Alberta Health Services

PROTOCOL

TITLE

ASSESSMENT AND MANAGEMENT OF ANTEPARTUM VAGINAL BLEEDING

SCOPE
Provincial: Women's and Infant Health

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NOTE: The first appearance of terms in bold in the body of this document (except titles) are defined terms – please refer to the Definitions section.

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OBJECTIVES

- To provide direction to **health care professionals** working in maternity units (Obstetrical triage, Antepartum, and Labour & Delivery) on the recognition and management of **patients** presenting with antepartum vaginal bleeding.
- To assist health care professionals when implementing specific diagnostics, therapeutics, and interventions for patients, prior to the **most responsible health practitioner (MRHP)** initial assessment.

APPLICABILITY

Compliance with this document is required by all Alberta Health Services employees, members of the medical and midwifery staffs, students, volunteers, and other persons acting on behalf of Alberta Health Services (including contracted service providers as necessary).

ELEMENTS

1. Points of Emphasis

1.1 The health care professional shall perform a triage assessment on the patient as per the AHS *Obstetrical Triage Acuity Scale (OTAS)* Guideline.

a) The health care professional shall immediately notify the MRHP of any patient who presents with, or develops, active antepartum vaginal bleeding, or with suspected risk of maternal or fetal compromise.

1.2 Antepartum hemorrhage with hemodynamic instability/shock is an obstetrical emergency. Therefore, notification, assessment, and interventions may occur concurrently.

1.3 In consultation with the MRHP, consider as appropriate:

a) early specialty consultation by a Physician or Midwife via Referral, Access, Advice, Placement, Information & Destination (RAAPID);

(i) Transfer of care, if required, shall occur in accordance with AHS *Criteria to Support Appropriate Level of Obstetrical Care* Guideline.

b) notification of the Obstetrical Anaesthetic Care Provider and the pediatric or neonatal care team;

c) notification of the operating theatre (OR) team; and/or

d) early activation of a massive transfusion protocol (if available), or notification of blood bank per local site process.

1.4 A patient-specific **order** from the MRHP is required to implement this Protocol and the patient should be in an appropriate **treatment area** to manage initial assessment and reassessment.

1.5 Patient assessment and intervention should consider the full clinical picture:

a) volume of blood loss is not always indicative of the severity of the bleeding; and

b) abruptio placentae and vasa previa can both present as a small amount of bleeding but be life threatening to the pregnant patient and/or fetus.

1.6 All patients shall be offered information about the risks, benefits, and alternatives associated with their treatment to ensure **informed consent** has been obtained and documented in accordance with the AHS *Consent to Treatment/Procedure(s)* Policy.

2. Inclusion Criteria

2.1 This Protocol is intended for use in pregnant patients who are admitted to an obstetrical unit or who present to a facility that provides obstetrical care with:

a) active vaginal bleeding; or

b) recent history of vaginal bleeding prior to presentation with suspected risk of maternal or fetal compromise.

3. Exclusion Criteria

3.1 This Protocol is not intended for patients who:

a) have vaginal spotting or normal show without signs of maternal or fetal compromise; or

b) present to facilities that do not provide obstetrical care.

4. Assessment

4.1 The health care professional shall:

a) complete a patient assessment including current weight (if time permits). Obtain a full set of vital signs including blood pressure, temperature, pulse, respiratory rate, and oxygen saturation (SpO_2) and monitor in accordance with Appendix A: *Antepartum Hemorrhage with Hemodynamic Instability/Shock* and Appendix B: *Antepartum Hemorrhage – Hemodynamically Stable;*

b) determine if the patient's vaginal bleeding is active or has stopped;

c) obtain recent ultrasound reports (if available) and determine if there is a known history of placenta previa or vasa previa;

(i) Placenta previa or vasa previa, or unknown placenta location are contraindications to digital vaginal examination.

d) assess the patient for:

(i) signs and symptoms of hemodynamic instability/shock such as:

- hypotension (systolic blood pressure less than 90 millimetres of mercury [mmHg] or a decrease of greater than or equal to 40 mmHg from baseline, if known);
- tachycardia (equal to or greater than 120 beats per minute);
- hypoxia (SpO_2 less than 95 percent [%]);
- altered level of consciousness;
- cold, clammy, or blue skin;
- disorientation or confusion; and/or
- atypical or abnormal fetal health surveillance.

(ii) active vaginal bleeding:

- colour – bright red versus old brown;
- amount of bleeding;
- weigh pads and initiate cumulative quantification of blood loss;
- any other characteristics of note – clots, mucus; watery (i.e., appears to be mixed with amniotic fluid); and
- time bleeding started and, if applicable, stopped.

