Emergency Management of Ectopic Pregnancy

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Objectives

1. Identify important considerations when evaluating pregnancies of unknown location in the ED.
2. Apply general principles that support appropriate triage and assessment.
3. Describe clinical actions and protocols that can guide early management and follow up.
4. Discuss strategies for providing equitable care across diverse and resource limited settings.

Case Scenario

Patient: 27 yo female who reports no pmh

CC/ Pain history: Right lower quadrant pain, cramping, waxing and waning intensity of pain

Vitals: HR: 97, BP: 110/ 70, RR: 20, T: 96.2, O2: 96%

Physical Exam: Diffuse abdominal pain, most pronounced in RLQ, not peritoneal in nature

Medications: None

Family hx: None

GU Exam: Some blood in vaginal vault, closed cervix, no tissue or clots

Bimanual exam: Fullness and moderate pain with manipulation of R ovary

Differential Diagnosis

-Appendicitis

-Colitis

-Ovarian Cyst/ rupture

-Urinary calculi

-UTI/ Pyelonephritis

-Ovarian Abscess

-Ectopic pregnancy

-Ovarian Torsion

-Early pregnancy loss

- Cervicitis

-Endometriosis

-PID

-Gastroenteritis

-Bowel obstruction

- MSK trauma

-Pelvic congestion syndrome

- IUD migration

-IBS

-Pregnancy of unknown location

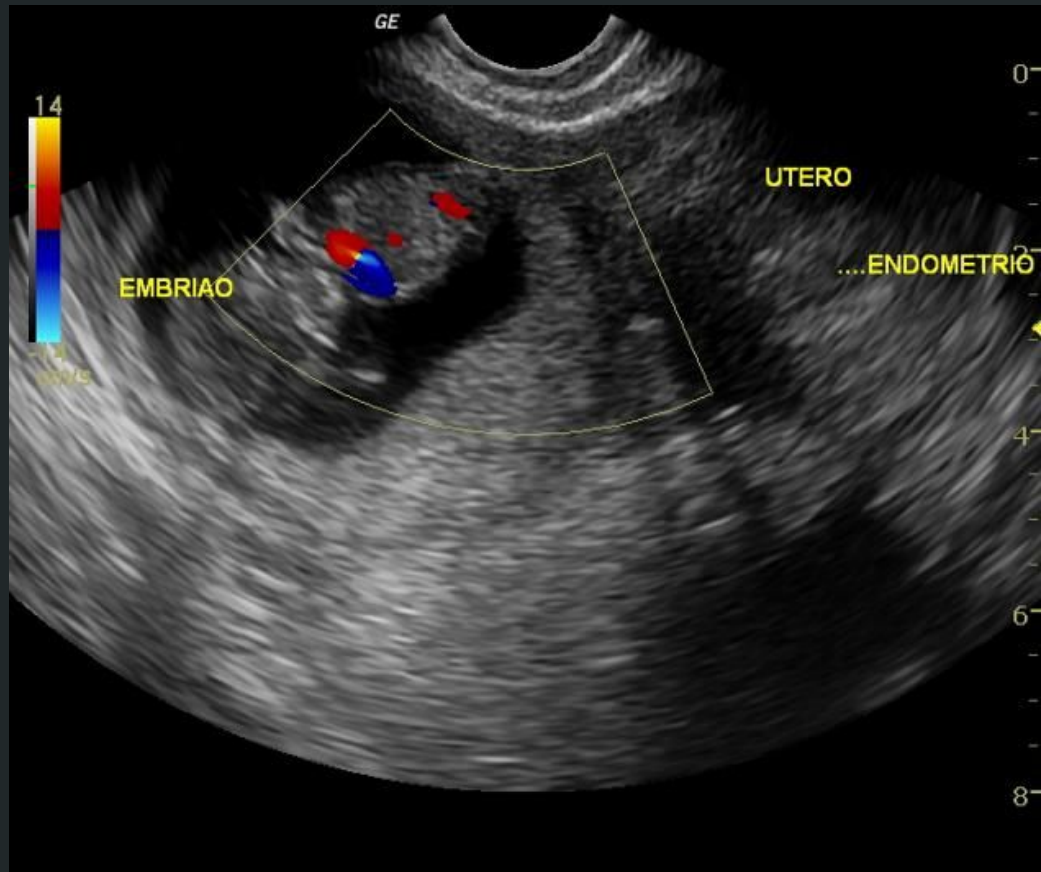
Where is the pregnancy?

