Dr. Robert Bree Collaborative Background

The Dr. Robert Bree Collaborative was established in 2011 by Washington State House Bill 1311 “...to provide a mechanism through which public and private health care stakeholders can work together to improve quality, health outcomes, and cost effectiveness of care in Washington State.” The Bree Collaborative was modeled after the Washington State Advanced Imaging Management (AIM) project and named in memory of Dr. Robert Bree, a pioneer in the imaging field and a key member of the AIM project.

Members are appointed by the Washington State Governor and include public health care purchasers for Washington State, private health care purchasers (employers and union trusts), health plans, physicians and other health care providers, hospitals, and quality improvement organizations. The Bree Collaborative is charged with identifying up to three health care services annually that have substantial variation in practice patterns, high utilization trends in Washington State, or patient safety issues. For each health care service, the Bree Collaborative identifies and recommends best-practice evidence-based approaches that build upon existing efforts and quality improvement activities aimed at decreasing variation. In the bill, the legislature does not authorize agreements among competing health care providers or health carriers as to the price or specific level of reimbursement for health care services. Furthermore, it is not the intent of the legislature to mandate payment or coverage decisions by private health care purchasers or carriers.

See Appendix A for a list of current Bree Collaborative members.

Recommendations are sent to the Washington State Health Care Authority for review and approval. The Health Care Authority (HCA) oversees Washington State’s largest health care purchasers, Medicaid and the Public Employees Benefits Board Program, as well as other programs. The HCA uses the recommendations to guide state purchasing for these programs. The Bree Collaborative also strives to develop recommendations to improve patient health, health care service quality, and the affordability of health care for the private sector but does not have the authority to mandate implementation of recommendations.

For more information about the Bree Collaborative, please visit: www.breecollaborative.org.

Hysterectomy is a common surgical procedure for women. However, there is a high degree of variation in rates of the procedure, indicating a lack of appropriateness standards and potential overuse. The Bree Collaborative elected to address this topic and convened a workgroup to develop recommendations that met from March 2017 – XXX.

See Appendix B for the Hysterectomy workgroup charter and a list of members.
Problem Statement

Hysterectomy is one of the most frequent surgical procedures in the United States with approximately 600,000 performed annually.\(^1\) Hysterectomy rates are highly variable by hospital and by region, being one of the first published surgical procedures with rates differing primarily based on location, indicating overuse.\(^2\) Cost of hysterectomy also varies by region, from an average of $9,661 (range $6,243 - $15,335) in the Mid-Atlantic to $22,534 (range $15,380 - $33,797) in the Pacific region.\(^3\) Rates are also shown to be highly variable based on location in Washington State through Washington Health Alliance analysis.\(^4\)

The most common indication for hysterectomy is uterine fibroids with 150,000 – 200,000 cases annually. Other indications include abnormal menstrual bleeding, benign neoplasm or ovarian cyst, gynecologic cancer, endometriosis, chronic pelvic pain, and uterine prolapse.\(^5,6\) Types of hysterectomy include:\(^7\)

- Total – removal of entire uterus including the cervix
- Supracervical (subtotal or partial) – removal of the upper part of the uterus not including the cervix (must be done laparoscopically or abdominally)
- Radical – removal of the entire uterus including the cervix and structures around the uterus (e.g., ovaries, fallopian tubes), typically in cases involving cancer

However the procedure has a risk of complications including bladder or bowel injury, bleeding, urinary incontinence, wound infection, bleeding, blood clots, nerve and tissue damage, among others.\(^5,7\)

Satisfaction rates tend to be comparable to medical management, with higher patient-reported sexual functioning after less invasive procedures (i.e., uterine artery embolization compared to hysterectomy after 2 years).\(^8,9\)

Disparities

Racial and ethnic differences in the rate, route, and probability of complications are also commonly found, partially due to differences in disease burden from fibroids and endometriosis.\(^10\) Black women are significantly more likely to undergo hysterectomy for fibroids, potentially due to larger fibroid size and greater numbers, however black women are also more likely to experience complications as compared to white non-Hispanic women.\(^11\) White women are also more likely to undergo minimally invasive hysterectomy (i.e., vaginal, laparoscopic, or robotic-assisted procedures) vs. laparotomy or open surgery as compared to Hispanic and black patients.\(^8\)

Recommendation Development

The workgroup reviewed clinical practice guidelines, available evidence, and relied on clinical expertise where evidence was lacking. The two primary workgroup areas of focus were on implementing broad use of appropriateness standards, or a trial of medical management of symptoms prior to considering hysterectomy, and use of minimally invasive procedures. Use of medical management or alternatives to hysterectomy for abnormal uterine bleeding, uterine fibroids, endometriosis, or pelvic pain are
underutilized, especially for women over 40, and in one analysis in Michigan, not utilized in 38% of women.12

