

Miscarriage Management in the Emergency Department

Treating first trimester pregnancy loss and miscarriage in the ED

Why miscarriage is emergency medicine

- Patients with miscarriage seek care in EDs
- EPL care has not historically been stressed in EM residencies
- You can learn to do more for your patients apart from just providing default expectant management

Outline

- Why miscarriage matters in the ED
- Miscarriage diagnosis
- Treatment options
- Benefits of treatment
- Educational resources

Nomenclature

Miscarriage

- EPL - early pregnancy loss
- EPF - early pregnancy failure
- SAB - spontaneous abortion

Uterine Aspiration

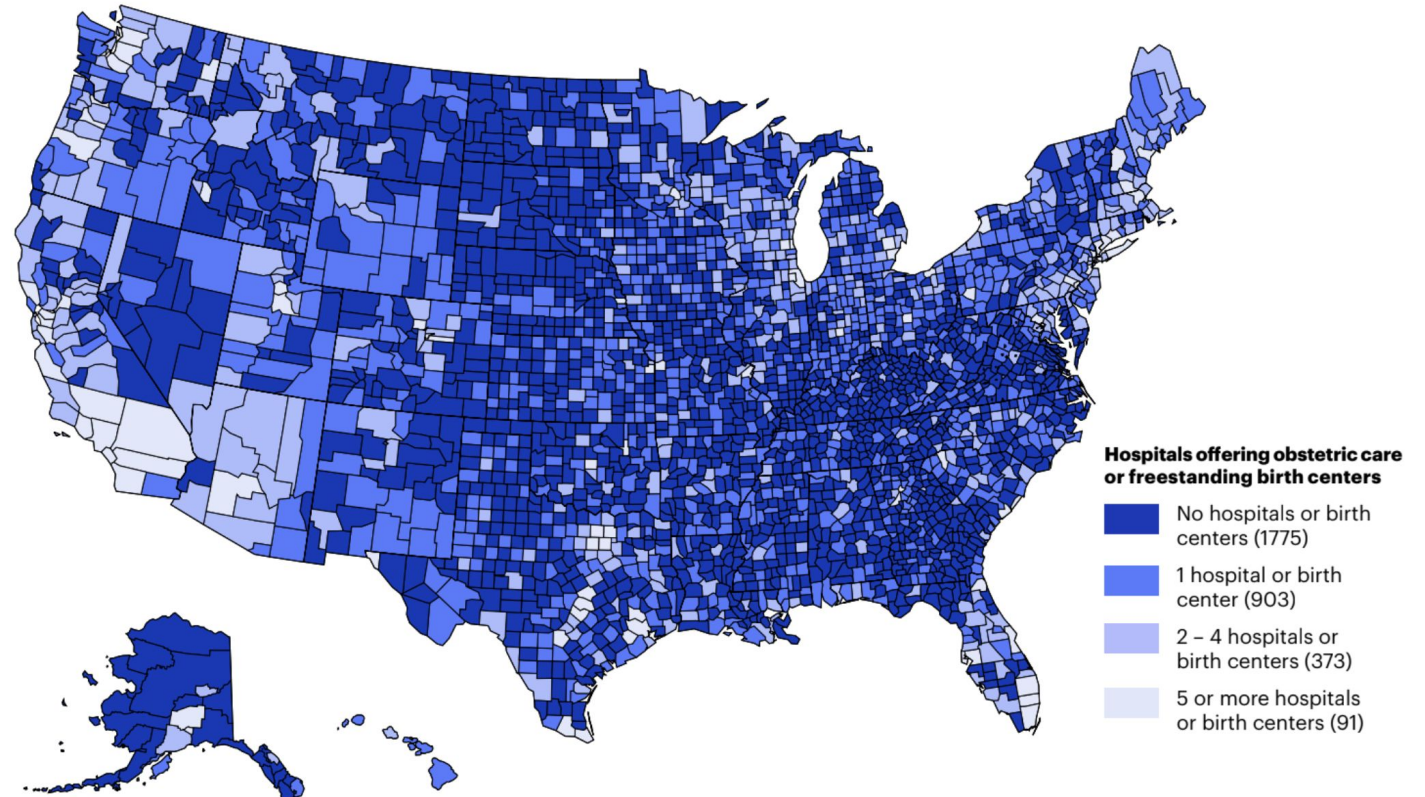
- MUA - manual uterine aspiration
- MVA - manual vacuum aspiration
- ~~-D&C - dilation & curettage~~

