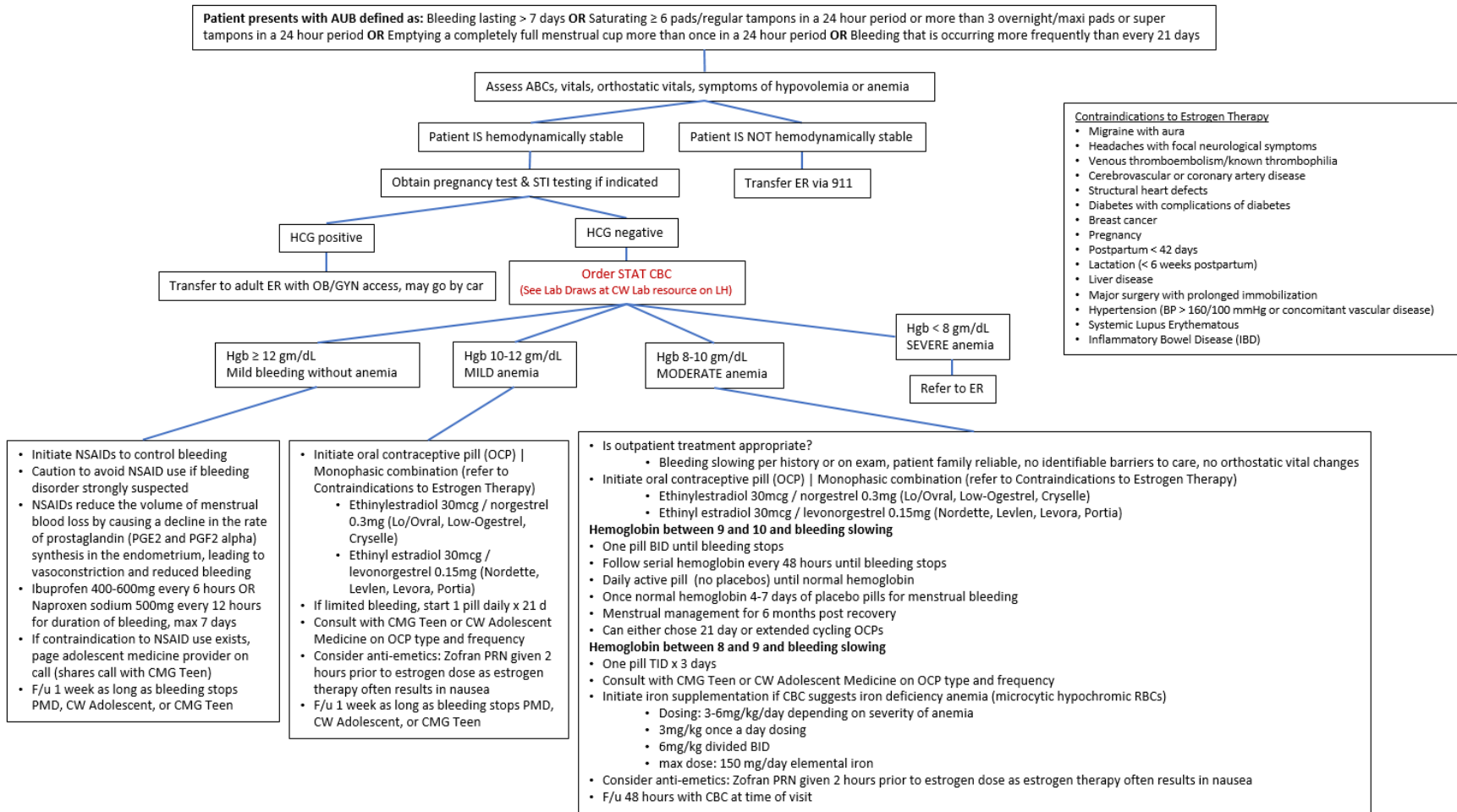


Children's Hospital and Health System, Inc.