**Inclusions**
- Uterine leiomyoma (Fibroids)
- Abnormal menstrual bleeding
  - Benign Neoplasm or Ovarian Cyst
- Endometriosis
- Uterine prolapse
- Adenomyosis
- Pain not due to endometriosis

**Exclusions**
- Pregnancy
- Cancer
  - Emergency situations (e.g., due to trauma)

**Consulted Guidelines:**
I. Assessment and Medical Management: Appropriateness Standard

1. Full gynecologic workup
   a. Confirmation of lack of viable pregnancy
   b. Discuss comorbidities

2. Document impairment.

3. Patient engagement. Shared decision making using a patient decision aid approved by the Washington State Health Care Authority, if available. If not available, use a patient decision aid that includes a conversation about the patient’s goals of care including desire for future pregnancy and gains patient understanding of the risks and benefits of medical management and alternative therapies for the specified condition.13,14

4. Document trial of medical management unless symptoms are severe. Use checklist by indication (e.g., uterine leiomyoma or fibroids, abnormal menstrual bleeding, benign neoplasm or ovarian cyst, endometriosis, uterine prolapse, adenomyosis, and/or pain not due to endometriosis) as defined in Appendix C.

5. Document failure of medical management.
   a. Patient engagement after failure of medical management. Discussion of the approach should include which route will maximize benefits and minimize risks based on the patient’s individual clinical situation.15 Decision on route should be made by both patient and clinician.
II. Fitness for Surgery: Appropriateness Standard

Prior to surgery, candidates for hysterectomy should meet minimal standards to ensure safety and commitment to participate actively in return to function. If a patient does not meet fitness for surgery standards the case should be discussed in a multidisciplinary conference with members relevant to the standard in question as chosen by the surgeon.

A) Document requirements related to patient safety

1. Patient should meet the following minimum requirements prior to surgery:
   a. Body Mass Index less than 40
   b. Avoidance of nicotine for at least four weeks pre-operatively
   c. Screen for alcohol overuse, with management plan if screen is positive
   d. Hemoglobin A1c less than 8% in patients with diabetes
   e. Control of opioid dependency, if present and when possible consider tapering off opioids prior to surgery
   f. Adequate nutritional status to ensure healing
   g. Absence of dementia that would interfere with recovery – performing hysterectomy for a patient with such dementia requires preauthorization, informed consent of a patient’s durable power of attorney for health care, and a contract with the patient’s primary care provider
   h. Absence of severe disability from a condition unrelated to hysterectomy indication that would severely limit benefits of surgery
   i. Absence of an active, life-limiting condition that would likely cause death before recovery from surgery
   j. Adequate peripheral circulation to ensure healing
   k. Sufficient liver function to ensure healing
   l. Screen for depression with management plan if positive
   m. Develop pre-operative plan for post-operative return to function

B) Document patient engagement

1. Patient should designate a personal care partner who actively participates in the following:
   a. Surgical consultation
   b. Pre-operative evaluation
   c. In-hospital care
   d. Post-operative care teaching
   e. Patient’s home care and exercise program

2. If patient cannot or will not designate a care partner, the surgical team should discuss how to best support the patient post-surgery

3. Patient should be encouraged to participate in end-of-life care planning, including completion of an advance directive and designation of durable power of attorney for health care.
C) **Document optimal preparation for surgery**  
1. Perform pre-operative history, physical, and screening lab tests based on review of systems:  
   a. Evaluate for cardiac and pulmonary fitness  
   b. If indicated, obtain basic lab profile, plasma glucose, prothrombin time, complete blood count, urinalysis with culture  
   c. Treat nasal passages for possible staphylococcal carrier state or culture nasal passages and treat if positive  
   d. Ensure A1c 8% or less in patients with diabetes  
   e. Screen for predictors of delirium  

2. Obtain relevant consultations:  
   a. Evaluate for good dental hygiene with dental consultation as necessary  
   b. Refer to anesthesia for pre-operative assessment (e.g., sleep apnea, pulmonary hypertension)  
   c. Request additional consults as necessary  

3. Provide education regarding self-care at home following discharge, (e.g., expected emotional response to surgery, expectations of surgical outcomes)  

D) **Discuss the case in a multidisciplinary conference with members as defined by the surgeon if patient does not meet fitness for surgery standards.**
III. Surgical Procedure

