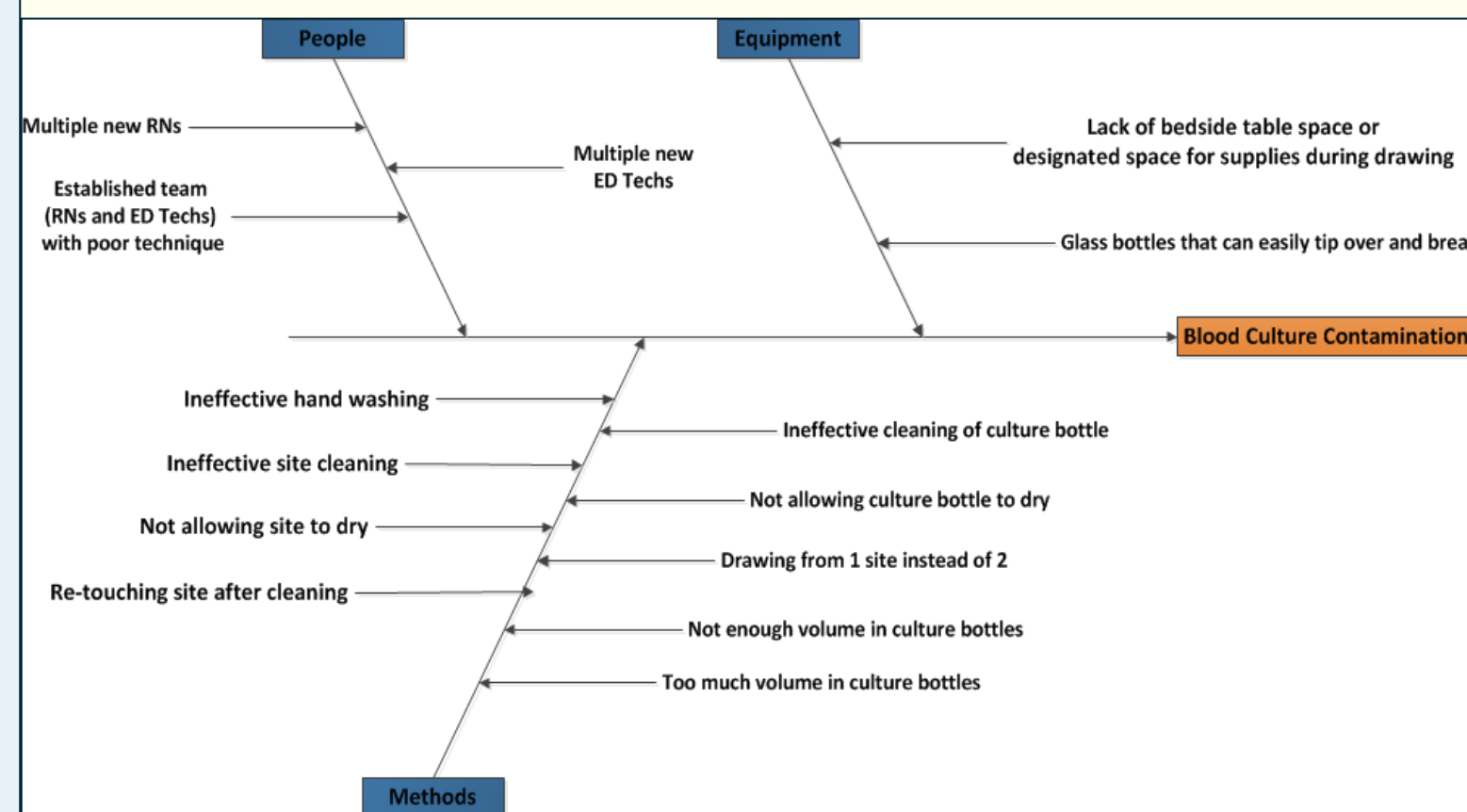


# Elimination of Blood Culture Contamination in the Emergency Department

## Introduction / Opportunity Statement

Blood cultures are frequently obtained in the care of patients with potentially serious infections to detect bacteremia. Blood culture contaminations are a common problem, particularly false-positive blood cultures. These are often the result of contamination from faulty aseptic techniques. This can lead to delays in proper treatment which leads to increased length of stay and increased costs, and decreased patient satisfaction.