Patient Care Treatment Guideline

CW Urgent Care

SUBJECT: Acute Abnormal Uterine Bleeding



Supersedes: 1/2018, 5/2020

Approved UC Clinical Practice Council and Medical Director 4/2024, minor update 5/2024

Next review due 4/2027

Purpose: To evaluate and initiate treatment of acute abnormal uterine bleeding (AUB).

Females with a known bleeding disorder and/or pregnancy should be sent immediately to the ER for further evaluation.

Definition: AUB is abnormal endometrial bleeding in the absence of pelvic pathology. It is defined by:

- Bleeding lasting > 7 days
- OR
- Saturating ≥ 6 pads/regular tampons in a 24 hour period or more than 3 overnight/maxi pads or super tampons in a 24 hour period
- OR
- Emptying a completely full menstrual cup more than once in a 24 hour period
- OR
- Bleeding that is occurring more frequently than every 21 days

Etiology: During the normal ovulation cycle, the body produces estrogen and progesterone. Estrogen causes thickening of the endometrial lining whereas progesterone functions to stabilize the endometrial lining. When fertilization does not occur, there is a rapid drop in progesterone as well as estrogen. This results in the bleeding known as menstruation. For young gynecological aged adolescents, the normal interval between menstrual cycles is 21-45 days; periods should typically last 3-7 days.

In the adolescent population, 95% of AUB cases are attributed to anovulation. Anovulation is most commonly caused by lack of maturity in the hypothalamic-pituitary-ovarian axis. In the absence of ovulation, the endometrium experiences continued estrogen stimulation that is unopposed by progesterone. In adolescents, this results in the endometrial lining becoming excessively thickened and unstable and it begins to break down irregularly. Additional causes of anovulation include: systemic illness, poor nutritional status, hypothyroidism, primary ovarian insufficiency, hyperprolactinemia, and PCOS.

Anovulation is most common during the first two years of menarche. The typical onset of menarche varies depending on race and familial history. For example, African American females have a mean age of menarche of 12.2 years, whereas Caucasian females have a mean age of menarche of 12.9 years. Adolescents with later onset of menarche tend to be more prone to AUB and have longer durations of anovulation.

Differential Diagnosis:

- Polycystic ovarian disease
- STIs
- Complications related to pregnancy
- Pelvic Inflammatory Disease/Endometritis

Supersedes: 1/2018, 5/2020

Approved UC Clinical Practice Council and Medical Director 4/2024, minor update 5/2024

Next review due 4/2027

- Thyroid disorders
- Hypothalamic disorders
- Pituitary disorders
- Endocrine tumors
- Coagulopathies
- Medication induced side effects (i.e. aspirin, valproic acid, platelet inhibitors, SSRIs, risperidone)
- Trauma
- Malignancy
- Uterine anomaly/fibroids

Guideline

Subjective Data/History:

- Age of menarche
- Character and duration of flow
 - Size/amount of tampons/pads used, % saturation of products when changed, frequency of changing feminine hygiene products, intervals between cycles, breakthrough bleeding, color, clots
- History of painful bleeding – Anovulatory cycles are usually painless. Causes of painful uterine bleeding in teens include primary dysmenorrhea, pregnancy complications and infection
- History of non-menstrual bleeding (easy bruising, dental bleeds, epistaxis > 10 minutes)
- Sexual history
 - Number of partners, contraception (use, type and adherence), history/possibility of pregnancy, history/possibility of STIs, vaginal discharge, pelvic pain, post-coital bleeding, date of last sexual activity (protected/not protected)
 - *Consider documenting this information in a sensitive note*
- Family history of bleeding disorders
- Comprehensive medical history and review of systems
 - Symptoms of anemia (i.e. fatigue, weakness, dizziness, syncope, headaches, shortness of breath, chest pain, craving ice chips, palpitations, pallor)
 - Symptoms of hypothalamus/pituitary/thyroid disorder (i.e. weight changes, temperature intolerances, mood changes)
- Consider the possibility of a bleeding disorder in adolescents who present with extremely heavy or prolonged flow at the onset of menstruation

Objective Data/Physical Exam:

- Vital signs including orthostatic blood pressure

Supersedes: 1/2018, 5/2020




Approved UC Clinical Practice Council and Medical Director 4/2024, minor update 5/2024

Next review due 4/2027

Measuring Orthostatic Blood Pressure

- ① Have the patient lie down for 5 minutes.
- ② Measure blood pressure and pulse rate.
- ③ Have the patient stand.
- ④ Repeat blood pressure and pulse rate measurements after standing 1 and 3 minutes.

