Adolescent Abnormal Uterine Bleeding Primary Care Pathway

Quick links: Pathway primer | Expanded details | Provider resources | Patient resources

Normal cyclical bleeding refers to a regular bleed occurring at 24-38-day intervals (cycle length may vary)

1. History

- Adolescent (<18)
  - No → Abnormal Uterine Bleeding Pathway
  - Yes →
    - Evaluate bleed (pattern and quantity)
    - Pregnancy risk / sexual history
    - Onset of menarche
    - Weight / weight changes
    - Increased exercise
    - Easy bleeding (e.g. nose bleeds, gum bleeding)

2. Assessment / red flags

Red flags
- Symptoms of significant anemia (new HA, palpitations, SOB, presyncope / syncope
- Patient looks unwell
- Hypotension / tachycardia
- Flooding through >1 pad each hour

Yes → Call RAAPID or 911 if urgent

No →

In adolescents, pelvic exam rarely adds to your diagnosis.

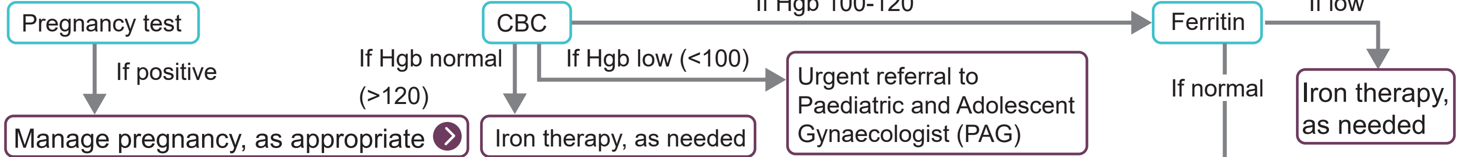
Consider:
- Trauma-informed
- Intact hymen

As needed:
- Vitals / general appearance
- Vulva / vagina: trauma

Consider:
- STI screen (C/G urine +/- Trich*) if sexually active
- Trich can be a blind swab

3. Investigations

For all patients, please consider the following:



- Pregnancy test
  - If positive → Manage pregnancy, as appropriate
- CBC
  - If Hgb normal (>120) → Iron therapy, as needed
  - If Hgb low (<100) → Urgent referral to Paediatric and Adolescent Gynaecologist (PAG)
  - If Hgb 100-120 → Ferritin
    - If low → Iron therapy, as needed
    - If normal → 4. Treat / manage

4. Treat / manage

Cyclical heavy bleeding
- No abnormal findings or contraindications; trial medical management
- Failed medical management → Criteria for referrals

Non-cyclical heavy bleeding
- May be normal within 2 years of menarche
  - <2 yrs → Trial medical management → Consider Specialist Link tele-advice or referral to PAG through Central Access Triage (CAT) with the following criteria:
    - Failed medical management
    - Significant anemia requiring IV iron
    - Specialist Link
  - ≥2 yrs →
    - Oligoovulatory / irregular bleed → Trial medical management
    - Intermenstrual / post-coital bleed → Urine Screen, treat STI if present → If symptoms persist → Trial medical management
    - Failed medical management → Criteria for referrals

Criteria for referrals:
- History
- Relevant physical exam
- Blood test
- Attempted treatments and outcomes

Refer to PAG

Advice options | Background

PrimaryCare Networks CALGARY AND AREA | Physician Learning Program

PATHWAY PRIMER

- For adolescent (< 18 years) with abnormal uterine bleeding
- Normal cyclical bleeding refers to a regular bleed occurring at 24-38 days intervals.[1] Abnormal uterine bleeding (AUB) is bleeding that occurs outside of the normal 24-38 -day pattern.
- This pathway applies to any female who has had menarche. The pathway facilitates the prompt management of abnormal uterine bleeding in the patient's medical home and provides primary care clinicians with guidance on evidence-based diagnosis, investigations, and management. The pathway also establishes guidelines for when to make a referral to pediatric Gynecology, Specialist Link for non-urgent advice (Homepage (specialistlink.ca)), or to RAAPID for urgent evaluation. The Society of Obstetricians and Gynecologists of Canada (SOCG) generally recommend that treatment of AUB should start with medical management, followed by the least invasive surgical interventions to achieve results for patients.[1] This principle is also re-iterated in a Choosing Wisely Canada recommendation that surgical interventions should be avoided for abnormal uterine bleeding until medical management (including progesterone intra-uterine system) has been offered and either declined or found unsuccessful.[2]
- Abnormal uterine bleeding is a common condition that affects many women of reproductive age. In the adolescent population, it can impact attendance at school, increase social burden and self-esteem. For example, a 2007 systematic review on AUB assessed the prevalence of heavy bleeding, one type of AUB, at between 10% to 30% in women of reproductive ages.[3] Heavy menstrual bleeding is self-reported by 37% of adolescents. (Reference: Van't Klooster SJ, de Vaan A, van Leeuwen J et al. Heavy menstrual bleeding in adolescents: incidence, diagnostics, and management practices in primary care. Research and Practice in Thrombosis and Haemostasis 7(7); 2023.