## Team

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## References

Bradford, J.; Reeve, N.; Killian, M.; Valdez, A.; Marsha, C.; Horigan, A.; ... Zaleski, M. (2016) ENA Clinical practice guidelines: Prevention of blood culture contamination. Retrieved: 7/20/17 from www.ena.org

## Plan

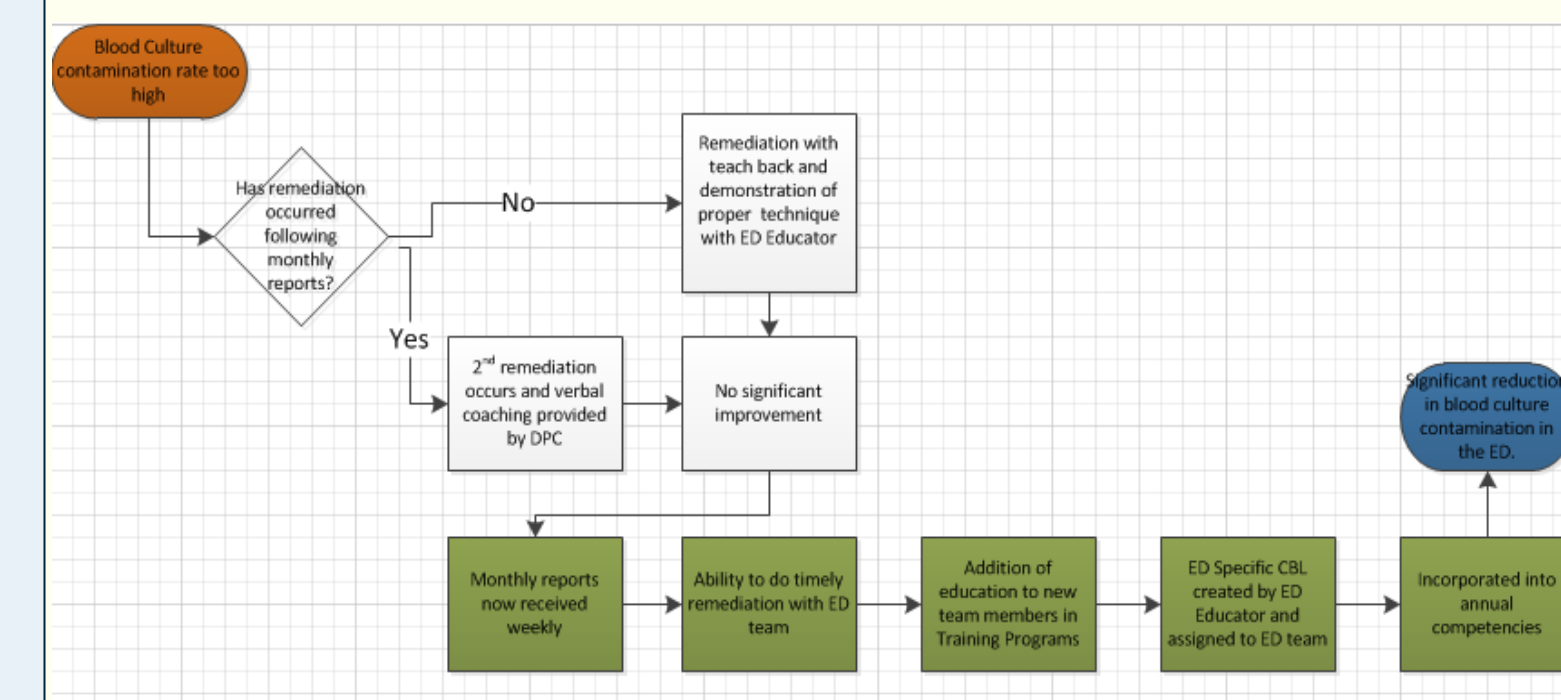
The international benchmark for blood culture contamination is 3%. RWJBH Community Medical Center was below this threshold at 1.28% for the month of July 2017. The year to date average is 0.75% as of July 2017. This, however, does not satisfy the Emergency Department's desire for 0 blood culture contaminations for safe and superior patient care.

Our multi-faceted plan includes:

- Remediation of staff identified as having provided contaminated specimens. Return demonstration is completed by ED Nurse Educator.
- Observation of real time blood culture collection techniques and "just in time" education where appropriate began in August 2017.
- Weekly in addition to monthly data collection, to remediate and correct collection techniques in a timely manner began 8/9/17.
- Blood Culture Collection education has been added to the ED RN and ED Technician training programs beginning September 2017.
- A newly created CBL for Blood Culture Collection in the ED, assigned to all staff 9/12/17.
- Incorporate process in ED annual competencies (9/17-10/17)
- Recognition of ED Team Members with 0 contaminated specimens