A drop in BP of ≥ 20 mm Hg, or in diastolic BP of ≥ 10 mm Hg, or experiencing lightheadedness or dizziness is considered abnormal.

POSITION	TIME	BP	ASSOCIATED SYMPTOMS
Lying Down 	5 Mins.	BP ____ / ____ HR _____	
Standing 	1 Min.	BP ____ / ____ HR _____	
Standing 	3 Mins.	BP ____ / ____ HR _____	

Note: changes in heart rate may also be considered abnormal.

Above images from CDC at: https://www.cdc.gov/steady/pdf/Measuring_Orthostatic_Blood_Pressure-print.pdf
(also verified by Merck Manual, UpToDate, NIH, Nursing Center)

- Weight changes
- Fever
- Skin assessment (i.e. pallor, petechiae, bruising)
- Signs of anemia (i.e. pallor, tachycardia/irregular heartbeat, weakness, abnormal orthostatic blood pressure measurements)
- Abdominal exam to assess for hepatosplenomegaly, uterine enlargement, and masses
- Genital exam ALWAYS INDICATED
 - External visual exam: external causes for bleeds (i.e. lesions, irritation)
- Note vaginal discharge or amount/quality of bleeding with valsalva
 - *May consider bimanual exam:* assessment of adnexal and uterine size, abdominal, ovarian or cervical motion tenderness, presence of mass
- Tanner staging (pubic hair and breast development). Menarche typically occurs within 2-3 years after thelarche (breast budding), at Tanner stage 4 breast development, and is rare before Tanner stage 3 development.
 - **Pubic Hair Development:**
 - Stage 1 – Prepubertal with no pubic hair
 - Stage 2 – Sparse, straight hair along the lateral vulva
 - Stage 3 – Hair is darker, coarser, and curlier, extending over the mid-pubis
 - Stage 4 – Hair is adult-like in appearance, but does not extend to the thighs
 - Stage 5 – Hair is adult in appearance, extending from thigh to thigh
 - **Breast Development:**
 - Stage 1 – Prepubertal with no palpable breast tissue.
 - Stage 2 – Development of a breast bud with elevation of the papilla and enlargement of the areolar diameter.

Supersedes: 1/2018, 5/2020

Approved UC Clinical Practice Council and Medical Director 4/2024, minor update 5/2024

Next review due 4/2027

- Stage 3 – Enlargement of the breast without separation of areolar contour from the breast.
- Stage 4 – The areola and papilla project above the breast forming a secondary mound.
- Stage 5 – Recession of the areola to match the contour of the breast; the papilla projects beyond the contour of the areola and breast.



Diagnostic Studies: *There is no direct correlation between symptomatology and severity of blood loss. This means that an individual without any outward symptoms could potentially have critical lab values that require immediate treatment.*

- CBC – in all actively bleeding patients, **or patients with history of heavy menstrual bleeding who are symptomatic, but may not be bleeding actively at time of presentation**
- Urine pregnancy – in all patients
- STI testing when appropriate
- Other testing that may be considered outside of Urgent Care: Ferritin, TSH, LH, FSH, testosterone, prolactin, PT/PTT, ESR, and Von Willebrand screening

Treatment: (See Algorithm)

Supersedes: 1/2018, 5/2020

Approved UC Clinical Practice Council and Medical Director 4/2024

Next review due 4/2027

The treatment goal in Urgent Care is to establish hemodynamic stability. The goal in primary care is to establish hemodynamic stability, correct anemia, restore normal ovulatory patterns, and prevent recurrence of abnormal bleeding.

