

ABNORMAL UTERINE BLEEDING HEAVY MENSTRUAL BLEEDING IN ADOLESCENTS

ED/OUTPATIENT ESTROGEN PATHWAY

EXCLUSION CRITERIA

- Pregnancy
- Active malignancy
- Intolerance to PO medication

INCLUSION CRITERIA
Post-menarchal patient with heavy bleeding

See Evaluation/Labs and assess for hemodynamic stability

Assess for contraindication to estrogen based on CDC/WHO medical eligibility criteria **1**

OR

Family preference not to start estrogen containing pills

See Progesterone Pathway
Consider Consult/Call Adolescent Medicine for treatment recommendations.

DISCHARGE 3
Reevaluate in 3 months OR if symptoms change
May follow-up with Adolescent Medicine

Iron
Elemental Iron 130 mg
Ferrous sulfate 325 mg (elemental iron 65 mg)
BID

HGB > 11

- Naproxen 10-15 mg/kg/day BID dosing (max 500 mg/dose)
- May offer options per pt/family preference (estrogen vs progesterone-only containing pills)

HGB 10 - 11

Bleeding SLOWING?

Yes → Estrogen containing pills **2**
Daily starting immediately. Continue for normal pack dosing.

No → Estrogen containing pills **2**
STEP 1: q12h until bleeding stops
STEP 2: Daily pills

HGB 9 - 10

Bleeding SLOWING?

Yes → Estrogen containing pills **2**
STEP 1: q12h until bleeding stops
STEP 2: Daily (without placebos) until HGB > 10

No →

HGB 8 - 9

ADMIT CRITERIA
1) Concerns about adherence/treatment/transportation
2) Continued heavy bleeding
3) Unstable vital signs
OR
4) Persistently symptomatic

No → Consider Consult – check AMION and/or Call Adolescent Medicine ((512)-324-6534)
Document 2 reliable phone numbers for patient
Reevaluate by phone next day

DISCHARGE CRITERIA

- Stable vital signs
- Follow-up plan in place
- Patient able to obtain medication prior to or upon discharge

HGB < 8

Start estrogen containing pills:
As soon as possible in ED **2**

Estrogen containing pills prescribing instructions 2

DISCHARGE 3
Follow-up with Adolescent Medicine in 5 to 7 days for CBC and Bleeding Assessment ((512)-324-6534)

Tolerating PO?

Yes → ADMIT

No →

- Consider Premarin 25 mg IV (estrogen) Note potential contraindications to estrogen
- Consult surgery or Adolescent Medicine

Contraindication for starting estrogen containing pills:

1. Absolute contraindications to estrogen
 - History of migraine headache with aura
 - Personal history of DVT/PE/CVA or known clotting disorder
 - Malignant HTN
 - Refer to CDC recommendations for additional contraindications
2. Family preference not to start estrogen containing pills
3. Patient with prior side effects to estrogen

Estrogen containing pills prescribing instructions

Inpatient	Outpatient*
Nortrel	Monophasic OCP with 30 or 35 mcg ethinyl estradiol

STEP 1: q6h for 2 days
STEP 2: q8h for 3 days
STEP 3: q12h for 14 days
STEP 4: Daily (without placebos) until HGB > 10

Consider Ondanestron 2h prior to OCP

* If utilizing DCMC pharmacy, dispense 3 packs of Nortrel
* If utilizing patient's pharmacy of choice, dispense 3 packs of Sprintec or Ortho-Cyclen (Nortrel outpatient Rx is expensive)

Discharge Instructions for Estrogen containing pills:

1. Review risks of thrombosis with estrogen-containing medication. Signs and symptoms of DVT/PE should be explained and instructions given on what to do should patient experience.
2. Clear dosing instructions for estrogen containing OCPs with taper instructions written with times and dates of pills until follow-up.
3. Prescription should be sent to pharmacy with instructions to dispense 3 packages of Nortrel for ICD10: N92.0 + prescription to outpatient pharmacy. Uninsured patients should have prescription for Ortho-Cyclen or Sprintec.
4. Discuss with the patient the possibility of re-bleeding. If it happens, a follow up with Adolescent Medicine or Primary Physician will be needed.