Miscarriage is emergency medicine

- 900,000 ED visits/yr
- 10-20% of recognized pregnancies end in EPL
 - By some estimates, up to 70% of conceptions end in miscarriage, often before patients know they're pregnant
- 25% of women will have at least one miscarriage

Expect more patients with miscarriage

- L&D floors closing
- Maternal age is increasing in the US, and advancing age correlates with more miscarriages



Health equity of ED miscarriage

Patients receiving ED-based EPL care compared to outpatient clinic-based EPL care w higher likelihood:

- Publicly insured
- Person of color
- Less likely to receive medication management
- Less likely to receive procedural management

Are we doing a good job caring for EPL in the ED?

EM patients report:

- Inefficient care
- Lack of diagnostic clarity
- Perceived lack of sensitivity

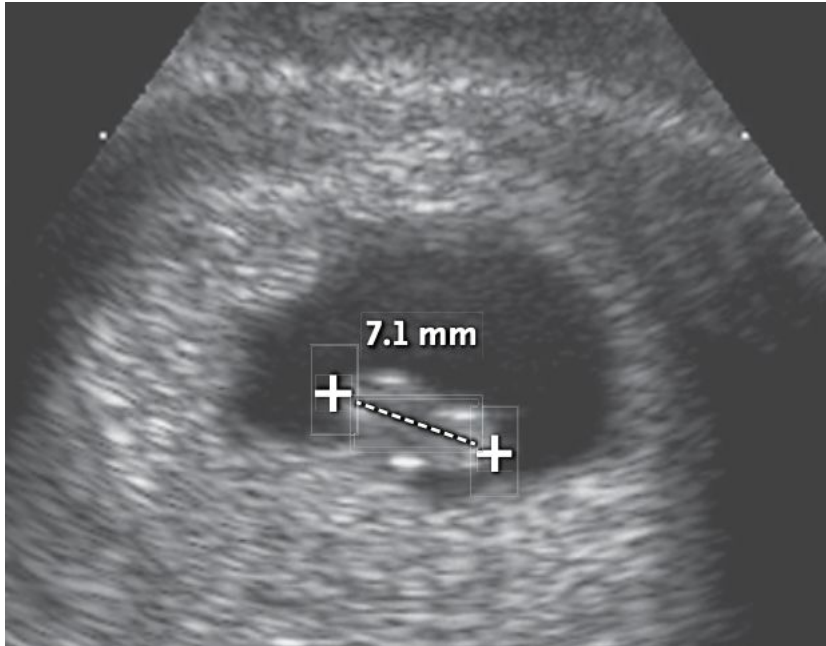
EM physicians & nurses:

- EPL care is challenging & uncomfortable
- Moral injury from inability to provide compassionate care
- Abortion stigma influences care



Diagnosis

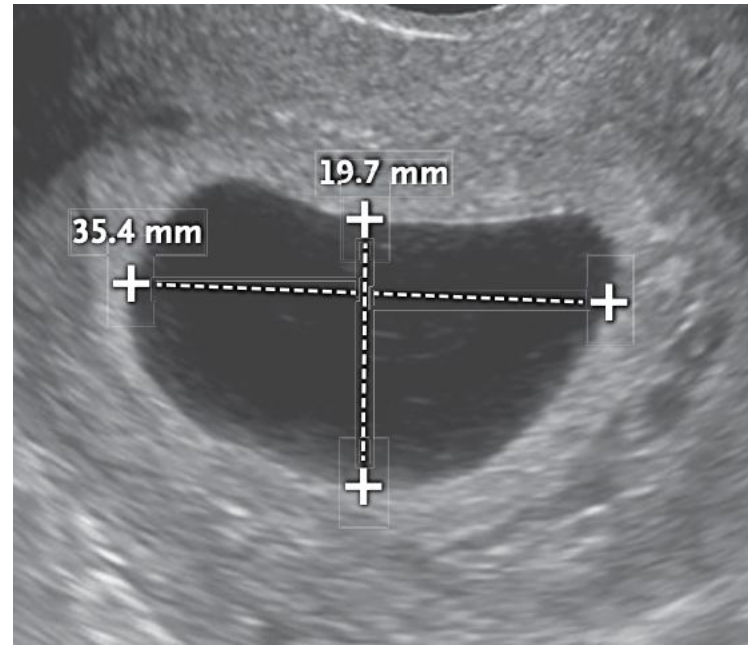
CRL \geq 7mm w/o cardiac activity



Embryonic

*TVUS

Mean sac diameter \geq 25mm w/o embryo



Anembryonic

Treatment options for EPL

- Do nothing - *Expectant management*
- Do something - *Medication management*
- Treat definitively - *Procedural management*

