Pelvic Inflammatory Disease (PID)
Clinical Pathway Synopsis

PID: Diagnostic Algorithm

Goal:
Increase timely treatment of PID to avoid chronic pelvic pain and infertility

Inclusion Criteria:
Any of the following
- Lower abdominal/pelvic pain outside of menses
- Abnormal vaginal discharge
- Breakthrough/abnormal bleeding
- Dyspareunia (painful sexual intercourse before, during, or after, especially in the pelvic or genital region)

Exclusion Criteria:
- Pregnancy (engage SW and/or SCAN if needed)
- Mullerian anomalies

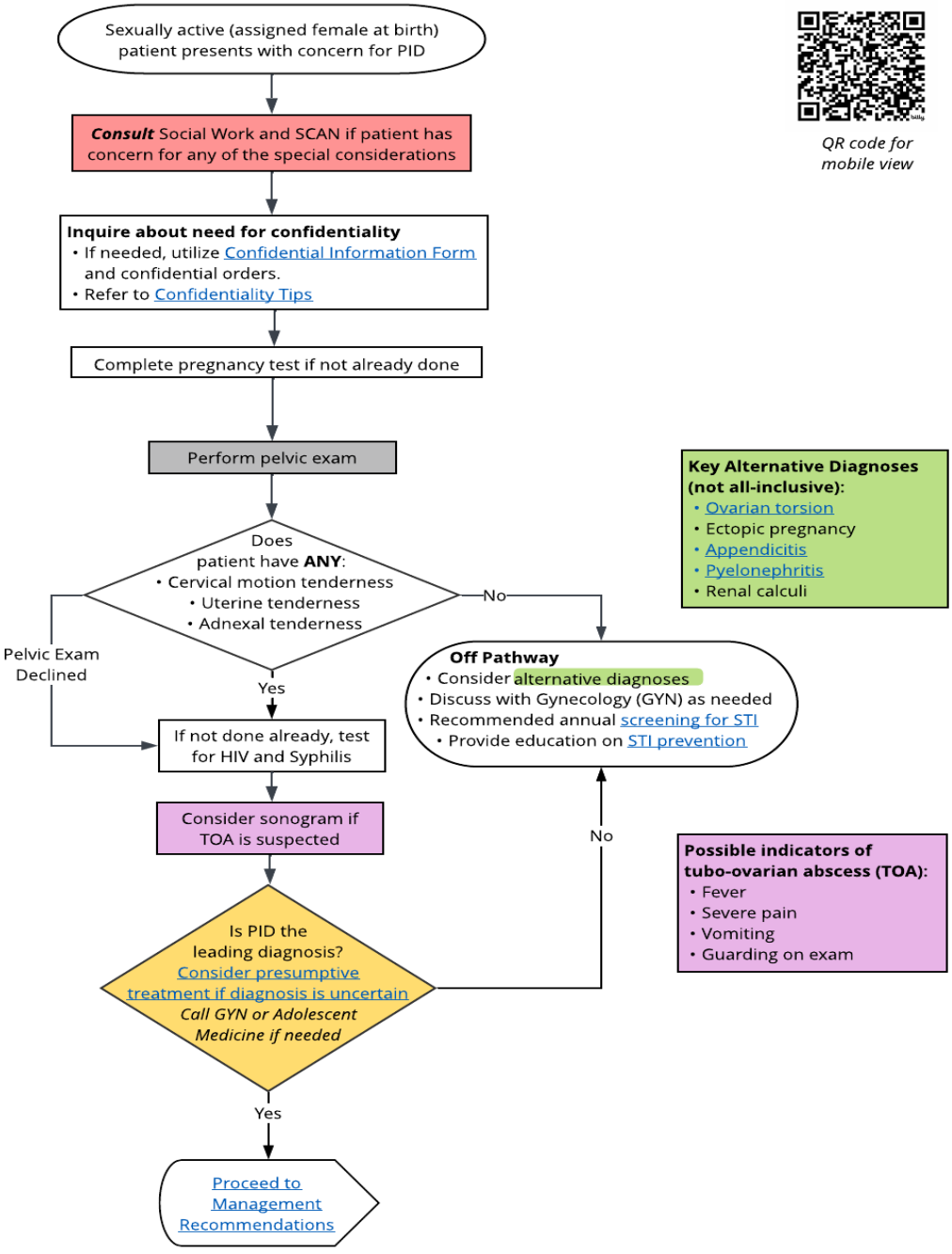
Special Considerations:
Required consultation for Social Work ***-AND-*** SCAN when:
- Concern for abuse/assault
- Concern for human trafficking
- Prepubertal patient or patient < 13 years old with STI
- If concern about partner age for patients < 18 years
- Patient has developmental delay

