QUALITY IMPROVEMENT PROJECT CHARTER

PROBLEM AND BACKGROUND

What is the core quality issue that you are trying to improve, and what are the factors involved?

This project aims to improve the management of positive blood cultures in the emergency department by improving documentation and developing practical tools for clinicians to interpret these results.

Blood cultures are commonly drawn in the ED, and the utility of the result to patient-centered outcomes depends on several steps, including proper clinician interpretation and subsequent management of the result.

Prior to initiation of this project, documentation of positive culture follow-up was inadequate and disorganized. Furthermore, there was a significant amount of confusion and discrepancy with how to best manage particular blood culture results, leading to inconsistent patient follow-up.

Due to the myriad of potential organisms that can be isolated, and that some of these organisms may simply represent contaminated samples, it is important to develop clinical decision support for physicians to appropriately manage the results to improve efficiency and safety.

RATIONALE AND BENEFITS

Why is this an important problem to tackle, and what are the expected benefits?

Timely follow-up for positive culture results is facilitated during the dedicated quality assurance (QA) shift, an 8-hour shift staffed by emergency physicians. During this shift, the on-duty QA physician is responsible for making appropriate management decisions for the patient and documenting their actions.

By improving the culture follow-up documentation, we hope to reduce medico-legal risk associated with poor charting, improve patient safety and physician workflow associated with clear written communication among multiple providers.

We will also aim to assist physicians in navigating the many potential organisms that may grow in blood cultures. There is no ED-specific resource available to assist physicians on the QA shift. Our reference materials will provide an algorithmic approach to blood culture results, thereby reducing practice variation amongst our physician group, improving patient outcomes with evidence-based literature, and improving physician workflow and confidence in dealing with positive blood cultures.

AIM STATEMENT AND DELIVERABLES

What are the goal and objectives of this project?

Our goals are twofold: (1) improving documentation of physician actions taken to deal with positive blood cultures, and (2) providing decision making support tools to assist the physicians in managing positive cultures.

1. *The Form*
Prior to the initiation of this project, documentation of positive culture follow-up was very disorganized. This was problematic for medico-legal purposes (no appropriate place to document how the positive results were managed), but also problematic for workflow reasons. This was particularly true when a positive culture required several days (and several physicians) to complete the follow-up process (sometimes waiting for final culture and sensitivities, sometimes attempting to contact the patient). Because of this, we seek to improve the documentation with the goal of improving communication between clinicians, improving physician workflow, and reducing medico-legal risk. We will accomplish this by developing a new template where the follow-up steps can be clearly documented.

2. *The Algorithms*
We will also develop clinical decision support algorithms and tables to improve and standardize physician management of positive blood cultures in discharged patients. This will require an extensive literature review and close collaboration with our colleagues from the department of microbiology. We will elicit feedback from the UHN ED physician group on these materials, and will survey the group regarding their confidence in managing positive blood cultures, both pre- and post-implementation of the algorithms.

SCOPE
What are the things (people, tasks, processes) that this project WILL and WILL NOT touch on?

Our patient population will include only those with cultures drawn in the ED, who are subsequently discharged from the ED, and will not include patients who are admitted to hospital from the ED.

We will not address the computerized (and intermittently used) "ED follow-up note" on EPR. This follow-up note continues to be used at the discretion of each physician.

We will develop algorithms for managing positive blood cultures, but not other cultures.

MEASURES
What are the outcome, process and balancing measures that you are planning on looking at?

The primary outcome at this stage will be clinician attitudes towards using these algorithms on QA shifts. We will survey our physician group with regards to their comfort and perceived medico-legal risk when managing positive blood cultures on the QA shift. We then plan to repeat the survey 6-months post-implementation to measure if there were any changes in physician confidence with respect to managing positive cultures.

CHANGE IDEAS
What are you going to be attempting or changing, if already known?

We will create a standard approach to management of positive blood cultures in discharged patients that is clear and comprehensive. This will reduce inter-provider variation, which should improve EP confidence in their ability to manage these cases while reducing medico-legal risk by delineating a standard of care.

PROJECT LEADER, TEAM MEMBERS AND RESPONSIBILITIES

Who is the point person accountable for the project's progression, who are the other members, who will do what?

Oliver Van Praet – group progression, form and algorithm development, physician education
Joseph Choi – group progression, algorithm development, intervention evaluation
Sahand Ensafi – group progression, form development, nursing and physician education
Sheri Broome - group participation, nursing education
Paula Cleiman - group participation
Jojo Leung - group participation
Leah Watson - group participation

RESOURCES

What resources will you require – human, financial, equipment, authorizations and permissions, etc.?

There will be no additional financial or equipment resources required for this project. We will seek assistance from the department of microbiology for input and review of proposed algorithms and resource materials.

TIMELINES AND MILESTONES

When do you anticipate STARTING to work on this project, IMPLEMENTING this project, and COMPLETING it?

Physician survey #1: Summer 2014
Culture callback form completion: Fall 2014
Physician education #1: Fall 2014
Algorithm completion: End 2015
Physician education #2: Beginning 2016
Physician survey #2: Summer 2016

UPDATE as of April 2016: The project is well under way. The completed follow-up form has been in use for over a year. Algorithms were finalized in January 2016 and have been rolled out at both UHN sites.

We will be sending a follow-up survey in August 2016 to measure physician reactions to the algorithms and to elicit feedback for refinement and improvement.