Expectant management for EPL

Eligibility

- <13w EGA
- Stable vitals
- Unpredictable bleeding timeline acceptable
- No coagulopathy

Rx NSAIDS, heat (*no antibiotics needed)

Efficacy

- 81% success rate
 - Higher if cervix open
 - 66% anembryonic pregnancy
- Most expel < 2wk

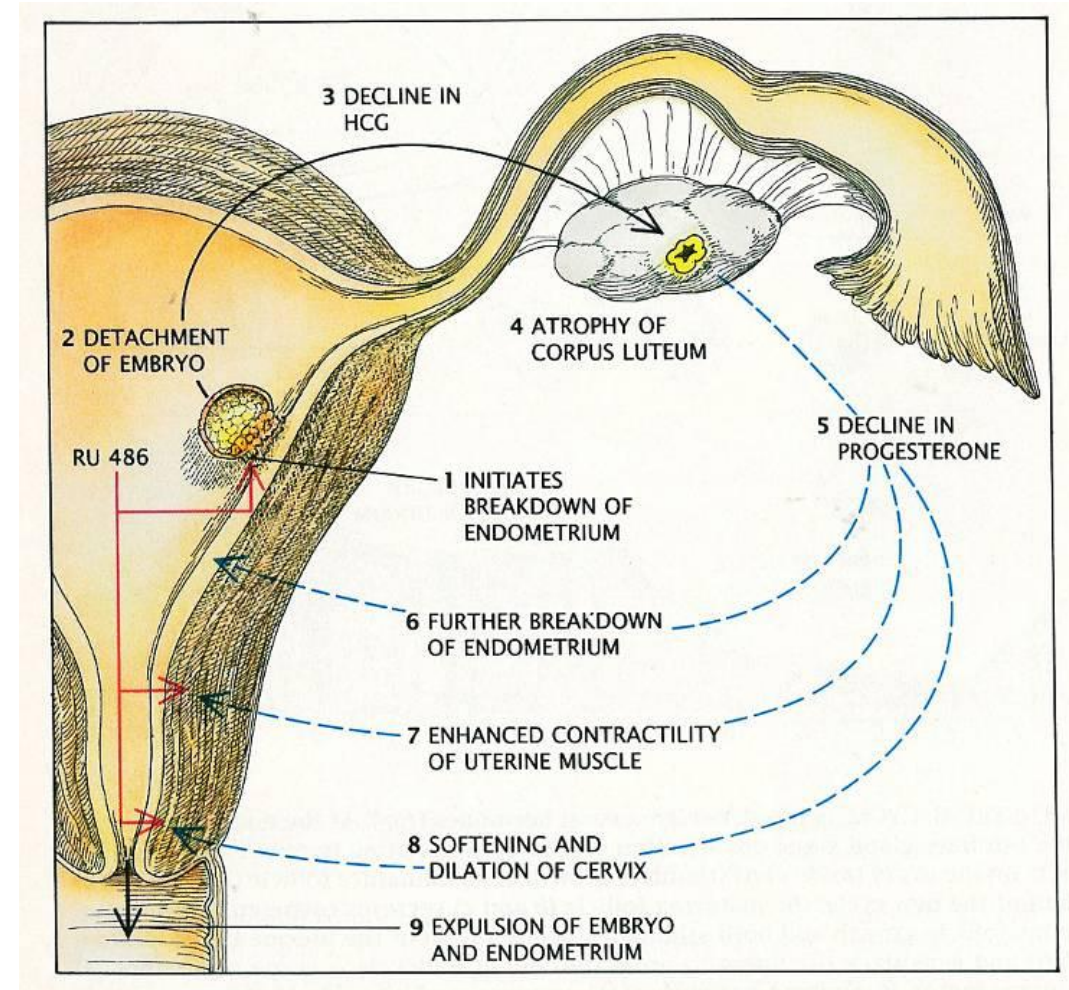
Medication management for EPL

Misoprostol - "Cytotec"