Pelvic Exam:
Step 1: *Obtain* patient consent
If patient does not consent to pelvic exam, proceed to step #3 below
Step 2: *Perform* bimanual exam (use of speculum as indicated)
Nuances to Consider for Pelvic Exam
Step 3: *Collect* Urogenital Wet Mount and PCR urogenital swab ***-or-*** first catch urine for Gonorrhea, Chlamydia, and Trichomonas

If desired by patient, use confidential orders

Risk Factors:
Any of the following increases the likelihood of PID:
- Oral temperature > 101^0 F (> 38.3^0 C)
- Mucopurulent discharge or cervical friability
- Abundant white blood cells on Urogenital Wet Mount (> 10 hpf)
- Elevated ESR
- Elevated CRP
- Positive infection for gonorrhea or chlamydia

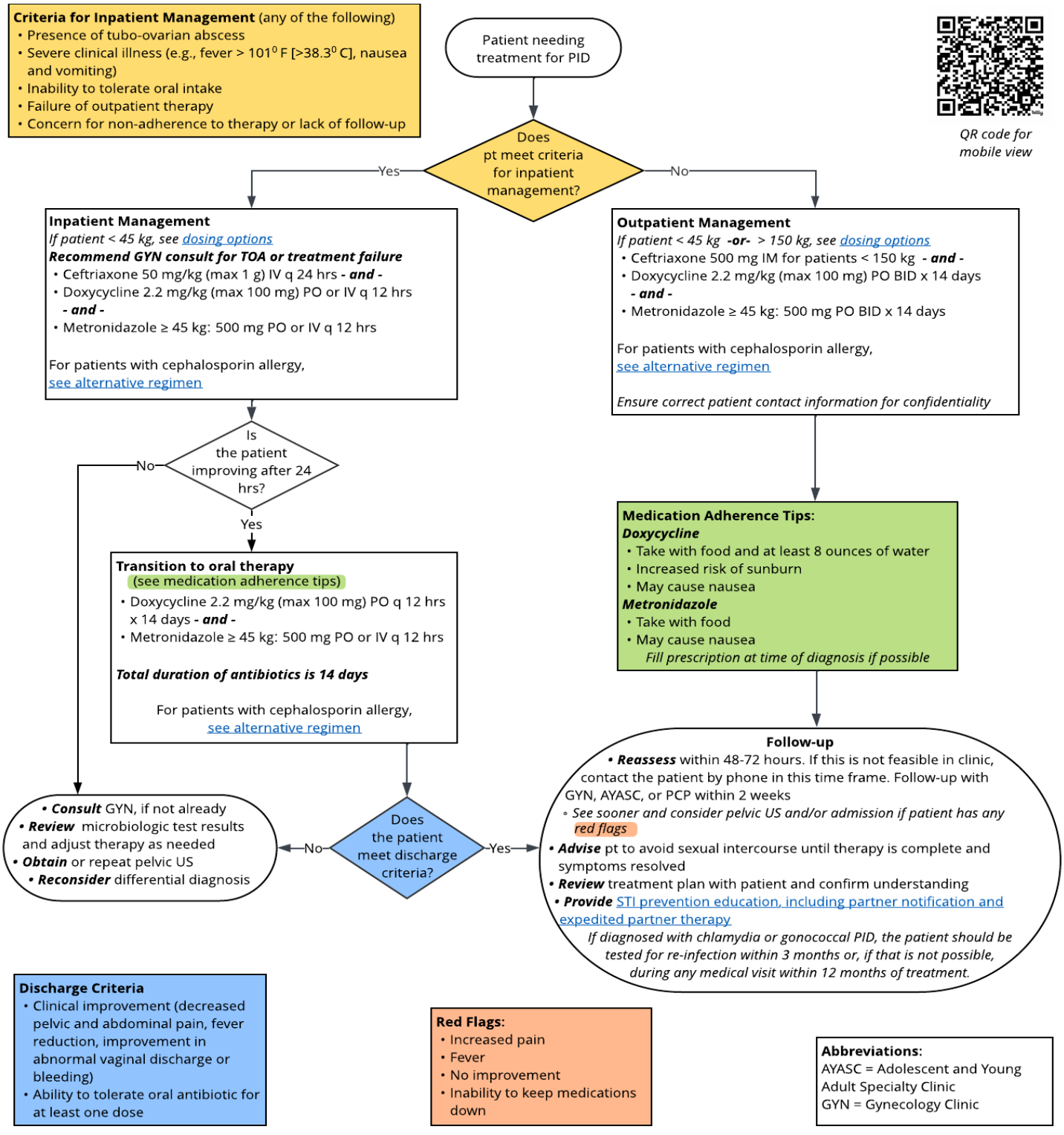
If the cervical discharge appears normal with no WBCs on Urogenital Wet Mount, the diagnosis of PID is unlikely