EXPANDED DETAILS

1. History

A thorough patient history and selected physical examination will, in most cases, identify the cause(s) of abnormal uterine bleeding and provide direction for investigation and management.

- **Evaluate the bleeding pattern, including quantity and timing**:
  - Do cycles occur between 24-38 days apart? Cycles may vary in length month to month, but a normal cycle will average between 24-38 days in length.
  - What is the duration of bleeding and is it consistent when they get a period even if timing is not consistent?
  - Quantify bleeding
    - FHx of bleeding disorder
    - FHx of DVT/clots
    - Female family members who had issues with BCP/clot
  - Are there any signs of ovulation (mood changes, change in discharge, cyclical acne or breast tenderness)?
  - Is there bleeding between cycles?
  - Is there bleeding with intercourse?

- **Assess pregnancy risk and sexual history -** All patients with abnormal bleeding should have a pregnancy test if there is potential for pregnancy. See Important treatment considerations - confirmed pregnancy for more information on managing pregnancy with abnormal bleeding.
- **Onset of menarche -** Onset before or after the ages of 11 – 14. Predictors of bleeding disorder linked to younger age at first bleeding event.
- **Weight -** Weight gain / obesity can affect hormone levels and result in irregular or heavier periods, as well as increase the risk of conditions like polycystic ovary syndrome (PCOS).

Polycystic Ovarian Syndrome (PCOS)

A patient requires 2 of 3 criteria to make a diagnosis of PCOS:

1. Pelvic ultrasound findings of polycystic ovaries
2. Clinical presentation (e.g. Hirsutism) **OR** laboratory confirmation (e.g. Free androgen index) of high androgens.
3. Oligo-ovulation / irregular menstrual cycles (not occurring 24-38 days apart).

This can be a difficult diagnosis in adolescents as all three criteria can be normal, a discerning feature can be acanthosis nigricans. Refer to Pediatric Gynecology (PAG) for further investigation/diagnosis/management or call Specialist Link (specialistlink.ca) for telephone advice.

- **Increased exercise –** Energy deficiencies, body fat percentage, overtraining syndrome, and stress and cortisol contributing to abnormal bleeding patterns.
- **Easy bleeding** (nose bleeds, gum bleeding) caused by blood disorders such as thrombocytopenia, von Willebrand disease, DIC, or other bleeding disorders that causse easy bruising or excessive bleeding\

Contraindications for hormonal therapy

- Family history of bleeding symptoms / clots
- History of DVT
- Migraine with aura
- **As a reminder, rule out urinary or bowel as the source for bleeding**

Of note, uterine cancer is not a consideration in the adolescent

2. Assessment / red flags

Red flags

- Patient looks unwell
- Hypotension or Tachycardia
- Hemorrhage or heavy bleeding defined as soaking through a pad or tampon within an hour.
- Chronic menstrual bleeding exceeding 80 mL will result in anemia

If alarm features are present or the patient is medically unstable, call RAAPID for an urgent referral to paediatric Gynecology for immediate hospital evaluation

Assessment

In the adolescent a pelvic examination rarely adds to the diagnosis and can be traumatic in the adolescent.

As per the guidelines a pap smear is not recommended until the age of 24 (TOP Cervical Cancer Screening Guideline).

- If there is intermenstrual, post-coital bleeding or vaginal discharge, initiate STI testing for:

  - Chlamydia
  - Gonorrhea
- STI test can be performed with a first catch urine test.
- If STI testing is positive, treat as per provincial guidelines (STI Treatment Guidelines)

Sexual trauma / STI risk

Consider HEADSSS or seek non-urgent call advice on Specialist Link – Pediatrics / Suspected Child Abuse and Neglect for younger adolescents

- If persistent bleeding and / or vaginal discharge, and STI tests are negative, do vaginal swab for Trichomonas

3. Investigations

Laboratory tests

- Confirm Pregnancy: For all patients with abnormal uterine bleeding, perform a urine or serum pregnancy test if there is any possibility of pregnancy. If the test is positive, see Important Treatment Considerations – Confirmed Pregnancy for information on management.
- CBC/Ferritin: For all stable patients, order a CBC/Ferritin if there are concerns of possible anemia or iron deficiency. Treat as appropriate with iron therapy, especially if there is continued menstrual bleeding.
- Thyroid: Thyroid functioning testing is not indicated unless there are clinical findings suggestive of an index of suspicions of thyroid disease.[1]
- Coagulation Disorders: Testing for coagulation disorders should only be considered in women with heavy bleeding since menarche that has not responded to medical management or who have a family history/personal history of abnormal bleeding.[1]
- Uterine pathology is an unusual cause of AUB in the adolescent and a pelvic ultrasound (avoid trans-vaginal ultrasound in adolescents) should be reserved for failed medical management or significant dysmenorrhea unresponsive to medical management.