- Prostaglandin & uterotonic
- WHO essential medicine

Mifepristone - "RU486"

- Progesterone antagonist
- Hyperglycemia in Cushing's
- Disruption of pregnancy



Medication management for EPL

Eligibility

- <13w EGA
- Stable vitals
- No severe anemia
- No coagulopathy

Mifepristone contraindications

- Chronic steroid use
- Porphyria (exacerbates flares)

If IUD in place, remove if strings visible

Medication management for EPL

Side effects (*Misoprostol)

- n/v/d
- pyrexia < 8hr
- cramping

Despite side effects, 90% would choose again

Rx: NSAIDS, zofran, heat (*no antibiotics)

Misoprostol alone for EPL

Misoprostol 800mcg buccal/vaginal

- Repeat dose at 12-24 hrs if needed

Efficacy

- 71% complete expulsion by day 3
- 84% complete expulsion by day 8
- Close to 100% if cervix open

Misoprostol alone for EPL - Access Bridge Protocol

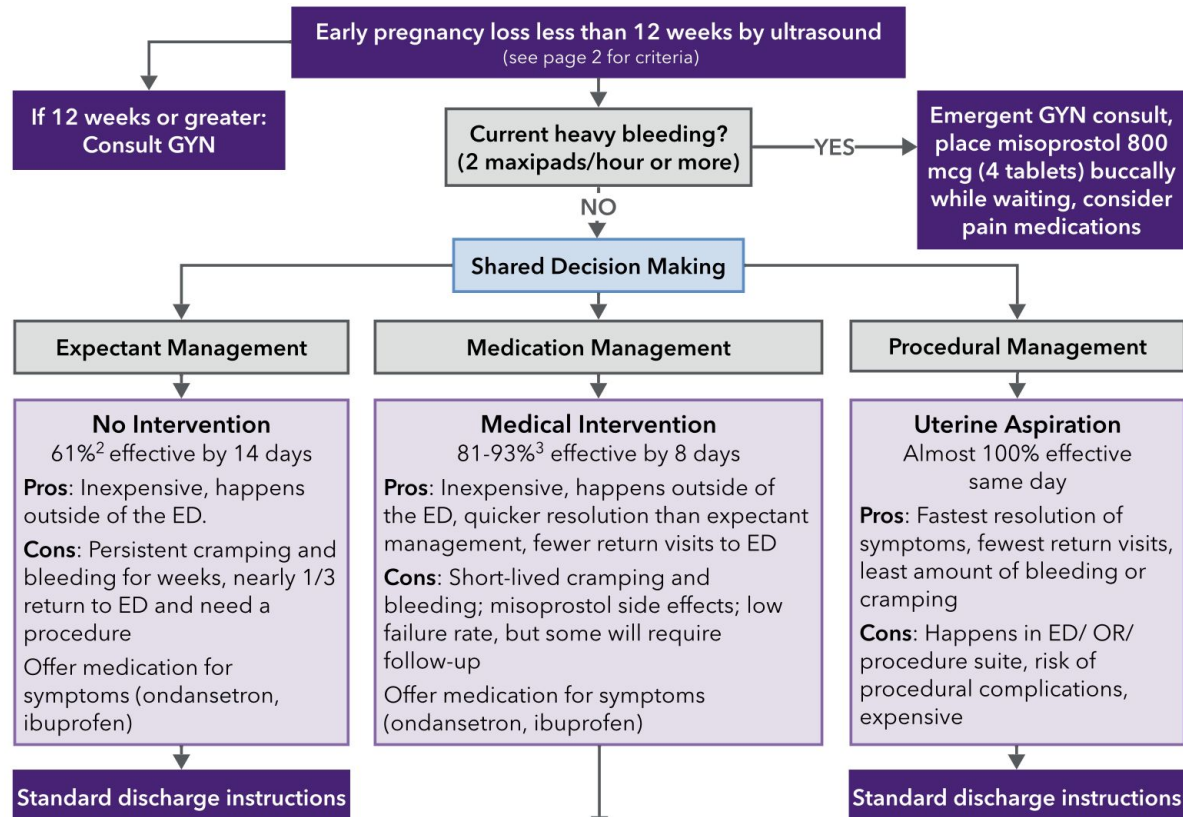
ACCESS BRIDGE

Early Pregnancy Loss (EPL): Emergency Dept. Management **BRIDGE** Misoprostol Only

Treatment. Equity. Connection.

