Life connected to every blood culture

Your choice in blood culture solution can affect blood stream infection management goals and improve laboratory outcomes

Enter

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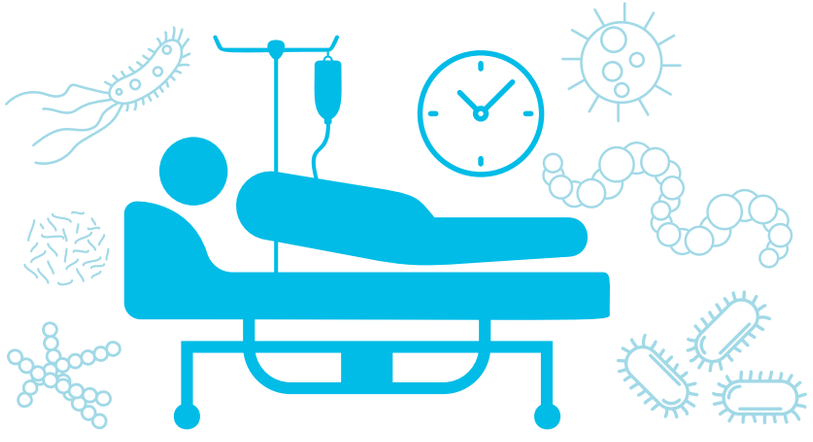
Managing and preventing sepsis are key challenges faced by healthcare institutions

Clinical studies have demonstrated a twofold increase in mortality caused by sepsis when inappropriate antimicrobial therapy is given[1]