Text in *italics* from standard Bree Collaborative bundled payment model

We encourage following the enhanced recovery after surgery (ERAS) protocol and using a minimally invasive approach, when appropriate. The ERAS protocol fits well with gynecological surgery and has been associated with reduced opioid use, length of stay, cost; stable readmission and incidence of side effects, and improved patient satisfaction.16,17 We also recommend using a minimally invasive approach, if not contraindicated. Multiple studies have shown a vaginal approach to have fewer complications (e.g., infection, urinary tract injuries) and a shorter hospital stay.15,18,19 If a vaginal approach is not possible, a laparoscopic approach is recommended over abdominal surgery.20 We recommend using the decision tree profiled in by Schmidt et al 2017 to facilitate a minimally invasive approach.21 Outcomes of robotic surgery are similar to that of laparoscopic hysterectomy however robotic surgery is associated with longer operating room times and higher cost and is not recommended.

1. Prior to surgery
   a. Minimize preoperative fasting
   b. Avoid bowel preparation
   c. Preemptive analgesia22
   d. Prophylactic antibiotics (*Administer appropriate peri-operative course of antibiotics according to guidelines set forth in the Surgical Care Improvement Project (SCIP): SCIP-Inf-1b, 2b, 3b; CMS Measure 1, 2, 3*)
   e. Use appropriate skin prep by patient prior to surgery

2. Use a minimally invasive approach, if not contraindicated.
   a. Using the decision tree from Schmitt et al.

3. Limit use of nasogastric tubes and drains

4. Thromboprophylaxis (*Minimize risk of deep venous thrombosis and embolism according to guidelines set forth in the SCIP VTE-2, CMS Measure 4*)

5. Optimize pain management and anesthesia with multimodal analgesia to minimize opioid use (*Use multimodal anesthesia management to minimize sedation and encourage early extubation and recovery*)
   a. Minimize use of opioids and prescribe according to Washington State Agency Medical Director’s Group Opioid Prescribing Guidelines, 2015 Interagency Guidelines or more recent if available)

6. Early removal of urinary catheters (*Restrict use of urinary catheter to less than 48 hours per SCIP guidelines: SCIP-Inf-9*)

7. Prokinetics to enhance gastrointestinal motility

8. Early enteral nutrition
B) **Elements of optimal surgical process**

1. **Optimize pain management and anesthesia:**
   a. Use multimodal anesthesia management to minimize sedation and encourage early extubation and recovery
   b. Minimize use of opioids and prescribe according to *Washington State Agency Medical Director’s Group Opioid Prescribing Guidelines*, 2015 Interagency Guidelines or more recent if available

2. **Minimize risk of infection:**
   a. Administer appropriate peri-operative course of antibiotics according to guidelines set forth in the Surgical Care Improvement Project (SCIP): SCIP-Inf-1b, 2b, 3b; CMS Measure 1, 2, 3
   b. Restrict use of urinary catheter to less than 48 hours per SCIP guidelines: SCIP-Inf-9
   c. Use appropriate method for hair removal; avoid shaving: SCIP-Inf-6
   d. Use appropriate skin prep by patient prior to surgery

3. **Minimize risk of bleeding and low blood pressure:**
   a. Administer standardized protocols using appropriate medications to limit blood loss
   b. Use institution-based standard IV fluid and inotrope protocols including those implemented by RNs post-operatively with appropriate supervision and monitoring

4. **Minimize risk of deep venous thrombosis and embolism according to guidelines set forth in the SCIP VTE-2, CMS Measure 4

5. **Minimize risk of hyperglycemia:** Use standardized protocol to maintain optimal glucose control, SCIP-Inf-4
IV. Post-Surgical Care and Follow-Up

1. **Early postoperative mobilization**

2. **Patient education and care plan.** Provide the patient and family/caregiver with care plan including:
   a. Signs or symptoms that warrant follow up with provider
   b. Guidelines for emergency care and alternatives to emergency care
   c. Contact information for surgeon and primary care provider

3. **Reconcile medications**

4. **Discharge planning**

5. **Follow-up appointments**
   a. Schedule return visits as appropriate.
      - **If opioid use exceeds six weeks, develop a formal plan for opioid management**

6. **Measurement**

A) **Standard process for post-operative care**
   1. Utilize a rapid recovery track to mobilize patients on the day of surgery:
   2. Patients that meet Medicare standards for placement in a skilled nursing facility will have their post-operative nursing and rehabilitative needs addressed
   3. Hospitalists or appropriate medical consultants will be available for consultation to assist with complex or unstable medical problems in the post-operative period