Misoprostol alone is effective in incomplete EPL (active bleeding). The addition of mifepristone is superior in anembryonic and missed EPL.¹ (See mifepristone/misoprostol protocol).

April 2025



Mifepristone + Misoprostol for EPL

Mifepristone 200mg PO + Misoprostol 800mcg 24hr later

Efficacy

- 84% day 2 (vs 67% misoprostol alone, RR 1.25)
- 88% day 8 (vs 71% misoprostol alone, RR 1.23)
- 9% aspiration need by day 30 (vs. 24% misoprostol alone)

*NOT Ectopic treatment

Mifepristone + misoprostol for EPL - Access Bridge Protocol

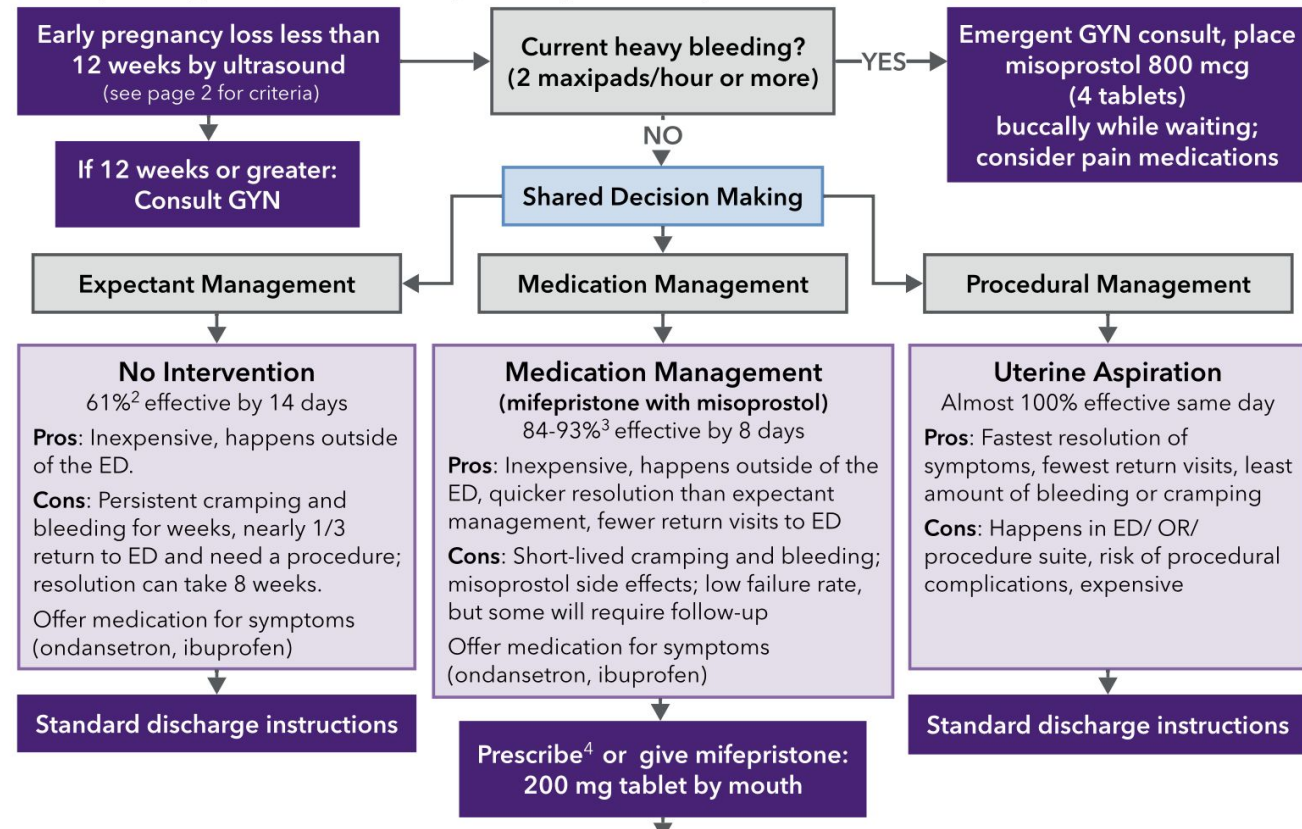
ACCESS BRIDGE

Early Pregnancy Loss (EPL): Emergency Dept. Management



This protocol should be used in settings where mifepristone is available. Misoprostol alone is effective in incomplete EPL (active bleeding). (See misoprostol-only protocol). The addition of mifepristone is superior in anembryonic and missed EPL.¹

April 2025



Practice Update 2018



Mifepristone - Use w misoprostol for EPL when available.

