Vanderbilt University Medical Center
Guidelines for Providers on the Ordering and Collection of Blood Cultures

I. General Principles re: Bacteremia/Fungemia
   a. Blood cultures are indicated only when bacteremia or fungemia is suspected clinically.
   b. If bacteremia or fungemia is suspected, 2 sets of blood cultures should be drawn from separate venipuncture sites in adults (1 to 2 sets for children).
   c. Collection from any "plastic source device" (e.g. central venous catheter, PICC, port-a-cath, dialysis line) is strongly discouraged unless catheter-related infection suspected.
   d. Blood cultures should not be drawn from a peripheral IV.
   e. As standard blood cultures will readily detect fungemia due to Candida species, fungal blood cultures should only be ordered when non-Candida infections are suspected.

II. Catheter-Related Infections (e.g. including Central Venous Catheters, PICC lines, implanted port, hemodialysis catheter)
   a. In the event that a catheter-related bloodstream infection is suspected, evidence-based guidelines indicate that one set of blood cultures should be obtained from the catheter and one set via venipuncture.
   b. Collection via a catheter must be specifically ordered by a provider. If a peripheral venipuncture is not possible, two separate cultures obtained from the catheter should be collected 15 minutes apart.
   c. To document the clearance of a catheter-related infection, providers should wait to order blood cultures until the day after removal of the infected catheter (due to the risk of detection of transient bacteremia related to catheter removal).

III. Endovascular Infections (e.g. endocarditis, vascular graft infection)
   a. For suspected endovascular infection, an additional (e.g. 3rd set in adults, 2nd or 3rd set in children) separately-drawn set via venipuncture should be collected.
   b. To document clearance of an endovascular infection, catheter-related infection, or general bacteremia/fungemia (if indicated) clinicians should allow existing blood culture specimens time to turn positive before ordering another set. Blood cultures should be ordered no more frequently than every other day.

IV. Standing/Surveillance Orders for Blood Cultures
   a. Collection of blood cultures for routine surveillance in the absence of any clinical signs or symptoms (e.g. as a part of routine preoperative testing) is strongly discouraged.
   b. Routine standing or "as needed" orders for blood cultures are strongly discouraged (e.g. daily cultures to document clearance of bacteremia or blood cultures x 2 for temp > 101°F).
   c. In the absence of a suspected endovascular infection, collection of more than 2 sets of blood cultures in a 24 hour period is strongly discouraged.

V. Exceptions
   a. If venipuncture collection is unsuccessful after multiple attempts, collection through a plastic source device will be allowed only with modification of the original blood culture order from a physician.

For further details re: blood culture collection, refer to VUMC policy CL – 30-08.05 Blood Culture Collection