



***For Immediate Release***

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**Children's Hospital Oakland is First Pediatric Hospital to Use  
"Laboratory on a Card" Technology**  
Innovative and more efficient way to analyze blood

April 20, 2009-Oakland, Calif.- Children's Hospital & Research Center Oakland is the first children's hospital in the country to use groundbreaking technology that could revolutionize the way blood is analyzed at pediatric hospitals. This new method uses smart-card technology, similar to that used in some debit or credit cards at the supermarket or gas station, to read a child's blood sample.

The procedure starts with a respiratory therapist who takes a tiny finger stick sample of patient blood at bedside and places it on the diagnostic card. The card is slipped into a handheld wireless card reader or "host mobile computer" and blood gases are immediately analyzed. The respiratory therapist, along with the medical team, can quickly adjust the child's ventilator or other life support device settings, based on the nearly instantaneous measurements.

"What it's allowed us to do is be more efficient, effective and safe," said Katie Sabato, RRT, MS, director of respiratory care at Children's Hospital. She and her colleagues are convinced the new system could become an iPhone-like success story. What used to take 30 minutes to analyze and report, now takes 3 minutes.

Respiratory therapists at Children's Hospital Oakland do about 20,000 point-of-care blood gas and electrolyte measurements a year. "We are always interested in being in the forefront of making the best technology available for children," said Vivienne Newman, MD, clinical director of the Pediatric Intensive Care Unit and a veteran Children's Hospital intensivist. "We're always looking to see if there's new technology that will make running the ICU more efficient and more child-friendly, allow us to minimize discomfort and maximize our results, and make measurement as accurate as possible, while ensuring patient safety."

Children's Hospital Oakland collaborated with Epocal, the Canadian-based biomedical device manufacturer, to successfully modify and fine-tune the equipment, originally developed for adults. Since the collaborative improvements, there are now at least two other children's hospitals in the country using the new technology.

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### **About Children's Hospital & Research Center Oakland**

Children's Hospital & Research Center Oakland is Northern California's only freestanding and independent children's hospital. Children's is the leader in many pediatric specialties including neonatology, cardiology, neurosurgery and intensive care. The hospital is a designated Level 1 pediatric trauma center and has the largest pediatric critical care facility in the region. Children's Hospital has 190 licensed beds, 201 hospital-based physicians in 30 specialties, more than 2,611 employees and an operating budget of \$312 million. Children's research arm, Children's Hospital Oakland Research Institute, has about 300 staff members and an annual budget of more than \$49 million. Primary research funding comes from the National Institutes of Health. The institute is a leader in translational blood diseases, developing new vaccines for infectious diseases and discovering new treatment protocols for previously fatal or debilitating conditions such as cancers, sickle cell disease and thalassemia, diabetes, asthma, HIV/AIDS, pediatric obesity, nutritional deficiencies, birth defects, hemophilia and cystic fibrosis.