STAMFORD HEALTH

Affiliate: Columbia University Vagelos College of Physicians and Surgeons
A Planetree Hospital
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**MEMORANDUM**

**DATE:** **July 18, 2024**

**TO:** **Medical Staff, Nursing Service**

**FROM:** **Michael Parry, MD, Medical Director of Microbiology**
**Asha Shah, MD, Director of Infectious Diseases and Hospital Epidemiologist**
**Diedre Fergus, MT, Manager of Microbiology**

**RE:** **Severe blood culture bottle shortage**

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There is a severe national shortage of BACTEC blood culture bottles due to recent plastic and media supply issues. We were made aware of this in a Letter to Health Care Providers from the FDA on July 10, 2024, and have been involved in ongoing discussions with the company, Becton-Dickinson. BD has been unable to ship any significant volume of blood culture bottles for the last three weeks. Some hospitals have already run out. It is our understanding that this situation may persist for the next few months. Without additional deliveries, at current use rates, Stamford Hospital will run out of BC bottles in two weeks. Therefore, it is imperative that we reduce our use of blood cultures so we don't run out.

Many blood cultures are ordered in low-yield situations and in excessive numbers. While they are the gold standard for diagnosing bloodstream infections, less than 10% are positive and 1/3 of these represent only contaminants. More judicious use is justified and test stewardship can be safely implemented as follows:

**Decrease unnecessary blood cultures**

- Blood cultures are not recommended for low-risk conditions such as
  - non-severe pneumonia or cellulitis
  - lower tract UTI
  - isolated fever or leukocytosis in a stable patient without neutropenia
  - fever and leukocytosis within 48 hours of surgery
  - suspected viral infection, including COVID
  - localized (non-vertebral) osteomyelitis
  - for surveillance purposes
- Repeat cultures after prior positive(s) should rarely be obtained in patients who are on treatment and improving. If not improving, wait until at least 48 hours after initiation of treatment. An exception may be when an initial culture result is thought to possibly be a contaminant. When in doubt, ask for ID consultation
- The concept of "pan-cultures" is discouraged in general. Instead, obtain symptom-focused cultures

**Follow-up blood cultures are only indicated in limited circumstances, usually no more often than one every 48 hours. Be guided by ID consultation.**

- Staph aureus bacteremia
- Candidemia
- Multidrug resistant gram-negative bacteremia
- Endovascular infections: for diagnosis and to confirm response to treatment
- Central line-associated blood stream infection
- Concern for an unresolved focus of infection
- Bacteremia of unknown source

**Two initial sets of blood cultures are still recommended in the following conditions:**

- Sepsis / septic shock
- Severe community acquired pneumonia and VAP but not as a substitute for sputum c/s
- Neutropenic fever
- Severe SSTI or necrotizing SSTI or vertebral osteomyelitis
- Cholangitis or liver abscess
- Asplenic patient with infection
- Where intravascular infection is suspected (endocarditis, line infection, AV fistula infection)

To maximize the yield in all instances, blood culture bottles should be fully filled to the recommended volume specified on each bottle (5-7ml or 8-10ml depending on the bottle). Pediatric volumes are smaller. Each set of 2 (aerobic and anerobic bottles) should be drawn through a separate venipuncture. Skin prep should be meticulous, using CHG and no-touch after the prep. Bottle tops should be disinfected with alcohol, which should be allowed to dry.

Our goal should be to reduce blood culture use by 50% or more during this critical time. Following the above guidelines, we can continue to provide optimal and safe care but assure, to the best of our ability, that we will not run out of BC bottles for those patients who are septic and critically ill. We will be following inventory closely and will update you if more stringent rationing is needed.

Thanks for your understanding. If you have any questions, please contact any of the Infectious Diseases clinicians or the microbiology lab.