PUL: Pregnancy of unknown location

IUP: Intrauterine pregnancy

Ectopic Pregnancy: Implantation of a fertilized ovum outside the uterine cavity

Heterotopic Pregnancy: intrauterine and extrauterine pregnancy



Workup

-CBC

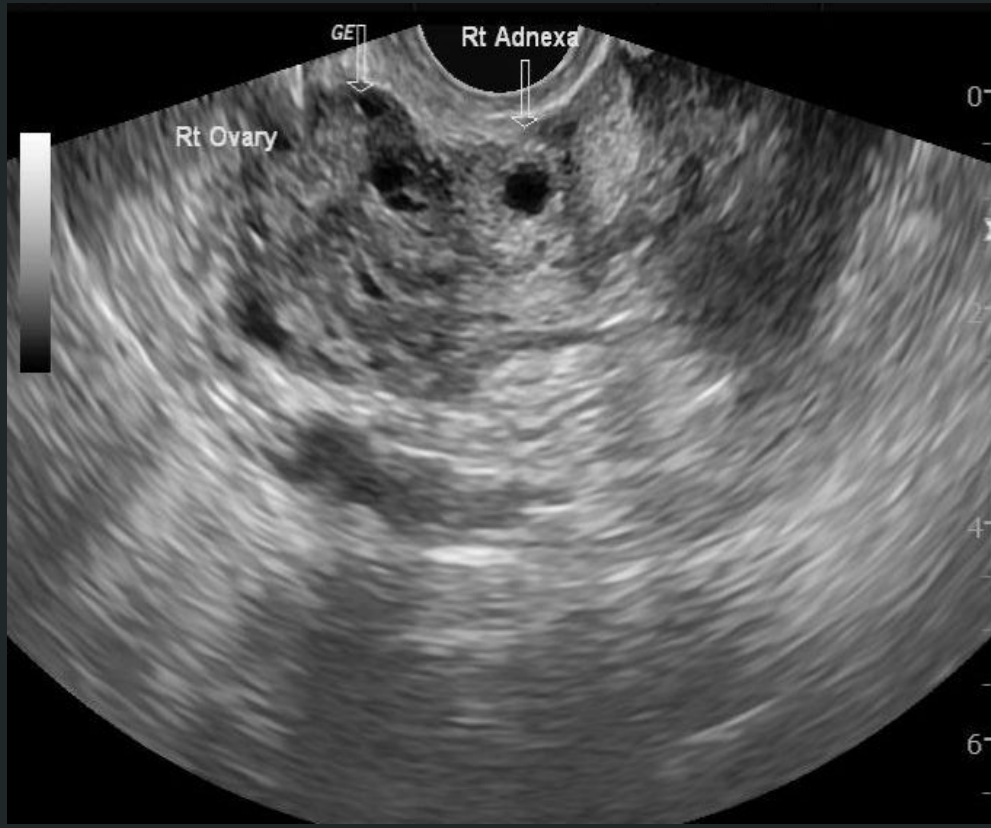
-CMP

-B-hCG

-Pelvic US (transabdominal vs. transvaginal)