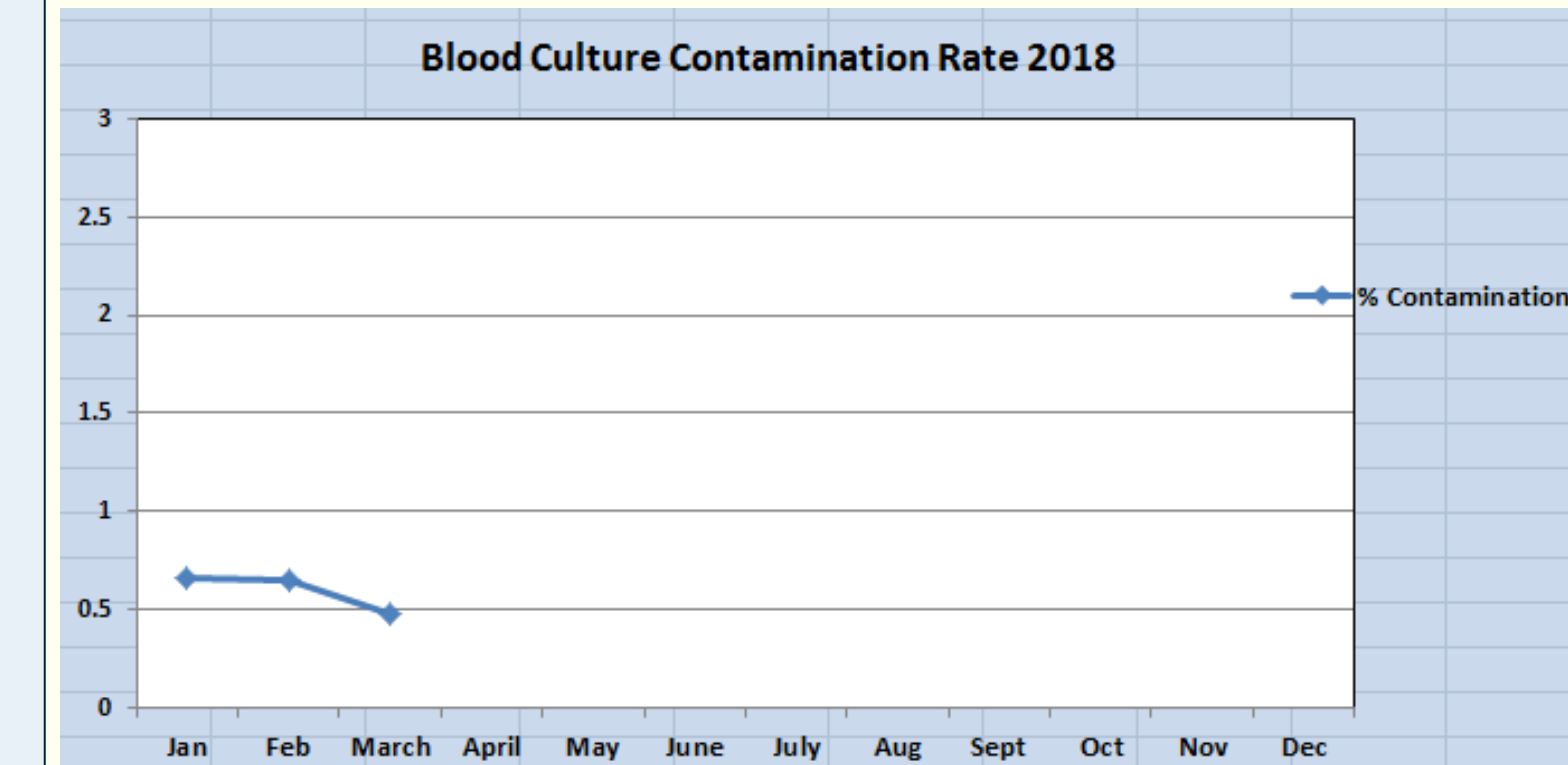
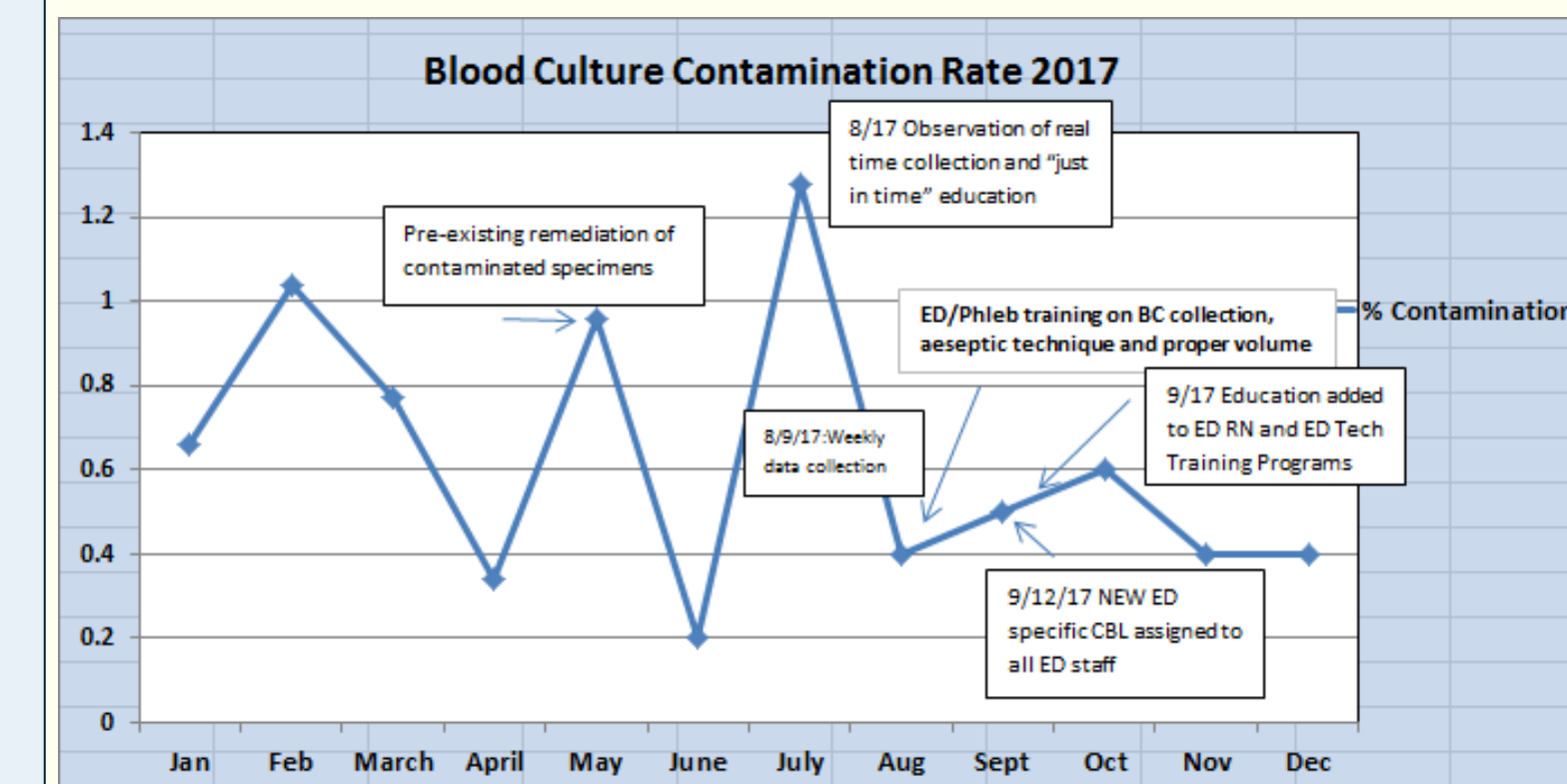
## Do

