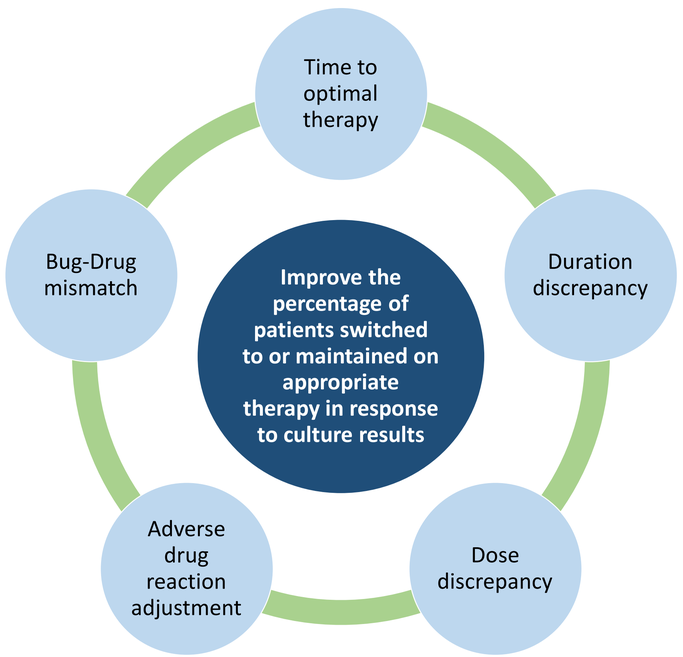
Impact of a Pharmacist-Managed Culture Queue on Appropriate Antibiotic Prescribing in an Ambulatory Clinic

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Background:

The majority of patients seen for acute infections in the Helena community present to urgent care, the emergency department, or primary care. At St. Peter's Health (SPH), there are robust antimicrobial stewardship (AMS) efforts which focus on inpatient, urgent care, and emergency department culture review and appropriate antimicrobial selection. While there have been multiple attempts to improve outpatient stewardship efforts at SPH, initiatives have not produced lasting results and currently SPH does not have a formal outpatient AMS presence to assess safety and efficacy of antimicrobial therapies prescribed by SPH primary care providers. Without a formal review of cultures and treatment selection, it is challenging to evaluate if treatment was warranted and if appropriate therapy was selected. The lack of formal outpatient stewardship efforts increases concern for growing antimicrobial resistance in the community and also puts SPH at risk for lack of regulatory compliance from accrediting organizations. Implementation of a pharmacist-driven outpatient culture queue with associated collaborative practice agreement (CPA) will help SPH assess current outpatient prescribing patterns and focus on optimizing future antimicrobial use, enhancing patient care, and ensuring regulatory compliance.

Objectives:



Timeline/Project Implementation:

Aug - Sept 2025: Phase 1:

- Identification of project and establishment of research team
- SBAR created and presented to SPH Informatics Committee to request informatics resources for queue build, approved
- Research proposal presented to the Primary Care Team, approved
- CPA developed, research proposal finalized

Oct-Dec 2025: Phase 2:

- Data collection form developed
- Retrospective data collection performed for comparator group (February 2025)
- Electronic culture queue developed in EHR
- Final research proposal and CPA presented to Primary Care Team and P&T Committee, approved

Jan-Mar 2026: Phase 3:

- Outpatient Culture Queue Implementation (project go-live) January 1st, 2026
- Prospective data collection (February 2026)

Apr-May 2026: Phase 4:

- Data analysis with comparison of retrospective and prospective data
- Present findings at state and regional meetings
- Develop and finalize manuscript suitable for publication

CPA & Project Overview:

CPA:

- Under the CPA, pharmacists are able to independently modify the prescribed therapy under the patient's primary care provider
  - The pharmacist is able to independently review and determine appropriate therapy for the patient based on infection type and culture result

Target Cultures & Panels:

- Wound, abscess, body fluid, urine, blood, sputum, throat, ear, eye
- Gastrointestinal, giardia, cryptococcus

Inclusion Criteria:

- Patients seen by their primary care provider (PCP) at St. Peter's Health Medical Group – Broadway Clinic with an eligible positive culture result
- Cultures drawn within the month of February, 2025 and February, 2026
- Patients that reside in long-term care facilities (hospice, palliative, nursing homes)

Exclusion Criteria:

- Chlamydia, gonorrhea, herpes simplex virus, human immunodeficiency virus cultures/tests
- Cultures taken at any SPH clinic other than St. Peter's Health Medical Group – Broadway Clinic

Design:

- This is a prospective, comparator study evaluating the clinical significance of a pharmacist-managed outpatient clinic culture queue.
- Initially, a one-month period will be reviewed as the base comparator with no interventions made which will serve as the control group, while assessing the outlined objectives.
- During the implementation phase, an additional one-month period will be recorded with pharmacist-driven interventions.
- Retrospective and prospective data will be compared to evaluate for improvements in outlined objectives.

Daily Workflow Outline:

Patient is seen for infectious concern by PCP, cultures obtained sent to lab for evaluation.

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Positive culture results flow into the Outpatient Culture Queue.

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The AMS pharmacist will review the culture results and patient specific variables to determine if optimization is required.

If therapy is **adequate**, the AMS pharmacist will document the results in the EHR under the culture result.

If therapy is **inadequate**, the AMS pharmacist will contact the patient to assess symptom improvement/worsening, review culture results, and explain necessary changes.

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The AMS pharmacist will independently modify the prescribed therapy under the CPA and document the changes in the EHR under the culture result.*

**The AMS pharmacist may request guidance from the provider for any culture/clinical situation felt to be complicated beyond the pharmacist's scope of practice.*

Author Disclosures:

The authors of this study have no conflicts of interest to disclose.

References:

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