-Type & Screen

-Rh factor



Epidemiology and Demographics of Ectopic Pregnancy

Incidence: 1-2% of all pregnancies

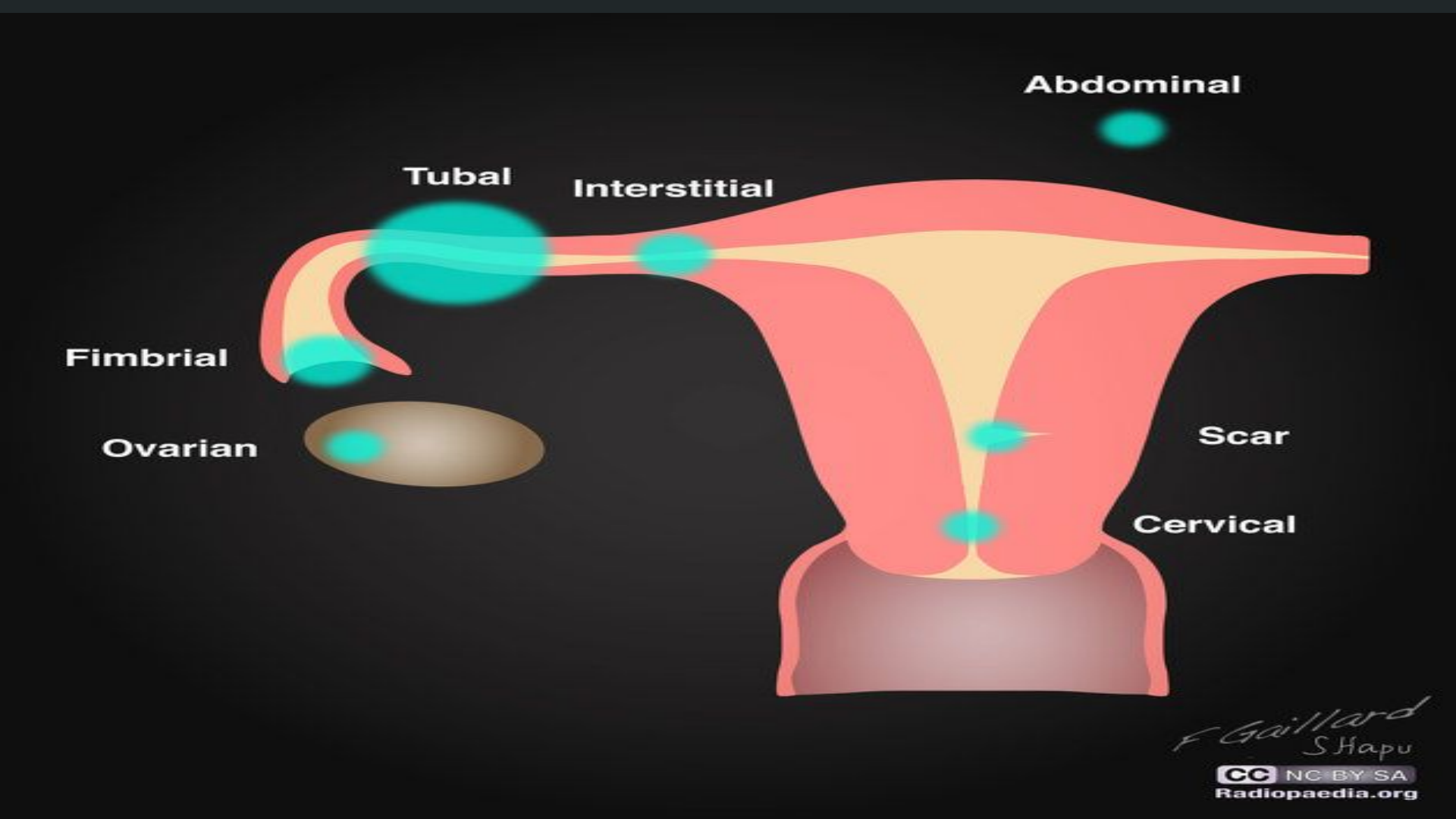
Risk Factors:

- Previous ectopic pregnancy
- Pelvic inflammatory disease (PID)
- Tubal surgery
- Assisted reproductive technology (ART)
- Smoking
- Endometriosis
- Intrauterine device (rare but possible)

Demographics:

-Age: Higher risk in older patients, especially > 40

Ethnicity: Non hispanic black women have highest incidence (21.9/1000)



