National EMS Education Standard Competencies (1 of 3)

Medicine
Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient.

National EMS Education Standard Competencies (2 of 3)

Gynecology
- Recognition and management of shock associated with
  - Vaginal bleeding

National EMS Education Standard Competencies (3 of 3)

- Anatomy, physiology, assessment findings, and management of
  - Vaginal bleeding
  - Sexual assault (to include appropriate emotional support)
  - Infections

Introduction
- Women are uniquely designed to conceive and give birth.
- Women are susceptible to problems that do not occur in men.

Anatomy and Physiology (1 of 8)
- External female genitalia
  - Vaginal opening
  - Labia majora and labia minora
  - Clitoris
  - Perineum is area of skin between the vagina and anus

Anatomy and Physiology (2 of 8)

Anatomy and Physiology (3 of 8)
- Ovaries are a primary internal female reproductive organ.
  - Lie on each side of lower abdomen
  - Produce ovum (egg)
- Fallopian tubes connect each ovary with the uterus.

Anatomy and Physiology (4 of 8)
- Uterus is a muscular organ where the fetus grows.
  - Narrowest part of uterus is the cervix
  - Cervix opens into the vagina
- Vagina is outermost cavity of woman’s reproductive system.
  - Forms the lower part of birth canal

Anatomy and Physiology (5 of 8)

Anatomy and Physiology (6 of 8)
- Ovulation and menstruation begin in puberty.
  - Onset of menstruation is called menarche.
  - Occurs between age 11 and 16 years
- Women continue ovulation and menstruation until menopause.
  - Occurs around age 50
Anatomy and Physiology (7 of 8)
• Each ovary produces an ovum in alternating months.
  – Each month one ovum is released into fallopian tubes (ovulation).
• The process of fertilization begins in the vagina.
  – Sperm are deposited from the male penis, passes through cervix to uterus, and up the fallopian tubes.

Anatomy and Physiology (8 of 8)
• If fertilization does not occur within about 14 days of ovulation:
  – The lining of the uterus begins to separate, and menstruation occurs for about a week.
• Process of ovulation and menstruation is controlled by female hormones.

Pathophysiology
• Causes of gynecologic emergencies are varied.
  – Range from sexually transmitted diseases to trauma

Pelvic Inflammatory Disease (PID)
• Infection of upper organs of reproduction
  – Uterus, ovaries, fallopian tubes
  – Occurs almost exclusively in sexually active women
  – Can result in increased risk of ectopic pregnancy or sterility
  – Most common sign is generalized lower abdominal pain

Sexually Transmitted Diseases (1 of 3)
• STDs can lead to more serious conditions, such as PID.
• Chlamydia
  – Most common STD
  – Caused by bacteria
  – Usually mild or absent symptoms
  – Can spread to rectum and progress to PID

Sexually Transmitted Diseases (2 of 3)
• Bacterial vaginosis
  – Most common vaginal infection
  – Normal bacteria in vagina are replaced by an overgrowth of other bacteria.
  – Untreated, it can progress to premature birth or low birth weight in pregnancy, and PID

Sexually Transmitted Diseases (3 of 3)
• Gonorrhea
  – Grows and multiplies rapidly in warm, moist areas of reproductive tract
    • Cervix, uterus, fallopian tubes in women
    • Urethra in men and women
  – If untreated, can enter bloodstream and spread to other parts of body

Vaginal Bleeding
• Bleeding may be considered menstrual bleeding and overlooked.
• Possible causes include:
  – Abnormal menstruation
  – Vaginal trauma
  – Ectopic pregnancy
– Spontaneous abortion
– Cervical polyps or cancer

20 Patient Assessment
  • Obtaining an accurate and detailed assessment is critical.
    – You will be able to gain only a primary impression of the problem in the field.
    – Thorough patient assessment will help determine how sick the patient is and whether lifesaving measures are needed

21 Scene Size-up (1 of 2)
  • Scene safety
  • Gynecologic emergencies can involve large amounts of blood and body fluid.
  • Involve police if assault is suspected.
    – In sexual assault, it is important to have a female EMT to provide care.

22 Scene Size-up (2 of 2)
  • The MOI may be easily understood from the dispatch information, such as sexual assault.
    – In other patients, patient history may reveal the nature of the condition.

23 Primary Assessment (1 of 2)
  • Form a general impression
    – Is the patient stable or unstable?
    – Use AVPU scale.
  • Airway and breathing
    – Always evaluate first to ensure adequacy.
  • Circulation
    – Pulse and skin color, temperature, and moisture can help identify blood loss.

