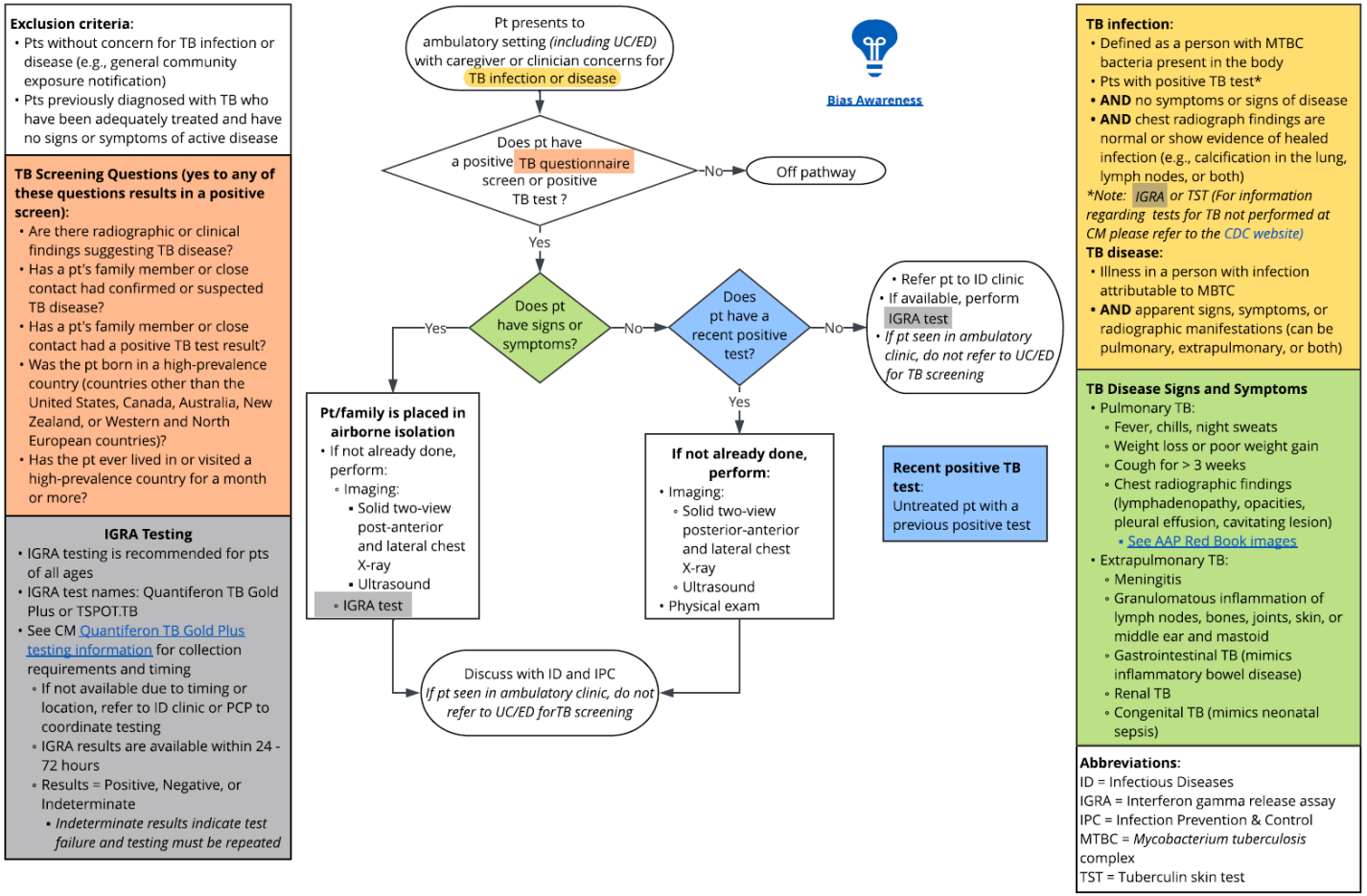
Tuberculosis (TB) Screening in the Ambulatory Setting
Clinical Pathway Synopsis

Tuberculosis (TB) Screening in the Ambulatory Setting Algorithm



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.

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Objective of Clinical Pathway
This pathway aims to guide the screening and follow-up of patients in ambulatory settings, including the Emergency Department and Urgent Care, who present with caregiver or clinician concerns for TB infection or disease. It provides a standardized approach to evaluating signs and symptoms, exposure and travel history, diagnostic testing, and appropriate referral to Infectious Diseases.

Background
The American Academy of Pediatrics (AAP) Red Book chapter on Tuberculosis (American Academy of Pediatrics, 2024) provides general guidance for TB screening including etiology, definitions of infection vs. disease, screening, diagnosis, testing methods, and general infection control and prevention practices. However, application of this guidance for ambulatory patients at Children's Mercy requires clarification of the recommended screening questions to improve usability, recommendations for patient referral to Infectious Diseases and Infection Prevention & Control, local testing requirements and timing, decisions for when isolation of patients and families is required, and consideration of previous test results.