Clinical Presentation

Symptoms

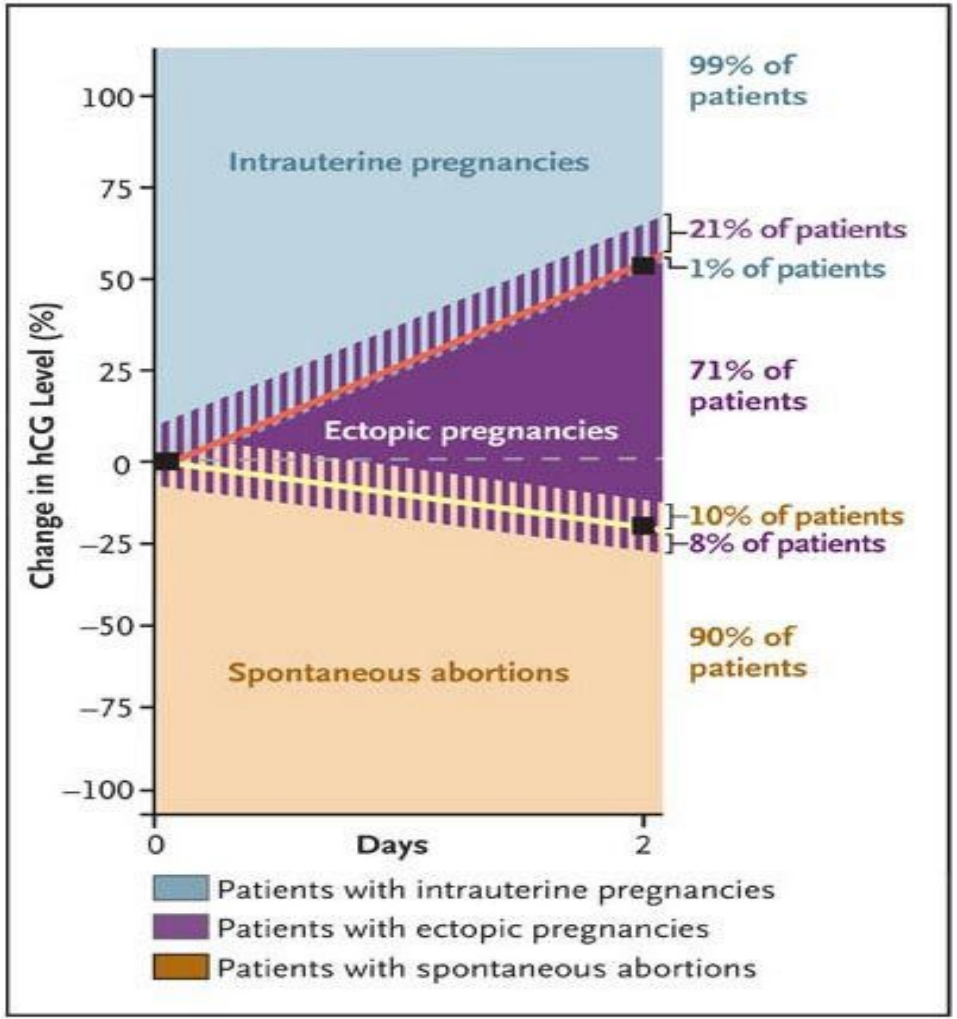
- Lower abdominal or pelvic pain
- Vaginal bleeding
- Missed menstrual period
- Referred shoulder pain

Signs

- Abdominal tenderness
- Adnexal tenderness or mass
- Cervical motion tenderness
- Signs of shock in ruptured ectopic pregnancy

Diagnosis

- Positive pregnancy test
- Serial β-hCG measurements
- Transvaginal ultrasound findings:
  - Empty uterus
  - Adnexal mass
  - Free pelvic fluid
- Differentiate from:
  - Miscarriage
  - Ovarian torsion
  - Appendicitis
  - Ruptured ovarian cyst
  - PUL



Possible Ectopic

Stable

Risk Assessment

Exam:
- Abdominal tenderness
- Adnexal mass/tenderness
- Cervical motion tenderness

US:
- Complex adnexal mass
- Moderate-to-large pelvic free fluid
- Echogenic pelvic free fluid

FAST

Free fluid in hepatorenal recess

Ectopic

Definite ectopic identified

IUP

Definite IUP identified (ex. yolk sac, double decidual sign)

Non-Diagnostic

Decidual reaction, gestational sac or pseudo-gestational sac

Management

- Establish access
- Blood product transfusion
- Emergent gynecology consultation

OR

Consult Gyn

Assisted Fertilization

hCG
Discriminatory Zone

Alternative Diagnosis

Consult Gyn

Risk Assessment

Follow

Emergency Assessment

Primary Survey (ABCDE)

- Airway
- Breathing
- Circulation
- Disability
- Exposure

*Pregnant patients are still patients

Management

Hemodynamically Unstable

- Immediate resuscitation
- Oxygen therapy
- Two large-bore IV lines
- Rapid IV fluids
- Blood transfusion if necessary
- OB Consult STAT (likely need surgery)

