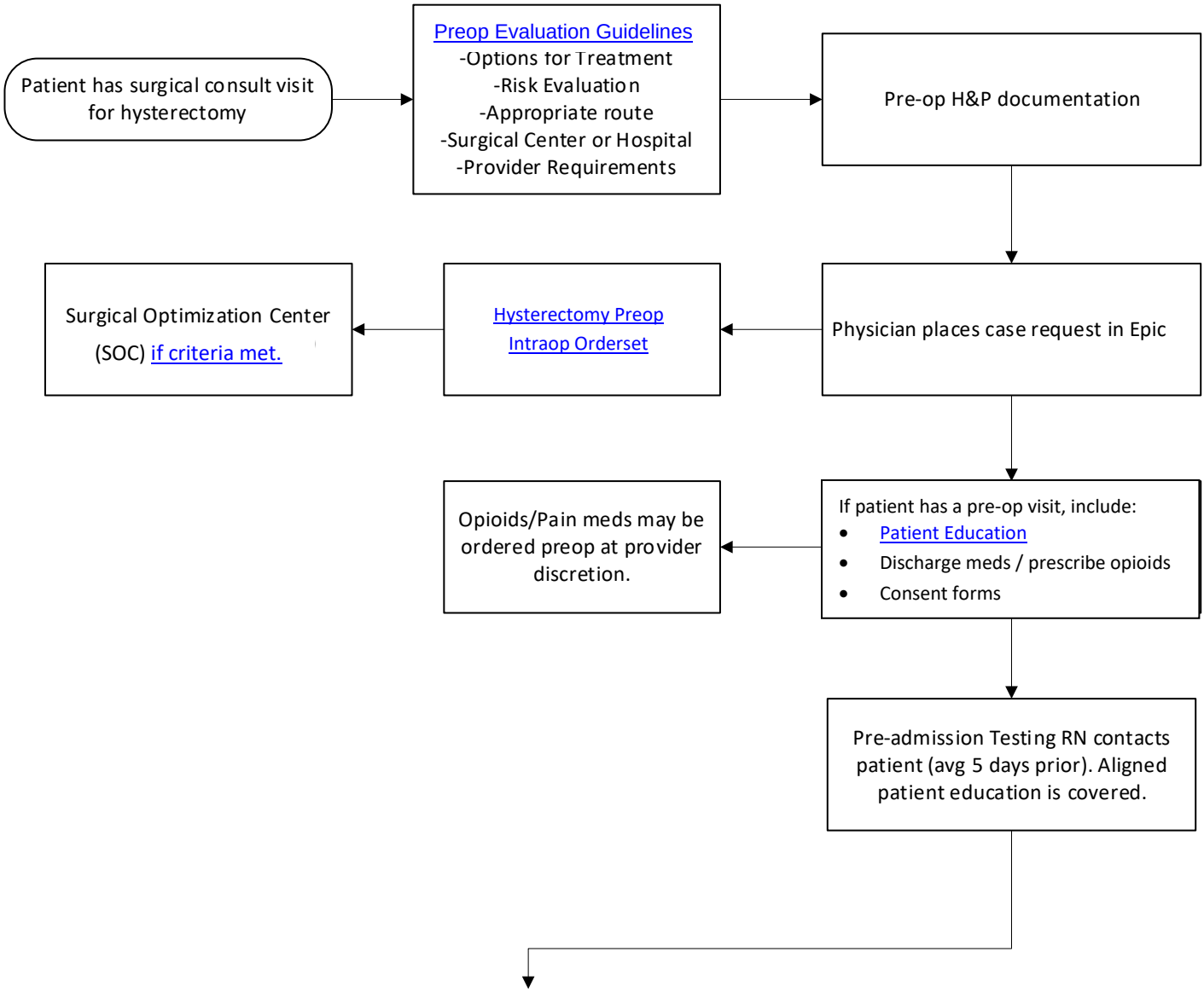