Education of Patient/Family:

- OCPs: Vaginal bleeding typically slows or resolves within 1-3 days of initiating OCPs
 - Withdrawal bleeding is normal after stopping OCPs
- Iron supplementation:
 - Iron supplementation can lead to minor GI side effects, which tend to occur with higher doses of iron
 - Liquid iron can cause temporary teeth staining. To prevent this, the patient should brush his/her teeth after taking.
 - Iron supplementation will absorb better when taken on empty stomach with juice rather than milk or other fluids. Calcium inhibits the absorption of iron.

Follow-up:

- Follow up within 2 weeks with CMG Teen Clinic or CW Adolescent Medicine or primary care provider if patient's hemoglobin is greater than 12mg/dl.
- Follow up as directed based on CMG Teen Clinic or CW Adolescent Medicine recommendation for patients with hemoglobin levels between 8-12mg/dl.

Amy Romashko, MD
Medical Director, CW Urgent Care

This guideline is designed to serve as a reference for clinical practice and does not represent an exclusive course of treatment nor does it serve as a standard of medical care. Providers should apply their professional judgment to the management of individual patient conditions and circumstances. Children's Hospital and Health System (CHHS) does not make any representation with respect to any sort of industry recognized standard of care for the particular subject matter of this clinical guideline. Additionally, CHHS form documents are subject to change, revision, alteration, and/or revocation without notice.

Supersedes: 1/2018, 5/2020

Approved UC Clinical Practice Council and Medical Director 4/2024

Next review due 4/2027

References

American College of Obstetricians & Gynecologists. (2013). ACOG committee opinion no. 557: Management of acute abnormal uterine bleeding in nonpregnant reproductive-aged women. *Obstetrics & Gynecology*, 121(4), 891-896.

American College of Obstetricians & Gynecologists. (2015). ACOG committee opinion no. 651: Menstruation in girls and adolescents: Using the menstrual cycle as a vital sign. *Obstetrics & Gynecology*, 126, 143-146.

Biro, F.M., Chan, Y. (2023). Normal puberty. *UpToDate*. Retrieved from <http://www.uptodate.com>

Bohart, J. (2013). Emergency department management of vaginal bleeding in the nonpregnant patient. *Emergency Medicine Practice*, 15(8), 1-20.

De Silva, N.K. (2022). Abnormal uterine bleeding in adolescents: Management. *UpToDate*. Retrieved from <http://www.uptodate.com>

Emans, S.J. & Laufer, M.R. (2012). Pediatric & adolescent gynecology. (6th) ed. Philadelphia, PA: Lippincott Williams Wilkins.

Hirsch, M. & Birnbaum, R.J. (2023). Selective serotonin reuptake inhibitors: Pharmacology, administration, and side effects. *UpToDate*. Retrieved from <http://www.uptodate.com>

Kaunitz, A.M. (2024). Abnormal uterine bleeding in nonpregnant reproductive-age patients: Terminology, evaluation, and approach to diagnosis. *UpToDate*. Retrieved from <http://www.uptodate.com>

Supersedes: 1/2018, 5/2020

Approved UC Clinical Practice Council and Medical Director 4/2024

Next review due 4/2027

UC EVIDENCE BASED GUIDELINE: AUB

Madsen, K.P., Schmidt-Dalton, T.A., Sweet, M.G., & Weiss, P.M. (2012). Evaluation and management of abnormal uterine bleeding in premenopausal women. *American Family Physicians*, 85(1), 35-43.

Zucker, M., Hughes, R., Culyba, A., Zinna, L, Boyle, J., Jacobstein, C., ... Lavelle, J. (2017).

Evaluation/treatment of acute abnormal uterine bleeding. Children's Hospital of Philadelphia. Retrieved from <http://www.chop.edu/clinical-pathway/uterine-bleeding-acute-abnormal-clinical-pathway>.

Treatment information also provided by Melissa Vukovich, Nurse Practitioner, CMG Teen Health Clinic, (personal communication, May 2020 and February 2024).

Treatment information also provided by Raj Kiran Chawla, M.D., CMG Teen Health Clinic, (personal communication, February 2024).

Supersedes: 1/2018, 5/2020

Approved UC Clinical Practice Council and Medical Director 4/2024

Next review due 4/2027