ACOG PRACTICE BULLETIN

Clinical Management Guidelines for Obstetrician–Gynecologists

NUMBER 200

(Replaces Practice Bulletin Number 150, May 2015)

Committee on Practice Bulletins—Gynecology. This Practice Bulletin was developed by the ACOG Committee on Practice Bulletins—Gynecology in collaboration with Sarah Prager, MD; Vanessa K. Dalton, MD, MPH; and Rebecca H. Allen, MD, MPH.

INTERIM UPDATE: This Practice Bulletin is updated as highlighted to reflect recent evidence regarding the use of mifepristone combined with misoprostol for medical management of early pregnancy loss. This Practice Bulletin also includes limited, focused updates to align with Practice Bulletin No. 181, *Prevention of Rh D Alloimmunization*.

Mifepristone - REMS agreement



“Risk Evaluation and Mitigation Strategy” - Drug safety program FDA requires for certain meds to ensure benefits outweigh risks

- Mifepristone must be prescribed and dispensed by/under the supervision of a healthcare provider who meets certain qualifications:
 - you can date a pregnancy, diagnose an ectopic, counsel on risks, and refer for needed procedures
- OBGYN or EM can manage the paperwork

Medication vs. expectant management

Reduces MUAs from 43.5% to 19.1% ($P < .001$)

Reduces gynecological ED visits by **50%** ($p=.009$)

Manual Uterine Aspiration



Manual uterine aspiration

Eligibility

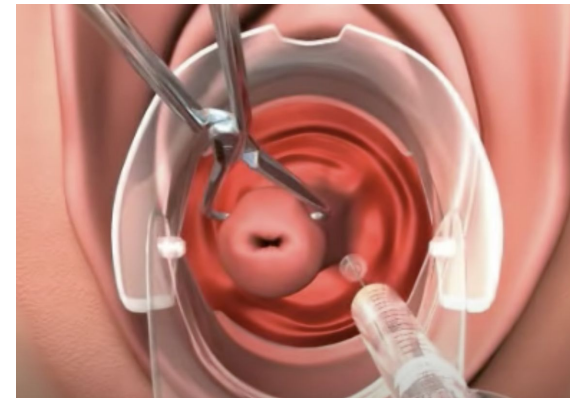
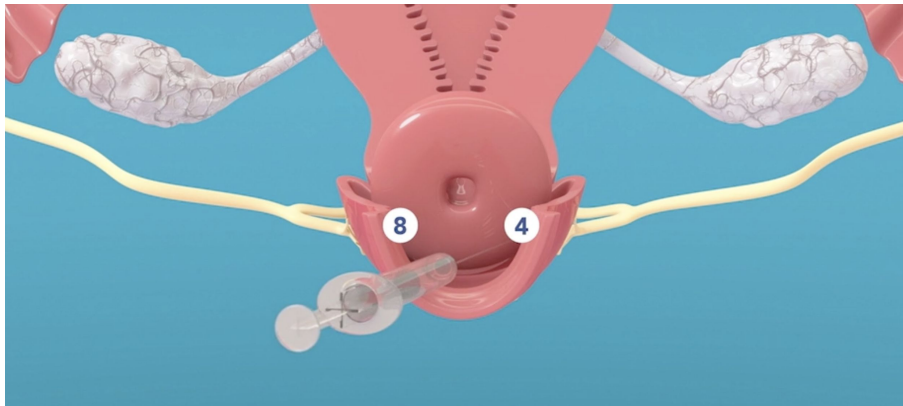
- \leq 8-10wk gestational size
- Hemorrhage
- Desired by patient
- Infection*
- Coagulopathy*

Medications and adjuncts

- Doxycycline 200mg
- Ketorolac
- Benzodiazepine -or- opiate

Procedural management - MUA

- Sedation needs are rare, but some patients may require it
- Paracervical block: 20mL Lidocaine 1%
 - Superficial injection at tenaculum site (12 o'clock)
 - Deep injection at cervicovaginal junction (9mL at 4 and 8 o'clock)



MUA benefits for ED

Simple

Safe

Fast

Efficacious

Cost Sparing

Common

Hospital admits & ED
bounce-backs

OR Resources

Improves ED flow

No Rh D Immune Globulin < 12wk



CLINICAL PRACTICE UPDATE

DECEMBER 2024

Rh D Immune Globulin Administration After Abortion or Pregnancy Loss at Less Than 12 Weeks of Gestation

This Clinical Practice Update was developed by the American College of Obstetricians and Gynecologists.