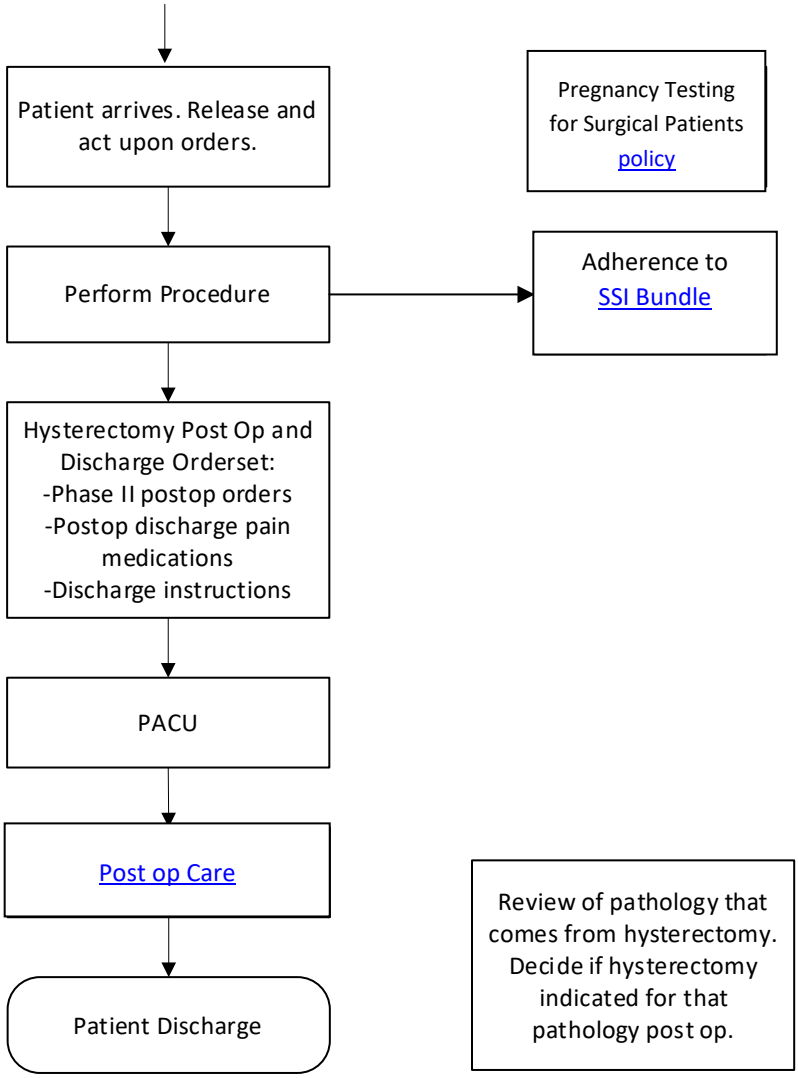
Clinical Standardization

