Introduction

False positive blood cultures (BC) are associated with unnecessary hospitalization and/or extended length of stay with consequent financial burden. Our historical data shows that the majority of the false positive blood cultures are from the Emergency Department (ED). After repeated attempts of training, blood culture contaminations persisted at an unacceptable rate. Therefore, we recently [trialed] two different types of FDA 510(k)-approved devices* designed to eliminate blood culture contamination by sequestering the initial few drops of blood (first draw) which is considered to carry contaminant flora.

Steripath® Blood Culture Collection System

• This is a single-use sterile blood culture collection system.
• SteriPath is designed for initial blood specimen diversion using a preassembled vein-to-bottle closed system that mechanically diverts the initial 1.5 to 2 mL of blood into a proprietary isolation chamber.

Kurin® Blood Culture Collection System

• This device is a sterile, single-use blood culture collection set. The Kurin device consists of a winged needle with flexible tubing and an attached vial adapter required for venipuncture to draw blood culture samples.
• The Kurin blood capture device sequesters the initial draw of blood upon venipuncture. The set is provided with a safety shield for covering the used needle prior to disposal.
• The amount of blood diverted is very small, estimated to be 0.2-0.1 mL.

*Correction: as of September 2018, the Steripath device had not received 510(k) clearance.
Conclusion

- Appropriate aseptic technique and the use of Steripath® or Kurin® devices made a remarkable decrease in contamination [in the] ED.
- Reduced false positive cultures and eliminated additional resources for workup are cost beneficial.
- Avoid unnecessary antibiotic treatment and hospitalization days.
- Initial specimen diversion volume variation from 0.2ml–2ml did not have a significant impact on contamination rate.

References:

- Kurin, manufactured in San Diego, CA has received FDA 510(k) market clearance. www.kurin.com