EVALUATION/LABS

Bleeding disorder screen

Positive with any one of the following

- heavy menstrual bleeding since menarche
- history of post-partum hemorrhage
- surgery or dental-related bleeding
- bleeding with clots >10 mm

Positive with any two of the following:

- Bruising 1-2 times a month
- Epistaxis 1-2 times a month
- Frequent gum bleeding
- Family history of bleeding symptoms

4

PCOS Screen

1. Presence of ovulatory dysfunction (cycle irregularity)
2. Presence of hyperandrogenism (hirsutism, acne, etc)
3. Obesity

5

Hemodynamic stability

Stable

Thorough history including:

1. Detailed menstrual/bleeding history
2. Screening for personal/family history of bleeding disorder
3. Sexual activity history
4. Screen for PCOS

4-5

Complete Physical Exam

INCLUDING:

1. External GU exam
2. Internal GU exam if appropriate and indicated (+/- speculum exam)

Laboratory evaluation (if not already drawn)

- Urine pregnancy test
- CBC w/diff
- Ferritin
- Coagulation studies
- TSH/Reflex T4

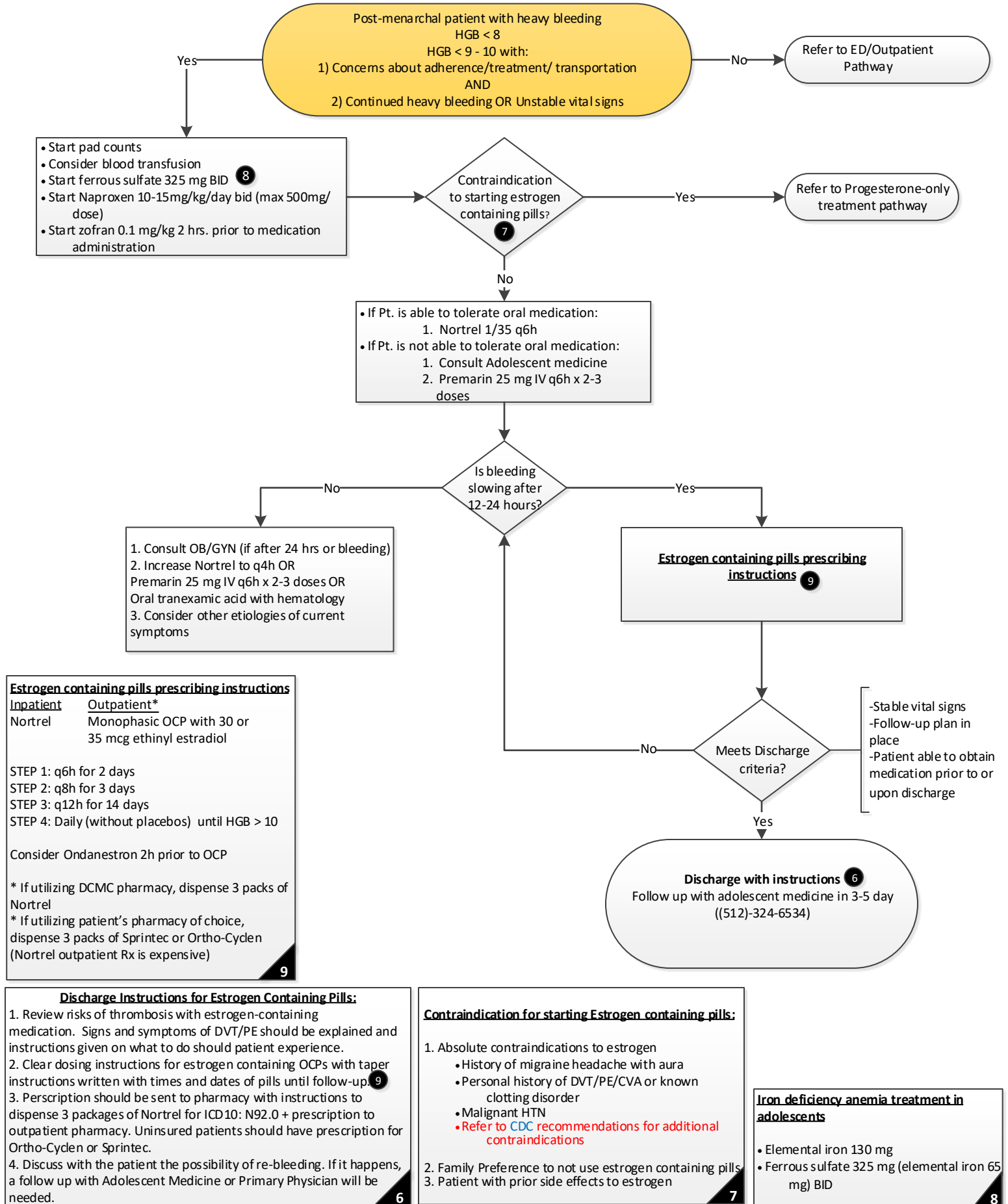
Unstable

1. Resuscitate - IV fluids and blood products if appropriate
2. Laboratory studies prior to blood transfusion
 - Type and Cross
 - Complete blood count w/diff
 - Coagulation studies
 - +/- Von-Willebrand panel (if bleeding disorder screen positive) 4

Further laboratory and imaging considerations for select patients

Positive pregnancy test	→	<input type="checkbox"/> Abdominal or transvaginal ultrasound (if appropriate) <input type="checkbox"/> Transfer to adult ED for OB evaluation
Recent sexual activity	→	<input type="checkbox"/> GC/CT (vaginal/cervical or urine specimen)
Positive bleeding disorder screen	→	<input type="checkbox"/> Von-Willebrand panel
Positive PCOS Screen	→	<input type="checkbox"/> FSH/LH <input type="checkbox"/> Free and total testosterone levels <input type="checkbox"/> DHEA-S

INPATIENT ESTROGEN PATHWAY



Estrogen containing pills prescribing instructions

Inpatient	Outpatient*
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Discharge Instructions for Estrogen Containing Pills:

- Review risks of thrombosis with estrogen-containing medication. Signs and symptoms of DVT/PE should be explained and instructions given on what to do should patient experience.
- Clear dosing instructions for estrogen containing OCPs with taper instructions written with times and dates of pills until follow-up.
- Prescription should be sent to pharmacy with instructions to dispense 3 packages of Nortrel for ICD10: N92.0 + prescription to outpatient pharmacy. Uninsured patients should have prescription for Ortho-Cyclen or Sprintec.
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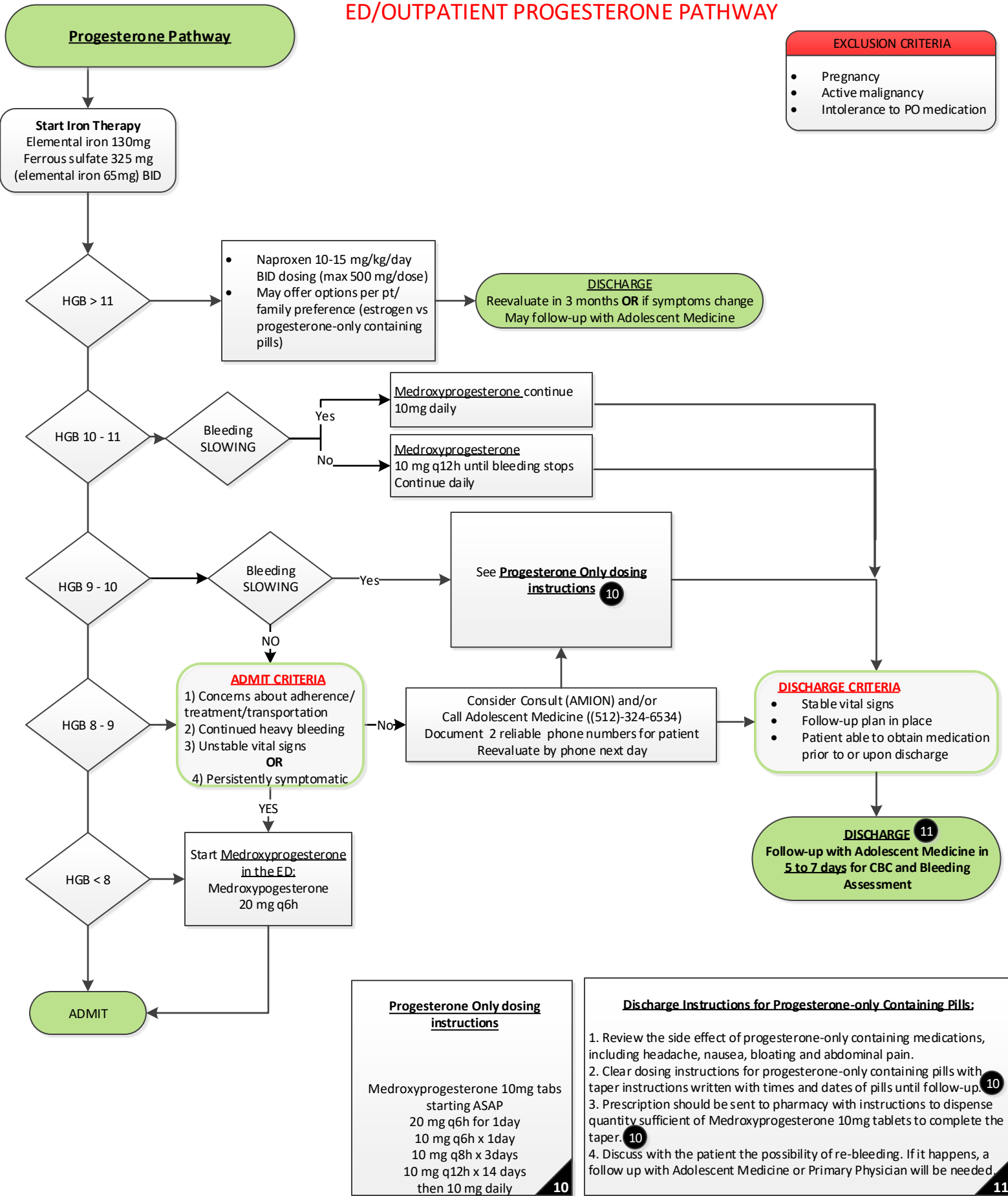
Contraindication for starting Estrogen containing pills:

- Absolute contraindications to estrogen
 - History of migraine headache with aura
 - Personal history of DVT/PE/CVA or known clotting disorder
 - Malignant HTN
 - Refer to CDC recommendations for additional contraindications
- Family Preference to not use estrogen containing pills
- Patient with prior side effects to estrogen

Iron deficiency anemia treatment in adolescents

- Elemental iron 130 mg
- Ferrous sulfate 325 mg (elemental iron 65 mg) BID

ED/OUTPATIENT PROGESTERONE PATHWAY



- EXCLUSION CRITERIA**
- Pregnancy
 - Active malignancy
 - Intolerance to PO medication

- Naproxen 10-15 mg/kg/day BID dosing (max 500 mg/dose)
- May offer options per pt/family preference (estrogen vs progesterone-only containing pills)

DISCHARGE
Reevaluate in 3 months **OR** if symptoms change
May follow-up with Adolescent Medicine

