

# Healthcare Tech OUTLOOK

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## PEDINOTES™ THE NEXT GEN NEONATAL EMR

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# PEDINOTES™

## THE NEXT GEN NEONATAL EMR

By Banu John

**U**pon completing his pediatric residency and fellowship in neonatal-perinatal medicine at the University of Colorado Health Science Center, Steve Spedale, MD was enthusiastic to embark on a journey into the world of technology. His vision was strong and simple: providing better care by utilizing precise patient information. Having dealt with electronic medical records in various Neonatal Intensive Care Units (NICUs), Spedale knew the reality—the large EMRs used by most hospitals lacked the focus and detail that was required for delivering care to infants in the NICU. “I did not see any movement from the EMR companies to resolve this. As a clinician, I was growing impatient, waiting for someone else to create the technology that augments the healthcare I provide. So I decided to create one that will benefit both doctors and hospitals,” expresses Spedale. Today, PediNotes™—an EMR designed to work how a clinician works—is fulfilling Spedale’s vision by enhancing the working environment of the NICU and making patient care the top priority. “No matter what systems clinicians work with across different hospitals, PediNotes™ makes the NICU EMR environment the same,” says Spedale, medical director of one of the largest NICUs in the country and President of Tecurologic LLC, the parent company of PediNotes™.



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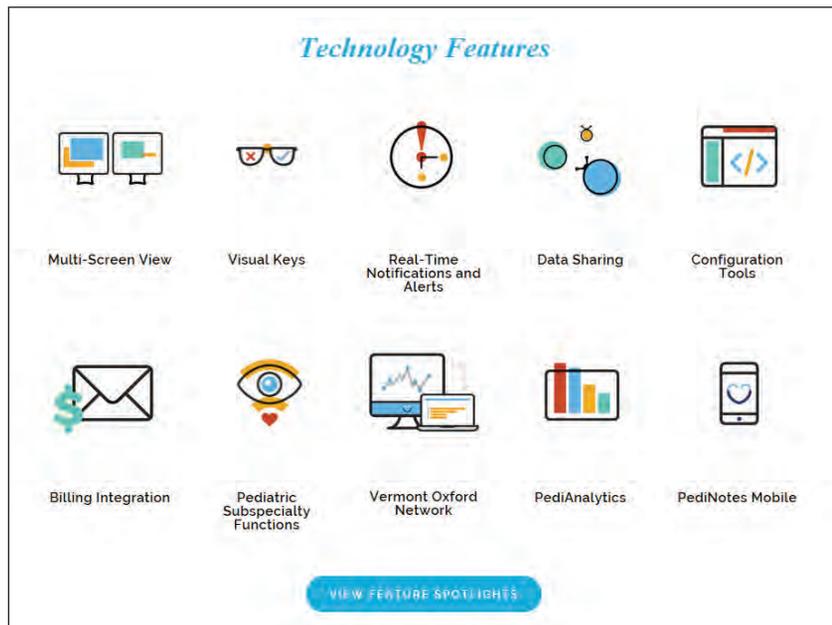
## An Integrated Approach

PediNotes™ is an easy-to-navigate EMR exclusively developed for NICU healthcare providers. The intuitive platform captures patient information from all NICU caregivers and integrates it into the EMR electronically to reduce their workload—allowing them to focus on patient care. To achieve this, the solution harnesses interoperability, both in clinical data exchange as well as Computerized Physician Order Entry (CPOE), allowing neonatal providers to work in a software program not only designed for them but one that also integrates with their hospital's EMR. The bidirectional interoperability lets users perform CPOE and send or receive clinical data, all from within PediNotes™—eliminating the usage of multiple systems for different functions. In addition, PediNotes™ can also run as a standalone application, allowing clinicians to continue their care delivery, even during the downtime of a hospital's EMR. PediNotes™ received its first certification as a modular inpatient EMR in 2013.



# In PediNotes™, we simply capture any available electronic patient information and display it in the logical repository for physicians to use

According to Spedale, it is a “win-win situation” for both hospitals and physicians. Both sides stand to benefit; hospitals are able to meet criteria for meaningful use, as well as having access to clinical data previously housed in a stand-alone neonatal EMR, and neonatal providers can use



software designed specifically around how they care for their patients.

## Streamlined Communication with Entire Care Team

PediNotes™ is designed by Spedale with the help of other neonatologists and pediatric subspecialists, with a focus on seamless communication

subsequent consult documentation, ECHO reports and retinal diagrams.

In addition, real-time data retrieval is available in the PediNotes™ desktop application as well as via smart devices utilizing PediNotes™ Mobile. Both applications provide caregivers a mechanism to communicate to bedside providers remotely and efficiently. “Physicians no longer have to be asked ‘Did you see the patient lab results?’” says Spedale. “Rather, they can receive, review, and transmit information back to the bedside nursing and respiratory therapy staff from PediNotes™ or PediNotes™ Mobile. In the event of a physician being engaged in emergency situations and thus unable to acknowledge the critical lab result, PediNotes™ provides automated protocols to instantly alert the bedside nurses allowing them to take necessary action to avoid adverse outcomes.

The moment a medical provider submits a STAT order, PediNotes’ two-tier alert system notifies the bedside nurse via their smart device that an order on their patient has been placed and displays the order details. Physician verbal orders can also be logged into PediNotes™ by the nursing staff so

between all members of the care team. As there are multiple providers in a NICU, documentation needs vary and PediNotes™ provides the means for all the providers to generate the documentation that best fits the type of care they provide. Subspecialty support in PediNotes™ includes: initial and

the orders can be reviewed, accepted or declined by the doctor through electronic signature functions available on the ordering physician's smart device. The order is then integrated into the hospital EMR like any other PediNotes™ CPOE order, significantly increasing the productivity of both the medical and nursing team as well as improving patient safety and order accuracy.



