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## Safe and effective devices and instruments for use in the neonatal intensive care units: NICHD Workshop summary.

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### **Abstract**

The neonatal intensive care unit (NICU) depends heavily on advanced biomedical devices for monitoring, diagnosis, and treatment. Developing safe and effective devices for use in the NICU requires collaborative research and testing efforts between the bioengineering and biomedical disciplines. However, no mechanism exists to match the needs of the clinical community and the efforts of the bioengineering community. To address this issue, in February 2009, the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) of the National Institutes of Health (NIH) invited a team of experts from diverse fields of biomedicine and bioengineering to participate in a workshop. The team reviewed and summarized bioinstrumentation needs and proposed a research agenda to develop safe and effective devices and instruments. The discussants addressed topics in cardiopulmonary, cerebrovascular, metabolic, and infectious conditions of the neonate. The authors provide a summary of the workshop discussions in this paper.

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