BLOOD CULTURE
Supporting information

An inadequate sample may give a false negative result?
A survey carried out over a 4-month period at a tertiary care unit (Donnino, 2007) revealed that 79% (95% CI, 74% - 83%) of employees thought that blood samples of less than 10 mL were adequate for culturing organisms. Overall, 44% (95% CI, 39% - 49%) thought that less than 5 mL was acceptable. The authors drew attention to the fact that, “Because volume remains the most important determinant for the optimal yield of organisms, these findings raise an important quality assurance issue.”

Donnino MW, Goyal N, Terlecki TM, et al. Inadequate blood volume collected for culture: a survey of health care professionals. Mayo Clin Proc 2007;82:1069-72

Evidence Level: V

If anaerobic sample is insufficient, most of the causative organisms of septicaemia can still be detected in the aerobic sample?
A study of aerobic vs anaerobic blood samples (n=3958) compared over a 20-month period (Sandven, 1985) found only statistically insignificant differences in the isolation rates of various bacterial and fungal species. Altogether 438 (11%) of the blood culture sets were positive. Of the 438 isolates, 317 (72%) were detected in both bottles, 61 (14%) in the vented bottle and 60 (14%) in the unvented bottle. A total of 60 (14%) isolates would not have been detected if only five ml of blood had been cultured.

Sandven P, Høiby EA. Effect of aerobic and anaerobic atmosphere on the detection of micro-organisms from blood cultures. Acta Path Microbiol Immunol Scand (Section B Microbiol) 1985; 93:233-6

Evidence Level: IV

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