This Clinical Practice Update provides revised guidance on Rh testing and Rh D immune globulin administration for individuals undergoing abortion or experiencing pregnancy loss at less than 12 0/7 weeks of gestation. This document updates Practice Bulletin No. 225, *Medication Abortion Up to 70 Days of Gestation* (Obstet Gynecol 2020;136:e31–47); Practice Bulletin No. 200, *Early Pregnancy Loss* (Obstet Gynecol 2018;132:e197–207); and Practice Bulletin No. 181, *Prevention of Rh D Alloimmunization* (Obstet Gynecol 2017;130:e57–70).



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POLICY STATEMENT

Emergency Physicians' Role in the Medication and Procedural Management of Early Pregnancy Loss

Approved September
2024

Originally approved
September 2024

The American College of Emergency Physicians (ACEP) affirms that early pregnancy loss (loss of a pregnancy before 13 weeks gestation) is a common and potentially life-threatening emergency department diagnosis. Early pregnancy loss is addressed through medical management, procedural management (including surgery and manual uterine aspiration), and/or expectant management.

ACEP recognizes that ectopic pregnancy is a complication of early pregnancy and a medical emergency that threatens the life of a mother. ACEP affirms that both medical and surgical management of ectopic pregnancy can be life-saving, and ACEP supports the widespread availability of each of these options.

ACEP supports that in all situations of early pregnancy loss and ectopic pregnancy where maternal life is potentially at risk, appropriate measures are taken by the emergency physician to prevent an increase in maternal morbidity or mortality.

ACEP supports and encourages emergency physicians practicing in low-resource environments, including hospitals with limited or absent labor and delivery services, to obtain supplemental training and proficiency in the medical and procedural management of early pregnancy loss, as these can be life-saving interventions.

ACEP supports and advocates for evidence-based care in the setting of early pregnancy loss and ectopic pregnancy. Further, ACEP opposes the criminalization of medically necessary care or penalization of patients, physicians, nurses, and other health care workers, as well as health systems engaged in medically appropriate care of patients with early pregnancy loss and ectopic pregnancy.

How to get trained in MUA

In residency vs as practicing clinician

Simulation vs train to competence w live patients

- Likely a combination of both is most practical
- Many OBGYNs believe proficiency can be gained in < 10 procedures (have expert attest to your skills)
- Study below illustrated APPs can train to proficiency in aspiration after 40 procedures

Safety of Aspiration Abortion Performed by Nurse Practitioners, Certified Nurse Midwives, and Physician Assistants Under a California Legal Waiver

| Tracy A. Weitz, PhD, Diana Taylor, PhD, Sheila Desai, MPH, Ushma D. Upadhyay, PhD, Jeff Waldman, MD, Molly F. Battistelli, BA, and Eleanor A. Drey, MD

Create your own MUA training

Boston Medical Center EM dept published a training program for EM providers to learn MUA (below - includes video and all documents you can DOWNLOAD from site below to create your own training)

https://www.mededportal.org/doi/10.15766/mep_2374-8265.11469

Work with your OBGYN or Family Medicine department to create a training or set up a rotation in GYN clinic, or be trained by them in your ED

MedEdPORTAL® | The AAMC Journal of
Teaching and Learning Resources

Original Publication

Open Access

Manual Uterine Aspiration Simulation for Emergency Medicine Learners

Katherine Wegman, MD[†], Caroline Gorka, MD[†], Judith Linden, MD, Shannon Bell, MD, Stephanie N. Stapleton, MD, Virginia Tancioco, MD, Laura Welsh, MD^{*†}