(iii) pain:

- the presence or absence of pain and its location and nature may be useful for determining the source of the bleeding:
  - pain may be associated with placental abruption; or
  - absence of pain may be indicative of placenta previa or vasa previa.

(iv) abdominal palpation for:

- contractions;
- tenderness; and
- constant firmness, not related to contractions (sign of abruption).

e) perform fetal health surveillance, as appropriate, for gestational age and clinical indications; and

f) determine the patient's Rh status:

(i) Check the patient's **health record** (prenatal or previous laboratory results).

- If the patient's Rh status is negative, inform the MRHP for consideration of additional laboratory testing (i.e., fetomaternal blood quantification, also known as Kleihauer-Betke).

4.2 Consider possible explanations for vaginal bleeding such as: labour, recent intercourse, recent cervical examination, or injury.

5. Notification

5.1 As per site process, the health care professional shall notify the Charge Nurse and MRHP and, in collaboration with the health care team, consider notification of:

a) the on-call Obstetrician or Physician with Caesarean section skills; and

b) if applicable,

(i) the Obstetrical Anaesthetic Care Provider and the pediatric or neonatal care team; and/or

(ii) the site's emergency response or code team.

6. Interventions

6.1 The health care professional shall:

a) start one (1) or two (2) large bore (18 gauge or greater) intravenous (IV). Infuse lactated ringers, or if unavailable, 0.9% sodium chloride (normal saline):

(i) initiate an infusion at 100 millilitres (mL) per hour in the first IV;

(ii) if two (2) IVs are initiated, the second IV should be infused at a rate of 30 mL per hour to keep vein open (TKVO) or up to 100 mL per hour;

(iii) if signs and symptoms of hemodynamic instability/shock are present, infuse a 500 mL bolus; and

(iv) monitor and document fluid intake.

b) administer supplemental oxygen if the patient's oxygen saturation is less than 95% or if the patient exhibits signs of hypotension, hemodynamic compromise or shock;

(i) If administered, titrate to maintain oxygen saturation greater than 95%.

c) insert a Foley catheter and monitor urinary output if:

(i) an emergency Caesarean section is anticipated; or

(ii) hemodynamic instability/shock is present (attach urometer to monitor hourly output).

d) prepare the patient for emergency delivery if hemodynamically unstable.

6.2 In the event of an antepartum hemorrhage in a hemodynamically stable patient who is preterm with an anticipated delivery, the health care professional should:

a) anticipate transfer of the patient to a higher level of care, if applicable;

(i) Refer to the AHS *Criteria to Support Appropriate Level of Obstetrical Care* Guideline.

b) confirm RAAPID notification and transfer order with the MRHP; and

c) prepare the patient for transfer.

7. Laboratory Tests

7.1 The health care professional shall collect and send:

a) for all patients with antepartum hemorrhage:

(i) complete blood count (CBC); and

(ii) type and screen.

b) in addition, for patients with hemodynamic instability:

(i) creatinine;

(ii) partial thromboplastin time (PTT);

(iii) prothrombin time (PT) / international normalized ratio (INR); and

(iv) fibrinogen.

7.2 Local practice guidance may determine the laboratory tests that are included as part of this Protocol.

8. Documentation

8.1 The health care professional shall document on the patient's health record:

a) implementation of this Protocol, including notification to the MRHP and entering orders;

b) assessments;

c) reassessments;

d) interventions; and

e) the patient's response to interventions.

DEFINITIONS

Health care professional means an individual who is a member of a regulated health discipline, as defined by the *Health Professions Act*, and who practices within scope and role.

Health record means the collection of all records documenting individually identifying health information in relation to a single person.

Informed consent means the patient's agreement (or alternate decision-maker) to undergo a treatment/procedure after being provided, in a manner the patient can understand, with the relevant information about the nature of the treatment/procedure(s), its benefits, potential risks and alternatives, and the potential consequences of refusal.

Most responsible health practitioner means the health practitioner who has responsibility and accountability for the specific treatment/procedure(s) provided to a patient and who is authorized by AHS to perform the duties required to fulfill the delivery of such a treatment/procedure(s) within the scope of their practice.

Order means a direction given by a regulated health care professional to carry out specific activity(-ies) as part of the diagnostic and/or therapeutic care and treatment to the benefit of a patient. An order may be written (including handwritten and/or electronic), verbal, by telephone or facsimile.