QR code for mobile view

These clinical pathways do not establish a standard of care to be followed in every case. It is recognized that each case is different, and those individuals involved in providing health care are expected to use their judgment in determining what is in the best interests of the patient based on the circumstances existing at the time. It is impossible to anticipate all possible situations that may exist and to prepare a clinical pathway for each. Accordingly, these clinical pathways should guide care with the understanding that departures from them may be required at times.

PID: Management Algorithm



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Objective of Clinical Pathway

This pathway aims to provide care standards for patients with suspected pelvic inflammatory disease (PID) and guidance for its management, including assessment, imaging, treatment, and follow-up care.

Background

PID can be challenging to diagnose due to considerable variation in presenting signs and symptoms. Even mild or asymptomatic PID can lead to long-term sequelae, including infertility (CDC, 2021). Pelvic pain is the most common symptom for PID and can present as mild to sudden onset of lower abdominal pain and profound dyspareunia in other patients (Al-Kuran et al., 2023). Other common findings include unusual bleeding from the vagina or unusual vaginal discharge (Jennings & Krywko, 2023). Therefore, clinicians should have a low threshold for clinical diagnosis and provide presumptive treatment while waiting for test results (Al-Kuran et al., 2023).

Pelvic inflammatory disease (PID) is an inflammatory disease in the upper female genital tract affecting the uterus, fallopian tubes, and/or ovaries. Primarily considered a sexually transmitted infection (STI), PID often results from *Neisseria gonorrhoeae* or *Chlamydia trachomatis.* However, it can also arise from anaerobes, respiratory and enteric bacteria, and organisms linked to bacterial vaginosis (Chen et al., 2021; Ness et al., 2005; Wiesenfeld et al., 2021; Workowski et al., 2021). Approximately one million women are diagnosed with PID annually in the United States, with 1% to 2% being sexually active women under 25 years of age (Greydanus et al., 2022; Kreisel et al., 2017; Yusuf & Trent, 2020).

According to the United States Preventive Services Task Force (USPSTF), there are an estimated 20 million new bacterial and viral STIs each year in the United States, with half occurring in individuals aged 15 to 24. Upper genital tract infections can lead to inflammation, abscess formation, tubal scarring, or obstruction. If untreated, PID may result in complications of infertility, chronic pelvic pain, ectopic pregnancy, and recurrence (Greydanus et al., 2022; CDC, 2021; Jennings & Krywko, 2023; Yusaf & Trent, 2023). Screening and treating sexually active patients for STIs reduces their risk for PID (CDC, 2021). In accordance with the CDC Sexually Transmitted Infections Treatment Guidelines, the PID Clinical Pathway Committee aims to address these gaps in providing standardized, evidence-based care, including guidance on diagnostics, treatment, and follow-up, and quick access to resources for both providers and patients.