## No matter what systems clinicians work with across different hospitals, PediNotes™ makes the EMR environment the same

### Neonatology Designed

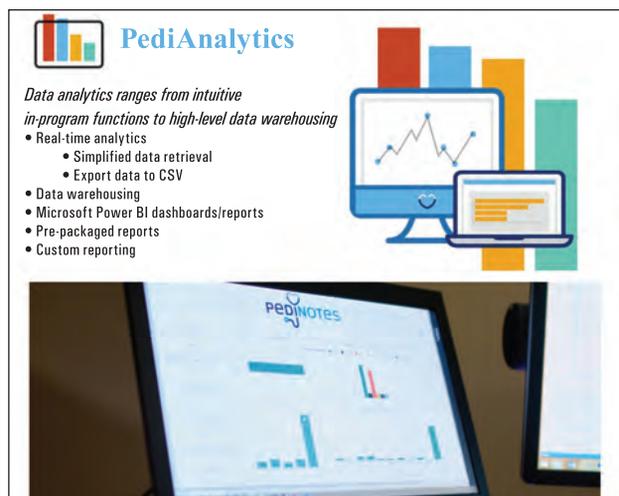
The intuitive design of PediNotes™ minimizes “the clicks” needed to navigate through different areas—respiratory, orders or lab results. For example, the respiratory page in PediNotes™ tracks all of a baby’s respiratory changes and assisted ventilation, as well as the associated laboratory information (blood gases). Based on its user centered design, intuitive CPOE capabilities are present on this page. This functionality ensures clinicians have all the required information at their fingertips, which in turn aids them in delivering the necessary treatment. “PediNotes™ captures any available electronic patient information and displays it in the logical repository for physicians to use,” states Spedale. “It further integrates it into the hospital system, significantly reducing the time providers spend searching for information, enabling them to focus more on patient care,” he adds.

Since all the information is housed in a single repository, end-users can view other caregivers’ documentation with a single click. Providers can also “borrow” the work done by another clinician to use as a starting point for their documentation in many places, without altering the primary clinician’s charting.

### Analytics for Quality Clinical Outcomes

Spedale recalls a real-life incident two years ago at one of their client institutions involving a newborn baby with infantile hemangioma—the most common vascular tumor of childhood. The NICU team had previously treated an infant with a similar condition with newer therapeutic medications with some modifications. The clinicians were able to utilize PediAnalytics, the integrated analytical tool, to search through thousands of patients for the prior patient and retrieve the therapeutic protocol for treatment within a few minutes. The ability for the

end user to easily retrieve clinical data through PediAnalytics enhances patient care when it is most needed.



A significant part of such successes can be attributed to the unique database of NICU patients that PediNotes™ has in their beta sites; “test sites with annual NICU admissions greater than 1200 infants and well newborn admissions greater than 2500 infants,” affirms Spedale. With the analytics tool, clinicians can quickly trigger their own queries about the patient, without having to submit a data request or possess knowledge of how to query a database. PediNotes™ also includes robust data analytics (Microsoft Power BI) coupled with data warehousing capabilities, which ensures regular electronic submission of clinical data to national databases.

### To an Exciting Future

With a neonatal EMR platform built for the future, PediNotes™ continues to stay true to its philosophy of making data work for caregivers. The company is continually improving its platform by expanding interoperability capabilities, expanding data retrieval from more sources and adding additional data analytics visualizations—including dashboards for financials, nursing acuties, and clinical outcomes; all to help caregivers deliver the next level of care. “Our innovation lab consists of daily meetings with the development team to review future developments and feedback from our beta testers on the features as well as the key issues they incur,” says Spedale. “We take pride in demonstrating PediNotes™ as the next generation of neonatal software. By virtue of being a neonatologist and working in a NICU environment, I want all feedback, good or bad, from our end users and look for all possible ways to improve care of patients,” states Spedale. “At the end of the day, we remember that PediNotes™ is helping someone to take care of a sick baby and, to us, that’s what really matters most.” **HT**

## 10 Most Promising EMR-EHR Solution Providers - 2017

The needs of the many outweigh those of the few. Modern day healthcare is as much a fundamental estate as the air we breathe—duly entitled to the growing multitudes. This causality bears heavily upon technology to deliver solutions, and rise to its unique challenges. The ambit then nestles a special set of options, demanding that these challenges be met, and have state of the art IT married to the exhaustive turf of medical science. The product of that endeavor yielded a means to contain the medical and treatment history of patients into one unified practice—Electronic Medical Records (EMR). EMR's are to medicine, what digital cameras are to photography. They are tools for capturing the most detailed aspects of patient

health and better monitor and improve the overall quality of care within practice.

Taking a step outward, Electronic Health Records (EHR) focus on the total health of patients, to go beyond standard clinical data, and include a broader view on patient's care. To quote HIMSS Analytics, "EHR represents the ability to easily share medical information among stakeholders and to have a patient's information follow him or her through the various modalities of care engaged by that individual."

Together, they form a compass that can help navigate the choppy seas of modern healthcare; and at the helm, are Healthcare Tech Outlook's 10 Most Promising EMR-EHR Solution Providers 2017, innovating the course to Eden.



**Company:**  
PediNotes™

**Description:**  
Provides an easy-to-navigate EMR platform for neonatal/pediatric care givers

**Key Person:**  
Steven Spedale,  
President

**Website:**  
pedinotes.com