



The Work System Assessment survey around blood culture practices

A group of hospitals across the United Kingdom are beginning to work with the BrightT STAR collaborative, a quality improvement collaborative to improve diagnostic testing practices and reduce testing overuse in the critical care setting. The goal of this survey is to evaluate practices and attitudes around your blood culture practices in paediatric critical care in your unit. This survey is interested in both typical unit level practices as well as your own opinions.

Your participation in this study is entirely voluntary and confidential. The 14-question survey should not take any longer than 15 minutes.

This research has been approved by the Johns Hopkins Hospital Institutional Review Board (IRB00461938) and the UK PCCS Study group. We greatly appreciate your willingness to complete this survey. Should you have any questions regarding this survey please feel free to contact Dr. Charlotte Woods-Hill MD MSHP at woodshillc@chop.edu or Dr. Aaron Milstone MD MHS at amilsto1@jhmi.edu

If you have questions about the BrightT STAR project in the UK please contact Jessica Green at Jessica.green@alderhey.nhs.uk

Question 1 - In which environment do you predominantly work?

☐ High Dependency unit

- ☐ Intensive Care Unit
- ☐ Both HDU and ICU

Question 2 - Which of the following describes your current role?

- ☐ Consultant
- ☐ Sr Registrar (ST 4 and above)
- ☐ Senior House Officer or Junior Registrar (ST1-3)
- ☐ Foundation year doctor (F1/F2)
- ☐ Advanced Nurse Practitioner
- ☐ Registered Nurse
- ☐ Other (please specify)

Question 3 - How long have you been in your current role (years)?

Question 4 - At which site do you predominantly work?

- ☐ Addenbrooke's Hospital, Cambridge
- ☐ Alder Hey Children's Hospital
- ☐ Birmingham Children's Hospital
- ☐ Bristol Royal Hospital for Children
- ☐ Children's Health, Ireland, Crumlin, Dublin
- ☐ Children's Health, Ireland, Temple Street
- ☐ Evelina London Children's Hospital
- ☐ Freeman Hospital, Newcastle upon Tyne
- ☐ Glenfield Hospital, Leicester
- ☐ Great North Children's Hospital, Newcastle upon Tyne
- ☐ Great Ormond Street Hospital
- ☐ James Cook University Hospital, Middlesbrough
- ☐ John Radcliffe Hospital, Oxford
- ☐ King's College Hospital, London
- ☐ Leeds General Infirmary
- ☐ Leicester Royal Infirmary

- ☐ Noah's Ark Children's Hospital for Wales, Cardiff
- ☐ Nottingham Children's Hospital, Queens Medical Centre, Nottingham
- ☐ Royal Belfast Hospital for sick Children
- ☐ Royal Brompton Hospital, London
- ☐ Royal Hospital for Children and Young People, Edinburgh
- ☐ Royal Hospital for Children, Glasgow
- ☐ Royal Manchester Children's Hospital
- ☐ Royal Stoke University Hospital
- ☐ Sheffield Children's Hospital
- ☐ Southampton Children's Hospital
- ☐ St George's Hospital, London
- ☐ St Mary's Hospital, London
- ☐ The Royal London Hospital
- ☐ Other – specify

Question 5

In general, in your critical care, how likely is it that blood cultures are ordered in the following scenarios:

	Extremely likely	Somewhat likely	Neither likely nor unlikely	Somewhat unlikely	Extremely unlikely
Fever, new ("new fever" = afebrile in preceding 48hrs), patient with no central venous catheter	☐	☐	☐	☐	☐
Fever, new ("new fever" = afebrile in preceding 48hrs), patient with central venous catheter	☐	☐	☐	☐	☐
Fever, persistent, patient with no central venous catheter	☐	☐	☐	☐	☐
Fever, persistent, patient with central venous catheter	☐	☐	☐	☐	☐
Hypothermia, new	☐	☐	☐	☐	☐
Hypotension, new	☐	☐	☐	☐	☐
New onset poor perfusion on physical exam	☐	☐	☐	☐	☐

[illegible]

	Extremely likely	Somewhat likely	Neither likely nor unlikely	Somewhat unlikely	Extremely unlikely	Not applicable
Surveillance screening culture in asymptomatic patient on continuous renal replacement therapy (2)	☐	☐	☐	☐	☐	☐
Screening culture in asymptomatic patient after accidental central venous catheter disconnection or malfunction (3)	☐	☐	☐	☐	☐	☐

Question 7

What are your *preferred* sources for obtaining a blood culture in a patient with a *First/New Fever* (new fever=afebrile in preceding 48hrs)?