HYSTERECTOMY PATHWAY

Updated: March 17, 2023

Clinical Algorithm:




Patient arrives. Release and act upon orders.
Pregnancy Testing for Surgical Patients policy
Perform Procedure
Adherence to SSI Bundle
Hysterectomy Post Op and Discharge Orderset:
-Phase II postop orders
-Postop discharge pain medications
-Discharge instructions
PACU
Post op Care
Patient Discharge
Review of pathology that comes from hysterectomy. Decide if hysterectomy indicated for that pathology post op.

Clinical Pathway Summary

CLINICAL PATHWAY NAME: Hysterectomy

PATIENT POPULATION AND DIAGNOSIS: Hysterectomy procedures excluding pregnancy.

APPLICABLE TO: Corewell Health West

BRIEF DESCRIPTION: Preop, intraop and post op surgical management of hysterectomy, inpatient and outpatient.

OPTIMIZED EPIC ELEMENTS:
NEW Hysterectomy Preop/Intraop Orderset
NEW Hysterectomy Postop and Discharge Orderset
NEW flag for benign hysterectomy pathology

IMPLEMENTATION DATE: November 2023

LAST REVISED: March 17, 2023

Clinical Pathways Clinical Approach

TREATMENT AND MANAGEMENT:

Pre-op Hysterectomy Pathway

Applicable for **benign, non-emergent hysterectomy**

1. Patient comes to provider with diagnosis that could lead to hysterectomy
    a. Pelvic pain, prolapse, endometriosis, adenomyosis, bleeding, etc.
2. Provider offers options for treatments and documents on standardized H and P
    a. List of other options provided as suggestions both medical/surgical
        i. Medical – NSAIDs, Lysteda, OCPs or similar, progesterone only options (pill, Depo, Nexplanon), Hormone containing IUDs, Lupron. Oriahnn, Orilissa, pelvic floor PT, pain meds, central pain agents (Gabapentin, TCA), pessary
        ii. Surgical – Ablation, myomectomy, Acessa, UAE, Laparoscopy
3. Document in H and P options offered/tried/declined/contraindicated
4. Pt desires hysterectomy
    a. Medicaid – hyst not covered if done for sterilization purposes
5. Provider evaluated pre-op risk.
    a. **High risk** - If hard stops as below, send to PCM or to SOC to correct criteria prior to scheduling surgery.
        i. HbA1c > 8.5
        ii. Use of >90 MME without attempt to lower dosage

iii. For mesh/device placement: Active tobacco/nicotine use - negative urine nicotine 2-3 weeks after quit date, nicotine-free 8 weeks prior to surgery.

b. **Moderate risk** (Examples – HTN, morbid obesity ,CVD risks, smoking, chronic steroid use, etc.)
   i. Schedule surgery
   ii. Send to SOC or PCM for clearance
   iii. See attached SOC guidelines for specifics
c. **Low risk** – scheduled surgery

6. Provider determines which route is the most appropriate and who can complete
   i. For these determinations, see below definitions.
   ii. Definitions for provider levels
      1. Junior = < 3 yrs (outside of residency)
      2. Senior > 3 yrs
   iii. Definitions for providers for different surgical volumes
      1. high volume surgeon > or equal to 20 hysterectomies/year
      2. moderate volume surgeon 12-19 hysterectomies/year
      3. low volume surgeon <12 hysterectomies per year
      4. To calculate the total number of hysterectomies, the provider may be primary surgeon or assistant . When attending providers double scrub hysterectomies, they both get credit for the hysterectomy
      5. include link to # of hysterectomies
         a. https://tableaugw.spectrum-health.org/#/site/Certified/views/HysterectomyDashboard/HysterectomyVolumesbyLocation
   iv. In order to continue performing hysterectomies without a partner, need a minimum of 12 hysterectomies per year (aka need to be a moderate volume surgeon)
   v. If a provider has < 12 hysts/year, they need a partner to assist
      1. Junior partner or chief resident ok for partner if Level 1 hysterectomy
      2. Senior partner or moderate volume partner if Level 2
      3. High volume partner if Level 3
      4. Residents will also be encouraged to attend as well
b. Preference given to minimally invasive surgeries TVH/LAVH/TLH/robotic hysterectomies
c. The criteria will be referred to as Level 1 criteria.
   i. **Criteria**:
      1. BMI <30
      2. Maj abdominal surgery (ex lap, C/s) =< 1
      3. Clinical uterine size =< 12 wks
      4. No known or suspected history of diffuse or advanced endometriosis or pelvic adhesive disease
      5. No concurrent sacrocolpopexy

ii. **Type of hysterectomy**: Schedule a TLH/TVH/LAVH for patients who meet **ALL** of the criteria.
iii. **Location**: They may be scheduled at outpatient surgical center or at hospital setting per provider preference.
iv. **Provider**: All
    1. If a provider has < 12 hysts/year, they need a partner to assist
        a. Junior partner or chief resident ok for partner