Target Users
- Physicians (Emergency Medicine, Urgent Care, Primary Care, Ambulatory Clinics, Fellows, Residents)
- Advance Practice Providers
- Nurses

Target Population
Inclusion Criteria
- Patients presenting to the ambulatory setting with caregiver or clinician concerns for TB infection or disease

Exclusion Criteria
- Patients without concern for TB infection or disease (e.g., patients who received a general community exposure notification)
- Patients previously diagnosed with TB infection or disease who have been adequately treated and have no signs or symptoms of active disease

Practice Recommendations
The APA Red Book Chapter on Tuberculosis (American Academy of Pediatrics, 2024) was used to inform sections of this clinical pathway, including definitions of TB infection and disease, TB signs and symptoms, and TB screening questions. The following modifications were made to the screening questions:
- Addition of radiological or clinical findings suggestive of TB disease
- Expanded to family members and close contacts
- Changed positive tuberculin skin test to general positive TB test
- Specified travel to a high-prevalence country to include lived in or visited for a month or more

Additional Questions Posed by the Clinical Pathway Committee
No clinical questions for formal literature review were posed by the clinical pathway committee.

Recommendation Specific for Children's Mercy
In the absence of a clinical guideline, practice recommendations and the employment of selected tools and resources were based on the expert opinion of the TB Screening in the Ambulatory Setting Clinical Pathway committee.

Measures
- Utilization of the Tuberculosis Screening in the Ambulatory Setting Clinical Pathway

Value Implications

The following improvements may increase value by reducing healthcare costs 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.

- Increased frequency of appropriate screening, testing, referrals, and follow-up
- Increased rate of appropriate isolation of patients exhibiting signs or symptoms of TB disease
- Decreased frequency of screening inappropriate patients
- Decreased frequency of inappropriate testing
- Decreased unwarranted variation in care

Organizational Barriers and Facilitators

Potential Barriers

- Variability of acceptable level of risk among providers
- Variability of utilization of clinical pathway, including exclusion criteria and screening questions
- Challenges with follow-up faced by some families

Potential Facilitators

- Collaborative engagement across care continuum settings during clinical pathway development
- Anticipated high rate of use of the clinical pathway

Diversity/Equity/Inclusion

Our aim is to provide equitable care. Resources from the Centers for Disease Control and Prevention are linked in this pathway to ensure the patient's specific needs and challenges are addressed when screening for TB (Centers for Disease Control and Prevention, 2025).

Associated Policies

- Tuberculosis Control Plan
- Primary Care and Infectious Diseases Tuberculosis Screening Standing Orders

Clinical Pathway Preparation

This pathway was prepared by the Evidence Based Practice (EBP) Department in collaboration with the TB Screening in the Ambulatory Setting 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.

TB Screening in the Ambulatory Setting Clinical Pathway Committee Members and Representation

- Kathy Auten, MSN, RN, CIC | Infection Prevention & Control | Committee Chair
- Christelle Ilboudo, MD | Infectious Diseases, Infection Prevention & Control | Committee Chair
- Theodore Barnett, MD | Emergency Department | Committee Member
- Danny Dooling, MD | Med/Peds Resident | Committee Member
- Anik Patel, MD, FAAP | Emergency Department, Global Health | Committee Member
- Gretchen Range, RN, BSN, CPN | Urgent Care | Committee Member
- Douglas Swanson, MD | Infectious Diseases | Committee Member

EBP Committee Members

- Todd Glenski, MD, MSHA, FASA | Anesthesiology, Evidence Based Practice
- Megan Gripka, MT (ASCP) SM | Evidence Based Practice

Clinical Pathway Development Funding

The development of this clinical pathway was underwritten by the following departments/divisions: Emergency Department, Infection Prevention & Control, Infectious Diseases, Urgent Care, and Evidence Based Practice

Conflict of Interest

The contributors to the TB Screening in the Ambulatory Setting 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 TB Screening in the Ambulatory Setting Clinical Committee, Content Expert Departments/Divisions, and the EBP Department; after which they were approved by the Medical Executive Committee.
- 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
Emergency Department	March 2025
Evidence Based Practice	March 2025
Infection Prevention & Control	March 2025
Infectious Diseases	March 2025
Urgent Care	March 2025

Version History

Date	Comments
April 2025	Version one – Development of clinical pathway

Date for Next Review

- 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 was provided to all stakeholders:
  - Departments of Emergency Medicine, Urgent Care, Infection Prevention & Control, 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 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 clinical pathways for each. Accordingly, these clinical pathways should guide care with the understanding that departures from them may be required at times.

References

American Academy of Pediatrics. (2024). Tuberculosis. In Red Book: 2024–2027 Report of the Committee on Infectious Diseases (31st ed.). American Academy of Pediatrics. https://doi.org/10.1542/9781610027373-S3_019_015

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Primary Care and Infectious Diseases Tuberculosis Screening Standing Order (October 2024), Patient Care Services Standing Orders Manual. Children's Mercy Hospital, Kansas City, Missouri.

Tuberculosis Control Plan, (December 2024), *CMH Infection Prevention & Control Manual*. Children's Mercy Hospital, Kansas City, Missouri.