4. Treat / manage

Cyclical heavy bleeding

- For women with regular monthly bleeding (24-38 days) that is heavy and who have no bleeding in between cycles.
- Ensure no contraindications prior to prescribing:
  - Tranexamic acid with menses:
    - Easy regimen to start is 1000mg BID with an extra 1000mg at lunch time
    - Maximum doses are 1000 mg po QID or 1500mg PO TID x 5 days with menses, taken with food.
  - NSAIDS at onset of menses (e.g. Advil® 400mg po q6h x5 days or naproxen 500mg po BID x5 days) May need to correct for pediatric dosing depending on patient's weight
  - Regular dosing of anti-inflammatories capitalizes on the prostaglandin mechanism for reducing blood flow
  - Combined contraceptive to decrease the amount of bleeding:
    - Monophasic oral pill, patch or ring**: In the adolescent use COC with 30ugm of ethinyl estradiol or more to maximize BMD**
    - Contraindications: History of or current VTE, CAD/cerebrovascular disease, breast cancer, other estrogen-dependent malignancy, known or suspected pregnancy, benign or malignant liver tumor/disease, smoking and > 35 years old, uncontrolled hypertension, or migraines with focal neurologic symptoms.
  - Progesterone-only methods (e.g. Prometrium® 100-200 mg PO OD at bedtime daily, or Micronor® /Visanne® progesterone-only pills, or Depo-Provera®)
  - Do not rely on progesterone only methods as effective contraceptives for your sexually active patients

Non-cyclical bleeding

- **Oligo-ovulatory/irregular bleeding:** Attempt medical therapy. Ensure no contraindications prior to prescribing:
  - Stop current bleeding with tranexamic acid: 1000mg po QID or 1500mg PO TID x5 days
  - **(Recommended, less risk, less side effects)** Medroxyprogesterone acetate 10mg po X 10 days or Prometrium 200mg for 14 days, to cause a withdrawal bleed. Intermittent use monthly or alternating months while waiting for the HPO axis to mature is an alternative to hormonal contraception. This can be used in combination with TXA. Warn the patient that they might get a heavy withdrawal bleed once stopping the progesterone and TXA can be used again.
    - In the adolescent use COC with 30ugm of ethinyl estradiol or more to maximize Bone Mineral Density (BMD) Monophasic oral pill, patch or ring (https://health-products.canada.ca/dpd-bdpp/)
    - Contraindications: History of or current VTE, CAD/cerebrovascular disease, breast cancer, other estrogen-dependent malignancy, known or suspected pregnancy, benign or malignant liver tumor/disease, smoking and > 35 years old, uncontrolled hypertension, or migraines with focal neurologic symptoms.
- **Intermenstrual bleeding or post-coital bleeding**
  - For women with regular monthly cycles (24-38 days) who experience bleeding in between cycles or after sexual intercourse.
  - Complete a screening for STIs and treat if positive, according to provincial guidelines (STI Treatment Guidelines)

Confirmed pregnancy

- Confirm the patient's Rh status for a positive pregnancy.
  - If the patient is Rh negative and negative for Anti-D antibodies on type and screen, give the Anti-D antibody (e.g. WinRho®/RhoGam® in 300mcg IM injection)
- If the patient has a positive pregnancy test and is bleeding, ensure the pregnancy is viable and intrauterine with a pelvic ultrasound. Manage/refer as appropriate.
- Link to Early Pregnancy Loss clinic if the pregnancy is NOT viable and is intrauterine and the patient is stable.
- If this is a possible ectopic pregnancy or the patient is bleeding heavily or is medically unstable, call RAAPID for referral to Gynecology.

BACKGROUND

About this pathway

This pathway is intended to provide evidence-based guidance to support primary care providers in caring for patients with common gynecological conditions within the medical home.

Authors and conflict of interest declaration

This pathway was reviewed and revised by the pediatric and adolescent gynecology clinic in October 2024 by a multidisciplinary team led by family physicians and gynecologists. The next scheduled review is October 2027. Names of participating reviewers and their conflict of interest declarations are available on request.

