Blood Culture Contamination Reduction Project  
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**PROBLEM:** From January through July of 2008 the monthly blood culture collection contamination rate of the William S. Middleton Memorial VA Hospital ranged between 1.3-4.2%. The Veterans Integrated Service Network for the Great Lakes Area (VISN 12) recommends a contamination rate of no more than 2.5% hospital-wide. Contaminated samples result in poor patient care associated with prolonged hospital stays, unneeded antibiotics, and extensive further testing. In addition, this correlates to an estimated $5,000-$8,000 loss with each contaminated blood culture.

**EVIDENCE:** Examination of current practices in place at the William S. Middleton Memorial VA Hospital, evidenced based current protocol recommendations, and collaboration with infection control and the microbiology laboratory linked contamination to five possible areas: personnel training, location of collection, site cleaning, collection equipment, and collection volume.

**STRATEGY:** A survey was conducted of the nurses on staff (n=168); 42% were returned. Scores revealed a deficit in knowledge of proper blood culture collection (60.5%). In-services were given to nurses regarding new protocol procedures; attendance (n=168) was 38%.

**PRACTICE CHANGE:** Specific knowledge deficits were identified and the staff was educated regarding: the use of PIV and newly inserted angiocaths is an unacceptable method of blood culture collection, proper site use and disinfection, proper use of collection equipment, adequate volume of blood in each sample, and charting and labeling of the samples.

**EVALUATION:** The average post in-service scores on the survey for the staff nurses (n=168) was 92.8%. High scores demonstrated retained knowledge of proper blood collection protocol.

**RESULTS:** Lower monthly contamination rates were recorded following the educational sessions, but still fluctuated between 1.7%-3.6% from August through December of 2008.

**RECOMMENDATIONS:** Further collection protocol in-services are recommended. A tracking sheet is being designed to identify collectors that require further education as well.

**LESSONS LEARNED:** Change takes time and persistence. As long as lower contamination rates are pursued and proper collection protocol is insisted upon patient care and resource utilization can improve.

**BIBLIOGRAPHY:**