B) **Use standardized hospital discharge process aligned with Washington State Hospital Association (WSHA) toolkit**
   1. Arrange follow up with care team according to WSHA toolkit
   2. Evaluate social and resource barriers based on WSHA toolkit
   3. Reconcile medications
   4. Provide patient and family/caregiver education with plan of care:
      a. Signs or symptoms that warrant follow up with provider
      b. Guidelines for emergency care and alternatives to emergency care
      c. Contact information for orthopedist and primary care provider
   5. Ensure post-discharge phone call to patient by care team to check progress, with timing of call aligned with WSHA toolkit

C) **Arrange home health services**
   1. Provide the patient and care partner with information about home exercises that should be done three times daily
   2. Arrange additional home health services as necessary

D) **Schedule follow up appointments**
   1. Schedule return visits as appropriate
   2. **If opioid use exceeds six weeks, develop a formal plan for opioid management**
Stakeholder Actions and Quality Improvement Strategies

Patients

www.acog.org/Patients/FAQs/Surgery-for-Pelvic-Organ-Prolapse

Primary Care Practices and Systems (including Primary Care Providers)

Review Table 1

Health Plans

Employers

Washington State Health Care Authority

- Certify patient decision aids for hysterectomy

Measurement

No relevant HEDIS 2017 measures

ACOG proposed measures:

- Emergency room visits, inpatient admissions, and outpatient hospital visits for conditions related to the hysterectomy within 45 days of the procedure including:
  - Disruption of the wound
  - Gastrointestinal (GI) complaints and complications (nausea, vomiting, bowel obstruction, etc.)
  - Hemorrhage
  - Infection
  - UTI
  - Pain
  - Post-procedural circulatory complications (including PE/DVT)
  - Post-procedural respiratory complications (pneumonia, etc.)
  - Nerve injury
  - Urine retention

- Use of non-procedural therapy for patients under age 55 with abnormal uterine bleeding (AUB) and fibroids in the year prior to the hysterectomy.

- Oophorectomy in women under age 65 without a family history of relevant cancer. (not relevant?)

- Patient-reported outcomes
  - Pain
  - Regret
  - Fatigue
  - Sexual function, and
  - Satisfaction
## Appendix C: Treatment Options by Indication

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<tr>
<th>Indication</th>
<th>Medical Management</th>
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| **Uterine Leiomyoma (Fibroids)**<sup>24</sup> | • Confirmation of diagnosis through cross-sectional imaging (preferably ultrasound or MRI)  
• Confirmation of absence of an active infection  
• Trial of hormonal management, unless contraindicated  
• Uterine artery embolization  
• Myomectomy, if amenable based on clinical opinion |
| **Abnormal Menstrual Bleeding**<sup>25</sup> | • Assessment for signs if hypovolemia and anemia  
• Assessment for hemodynamic instability  
• Classification of cause as structural or nonstructural using PALM-COEIN system (Polyp, Adenomyosis, Leiomyoma, Malignancy and hyperplasia – Coagulopathy, Ovulatory dysfunction, Endometrial, Iatrogenic, Not yet classified)  
• Trial of hormonal management, unless contraindicated.  
• Endometrial ablation (not a first-line therapy) |
| **Structural**              |                                                                                                                                                                                                                                                                                        |
| **Non-structural**          |                                                                                                                                                                                                                                                                                        |
| **Endometriosis**<sup>26,27</sup> | • Trial of Danazol  
• Trial of hormonal management, unless contraindicated  
• Surgical ablation  
• Laparoscopic surgery |
| **Uterine Prolapse**<sup>28,29,30</sup> | • Assess urinary incontinence  
• Consider therapeutic alternatives including pelvic floor exercises and pessaries. Advise on risks of long-term pessary use and do not use if there is evidence of an active infection, severe ulceration, silicone or latex allergy, or if the patient is unlikely to follow-up  
• Colpopoiesis |
| **Adenomyosis**             | • Trial of nonsteroidal anti-inflammatory drug (NSAID)  
• Trial of hormonal management, unless contraindicated  
• Uterine artery embolization |
| **Pain (not due to endometriosis)**<sup>26</sup> | • Use a multidisciplinary approach starting with through investigation with gynecologic examination, pelvic ultrasound, evaluation of other sources (e.g., urinary, gastrointestinal, musculoskeletal)  
• Trial of:  
  o Non-steroidal anti-inflammatory drugs  
  o Oral contraceptives  
  o Danazol |
References


7. www.acog.org/Patients/FAQs/Hysterectomy


23 www.acog.org/About-ACOG/ACOG-Departments/Payment-Reform/APMs/BenignHyst