Patient means an adult or child who receives or has requested health care or services from Alberta Health Services and its health care providers or individuals authorized to act on behalf of Alberta Health Services. This term is inclusive of residents, clients, and outpatients.

Treatment area for the purposes of this Protocol means the area of the Labour and Delivery or Emergency department where detailed assessment and treatment may occur.

REFERENCES

- Appendix A: *Antepartum Hemorrhage with Hemodynamic Instability/Shock*
- Appendix B: *Antepartum Hemorrhage- Hemodynamically Stable*
- Alberta Health Services Governance Documents:
  - *Consent to Treatment/Procedure(s)* Policy (#PRR-01)
  - *Criteria to Support Appropriate Level of Obstetrical Care* Guideline (#HCS-201-01)
  - *Obstetrical Triage Acuity Scale (OTAS)* Guideline (#HCS-207-01)
- Non Albert Health Services Documents:
  - Fetal Health Surveillance Online Manual, 5th Edition 2020 (Canadian Fetal Health Surveillance Education Program)

APPENDIX A

Antepartum Hemorrhage with Hemodynamic Instability/Shock

Notify

- Notify Most Responsible Health Practitioner and the Obstetrician or Physician with C/S skill on call
  - obtain an order for this protocol (do not delay life saving actions while awaiting order)
- Notify Charge Nurse/Nurse Clinician
- Notify Anaesthesia provider and NICU or newborn care team, as appropriate
  - Estimated blood loss and hemodynamic instability must be communicated at the time of notification
- Initiate the site's emergency response or code team, as appropriate

Intake & Output

- Initiate two (2) Large bore IVs (18 gauge or greater), one in each arm
- Infuse lactated ringers or, if unavailable, normal saline (0.9%):
  - 500mL bolus through one (1) IV, then 100mL/h
  - 30mL to 100mL/h through second IV
- Insert Foley catheter and monitor urine output hourly

Collect Labs

- Health care professional or lab services to collect a CBC, Type and Screen, creatinine, PT, PTT, Fibrinogen and any additional laboratory test if ordered
  - This may be done when initiating IV
- Ensure that patient identification is applied and follow local process for collection and identification of type and screen

Monitoring

- Pulse, BP, Respirations, SpO_2: q five (5) minutes, more often if needed
- Administer Oxygen via mask (8-10 Litres/min) if SpO_2 less than 95%, or with signs of hypotension, hemodynamic compromise or shock
- Perform fetal health surveillance as appropriate for gestational age and clinical indications
- Weigh pads for cumulative blood loss

Additional Interventions

- Activate Massive Transfusion Protocol (if available) or notify blood bank as per local processes, and administer blood products if ordered
- If surgical intervention is required, the Surgeon should declare the type of surgery to prepare for, and classify the urgency of the operation as per local process
  - The Charge Nurse or Nurse Clinician should initiate preparation of the operating theatre, or notification of the operating room staff (if applicable)
  - Prepare for transfer to a higher level of care if directed by the MRHP and RAAPID

APPENDIX B

Antepartum Hemorrhage- Hemodynamically Stable

Notify

- Notify the MRHP and Charge Nurse/Nurse Clinician of estimated blood loss and hemodynamic stability
- Obtain an order to implement this protocol

Intake and Output

- Initiate a large bore IV (18 Gauge or greater)
- Infuse either lactated ringers or if unavailable, normal saline (0.9%) at 100 mL/h
- Consider initiating 2nd IV, infused at 30 mL-100mL/h and/or 500 mL bolus, as clinically appropriate
- Consider insertion of a foley catheter, if appropriate

Collect Labs

- Health care professional or lab services to collect a CBC, Type and Screen and any additional laboratory test if ordered.
  - This may be done when initiating IV.
- Ensure that patient identification is applied and follow local process for collection and identification of type and screen.

Monitoring

- Monitor based on level of accuity
  - VS Every five (5) to 15 minutes, or more frequently, if needed
  - Observe for signs of hemodynamic instability/shock
- Perform fetal health surveillance, as appropriate for gestational age and clinical indications
- Weigh pads for cumulative blood loss
- Notify the MRHP if signs of hemodynamic instability/shock are observed

Additional Interventions

- Begin preparation for admission or transfer, as directed by the MRHP
  - May be admitted to Antepartum, L&D/LDRP or OR
- Prepare patient for ultrasound as requested by MRHP
- Administer blood products if ordered
- Administer corticosteroids if ordered (for preterm delivery anticipated within seven [7] days)
- Administer $MgSO_4$ for fetal neuroprotection if ordered