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

Exclusions
• Pregnancy
• Cancer

Consulted Guidelines:
Appropriateness Standards: Assessment and Medical Management

1. **Full gynecologic workup**
   a. Confirmation of lack of viable pregnancy
   b. Age
   c. Comorbidities

2. **Measurement**
   a. Pain

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 for the specified condition and discussion of potential for hysterectomy using a minimally invasive approach.\textsuperscript{13,14}

4. **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) as defined in Appendix C.

5. **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.\textsuperscript{15} Decision on route should be made by both patient and clinician.
Surgical Procedure

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.\textsuperscript{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.\textsuperscript{15,18,19} If a vaginal approach is not possible, a laparoscopic approach is recommended over abdominal surgery.\textsuperscript{20} We recommend using the decision tree profiled in by Schmidt et al 2017 to facilitate a minimally invasive approach.\textsuperscript{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 analgesia\textsuperscript{22}

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

2. **Limit use of nasogastric tubes and drains**

3. **Thromboprophylaxis**

4. **Prophylactic antibiotics**

5. **Optimize pain management and anesthesia with multimodal analgesia to minimize opioid use**

6. **Early postoperative mobilization**

7. **Early removal of urinary catheters**

8. **Prokinetics to enhance gastrointestinal motility,**

9. **Early enteral nutrition**
Post-Surgical Care and Follow-Up

1. **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

2. **Reconcile medications**

3. **Discharge planning**

4. **Follow-up appointments**
   a. Schedule return visits as appropriate.

5. **Measurement**
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:23
- 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: Medical Management by Indication

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<tr>
<th>Indication</th>
<th>Medical Management</th>
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| Uterine Leiomyoma (Fibroids)     | • Confirmation of diagnosis through cross-sectional imaging (preferably ultrasound or MRI)  
                                         • Confirmation of absence of an active infection  
                                         • Uterine artery embolization  
                                         • Myomectomy, if amenable based on clinical opinion |
| Abnormal Menstrual Bleeding      | • 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 including progestin therapy and combined hormonal contraception (e.g., IV conjugated equine estrogen, combined oral contraceptives, oral progestins, levonorgestrel IUD), unless contraindicated.  
                                         • Endometrial ablation (not a first-line therapy) |
| Benign Neoplasm or Ovarian Cyst  | • Pelvic ultrasound                                                                                                                                 |
| Endometriosis                    | • Use oral contraceptives, progesterone-only oral contraceptives, and medroxyprogesterone acetate (Provera) as first-line therapies  
                                         • Use gonadotropin-releasing hormone analogues as second or third line agents as they provide equivalent pain relief as oral contraceptives and progestogens but cause more side effects.  
                                         • See Diagnosis and Management of Endometriosis |
| Uterine Prolapse                 | • 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. |
| Adenomyosis                      | • Uterine artery embolization                                                                                                                                 |
| Pain                             | • 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  
                                           o High-dose progestins or  
                                           o GnRH analogues |
References

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