d. These criteria will be referred to as Level 2 criteria.
    i. 1 or 2 of the following criteria:
        1. BMI 30-49.9
        2. 2-3 major abdominal surgeries
        3. clinical size between 12 and 18 wks
    ii. **Type of Hysterectomy**: Schedule any type of minimally invasive hysterectomy (TVH, LAVH, TLH, robotic hysterectomy), for all patients who meet the above criteria. STRONGLY RECOMMEND the patient be offered a minimally invasive approach to decrease complications (infection, wound breakdown, etc.)
    iii. **Location**: These surgeries should be performed at a hospital. If the only reason they meet this criteria is BMI between 30-35, could consider doing at outpatient center.
    iv. **Provider**:
    If the patient desires a minimally invasive approach, must be done by
        1. Moderate or high volume surgeon.
        2. If low volume (< 12 hysterectomies/yr), must be accompanied by a senior surgeon or moderate or high volume surgeon.

    v. The following are Level 3 criteria.
    vi. **ALL** of the following criteria:
        1. BMI 30-49.9,
        2. 2-3 major abdominal surgeries
        3. clinical size between 12 and 18 wks
    vii. Any one of the following criteria:
        1. >3 major abdominal surgeries (ex lap, c/s)
        2. BMI >50
        3. Clinical size of uterus => 18 wks
        4. Prior myomectomy
        5. Clinical exam or prior laparoscopy c/w frozen pelvis
    viii. **Type**: Schedule any form of hysterectomy per provider preference (TVH, TLH, LAVH, Robotic hyst, TAH. STRONGLY RECOMMEND the patient be offered a minimally invasive approach to decrease complications (infection, wound breakdown, etc.).
    ix. **Location**: These procedures should be performed at a hospital.

x. **Provider:** If the patient desires a minimally invasive approach, if provider is a low or medium volume surgeon, the procedures are required be done in conjunction with a high volume surgeon

7. No restriction or recommendations for supracervical over total hysterectomies
8. Provider determines which location the hysterectomy should be performed at
    a. Outpatient surgical center
        i. Consider if all criteria Level 1 criteria are met.
        ii. Outpatient surgical center criteria will exclude patents with the following:
            1. Significant cardiac disease
            2. significant CVD hx (stroke)
            3. Hemoglobin under 8.0
        iii. Level 2 criteria hysterectomy if only criteria met is BMI between 30 and 35, provider could choose outpatient surgical center
    b. Hospital
        i. Required for Level 2 criteria hysterectomy except as listed above
        ii. Required for all Level 3 cases
    c. Region - Current criteria are working well, continue checking with anesthesia providers

9. Provider sends operative request in to book surgery

Preop Hysterectomy Algorithm:

Providers identifies a patent for hysterectomy **- benign/non-emergent** conditions
*See notes for requirements for gender dysphoria

Standardized Hysterectomy H and P completed

Patient risk stratification

High risk (Hard stops for hyst)
Hba1c >8.5
MME > 90 w/o trial to drop
Smoking (If using mesh in procedure)
Send to PCM/SOC for optimization prior to scheduling surgery

No or low risk: schedule surgery

Moderate risk: schedule surgery and send to PCM or SOC for clearance
*See attached guidelines for details

Determine route of hysterectomy

Schedule surgery at outpatient surgical center or hospital, provider preference

Level 1 Criteria -Perform a TVH, LAVH or TLH If ALL below criteria are met –
BMI <30, Maj abdominal surgery (ex lap, C/s) =< 1, Clinical uterine size =< 12 wks,, no known or suspected history of diffuse or advanced endometriosis or pelvic adhesive disease, no concurrent sacrocolpopexy
****Provider type:** If low volume surgeon, needs a partner

If not ALL above criteria are met

Level 2 criteria - Perform any type of minimally invasive surgical hysterectomy (TVH, LAVH, TLH, Robotic TLH)**; STRONGLY RECOMMEND if not comfortable with a minimally invasive approach, send to a provider who is**
1 or 2 of the following criteria: BMI between 30-49.9, 2-3 major abdominal surgeries (ex lap/c-section), clinical size between 12 and 18 wks
****Provider type**: Moderate or high volume surgeon; If low volume, needs a senior or moderate/high volume surgeon assisting