Target Users

- Physicians (Ambulatory, Urgent Care, Emergency Medicine, Hospital Medicine, Adolescent Medicine, Gynecology, Fellows, Residents)
- Physician Assistants
- Nurse Practitioners
- Nurses

Target Population

Inclusion Criteria

- Sexually active (assigned female at birth) patient with any of the following:
    - Lower abdominal/pelvic pain
    - Abnormal vaginal discharge
    - Breakthrough/abnormal vaginal bleeding
    - Dyspareunia

Exclusion Criteria

- Pregnancy
- Mullerian anomalies
- Suspicion for alternative diagnosis
    - Ovarian torsion
    - Ectopic pregnancy
    - Appendicitis
    - Pyelonephritis
    - Renal calculi

AGREE II

The Centers for Disease Control (CDC) national guideline on sexually transmitted infections provided guidance to the Pelvic Inflammatory Disease Clinical Pathway Committee (Workowski et al., 2021). See Table 1 for AGREE II.

Table 1
AGREE II Summary for the CDC Guideline on Sexually Transmitted Infections (2021)

Domain	^Percent Agreement	Percent Justification^
Scope and purpose	100%	The guideline's aim, the clinical questions, and the target populations **were** identified.
Stakeholder involvement	75%	The appropriate stakeholders **developed** the guideline and represented the views of its intended users. However, there was no discussion in the text about specific views or preferences outside of treatment preference once an STI/STD is diagnosed.
Rigor of development	76%	The process used to gather and synthesize the evidence, the methods to formulate the recommendations, and the updated guidelines **were** explicitly stated. However, the guideline developers did not provide a process for updating the guidelines.
Clarity and presentation	89%	The guideline recommendations **are** clear, unambiguous, and easily identified. Different management options are also presented.
Applicability	68%	The guideline addressed barriers and facilitators to implementation, strategies to improve utilization, and resource implications. It **did not** mention any auditing or monitoring criteria.
Editorial independence	100%	Competing interests did not bias the recommendations.
Committee's recommendation for guideline use	Yes	This guideline contains detailed information developed by a large number of professionals and supported by a diligent and systematic review of the literature. It includes an overarching scope intended to guide providers in global STI practice.

Note: Four EBP Scholars completed the AGREE II on this guideline.
^ Percentage justification is an interpretation based on the Children's Mercy EBP Department standards.

Practice Recommendations

Please refer to the CDC's Sexually Transmitted Infections and Treatment Clinical Practice Guideline section for Pelvic Inflammatory Disease (Workowski et al., 2021) for full practice recommendations, evaluation, and treatment recommendations. The CDC guidelines regarding practice recommendations were not deviated from, but logistical processes specific to Children's Mercy were added.

Recommendation Specific for Children's Mercy

There were no deviations from the CDC guidelines regarding practice recommendations, but logistical processes specific to Children's Mercy were added. Variations/Additions include:

- Algorithms for diagnosis and management (i.e., PID Diagnostic and PID Management)
- Subspeciality consults identified for provider resource
- Patient education and local resources
- Guidance on performing pelvic exams
- Guidance on maintaining patient confidentiality when desired by the patient

Measures

- Views of the clinical pathway website

Value Implications

The following improvements may increase value by reducing healthcare and non-monetary costs (e.g., missed school/work, loss of wages, stress) for patients and families and reducing costs and resource utilization for healthcare facilities.

- Decreased risk of underdiagnosis
- Decreased risk of missed treatment
- Decreased unwarranted variation in care

Organizational Barriers and Facilitators

Potential Barriers

- Variability of an acceptable level of risk among providers
- Variability of STI screening processes among different care settings
- Variable knowledge of evidence-based recommendations among providers
- Challenges with follow-up faced by some families

Potential Facilitators

- Collaborative engagement across care continuum settings during clinical pathway development
- Integration with the existing STI Clinical Pathway
- Anticipated high rate of use of the clinical pathway
- Access to patient education materials

Bias Awareness

This pathway aims to recognize bias awareness in social determinants of health and minimize healthcare disparities while realizing that unconscious bias can contribute to these disparities. There are noted inequities in PID epidemiology and complications impacting minority women (Das et al., 2016; Gonullu et al., 2021; Leichliter et al., 2013).

