

PERFORMANCE

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Rapid Identification of Pathogens from Pediatric Blood Cultures by Use of the FilmArray® Blood Culture Identification Panel.

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This study evaluated the performance of the FilmArray® Blood Culture (BCID) Panel on pediatric samples. Results were compared to conventional blood culture methods, including subculture onto solid media and phenotypic assays for antimicrobial susceptibility.

Results for 166 positive blood cultures collected from 138 pediatric patients were included for data analysis. The FilmArray® BCID Panel identified 168/188 (89.4%) of organisms recovered by culture. Of the 20 organisms not detected by the FilmArray® BCID Panel, 13 (65%) were organisms not included on the panel. The FilmArray® BCID Panel detected 112/122 (91.8%) of gram-positive organisms and 50/58 (86.2%) of gram-negative organisms. The oxacillin resistance determinant *mecA* was correctly identified for all 86 *Staphylococcus* spp. The panel also identified 6/8 positive cultures growing *Candida* species.

There were 20 polymicrobial cultures in this study, of which 2 grew bacteria that were not detected by the FilmArray® BCID Panel. For the remaining 18 mixed cultures, the FilmArray® BCID Panel correctly identified 9 (50%); however, the panel missed identification of 3 organisms in 3 mixed cultures and identification results were inconclusive for the remaining 6 mixed cultures.

“... the FilmArray® BCID assay performed very well for rapidly identifying pathogens in positive blood culture bottles that contained pediatric medium and blood samples from children. Compared to standard phenotypic methods, the assay reduced time for pathogen identification by 1-2 days. The ease of use of the assay will likely help laboratories to adapt and offer it 24/7, thus improving patient care.”

KEY POINTS

- The FilmArray® BCID Panel reliably identified gram-positive bacteria, gram-negative bacteria, and *Candida* species from pediatric blood culture specimens.
- FilmArray® BCID Panel identified 89.4% of 188 organism recovered by culture.
- FilmArray® BCID Panel accurately reported *mecA* & *vanA/B* resistance markers.