Medroxyprogesterone continue
10mg daily

Medroxyprogesterone
10 mg q12h until bleeding stops
Continue daily

See **Progesterone Only dosing instructions** **10**

Consider Consult (AMION) and/or
Call Adolescent Medicine ((512)-324-6534)
Document 2 reliable phone numbers for patient
Reevaluate by phone next day

- ADMIT CRITERIA**
- 1) Concerns about adherence/treatment/transportation
 - 2) Continued heavy bleeding
 - 3) Unstable vital signs
- OR**
- 4) Persistently symptomatic

- DISCHARGE CRITERIA**
- Stable vital signs
 - Follow-up plan in place
 - Patient able to obtain medication prior to or upon discharge

DISCHARGE 11
Follow-up with Adolescent Medicine in **5 to 7 days** for CBC and Bleeding Assessment

ADMIT

Progesterone Only dosing instructions

Medroxyprogesterone 10mg tabs starting ASAP

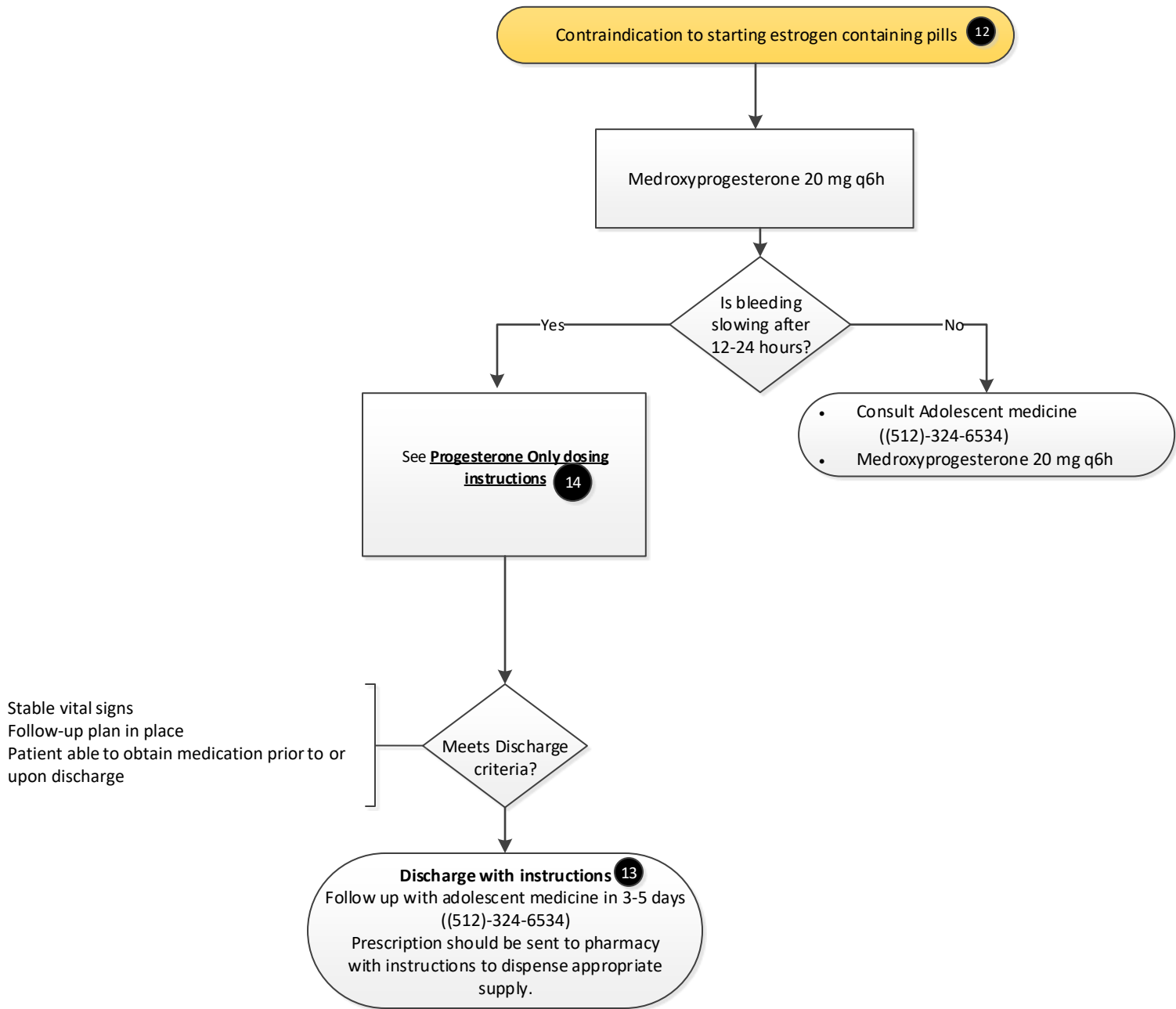
- 20 mg q6h for 1day
- 10 mg q6h x 1day
- 10 mg q8h x 3days
- 10 mg q12h x 14 days
- then 10 mg daily