24 Primary Assessment (2 of 2)
  • Most gynecologic emergencies are not life threatening.
  • If the patient has signs of shock, rapid transport is warranted.

25 History Taking (1 of 4)
  • Investigate chief complaint.
    – Some questions are extremely personal.
    – Ensure the patient’s privacy and dignity are protected.

26 History Taking (2 of 4)
  • For abdominal pain, ask about
    – Onset, duration, quality, and radiation
    – Provoking or relieving factors
    – Associated symptoms such as syncope, light-headedness, nausea, vomiting, and fever

27 History Taking (3 of 4)
  • For vaginal bleeding, ask about:
    – Onset
    – Duration
    – Quantity (number of sanitary pads soaked)
    – Associated symptoms such as syncope and light-headedness

28 History Taking (4 of 4)
• SAMPLE History
  – Note allergies and current medications.
  – Ask about birth control pills or devices
  – Ask about last menstrual period and STDs.

29 Secondary Assessment (1 of 5)
• Pertinent secondary assessment findings should include:
  – Vital signs: blood pressure, pulse, skin color, orthostatic vital signs
  – Abdomen: distention and tenderness
  – Genitourinary: visible bleeding
  – Neurologic: mental status

30 Secondary Assessment (2 of 5)
• Physical examinations
  – Should be limited and professional
  – Protect woman’s privacy
    • Limit the number of personnel present.
  – Focus your physical examination on the NOI and the patient’s chief complaint.

31 Secondary Assessment (3 of 5)
• Vaginal bleeding:
  – Visualize the bleeding and ask about quality and quantity.
  – Use external pads to control bleeding.
• Observe for vaginal discharge.
• Syncope, fever, nausea, and vomiting are significant in gynecologic emergencies.

32 Secondary Assessment (4 of 5)
• Vital signs
  – Assess patient’s:
    • Heart rate, rhythm, and quality
    • Respiratory rate, rhythm, and quality
    • Skin color, temperature, and condition
    • Capillary refill time
    • Blood pressure
    • Consider orthostatic vital signs

33 Secondary Assessment (5 of 5)
• Monitoring devices
  – Use pulse oximetry.
  – Consider noninvasive blood pressure monitoring to continuously track patient’s blood pressure.
  – Assess first blood pressure with sphygmomanometer and stethoscope.

34 Reassessment (1 of 2)
• Repeat the primary assessment.
• There are very few interventions with a gynecologic emergency.
  – Treat for hypoperfusion or shock.
  – Transport promptly.
Reassessment (2 of 2)
- Communication and documentation
  - Communicate all relevant information to staff at receiving hospital.
  - Include possibility of pregnancy
  - Carefully document everything, especially in cases of sexual assault.

Emergency Medical Care (1 of 3)
- Maintain patient’s privacy as much as possible.
  - If in a public place, move to ambulance.
  - Have a female EMT participate in the patient’s care if possible.
- Determining cause of bleeding is of less importance than treating for shock and transporting.

Emergency Medical Care (2 of 3)
- Most women will use sanitary pads to control bleeding before you arrive.
  - You may continue that approach.
- External genitals have a rich nerve supply.
  - Makes injuries very painful

Emergency Medical Care (3 of 3)
- Treat external lacerations with moist, sterile compresses.
  - Use local pressure to control bleeding.
  - Use diaper-type bandage to hold dressings in place.
  - Do not pack or place dressings in the vagina.

Assessment and Management of Specific Conditions
- Pelvic inflammatory disease (PID)
  - A patient with PID will complain of abdominal pain.
    - Usually starts during or after menstruation
    - May be made worse by walking
  - Prehospital treatment is limited.
  - Nonemergency transport is usually recommended.

Sexual Assault (1 of 6)
- Sexual assault and rape are common.
  - 1 of 5 women has reported being raped.
  - 1 of 4 women will be sexually molested.
- EMTs treating victims of sexual assault face many complex issues.

Sexual Assault (2 of 6)
- You may be first person victim has contact with after the encounter.
  - How you manage situation may have lasting effects for patient and you.
  - Professionalism, tact, kindness, and sensitivity, are important.

Sexual Assault (3 of 6)
- Be aware of drugs used to facilitate sexual assault or rape.
  - Inability to remember the event should create suspicion.
  - If these drugs are still in the patient’s system, you may see hypotension, bradycardia, abdominal complaints, difficulty breathing, seizures, coma, and even death.

Sexual Assault (4 of 6)
- You can generally expect police involvement.
• Attempts to gather detailed report from victim may cause her to “shut down.”
  – If possible, give the option of being treated by a female EMT.