Level 3 criteria – Perform any type of hysterectomy; if planning a TAH, STRONGLY RECOMMEND referral to a high volume surgeon for minimally invasive approach
Any 1 of the following criteria: BMI > 50, >3 major abdominal surgeries (ex lap, c-section), prior myomectomy, clinical exam or prior laparoscopy c/w frozen pelvis
ALL of the following criteria: BMI between 30-49.9, 1-2 major abdominal surgeries, clinical size between 12 and 18 wks
****Provider type**: If minimally invasive planned, must be done in conjunction with or by a high volume surgeon

Schedule surgery at the hospital
*If Level 2 and only criteria met is BMI between 30 and 35, could consider outpatient surgical center

Junior surgeon < 3 yrs out of resident; Senior surgeon >= 3 yrs after residency,
Low volume surgeon <12 hyst/yr; Moderate volume surgeon 12-19 hysts/yr, high volume surgeon => (20 hysts/yr)

Patient Education

The following patient education Emmi **videos** are automatically sent **electronically** to the patient as appropriate when they are scheduled for hysterectomy:
-hysterectomy (abdominal)
-hysterectomy (vaginal)
-hysterectomy (laparoscopic)
-hysterectomy (laparoscopic, robot assisted)
-hysterectomy (laparoscopic, robot assisted for oncology)

The following **documents** are given to the patient **in person** by the office during their surgery **consult visit**.
-Surgical Services Patient Handbook
-M-OPEN

AVS: Utilize Smartset
-Hibiclens instructions:
-Elsevier:
-Hysterectomy information
-Supracervical hysterectomy
-Abdominal hysterectomy
-Vaginal hysterectomy
-Total laparoscopic hysterectomy
-Laparoscopic assisted vaginal hysterectomy

Independent providers who don't have access to Epic pre-op are to document that the education was given in the H&P.

The content of these materials will be **reinforced** at the pre-op visit or the surgical optimization visit.

The Surgical Optimization Center provides additional resources according to patient need, such as:
-Malnutrition
-Smoking cessation
-Diabetes management
-Anemia

Aligned patient education covered during the Patient Assessment Test (previously preprocedure planning) call.

Preop Intraop Orderset

Thromboprophylaxis: pre-check 5000 units SC Heparin, with link to Caprini score and statement stating ">/= 3 it is recommended to give pharmacologic prophylaxis

Type & Screen: if patient's procedure is at high risk for bleeding: laparotomy, concurrent procedures, anemia (Hb<11), large uterine size, patient specific risk factors for antibodies, consider ordering a T&S.

CBC: beneficial to determine baseline anemia and to help guide if need for T&S and/or appropriate at ASC. Recommend CBC without differential within 6 months of surgery

BMP: Helpful to evaluate both glucose level (some consideration from anesthesia that patients with certain risk factors should have a fasting glucose checked e.g. BMI>30, Age>45), as well as baseline creatinine. Recommend BMP within 6 months of surgery

SOC: Consider if SOC optimization would be beneficial for all hysterectomy patients. (See SOC criteria)

Urine Pregnancy Test: pregnancy test per protocol.

EKG: determination can be made by PPP or preop optimization.

Antibiotic Surgical Prophylaxis: recommendation updated for cefazolin REGARDLESS of type of PCN allergy. Only contraindication to cefazolin is cephalosporin allergy. Recommended antibiotics are cefazolin and metronidazole. Appropriate alternatives listed.

Standardized ERAS orders:

Pre-select **LR** as fluid of choice as this is recommended by Anesthesia

Aprepitant: reviewed APFEL guidelines (female gender, history of PONV, nonsmoker, history of motion sickness, younger age, postop narcotics) and reviewed goals of decreased PONV; based on cost differential of cost of medication vs cost of increased LOS, recommend pre-selection of Emend 40mg

Gabapentin: based on risks and benefits (risk of dizziness, prolonged LOS at ASC, especially for older women, with minimal benefit in regards to postoperative narcotic use and minimal impact on same day procedures, recommend not pre-selecting gabapentin preop.