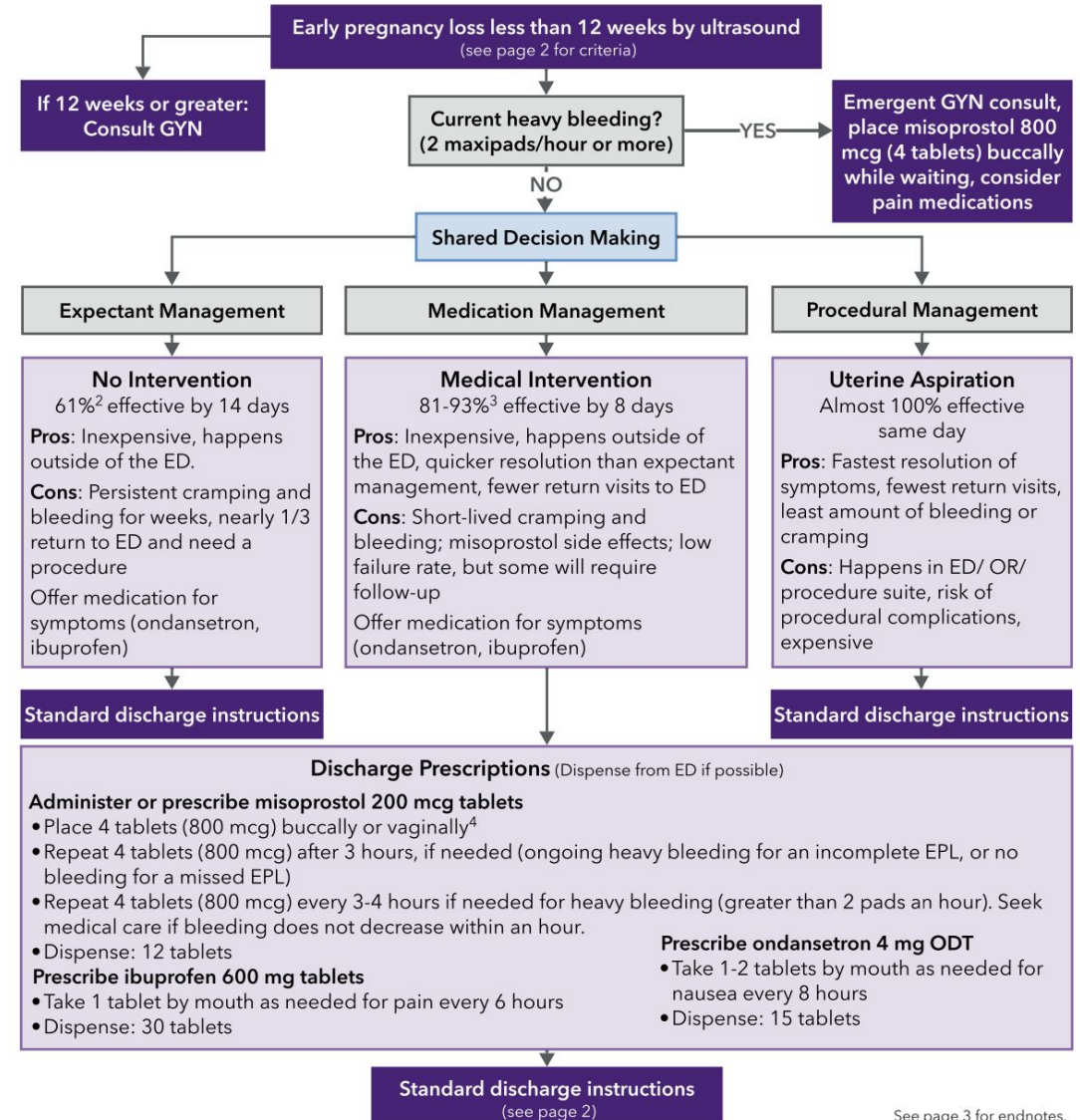
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MISCARRIAGE MANAGEMENT IN THE EMERGENCY DEPARTMENT

Access Bridge

- EM protocols
- Fellowship
- <https://bridgetotreatment.org/reproductive-health/access-bridge/>



TEAMM

- Training, Education & Advocacy in Miscarriage Management
- www.miscarriagemanagement.org



ACOG

- Optimizing Care for Pregnancy Loss
- www.acog.org/programs/optimizing-care-for-pregnancy-loss



Optimizing Care for Pregnancy Loss

The Optimizing Care for Pregnancy Loss Program connects clinicians with the most up-to-date information, resources, and training on evidence-based options for managing pregnancy loss.

[Learn About the Program](#)

Recap

- Do nothing - *Expectant management*
- Do something - *Medication management*
- Treat definitively - *Procedural management*

Thank you

Slides based on presentations from ACEP 2024 National Scientific Assembly.