- Data is obtained from the laboratory department on a weekly basis. This allows the ED leadership team to review cases in a timely fashion.
- We review all cases of contamination for trends, paying attention to details such as patient location, patient demographics, personnel, and time of day.
- Blood culture contamination data will be posted in the staff lounge and reviewed at pre-shift huddles, acknowledging the team members who are successfully obtaining blood cultures without contamination.
- The primary stake holders are engaged when given "the why". Remediation with the ED nurse educator will occur for first time contamination beginning with a review of the person's current technique, correct technique and a return demonstration of correct technique.
- The laboratory team will assist by attending the ED team competency. The ED will also send all new ED techs for a one day experience with a phlebotomy team member during orientation.
- Blood culture contamination will remain as a standing agenda item at the ED leadership, staff and professional practice meetings.
- Infection Prevention attended to the ED October 2017 staff meeting, and subsequent meetings as needed.



## Check

With our prior blood contamination rate of 0.75% as of July 2017, we had not met our goal of 0. Our expected outcome based upon our above methods is to achieve our goal of 0 blood culture contaminations in the ED.



Through strict adherence to policy, engagement of the team as to "the why" and remediation, blood culture contamination rates are anticipated to continue to decrease for the Emergency Department population.

## Act

After each cycle of change, data will be reviewed. If not at target, after 90 days, we will continue to follow the PDCA process and institute additional small cycles of change based on additional Evidence Based practice identified in literature review.