Pathway review process, timelines

Primary care pathways undergo scheduled review every year if there is a clinically significant change in knowledge or practice.

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DISCLAIMER

This pathway represents evidence-based best practice but does not override the individual responsibility of health care professionals to make decisions appropriate to their patients using their own clinical judgment given their patients' specific clinical conditions, in consultation with patients/alternate decision makers. The pathway is not a substitute for clinical judgment or advice of a qualified health care professional. It is expected that all users will seek advice of other appropriately qualified and regulated health care providers with any issues transcending their specific knowledge, scope of regulated practice or professional competence.

PROVIDER RESOURCES

Advice options, referral guidelines

When to refer to specialty or contact RAAPID or Specialist Link:

- Severe bleeding or medical instability (i.e., soaking through a pad an hour or abnormal vital signs). This patient needs to be directed to hospital through RAAPID or the ER. Call RAAPID for the on-call Gynecologist or **911**.
- If there is a possible ectopic pregnancy, call RAAPID for referral to gynecology.
- Failure of medical therapy for abnormal uterine bleeding, initiate a referral to gynecology.
- For any gynecology referral please include: A complete patient history, results from pap test, laboratory and diagnostic imaging investigations, and any attempted treatments with outcomes. This information allows for the appropriate triage of your patient.
- Please note: eReferral eConsults are not currently available.

Contact information

- For RAAPID South, call **1-800-661-1700** or **403-944-4486**. Visit https://www.albertahealthservices.ca/info/Page13345.aspx for more details.
- Family physicians can request non-urgent advice online at specialistlink.ca or by calling **403-910-2551**. The service is available from 8 a.m. to 5 p.m. (with some exceptions), Monday to Friday (excluding statutory holidays). Calls are returned within two hours. If the patient is under 18 please ask for the pediatric gynecology specialist on call.
- If you have used this pathway prior to sending the referral, indicate on the referral. Referrals sent to Alberta Children's hospital Central Access Triage (CAT)

Resources	**Link**
TOP Guideline – Cervical Cancer Screening	https://actt.albertadoctors.org/CPGs/Lists/CPGDocumentList/Cervical-Cancer-Screening-Summary.pdf
Alberta STI Treatment Guidelines	https://open.alberta.ca/publications/6880386
HEADSSS	HEADSSS Assessment - TeachMePaediatrics - Home - Education
Approach to Abnormal Uterine Bleeding in Adolescents	Cenk Yaşa and Funda Güngör Uğurlucan J Clin Res Pediatr Endocrinol. 2020 Jan; 12(Suppl 1): 1–6. Published online 2020 Feb 6. doi: 10.4274/jcrpe.galenos.2019.2019.S0200
Bleeding disorders in adolescents with heavy menstrual bleeding in a multicenter prospective US cohort	Ayesha Zia, Shilpa Jain, Peter Kouides, Song Zhang, Ang Gao, Niavana Salas, May Lau, Ellen Wilson, Nicole DeSimone, and Ravi Sarode Haematologica. 2020 Jul; 105(7): 1969–1976. Prepublished online 2019 Oct 17. doi: 10.3324/haematol.2019.225656

PATIENT RESOURCES

Information

Resources	Link
Online menstrual tracking tools (smartphone compatible) E.g., Clue - free application launched in 2013	https://helloclue.com/
Menstrual Diary to Monitor Premenstrual Symptoms (available from My Health Alberta). Print off a paper-based diary to track your menstrual cycle, along with symptoms and other factors pertinent to your health.	Menstrual Diary to Monitor Premenstrual Symptoms https://myhealth.alberta.ca/health/Pages/conditions.aspx?hwid=aa151402

Additional resources for adolescents

Resources	Link
NASPAG patient handout heavy menstrual bleeding	https://www.naspag.org/assets/docs/heavy_menstrual_bleeding_202.pdf
NASPAG patient handout irregular periods	https://www.naspag.org/assets/docs/irregular_periods_2020.pdf

[1] Sing, S, Best, C, Dunn, S et al. SOGC Clinical Practice Guideline No. 292 – Abnormal Uterine Bleeding in Pre-Menopausal Women. *J Obstet Gynaecol Can*. 2018;40(5):e391-e415

[2] Choosing Wisely. Society of Obstetricians and Gynecologists of Canada: *Nine Things Physicians and Patients Should Question.* Choosing Wisely Canada; 2019. https://choosingwiselycanada.org/obstetrics-and-gynaecology/

[3] Liu, Z, Doan, QV, Blumenthal, P and Dubois, RW. A Systematic Review Evaluating Health-Related Quality of Life, Work Impairment, and Health-Care Costs and Utilization in Abnormal Uterine Bleeding. Value in Health. 2007;10(3):183-194.