Power Plans

- There are no associated power plans for PID

Associated Policies

- Chaperones for Physical Examination of Patients

Education Materials

- Pelvic Inflammatory Disease (PID) For Teen
  - Intended for all patients with PID
  - Found in Cerner under depart education
- Pelvic Inflammatory Disease (PID) For Parent
  - Intended for parents of patients diagnosed with PID
  - Found in Cerner under depart education
- Healthy Sexual Behaviors
  - Intended for all patients
  - Found on the PID Clinical Pathway website
  - Available in English
- Telling your partner you have an STD
  - Intended for all patients
  - Available through a link found on the PID Clinical Pathway website
  - Available in English and Spanish
- STDs (Sexually Transmitted Diseases)
  - Intended for all patients
  - Available through a link found on the PID Clinical Pathway website
  - Available in English and Spanish

Clinical Pathway Preparation

This pathway was prepared by the Evidence Based Practice (EBP) Department in collaboration with the Pelvic Inflammatory Disease Clinical Pathway Committee, composed of content experts at Children's Mercy Kansas City. If a conflict of interest is identified, the conflict will be disclosed next to the committee member's name.

Pelvic Inflammatory Disease Clinical Pathway Committee Members and Representation

- Rachel Whitfield, MSN, APRN, FNP-C | Adolescent Medicine | Committee Co-Chair
- Ashli Lawson, MD, MS | Gynecology | Committee Co-Chair
- Melissa Miller, MD | Emergency Medicine | Committee Member
- Maria Deza Leon, MD | Infectious Diseases | Committee Member
- George Phillips, MD, MBA, CAQSM, FAAP | General Academic Pediatrics | Committee Member
- Noelle Tran, DO | Emergency Medicine – Fellow | Committee Member
- Kedar Tilak, MD, MS | Infectious Diseases – Fellow | Committee Member
- Lauren Roth, MD | Gynecology – Fellow | Committee Member
- Amanda Styers, MSN, APRN, CPN | Committee Member

EBP Committee Members

- Kathleen Berg, MD, FAAP | Hospitalist, Evidence Based Practice
- Andrea Melanson, OTD, OTR/L | Evidence Based Practice

Clinical Pathway Development Funding

The development of this clinical pathway was underwritten by the following departments/divisions: Adolescent Medicine, Gynecology, Emergency Medicine, Infectious Diseases, General Academic Pediatrics, and Evidence Based Practice.

Conflict of Interest

The contributors to the PID Clinical Pathway have no conflicts of interest to disclose related to the subject matter or materials discussed.

Approval Process

- This pathway was reviewed and approved by the PID Committee, Content Expert Departments/Divisions, and the EBP Department, after which the Medical Executive Committee approved it.
- Pathways are reviewed and updated as necessary every 3 years within the EBP Department at CMKC. Content expert teams are involved with every review and update.

Review Requested

Department/Unit	Date Obtained
Adolescent Medicine	May 2025
Emergency Medicine	May 2025
Gynecology	May 2025
General Academic Pediatrics	May 2025
Infectious Diseases	May 2025
Evidence Based Practice	May 2025

Version History

Date	Comments
May 2025	Version one – developed algorithms and synopsis for diagnosis and management of PID following CDC guidelines

Date for Next Review

- May 2028

Implementation & Follow-Up

- Once approved, the pathway was presented to appropriate care teams and implemented. Care measurements will be assessed and shared with appropriate care teams to determine if changes need to occur.
- Education tools reviewed for health literacy.
- Education was provided to all stakeholders:
  - Nursing units where the PID Clinical Pathway is used
  - Departments of Adolescent Medicine, Emergency Medicine, Gynecology, General Academic Pediatrics, and Infectious Diseases
  - Resident physicians
- Additional institution-wide announcements were made via email, the hospital website, and relevant huddles.

Disclaimer

When evidence is lacking or inconclusive, options in care are provided in the supporting documents and the power plan(s) that accompany the clinical pathway.

These clinical pathways do not establish a standard of care to be followed in every case. It is recognized that each case is different, and those individuals involved in providing health care are expected to use their judgment to determine what is in the patient's best interests based on the circumstances at the time.

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