Hemodynamically Stable

- IV access
- Laboratory investigations
- Pain management
- Gynecology consultation
- Consider methotrexate if criteria are met

Medical Management

Methotrexate Therapy

Eligibility

- Stable patient
- Small ectopic mass
- No rupture
- Reliable follow-up

Contraindications

- Hemodynamic instability
- Liver or kidney disease
- Peptic Ulcer Disease
- Heterotopic pregnancy w/ viable IUP
- Immunodeficiency
- Breastfeeding
- Blood dyscrasias
- Fetal cardiac activity (relative and dependent on state laws)
- B-hCG > 5000 (relative and dependent on institution)

Surgical Management

Indications

- Hemodynamic instability
- Ruptured ectopic pregnancy
- Contraindications to methotrexate
- Large ectopic pregnancy
- Fetal cardiac activity in selected cases

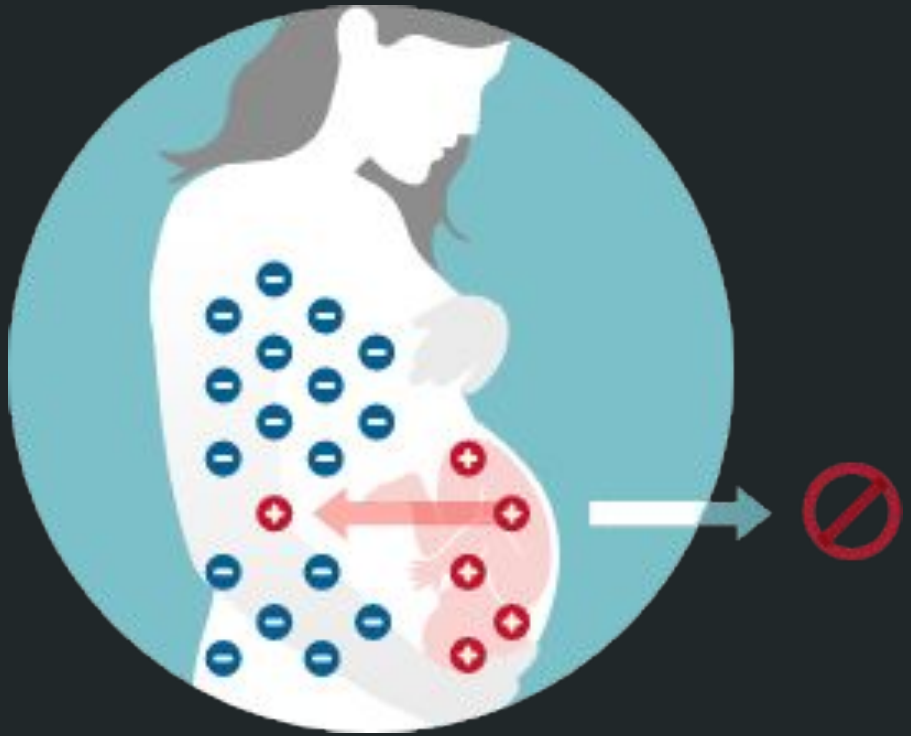
Procedures

- Laparoscopy (preferred if stable)
- Laparotomy (unstable patients)
- Salpingostomy
- Salpingectomy

Rhogam

-Always give Rhogam to Rh negative patients within 72 hours of exposure event

-Part of secondary resuscitation and treatment, does not need to be emergent in the ED



Patient Education= Patient Empowerment

Complication Counseling

- Hemorrhagic shock
- Infertility
- Recurrent ectopic pregnancy
- Infection
- Maternal death (rare with prompt treatment)

Patient Education

- Importance of follow-up β-hCG levels
- Warning signs:
  - Severe pain
  - Heavy bleeding
  - Dizziness or fainting
- Future pregnancy counseling
- Early ultrasound in subsequent pregnancies

Follow Up Planning

- Gynecology follow up
- Reproductive planning and fertility follow up (if specialty expertise required)
- Psychological follow up

Challenges to Ectopic Management

“Senator, you have my commitment,” Schwartz replied. “Abortion surveillance is absolutely a critical component of what the CDC is currently doing.”