44 Sexual Assault (5 of 6)
• Your focus should be:
  – Provide medical treatment of patient.
  – Offer psychological care of patient.
  – Preserve evidence.
  – Take history.
  – Produce a patient care report.

45 Sexual Assault (6 of 6)

46 Review
1. What is the narrowest portion of the uterus?
   A. Vagina
   B. Cervix
   C. Fallopian tubes
   D. Ovaries

47 Review
Answer: B
Rationale: The ovaries are the primary female reproductive organ. The developing embryo travels into the uterus through the fallopian tube. The embryo attaches to the uterine wall and continues to grow. The narrowest portion of the uterus is the cervix, which opens into the vagina.

48 Review (1 of 2)
1. What is the narrowest portion of the uterus?
   A. Vagina
      Rationale: The vagina is the outermost cavity of the woman’s reproductive system.
   B. Cervix
      Rationale: Correct answer

49 Review (2 of 2)
1. What is the narrowest portion of the uterus?
   C. Fallopian tube
      Rationale: The fallopian tubes are not part of the uterus. They connect each ovary with the uterus.
   D. Ovaries
      Rationale: The ovaries are located on each side of the abdomen and are not part of the uterus.

50 Review
2. What is the outermost cavity of a woman’s reproductive system?
   A. Cervix
   B. Ovaries
   C. Vagina
   D. Uterus

51 Review
Answer: C
Rationale: The vagina is the outermost cavity of a woman’s reproductive system.

Review (1 of 2)

2. What is the outermost cavity of a woman’s reproductive system?
   A. Cervix
      Rationale: The cervix opens into the vagina. Sperm passes through the cervix to the
      uterus and up the fallopian tubes.
   B. Ovaries
      Rationale: The ovaries are located on each side of the lower abdomen.

Review (2 of 2)

2. What is the outermost cavity of a woman’s reproductive system?
   C. Vagina
      Rationale: Correct answer
   D. Uterus
      Rationale: The uterus is the muscular organ where the fetus grows during pregnancy.

Review

3. If fertilization has not occurred within about ___ days following ovulation, the lining of the
   uterus begins to separate and menstruation occurs.
   A. 8
   B. 10
   C. 12
   D. 14

Review

Answer: D
Rationale: Women menstruate about 14 days following ovulation.

Review (1 of 2)

3. If fertilization has not occurred within about ___ days following ovulation, the lining of the
   uterus begins to separate and menstruation occurs.
   A. 8
      Rationale: Women menstruate about 14 days following ovulation.
   B. 10
      Rationale: Women menstruate about 14 days following ovulation.

Review (2 of 2)

3. If fertilization has not occurred within about ___ days following ovulation, the lining of the
   uterus begins to separate and menstruation occurs.
   C. 12
      Rationale: Women menstruate about 14 days following ovulation.
   D. 14
      Rationale: Correct answer.

Review

4. The onset of menstruation is called:
   A. menopause.
   B. menarche.
   C. ovulation.
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D. bleeding.

59  Review
   Answer: B
   Rationale: Menarche is the onset of menstruation, typically occurring between the ages of 11 and 16 years.

60  Review (1 of 2)
   4. The onset of menstruation is called:
      A. menopause.
         Rationale: Menopause is when the cycle of ovulation and menstruation cease.
      B. menarche.
         Rationale: Correct answer

61  Review (2 of 2)
   4. The onset of menstruation is called:
      C. ovulation.
         Rationale: Ovulation occurs each month when one ovum is released into the fallopian tube.
      D. premenstrual syndrome
         Rationale: Premenstrual syndrome involves symptoms that typically occur before menstruation.

62  Review
   5. Which of the following can cause vaginal bleeding?
      A. Ectopic pregnancy
      B. Spontaneous abortion
      C. Trauma
      D. All of the above.

63  Review
   Answer: D
   Rationale: Ectopic pregnancy, spontaneous abortion, and trauma can cause vaginal bleeding and should not be overlooked.

64  Review (1 of 2)
   5. Which of the following can cause vaginal bleeding?
      A. Ectopic pregnancy
         Rationale: Ectopic pregnancy can cause vaginal bleeding.
      B. Spontaneous abortion
         Rationale: Spontaneous abortion can cause vaginal bleeding.

65  Review (2 of 2)
   5. Which of the following can cause vaginal bleeding?
      C. Trauma
         Rationale: Trauma can cause vaginal bleeding.
      D. All of the above.
         Rationale: Correct answer.

