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Unplugged: The effect of implementing ISDT on blood culture contamination

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DESPITE best efforts, skin **DECONTAMINATION** does **NOT REMOVE** all **BACTERIA** from site of venipuncture (e.g., hair follicles).
During venipuncture, a **SKIN PLUG** can be taken up into the bottle resulting in a potential **CONTAMINATION.**
By **DIVERTING** the first **1-2 ML** of **BLOOD,** the **SKIN PLUG** is **REMOVED** before it goes into the bottle.

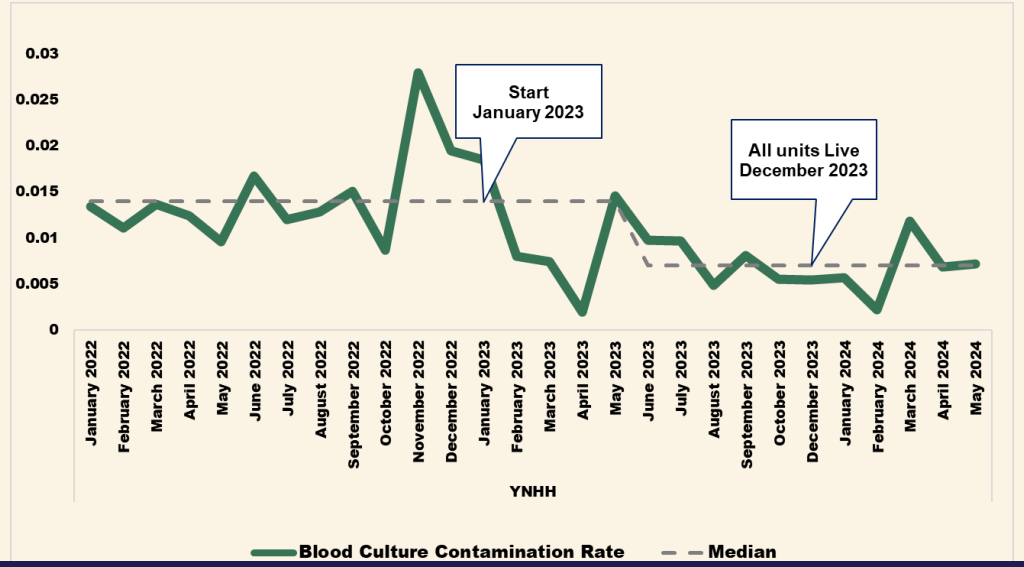
PURPOSE

The purpose of this quality improvement project was to **EVALUATE** the impact of the **INITIAL SPECIMEN DIVERSION TECHNIQUE** (ISDT) intervention on blood culture **CONTAMINATION RATES** across medicine services.

SIGNIFICANCE

Upwards of **50%** of positive blood cultures represent **CONTAMINATION**. Blood culture **CONTAMINATION CARRIES RISKS** for patients, such as unnecessary antimicrobial therapy and other additional hazards and costs.
One **METHOD** shown to be **EFFECTIVE** in **REDUCING CONTAMINATION** is **ISDT** during collection.

Our medicine units excluding critical care combined rate **PRE-INTERVENTION** was **1.4%** with a total number of 91 contaminations for calendar year 2022. In 2023, the rate **DECREASED** to **0.8%**, <1.0% goal with the number of contaminations decreasing to 48 **USING** the **ISDT** method with discard tube. Using a **CHI-SQUARE** test **ANALYSIS** with a 95% confidence interval the ***P-value was determined to be <0.001.***



METHODS



CONCLUSION

A **POSITIVE** blood culture in the absence of bacteremia **CAN** be **AVOIDED.**
The use of a **DISCARD TUBE APPROACH** is a simple and **COST-EFFECTIVE** measure to reduce risks associated with contaminated blood cultures.
The **ISDT** method of peripheral blood culture collection can be **SEAMLESSLY** integrated into our system delivery networks.
The **PLAN** is to continue to **SCALE** this process out to our hospital system with the **USE** of a **STANDARDIZED BLOOD CULTURE KIT**.