Celecoxib vs diclofenac – recommendation to provide one of the other if appropriate

Acetaminophen – pre-select

Post Op Care

HYSTERECTOMY POSTOPERATIVE CARE:

- **Activity:**
  - OOB and ambulation - must ambulate to be discharged.
- **Diet:**
  - Advance as tolerated - must tolerate water and cracker for discharge.
- **Fluid optimization:**
  - OR fluids discontinue upon floor arrival.
  - Peripheral lock at oral intake
- **Pain management:**
  - Stepwise and multimodal to minimize opioid administration.
  - NSAIDs PO Opioids prn (per current protocol in Epic)
  - IV regimens only for continued pain despite oral regimen
  - Local opioids for vaginal and rectal pain after consecutive reconstructive procedure
  - Muscle relaxants for myofascial pain due to positioning

- **Catheters:** Early catheter removal with spontaneous void vs voiding trial

POSTOPERATIVE VOIDING FUNCTION MANAGEMENT:

- **Proof of spontaneous void:** benign uncomplicated MIS hysterectomy with no reconstruction. Remove Foley upon arrival on the floor.
- **Proof of spontaneous void:** MIS hysterectomy with paraurethral bulking. Remove Foley upon arrival on the floor.
- **Required VT:** MIS hysterectomy with reconstruction or Mid Urethral Sling.
- **DC with indwelling catheter**: MIS hysterectomy with urinary tract injury

VOIDING TRIAL (VT) NURSING PROTOCOL:

- When patient is ambulatory and awake, instill 300 ml of STERILE SALINE via the lumen of the Foley catheter into the bladder via gravity drainage or slow push. If patient has discomfort stop at the amount you were able to instill.
- Clamp the Foley
- Deflate the catheter balloon and remove the catheter from the bladder.
- Record the amount of saline that was instilled into the bladder.
- Immediately or not later than 20 min assist the patient to void. Measure immediately Post Voiding Residual volume PVR) with US machine.
- Record the amount instilled, the amount voided and PVR.
- Passed VT: Voided > 150 ml and PVR < 150.

- If the patient fails the voiding trial, teach patient or family member straight intermittent catheterization (CIC).
- If patient/ family member fails to do CIC, place Foley catheter, and communicate to surgeon.
- Upon discharge of patient with CIC, provide patient with the hat and instruct to stop CIC after two consecutive PVRs < 150 ML and voided volumes > 150 ml.

DISCHARGE PATIENT:

Based on PADS -cumulative index that measures the home-readiness of patients based on five major criteria. Maximum score =10, score > 9- fit for discharge. **This scoring can help to measure readiness for discharge and standardize communication between nursing, resident and attending.**

Vital Signs • Within 20% of preoperative baseline • Within 20-40% of preoperative baseline • 49% 0f preoperative baseline	 2 1 0
Surgical bleeding • Minimal: Does not require dressing change • Moderate: Requires up to two dressing change with no further bleeding • Severe: requires three dressing change with continuous bleeding	 2 1 0
Pain score • VAS = 0-3: no pain or minimal pain before discharge • VAS = 4-6: the patient has moderate pain • VAS =7-10: the patient has severe pain	 2 1 0

Activity level • Steady gate, there is no dizziness, consistent with preoperative level. • Requires assistance. • Unable to ambulate/assess	 2 1 0
Nausea, vomiting. • Minimal: no treatment required • Moderate: treatment effective • Severe: treatment not effective	 2 1 0

Pathway Information

OWNERS(S): Beth Leary, Jackie Friedman, Casey Parini, Nima Shah, Katie Kowalczyk, Raisa Platte

CONTRIBUTOR(S): Robyn Hubbard, Chris Hummel, Kirsten Phillips, Ashley Storms, April Abeyewardene, Adam Blickley

EXPERT IMPROVEMENT TEAM (EIT): GYN EIT

CLINICAL PRACTICE COUNCIL (CPC): Women's Health

CPC APPROVAL DATE: March 21, 2023

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