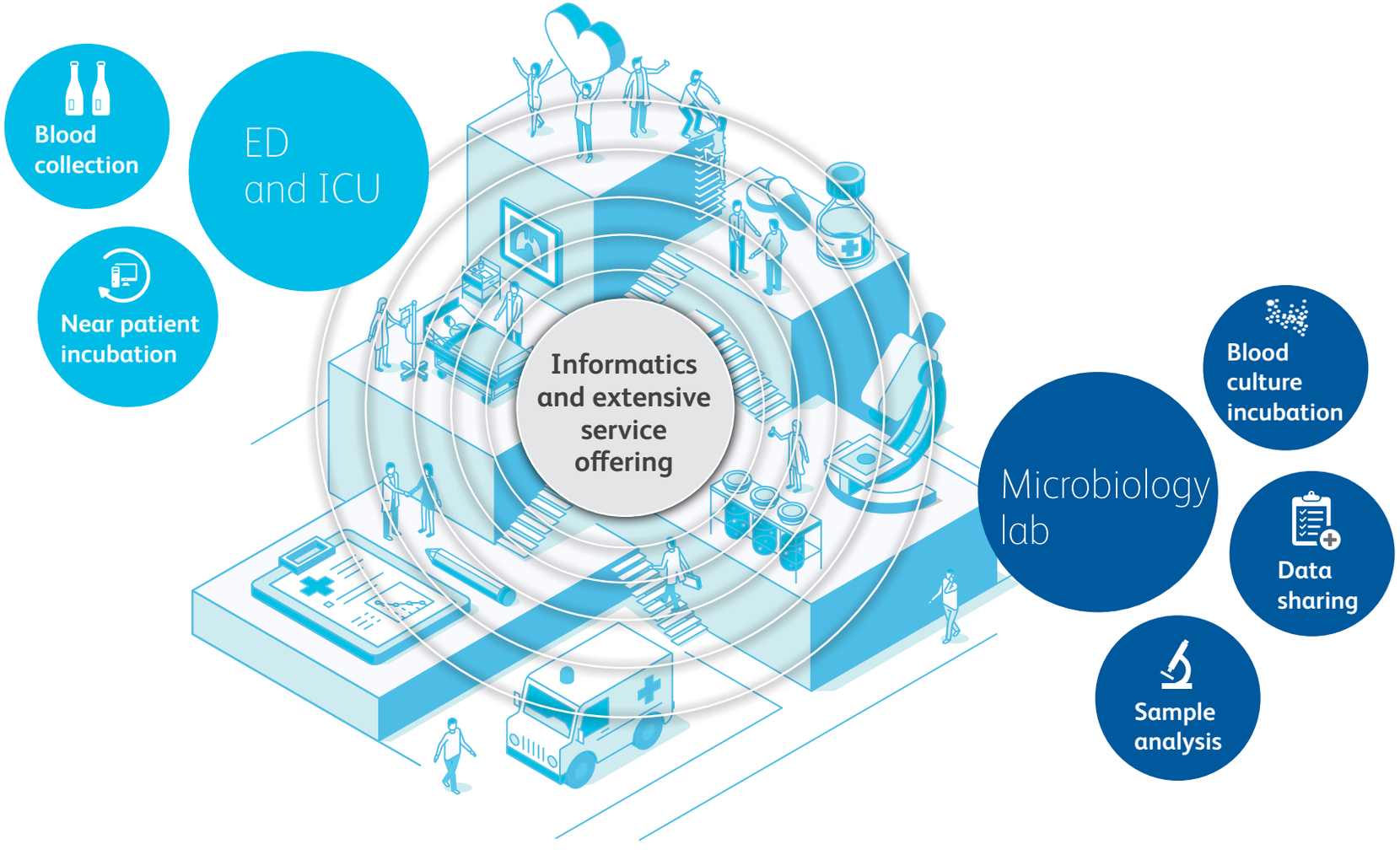


Sepsis affects an estimated

3.4 M

Europeans each year[2]

BD offers an integrated blood culture solution across all three phases of the diagnostic pathway, that may help in clinical decision making



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The right diagnosis begins with proper specimen collection

Challenges in patient preparation and specimen collection may result in preanalytical errors. Improper collection of blood culture specimens can lead to contamination events, which may[3]:

- Impact length of hospital stay
- Lead to inappropriate antimicrobial treatment
- Result in repeat diagnostic testing

Media selection and instrumentation can impact recovery and time to detection of clinically significant organisms

Greater than one third of patients hospitalised with sepsis may die prior to hospital discharge[4]. To help reduce morbidity and mortality of septic patients, the recommended best practices are[5]:

- Collection of 8 to 10mL of blood in each blood culture bottle*
- Collection of at least 2 sets of blood cultures prior to antimicrobial therapy*
- Incubation of blood culture bottles as soon as possible

Actionable insights help drive continuous improvement

An estimated 23% of clinical errors occur in the post-analytical phase of testing, and are partly due to:

- Improper validation of analytical data
- Failure in reporting
- Inappropriate follow-up plans[6]

* For adults patients, BD BACTEC™ Perfect or Plus Blood Culture Bottle Pairs

Preanalytical phase

BD Vacutainer® UltraTouch™ Push Button Blood Collection Sets with Pre-attached Holder are designed to improve safety, while maintaining sample integrity and workflow efficiency[7,8,9]

- BD RightGauge™ Ultra-Thin Wall Cannula Technology can improve time of collection with a larger inner diameter while maintaining the outer diameter
- Pre-attached holder reduces the number of steps in the phlebotomy procedure, helping to simplify the collection process
- Push button collection sets decrease insertion pain vs. 23-gauge Safety-Lok™ due to cannula design[9]
- Single-handed, in vein activation reduces needle stick injuries by up to 88%[7]

BD BACTEC™ Blood Culture media bottles help streamline the blood collection process

- Unique bottle neck design allows for compatibility with standard blood collection sets which:
  - Reduces the need to switch out adapters mid draw from the blood culture bottles to the tubes
  - Potentially reduces inventory requirements
  - Potentially reduces cost of overall specimen collection

BD Synapsys™ Informatics Solution helps to make data driven decisions to improve blood collection practices:

- Monitor blood volume collected per ward
- Implement improvement steps
- Monitor improvements

BD Vacutainer® UltraTouch™ Push Button Blood Collection Sets with Pre-attached Holder

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BD BACTEC™ Blood Culture media bottles

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BD Synapsys™ Informatics Solution

Analytical phase

BD BACTEC™ Perfect Pair

The combination of BD BACTEC™ Plus Aerobic and Lytic Anaerobic plastic blood culture bottle mediums have shown to improve time to detection and recovery of organisms.[10]

BD BACTEC™ Mycosis IC/F Medium

The BD BACTEC™ Mycosis IC/F plastic blood culture bottle is a selective medium for recovery of yeast and fungi, with improved sensitivity and speed of diagnosis of fungemia in high-risk patients when collected in addition to the Perfect Pair blood culture mediums and anaerobic blood culture mediums[11]

BD BACTEC™ Peds Plus™/F Medium

The BD BACTEC™ Peds Plus™/F plastic blood culture bottle is designed for the qualitative culture and recovery of aerobic microorganisms from paediatric and non-paediatric blood specimens less than 5 mL in volume.