66  Review
   6. What is the most common presenting sign of PID?
      A. Vomiting
      B. Vaginal discharge
C. Lower abdominal pain
D. Fever

67 Review
Answer: C
Rationale: Lower abdominal pain is the most common sign of pelvic inflammatory disease.

68 Review (1 of 2)
6. What is the most common presenting sign of PID?
   A. Vomiting
      Rationale: Vomiting is considered to be another sign of PID.
   B. Vaginal discharge
      Rationale: Vaginal discharge is considered to be another sign of PID.

69 Review (2 of 2)
6. What is the most common presenting sign of PID?
   C. Lower abdominal pain
      Rationale: Correct answer
   D. Fever
      Rationale: Fever is considered to be another sign of PID.

70 Review
7. When obtaining a SAMPLE history, which of the following pieces of information is important to obtain?
   A. Use of a birth control device or birth control pills
   B. The date of the patient’s last menstrual period
   C. The possibility of pregnancy
   D. All of the above.

71 Review
Answer: D
Rationale: When obtaining a SAMPLE history, the EMT should inquire about the patient’s medications. The EMT must ask about the use of birth control pills or birth control devices and ask specifically about the patient’s last menstrual period. The EMT should also inquire about the possibility of sexually transmitted diseases and the possibility of pregnancy.

72 Review (1 of 2)
7. When obtaining a SAMPLE history, which of the following pieces of information is important to obtain?
   A. Use of a birth control device or birth control pills
      Rationale: The EMT should also inquire about the possibility of pregnancy and the date of the last menstrual period.
   B. The date of the patient’s last menstrual period
      Rationale: The EMT should also inquire about the use of birth control pills and devices and the possibility of pregnancy.

73 Review (2 of 2)
7. When obtaining a SAMPLE history, which of the following pieces of information is important to obtain?
   C. The possibility of pregnancy
      Rationale: The EMT should also inquire about the use of birth control pills and devices and the date of the last menstrual period.
   D. All of the above.
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Rationale: Correct answer

8. What is the EMT’s FIRST priority when dealing with a patient experiencing excessive vaginal bleeding?
   A. Determine the cause of the bleeding.
   B. Treat the patient for shock and transport.
   C. Determine if the bleeding is a result of sexual assault.
   D. Keep the patient warm and apply oxygen.

Answer: B
Rationale: Determining the cause of the bleeding is less important than treating for shock and transporting the patient. EMTs can control the bleeding by using sanitary pads on the external genitalia. When treating for shock, the EMT must place the patient in the appropriate position, keep her warm, and apply oxygen.

8. What is the EMT’s FIRST priority when dealing with a patient experiencing excessive vaginal bleeding?
   A. Determine the cause of the bleeding.
      Rationale: Determining the cause of the bleeding is less important than treating for shock and transporting the patient.
   B. Treat the patient for shock and transport.
      Rationale: Correct answer

8. What is the EMT’s FIRST priority when dealing with a patient experiencing excessive vaginal bleeding?
   C. Determine if the bleeding is a result of sexual assault.
      Rationale: This information will be handled by the hospital staff and police.
   D. Keep the patient warm and apply oxygen.
      Rationale: This step is only part of treating the patient for shock.

9. Which of the following drugs is commonly used to facilitate sexual assault?
   A. Rohypnol
   B. Heroin
   C. Cocaine
   D. Marijuana

Answer: A
Rationale: Rohypnol is a sedative that is used by criminals to facilitate sexual assault by depressing the victim’s central nervous system.

9. Which of the following drugs is commonly used to facilitate sexual assault?
   A. Rohypnol
      Rationale: Correct answer
   B. Heroin
      Rationale: Heroin is not used to facilitate sexual assault.
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Review (2 of 2)

9. Which of the following drugs is commonly used to facilitate sexual assault?
   C. Cocaine
   Rationale: Cocaine is not used to facilitate sexual assault.
   D. Marijuana
   Rationale: Marijuana is not used to facilitate sexual assault.

Review

10. You should discourage a rape or sexual assault victim from doing which of the following?
    A. Urinating
    B. Cleaning herself
    C. Changing clothes
    D. All of the above.

Answer: D
Rationale: A victim of sexual assault or rape should be discouraged from showering, urinating, changing clothes, moving bowels, or rinsing out her mouth in order to preserve evidence.

Review (1 of 2)

10. You should discourage a rape or sexual assault victim from doing which of the following?
    A. Urinating
    Rationale: The victim should not urinate in order to preserve evidence.
    B. Cleaning herself
    Rationale: The victim should not clean herself in order to preserve evidence.

Review (2 of 2)

10. You should discourage a rape or sexual assault victim from doing which of the following?
    C. Changing clothes
    Rationale: The victim should not change her clothes in order to preserve evidence.
    D. All of the above.
    Rationale: Correct answer