



Achieving an integrated solution for a large perinatal practice

As New Mexico's largest perinatal medical practice, Perinatal Associates of New Mexico (PANM) strives to be an exemplary leader in its field. With committed maternal-fetal medicine subspecialists, and a relentless drive toward improvement, the practice delivers outstanding medical care and impeccable service to both their patients and referring providers. The clinicians at Perinatal Associates not only serve patients in the outpatient setting, but also continue a longstanding dedication to comprehensive perinatal services maintaining the capacity to care for pregnant women as inpatients at the leading hospital in the state.

From Paper to Paperless

With 30 years providing maternal-fetal care and prenatal ultrasound diagnosis, PANM is renowned throughout the southwest. Over the last three decades, the practice faced numerous healthcare challenges opening additional offices, managing changes in the insurance market and addressing the transition from paper to the digital era in medicine. In recent years, with federal mandates requiring movement from paper-based documentation to electronic health records, Perinatal Associates encountered a variety of issues regarding how best to carry on its tradition of excellent patient care. From upgrading its picture archiving and communication system (PACS), refining its ultrasound structured reporting software and integrating these systems within their electronic medical record program (EMR), the practice pursued its goal to maintain high efficiency and exceptional communication as they continued to monitor pregnant patients with medical and obstetrical complications.

Maternal-fetal medicine is a complex specialty requiring the physician to act as clinician, geneticist, radiologist and

multidisciplinary coordinator of a patient's high-risk pregnancy. As a practice, Perinatal Associates of New Mexico creates ultrasound reports, consult letters, and follow-up visit notes along with documentation of diabetic care logs, genetic counseling pedigrees, maternal transport correspondence and fetal non-stress test strips. While the practice pushed to become nearly paperless, each element produced by the practice required discussion and evaluation on the best manner in which to integrate them within their multifaceted electronic health record.

Enhancing Utilization of Your PACS and Ultrasound Structured Reporting Solution

While significant progress occurred with most items, the ability to transmit fetal non-stress test (NST) results to either its PACS and ultrasound structured reporting system or EMR lacked a robust solution. Multiple maternal medical and obstetrical conditions require monitoring of the wellbeing of the fetus during the last portion of a patient's pregnancy. This antenatal testing is conducted using a fetal heart rate monitor which traditionally prints NST results onto a specially formatted paper which can be collated into long stretches of documentation. Each fetal NST then needs to be interpreted and signed by a physician. The practice strongly hoped to achieve a paperless solution for this process as they hired a courier service to transport these documents from each of its nine offices to its main location to be completed by the physician.

In order to achieve a paperless solution, fetal NST tracings at PANM either would need to be scanned and placed into the EMR or PACS system or the fetal heart rate monitor itself could be linked to a software program to digitize the NST. Once in digital

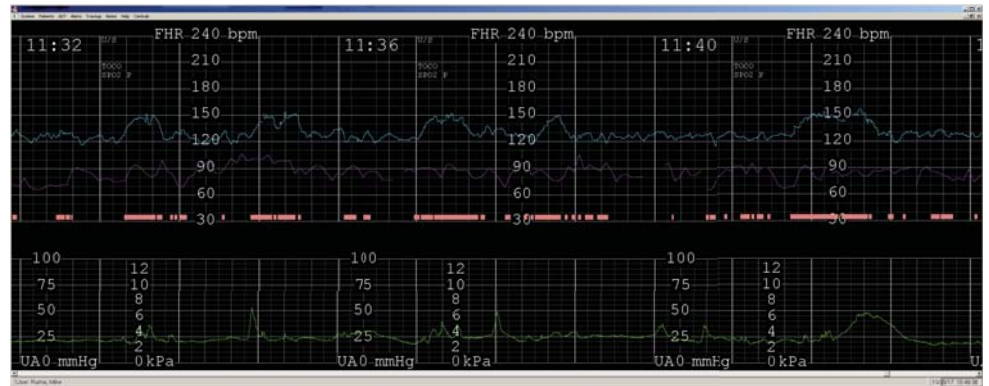
format, the practice ideally desired an automated manner to push the NST to its EMR or PACS and ultrasound structured reporting system thereby eliminating the need for employees to manually complete this task on a daily basis.