(Assume patient has a central venous catheter, arterial catheter, haemodialysis catheter, peripheral IV, and midline catheter in situ).

Please check **ALL** that apply. (Leave all options unchecked if you would not order a blood culture in this scenario).

- ☐ Peripheral venipuncture alone
- ☐ Peripheral venipuncture paired with either one or multiple cultures from central venous catheter
- ☐ Central venous catheter, one lumen
- ☐ All open / available central venous catheter lumens
- ☐ Arterial catheter
- ☐ Haemodialysis catheter
- ☐ Peripheral IV
- ☐ Midline catheter

Question 8

What are your *preferred* sources for obtaining a blood culture on a patient with a *persistent fever*?

(Assume patient has a central venous catheter, arterial catheter, haemodialysis

catheter, peripheral IV, and midline catheter in situ).

Please check **ALL** that apply. (Leave all options unchecked if you would not order a blood culture in this scenario).

- ☐ Peripheral venipuncture alone
- ☐ Peripheral venipuncture paired with either one or multiple cultures from central venous catheter
- ☐ Central venous catheter, one lumen
- ☐ All open / available central venous catheter lumens
- ☐ Arterial catheter
- ☐ Haemodialysis catheter
- ☐ Peripheral IV
- ☐ Midline catheter

Question 9

To what extent do you agree or disagree with the following statements?

[illegible]

[illegible]

	Extremely likely	Somewhat likely	Neither likely or unlikely	Somewhat unlikely	Extremely unlikely	Not applicable
Clinicians feel reluctance to change a practice they are used to doing	☐	☐	☐	☐	☐	☐
Lack of scientific evidence that blood culture ordering frequency can be safely reduced	☐	☐	☐	☐	☐	☐
Concern for delayed recognition of bacteremia	☐	☐	☐	☐	☐	☐
Pressure to meet metrics related to recognition or treatment of “possible sepsis” in critical care patients	☐	☐	☐	☐	☐	☐
It is difficult to obtain all pertinent information for blood culture decision making from the Electronic Medical Record	☐	☐	☐	☐	☐	☐
The workload in our unit prevents clinicians from doing a physical exam before ordering a blood culture	☐	☐	☐	☐	☐	☐
Concern about not having enough time or resources to focus on blood culture practice change in my critical care	☐	☐	☐	☐	☐	☐

	Extremely likely	Somewhat likely	Neither likely or unlikely	Somewhat unlikely	Extremely unlikely	Not applicable
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Question 11

Enter additional potential barriers to reducing the number of blood cultures ordered in your clinical practice setting, if any:

Question 12

How likely is it that the following items will act as potential **BARRIERS** to obtaining **PERIPHERAL** blood cultures in your clinical practice setting?

	Extremely likely	Somewhat likely	Neither likely nor unlikely	Somewhat unlikely	Extremely unlikely
Ability to get timely peripheral venipuncture completed (e.g. waiting for phlebotomy service or another trained professional)	☐	☐	☐	☐	☐
Technical challenges with venipuncture, such as difficult venous access	☐	☐	☐	☐	☐
Pain/discomfort for child versus painless draw from existing catheter	☐	☐	☐	☐	☐
Opinion of sub-specialty service or other non-critical care clinicians	☐	☐	☐	☐	☐
Lack of evidence that peripheral blood cultures have added yield/utility over central line cultures alone	☐	☐	☐	☐	☐
Clinicians have variable practices that will be difficult to standardize	☐	☐	☐	☐	☐
Clinicians may resist efforts to standardize practice (resist the concept of standardization)	☐	☐	☐	☐	☐
Clinicians feel reluctance to change a practice they are used to doing	☐	☐	☐	☐	☐
	Extremely likely	Somewhat likely	Neither likely nor unlikely	Somewhat unlikely	Extremely unlikely

Question 13

Enter additional potential barriers to obtaining peripheral blood cultures in your clinical practice setting, if any:

Question 14

How useful would the following intervention tools be in improving blood culture practices in your unit?

	Extremely useful	Very useful	Moderately useful	Slightly useful	Not at all useful
A checklist of clinical information that clinicians need to review before ordering a blood culture	☐	☐	☐	☐	☐
A decision algorithm guiding the selection of the source(s) for obtaining a blood culture	☐	☐	☐	☐	☐
Consensus-based recommendations to follow, that standardize and guide blood culture practices	☐	☐	☐	☐	☐
Knowing that blood culture practices are being targeted in multiple hospitals as a coordinated group / collaborative effort	☐	☐	☐	☐	☐