10

Discharge Instructions for Progesterone-only Containing Pills:

1. Review the side effect of progesterone-only containing medications, including headache, nausea, bloating and abdominal pain.
2. Clear dosing instructions for progesterone-only containing pills with taper instructions written with times and dates of pills until follow-up. **10**
3. Prescription should be sent to pharmacy with instructions to dispense quantity sufficient of Medroxyprogesterone 10mg tablets to complete the taper. **10**
4. Discuss with the patient the possibility of re-bleeding. If it happens, a follow up with Adolescent Medicine or Primary Physician will be needed. **11**

INPATIENT PROGESTERONE ONLY PATHWAY



Contraindication for starting estrogen containing pills:

- Absolute contraindications to estrogen
 - History of migraine headache with aura
 - Personal history of DVT/PE/CVA or known clotting disorder
 - Malignant HTN
 - Refer to CDC recommendations for additional contraindications
- Family Preference to not use estrogen containing pills
- Patient with prior side effects to estrogen

12

Discharge Instructions for Progesterone-only Containing Pills:

- Review the side effect of progesterone-only containing medications, including headache, nausea, bloating and abdominal pain.
- Clear dosing instructions for progesterone-only containing pills with taper instructions written with times and dates of pills until follow-up. 14
- Prescription should be sent to pharmacy with instructions to dispense quantity sufficient of Medroxyprogesterone 10mg tablets to complete the taper. 14
- Discuss with the patient the possibility of re-bleeding. If it happens, a follow up with Adolescent Medicine or Primary Physician will be needed

13

Progesterone Only dosing instructions

Medroxyprogesterone 10mg tabs starting ASAP
 20 mg q6h for 1day
 10 mg q6h x 1day
 10 mg q8h x 3days
 10 mg q12h x 14 days
 then 10 mg daily

14



EBOC Project Owner: Dr. Maria Monge

Approved by the Abnormal Uterine Bleeding (AUB) Workgroup Team

Revision History:

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Update summary:

Updates to Guideline based on new literature/evidence and Algorithm updates.

OLD Algorithms:

Diagnostic & Evaluation algorithm

ED/Outpatient Treatment algorithm

Inpatient Treatment algorithm

New Algorithms:

Evaluation Labs

ED/Outpatient Estrogen algorithm

ED/Outpatient Progesterone algorithm

Inpatient Estrogen algorithm

Inpatient Progesterone algorithm

AUB Team (direct contributor
and/or reviewer):

Maria Monge, MD

Danielle Glade, MD

Yasaman Ahmadiéh, MD

Roy Pruden, MD

Erin Isaacson, MD

Carmen Garudo, PM

EBOC Leadership Team

Lynn Thoreson, DO

Sujit Iyer, MD

Tory Meyer, MD

Amanda Puro, MD

Meena Iyer, MD

Terry Stanley, DNP, RN, NE-BC

Sarmistha Hauger, MD

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