BD BACTEC™ FX instrumentation

BD BACTEC™ FX instruments allow for a simple and rapid workflow across multiple sites of a healthcare system. The scalable and modular design offers flexibility to support placement of an instrument near the point of collection that helps to reduce the time to result for organism identification and susceptibility testing, which may enable earlier decision-making regarding antimicrobial treatment.[12,13]

Blood culture instruments at satellite locations can:

- Minimise delays in blood culture processing and enable optimal patient management
- Allow for immediate incubation outside of laboratory hours for reduced turnaround times

BD Synapsys™ Informatics Solution has tools to help staff impact blood culture workflow and turnaround time:

- Instrument status dashboard
- Workflow rules engine
- Worklist organization

BD BACTEC™ Perfect Pair

BD BACTEC™ Mycosis IC/F

BD BACTEC™ Peds Plus™/F

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BD BACTEC™ FX instrument

e.g., Central laboratory

BD BACTEC™ FX40 instrument

e.g., Emergency room, specimen/ pathology reception

BD BACTEC™ FX40 instrument

e.g., Satellite laboratory

Post-analytical phase

Advanced middleware that provides secure connectivity and tools to:

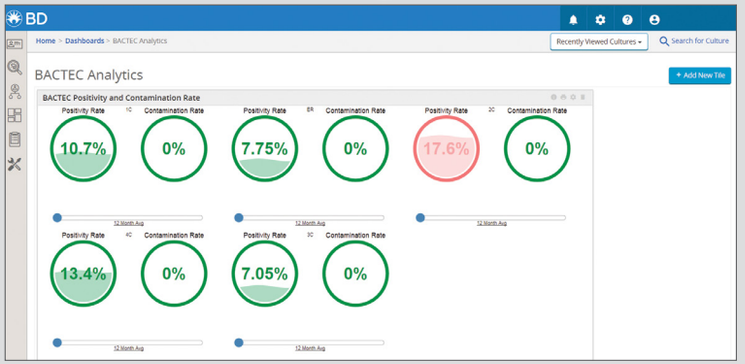
- Monitor workflow and improve bottle necks
- Improve compliance with best practices
- Control instrument status and utilisation

Access to data analytics, enabling key metric comparisons within a laboratory network or against a benchmark including:

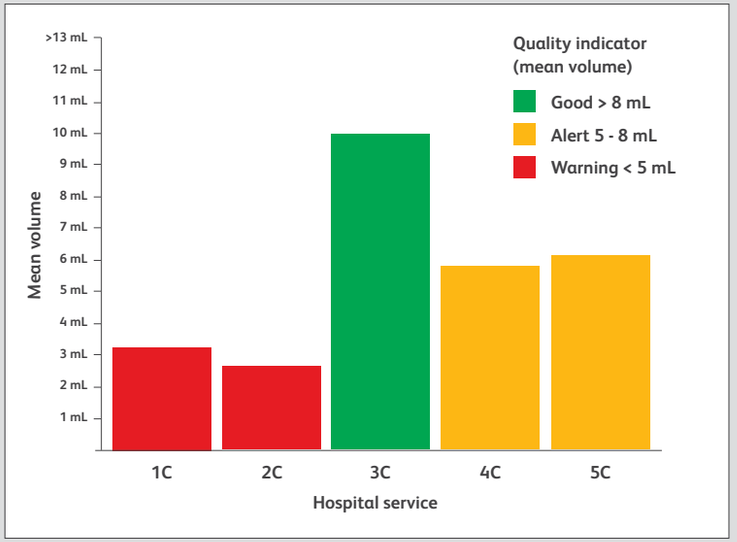
- Blood culture contamination and positivity rates
- Media consumption
- Laboratory workflow
- Order utilisation

Distinct modules allowing for customisable levels of capability and value:

- Connect instruments in satellite locations, for a better continuity of the testing protocol
- Integrate data collection, to monitor practices between different locations
- Empower healthcare professionals to drive standardised blood culture quality metrics that can impact operational and laboratory outcomes
- Scalable, automated reporting to drive standardisation



Positivity and contamination rate monitoring



Blood Volume Monitoring (BVM) mean comparison

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BD Professional Services: a suite of services for measurable improvements in your laboratory and beyond

One equation to optimise lab operations

Technology x **Workflow** x **People** = **Optimised lab**

Workflow optimisation

- On-site pathway mapping to identify causes of unwanted variation
- Detailed data analysis and benchmarked results
- Lean and six sigma strategies for streamlined processes

Implementation

- Tailored project management and change management
- Seamless integration of new technologies, workflows and people

Informatics

- Solution created with you to match your requirements
- Full integration with your information technology (IT) infrastructure
- Installations updates and comprehensive support for BD platforms

Education

- Face-to-face training on specimen management and diagnostic best practices
- Online modules available for remote learning
- A digital service to optimise your accreditation efforts

Support

- Remote and field technical support to maximise laboratory productivity
- Multi-channel expertise to support your daily operations
- Continuous improvement of system reliability, data security and communication

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