocols for the management of medical emergencies must be in place. These protocols must include indications for emergency transport and written, readily available directions for contacting external emergency assistance (e.g., an ambulance).

Recommendation 14.1.1. Protocols for the following topics should be in place: bleeding, perforation, respiratory arrest/depression, anaphylaxis, and emergency transfer.

Recommendation 14.1.2. Staff should review protocols annually.

Option 14.1.2.1. Annual drills of the emergency protocols are encouraged.

Recommendation 14.1.3. Clinics should consider developing a transfer agreement with a hospital outlining the means of communication and transport and the protocol for emergent transfer of care.

Standard 14.2. All staff must know their appropriate roles in the management of medical emergencies.

Standard 14.3. Emergency supplies must be in known, appropriate locations and regularly updated.

Standard 14.4. When abortion procedures are being performed, at least one medical staff member with health care provider level basic life support (BLS) training must be present.

Recommendation 14.4.1. All medical staff providing direct patient care should have current health care provider level BLS certification.

15. COMPLICATIONS: BLEEDING

Policy Statement: Hemorrhage can be one of the most serious immediate complications of an abortion procedure. Early recognition of the source of bleeding can reduce morbidity and mortality.

Standard 15.1. All facilities must have a protocol for the management of acute hemorrhage. This protocol must address the use and/or implementation of the following items:(1)
(1) establishment of intravenous access;
(2) administration of uterotonics; and
(3) evaluation of the cause and/or source of bleeding.

Standard 15.2. The facility must have at least two uterotonics and/or mechanical methods of controlling bleeding.

Discussion: Excessive bleeding during the procedure and in the post-procedure period is almost always due to uterine atony, often caused by incomplete emptying of the uterus. Therefore, the most important initial efforts should be directed at assuring complete evacuation of the uterus and at increasing uterine tone through uterotonics or uterine massage. Problems arise when bleeding is ignored or its severity underestimated. Clinicians must always remember to do the simple things when confronted with a developing bleeding problem: continue assessment of the blood loss, measure and record blood pressure and pulse frequently, and assure intravenous access.

The following measures may be used for treatment of post-abortion hemorrhage:
a. uterine massage;
b. methylergonovine (Methergine);
c. oxytocin (Pitocin);
d. vasopressin (Vasostrict);
e. misoprostol (Cytotec);
f. carboprost tromethamine (Hemabate);
g. intrauterine pressure using a Foley or Bakri balloon or vaginal pack; or
h. uterine re-aspiration.

When bleeding continues after assurance of complete uterine emptying and when there are no visible cervical or vaginal lacerations, the clinician must consider other complications such as perforation, coagulopathy, or placenta accreta.

References:

1. Kerns J, Steinauer J. Management of postabortion hemorrhage: SFP guideline 20131. Contraception. 2013;87(3):331-42. (http://dx.doi.org/10.1016/j.contraception.2012.10.024)

16. COMPLICATIONS: PERFORATION

Policy Statement: Uterine perforation is a complication of abortion that can lead to significant morbidity. Morbidity is related to site of perforation, instrumentation, and gestational age.

Standard 16.1. If, in the clinician's judgment, an instrument passes farther than expected, then uterine perforation must be considered.

Standard 16.2. If a perforation occurs, even if the patient is asymptomatic, additional observation and follow-up must be performed.

Recommendation 16.2.1. The following interventions should be considered:

Option 16.2.1.1. Additional antibiotic coverage may be instituted.

Option 16.2.1.2. Uterotonics may be administered.

Recommendation 16.2.2. If a perforation occurs and the pregnancy has been disrupted, the abortion procedure should be completed as soon as feasible.

Option 16.2.2.1. If a perforation occurs and *the pregnancy has not been disrupted*, the procedure may be completed immediately, after a delay, or by referral to another provider.

Option 16.2.2.2. The uterine evacuation may be completed under direct ultrasound guidance or laparoscopic visualization.(1, 2)

Standard 16.3. The patient must be transferred to a hospital if:

(1) intra-abdominal viscera are detected in the uterine cavity, cervix, vagina, suction tubing, or on tissue examination;

(2) fetal parts are detected in the abdominal cavity;

(3) expanding intra-abdominal or retroperitoneal hematoma is detected; or

(4) hemodynamic instability is present.

Discussion: Perforations are often occult and may be difficult to identify.(3-5) If a perforation is suspected, it is safest to proceed as if there has been a perforation.

In the first trimester, perforations are often asymptomatic and self-healing.(6, 7) Most perforations are midline and/or fundal in location.(8) If they occur before suction, these

usually can be managed with observation and close follow-up.(7) A lateral perforation may involve uterine blood vessels and, if so, will be more significant.

In the second trimester, even an asymptomatic perforation may warrant transfer to a hospital for evaluation depending on the instrumentation involved.(9, 10) There may be more significant morbidity due to increased uterine blood flow, a thinner myometrium, and the damage possible with the use of larger grasping instruments.

References:

1. Kohlenberg CF, Casper GR. The use of intraoperative ultrasound in the management of a perforated uterus with retained products of conception. The Australian & New Zealand journal of obstetrics & gynaecology. 1996;36(4):482-4. (http://www.ncbi.nlm.nih.gov/pubmed/9006840)

2. Lauersen NH, Birnbaum S. Laparoscopy as a diagnostic and therapeutic technique in uterine perforations during first-trimester abortions. Am J Obstet Gynecol. 1973;117(4):522-6. (http://www.ncbi.nlm.nih.gov/pubmed/4270312)

3. Amarin ZO, Badria LF. A survey of uterine perforation following dilatation and curettage or evacuation of retained products of conception. Archives of gynecology and obstetrics. 2005;271(3):203-6. (http://dx.doi.org/10.1007/s00404-003-0592-8)

4. Berek JS, Stubblefield PG. Anatomic and clinical correlates of uterine perforation. Am J Obstet Gynecol. 1979;135(2):181-4. (http://www.ncbi.nlm.nih.gov/pubmed/474668)

5. Grimes DA, Schulz KF, Cates WJ, Jr. Prevention of uterine perforation during curettage abortion. JAMA. 1984;251(16):2108-11. (http://www.ncbi.nlm.nih.gov/pubmed/6708260)

6. Kaali SG, Szigetvari IA, Bartfai GS. The frequency and management of uterine perforations during first-trimester abortions. Am J Obstet Gynecol. 1989;161(2):406-8. (http://dx.doi.org/10.1016/0002-9378(89)90532-2)

7. Lindell G, Flam F. Management of uterine perforations in connection with legal abortions. Acta Obstet Gynecol Scand. 1995;74(5):373-5. (http://www.ncbi.nlm.nih.gov/pubmed/7778431)

8. Mittal S, Misra SL. Uterine perforation following medical termination of pregnancy by vacuum aspiration. International journal of gynaecology and obstetrics: the official organ of the International Federation of Gynaecology and Obstetrics. 1985;23(1):45-50. (http://www.ncbi.nlm.nih.gov/pubmed/2860032)

9. Darney PD, Atkinson E, Hirabayashi K. Uterine perforation during second-trimester abortion by cervical dilation and instrumental extraction: A review of 15 cases. Obstet Gynecol. 1990;75(3 Pt 1):441-4. (http://www.ncbi.nlm.nih.gov/pubmed/2304715)

10. Pridmore BR, Chambers DG. Uterine perforation during surgical abortion: A review of diagnosis, management and prevention. The Australian & New Zealand journal of obstetrics & gynaecology. 1999;39(3):349-53. (http://www.ncbi.nlm.nih.gov/pubmed/10554950)

naf

NATIONAL
ABORTION
FEDERATION