# Pregnancy Complication

For any pregnancy-related condition that is not labor, includes vaginal bleeding in pregnancy, hypertension, and complications of delivery.

## History
- Due date
- Time contractions started/how often
- Rupture of membranes
- Time/amount of any vaginal bleeding
- Sensation of fetal activity
- Past medical and delivery history
- Medications
- Gravida/Para status
- High risk pregnancy

## Signs and Symptoms
- Contractions (frequency and duration)
- Vaginal discharge or bleeding
- Crowning or urge to push
- Meconium

### Priority symptoms
- Crowning at < 36 weeks gestation
- Abnormal presentation
- Severe vaginal bleeding
- Multiple gestation

## Differential
- Abnormal presentation
  - Buttock
  - Foot
  - Hand
- Prolapsed cord
- Placenta previa
- Abruptio placenta

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### Treatment Protocol

**Effective April 2022**

**Approved Birthing Centers**
- Kaiser Redwood City
- Mills - Peninsula Medical Center
- Sequoia Hospital
- Stanford Hospital
- UCSF Benioff Mission Bay

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### E
- Position of comfort
- Blood glucose analysis
- Cardiac monitor
- Establish IV

### P
- Normal Saline bolus 500ml IV/IO
  - Repeat to goal SBP > 80mm
  - **Maximum 2L**
  - For nausea, Diphenhydramine

### E
- Blood glucose analysis
- Cardiac monitor
- Establish two large bore IVs

### P
- Normal Saline bolus 500ml IV/IO
  - Repeat to goal SBP of 90mm
  - **Maximum 2L**
  - For seizure activity, Midazolam
  - For nausea, Ondansetron

### Notify receiving facility.
- Consider Base Hospital for medical direction

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**SAN MATEO COUNTY HEALTH EMERGENCY MEDICAL SERVICES**

**Treatment Protocol A28**

**Effective April 2022**
**Abruptio Placenta:**

Abruptio Placenta is the premature separation of the placenta from the uterus. During the second half of pregnancy < 5% of patients will have vaginal bleeding. About 30% of vaginal bleeding during this period may result from Abruptio Placenta. Bleeding during this period may result in fetal distress and is considered an emergency.

Trauma, preeclampsia or maternal hypertension typically precipitate Abruptio Placenta. Other risk factors are women < 20 years of age, advanced maternal age (>35), smoking, prior Abruptio Placenta, multiparity or cocaine use.

Patients with vaginal bleeding, contractions, uterine/abdominal tenderness and decreased or no fetal movement may have this condition.

**Placenta Previa:**

Placenta Previa occurs when the placenta implants over the cervical os (opening.) This is a leading cause of vaginal bleeding in the second half of pregnancy. Bleeding is usually bright and painless though about 20% will have some uterine irritability.

Advanced maternal age (>35), multiparity, smoking and prior C-section are risk factors for this condition.

**Uterine Rupture:**

Often occurs with onset of labor though more commonly after trauma. This is usually signaled with severe abdominal pain and shock.

**Active Seizure with no IV access:**

Midazolam is a preferred agent, give IM or IN first while you are trying to establish IV access.

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**Pearls**

- Do not perform digital vaginal exam.
- Document all times (delivery, contraction frequency and length, and time cord was cut).
- Any pregnant patient involved in an MVC should be immediately evaluated by a physician.
- There is uncertainty whether Ondansetron can cause harm to the developing fetus; therefore, use of Diphenhydramine as an antiemetic is recommended for pregnancy < 20 weeks.
- Hyperemesis gravidarum (HG) is a pregnancy complication that is characterized by severe nausea, vomiting, weight loss, and possibly dehydration. Feeling faint may also occur. It is considered more severe than morning sickness. Symptoms often get better after the 20th week of pregnancy but may last the entire pregnancy duration.
- Some perineal bleeding is normal with any childbirth. Large quantities of blood or free bleeding are abnormal.
- For prolapsed cord, wrap cord in saline soaked gauze cover to keep warm.