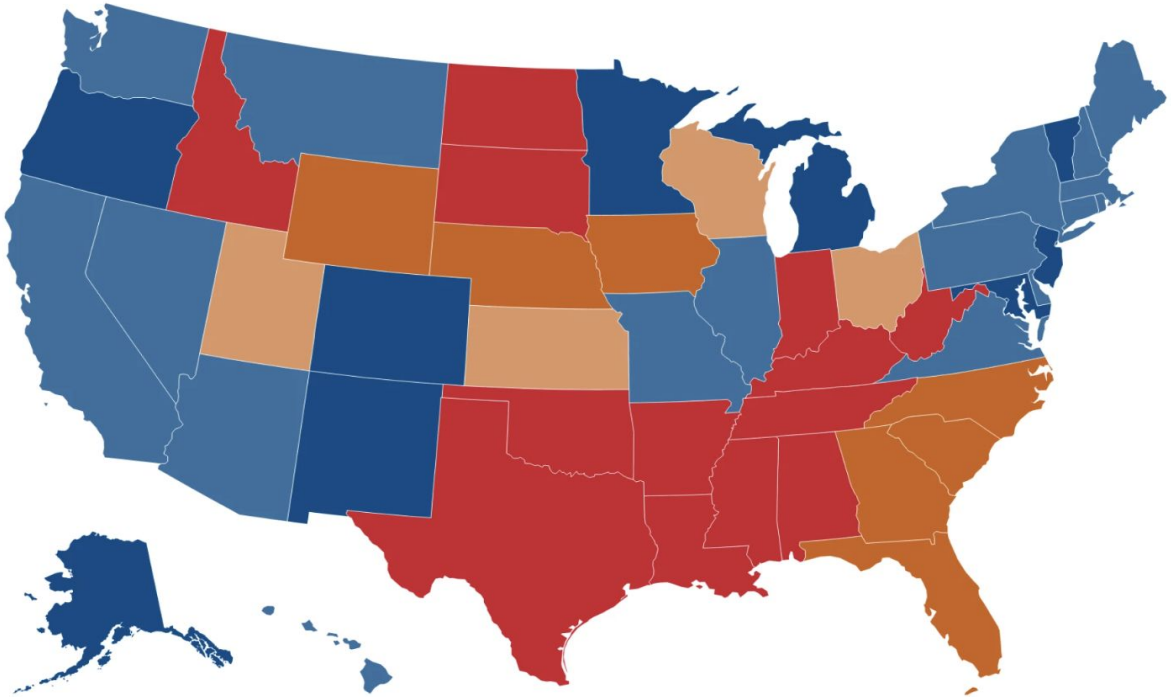
“I also want to make sure that certain states are not conflating emergency services and hiding abortions in that emergency services case definition,” she added. “We need to make sure we’re pulling out true abortions and making sure that we’re really having clear case definitions regarding abortions so the data is actually accurate.”

“Tremendous,” Hawley replied.”

Status of Abortion Bans in the United States as of March 9, 2026

Hover over state for more details

- Abortion Banned (13 states)
- Gestational limit between 6 and 12 weeks LMP (7 states)
- Gestational limit between 18 and 22 weeks LMP (4 states)
- Gestational limit at or near viability (17 states)
- No gestational limits (9 states & DC)



Maternity Care Deserts and Emergency Department Interface

-8/11/26: March of Dimes annual report showed half of counties in the United States do not have a labor and delivery unit.

-One third of counties in the country are considered maternity care deserts

57.9% of rural counties are without a practicing OB/GYN, projected to worsen by 2035

-Emergency Departments without access to OB/GYN support may require transfer of patients, extending average time of definitive care by 50 minutes

-Longer wait times in Emergency Departments due to increase in volume may cause delay in recognition and treatment

- Insurance coverage becoming more and more limited by hospital, may result in patients delaying care to ensure insurance coverage before presenting or being transferred, especially if private practice OB/GYN's are only in-network for certain insurance companies but are covering the labor and delivery unit at the closest hospital

Summary

-Identify location of pregnancy early, have a broad differential but a low threshold to suspect ectopic pregnancy

-Involve OB early

-Have a protocol at your hospital for ectopic pregnancy management and transfer process

- Do not delay treatment

-Be thoughtful and thorough about counseling patients on treatment options, follow up plans and next steps

-Be aware of community access to resources

-Emergency Department triage and assessment should not change based on pregnancy status: stabilize the patient first and foremost

Citations

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