The Customer is Always Right

Perinatal Associates of New Mexico contacted three national vendors of solutions for electronic fetal monitoring including Clinical Computer Systems, Inc. (CCSI) who develop, market and support the OBIX Perinatal Data System. The first vendor never returned any correspondence requesting assistance with this issue. The second vendor made contact with the practice, discussed its product's capabilities, but ultimately introduced several roadblocks to developing a solution for Perinatal Associates. The vendor made it clear they only sell to enterprise-sized institutions and had no capacity, nor desire to develop a solution to integrate the transmission of a digitized NST to a third-party software already in use by the practice. In stark contrast to the other two vendors, Clinical Computer Systems contacted the practice and listened to its detailed needs. After several phone calls between CCSI employees and members of the practice's information technology (IT) team, an in-person meeting took place in Albuquerque at the home office for Perinatal Associates of New Mexico.

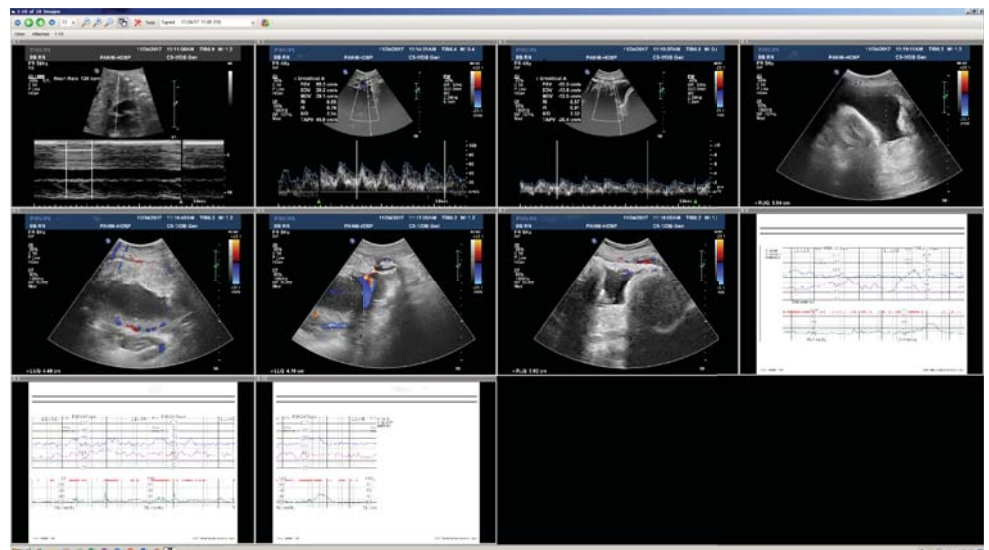
Despite the need for a significant amount of development, a novel solution evolved to manage the specific requirements of PANM. The OBIX Perinatal Data System integrated with the practice's EMR scheduling system and its modality worklist. The practice's twenty-five fetal NST monitors in offices, scattered four hours to the north and south of its main location, networked flawlessly to the OBIX system. Now pregnant patients

could be monitored and staff at the practice could visualize in real-time any NST conducted throughout the state. Upon patient discharge from OBIX, the digitally captured NST is then electronically transmitted in PDF format to the practice's PACS and ultrasound structured reporting system allowing for a permanent archive in the patient's medical record. By placing the digital images of the NST within the PACS and ultrasound structured reporting system, the physician could now review both biophysical ultrasound parameters and the fetal NST tracing within the same piece of software, fitting the exact needs of a maternal-fetal medicine practice workflow.



Optimized Solutions to Enhance Your Medical Practice

The OBIX system and the staff at CCSI addressed the unique needs of our growing maternal-fetal medicine practice. The collaboration and success achieved with integration of the OBIX system impressed our IT staff, our nurses conducting fetal NST monitoring, and our physicians and nurse practitioners interpreting the thousands of NST tests completed annually at PANM. Previously, our practice spent enormous amounts of employee time conducting, transporting and filing signed paper fetal NST reports. Today, with the help of this software and the unique integration developed at our request, Perinatal Associates of New Mexico is able to remotely view fetal monitoring occurring at any of its practice locations throughout the state, make instantaneous clinical decisions regarding patient care and document fetal NST reports in an automated and electronic fashion with ease. These advancements helped to integrate yet another component of our electronic health system and contribute to our ability to provide superior care to our patients today and without a doubt for many years into the future.



About the Author

Michael S. Ruma, MD, MPH joined Perinatal Associates of New Mexico in 2008. He received his medical degree and finished his residency in Obstetrics and Gynecology at Creighton University School of Medicine. He completed fellowship training in Maternal-Fetal Medicine at the University of North Carolina at Chapel Hill where he also obtained a Master of Public Health degree in Health Policy and Administration from the School of Public Health.