

# Change Champions Required to Promote Use of an Advanced EMR in a Mobile Community Health Clinic

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## Description of the Practice Model

This paper focuses on use of a new EMR system in the RotaCare Bay Area (RCBA) Concord mobile clinic with an attached pharmacy.<sup>(1)(2)</sup> RotaCare Bay Area Inc. is a nonprofit 501(c)(3) public benefit corporation providing free medical care to people with the greatest need. RCBA is supported through grants/donations and staffed primarily by volunteers. It provides myriad services, including medical exams, diagnostic testing, and an extensive formulary of free medications.<sup>(3)</sup> The Concord clinic operates from a mobile RV stationed at key sites in the city, providing continuous care to the extent possible through case management. The Concord clinic recently implemented a new EMR system to improve patient tracking, record-keeping, and data collection. The previous EMR system required significant paper documentation and could not be used to send external orders to labs, integrate pharmacy, nor provide clinical decision support. The new EMR system, athenaNet, was donated by Athenahealth Inc. Its implementation was led by the clinic operations manager and supported by volunteers designated as “superusers,” i.e., staff with training in and additional access to the EMR. The operations manager exhibited the qualities of a “change champion,” such as participating in the EMR’s final design and assuming a key role in decision-making.<sup>(4)</sup> This facilitated excitement among staff, providers, and student volunteers.

Upon arrival to the clinic, patients are checked into the system and triaged for documentation of vital signs, basic history, and chief complaint(s). While awaiting the physician, the patient is seen by a nurse who performs a glucose check and retrieves past lab values. A scribe enters patient data into athenaNet while a treatment plan is developed. Following diagnosis, the scribe transmits orders to the external lab and documents prescriptions for dispensing in the clinic or electronic submission to retail pharmacies. The pharmacist reviews the prescription order summary on athenaNet to ensure that the prescription label is written in the patient’s preferred language and counsels the patient prior to discharge. Drugs are dispensed in one- to three-month supplies to patients at no cost.

Benefits of the new EMR are readily apparent and include more easily accessible information in spaces with limited physical storage, improved coordination and quality of service, enhanced physician/pharmacist recall, and reduced likelihood of error. The system does come at a high cost, however, if the clinical is unable to attract monies for its purchase and implementation, including maintenance and staff training.

## Resource Requirements (staffing, equipment, capital)

The RCBA Concord team is composed of part-time volunteers, including primary care physicians, nurse practitioners, physician assistants, and pharmacists assisted by interns. Professional interpreters are routinely on-site. The remaining staff, such as scribes and IT personnel, are volunteers, often in training for various healthcare careers. The staff is led by a volunteer medical director and paid clinic operations manager.

The Concord clinic operates out of a mobile RV that includes two exam rooms, a small nurse station, and a pharmacy stocked with a limited number of generic drugs typically found on top 200 lists. The drug formulary is adjudicated by a P&T Committee that includes the medical director and a pharmacist. It targets conditions common to the treated population: hypertension, diabetes, infections, acute chest pain, allergies, thyroid problems, and airway diseases. The pharmacy also stocks medical devices, such as glucometers and pill cutters.

## Description of Successes (both anecdotal and measurable)

RCBA has successfully delivered care to underserved populations in the Bay Area for nearly 30 years through 12 clinics. The Concord clinic has been operating since 2010. Its workflow has been improved by recent implementation of athenaNet; for example:

- The clinic operations director recently used the new EMR to extrapolate data for a grant application. She acquired data such as the number of patients treated per year, stratified by gender, age, ethnicity, and other demographics. Grant-writing for operations like Rotacare is essential to their long-term solvency, the quality of care they provide, and the number of patients treated.
- The pharmacists note that electronic prescriptions make for easier and improved verification and concurrent drug utilization review. This not only reduces the likelihood of error but also helps to optimize the patient’s therapeutic regimen. The EMR creates a role for pharmacy interns to verify orders and print prescription labels. It also provides interns with insight into clinical decision-making. With interns handling the EMR, the pharmacist has more opportunity to consult with physicians and counsel patients.

- Diagnosticians have more time to focus on direct patient care, including personal interaction, while scribes input information more efficiently. Diagnosticians are accorded the opportunity to employ a vital signs and lab values trends tool to assess the success of the patient's care plan. They can assess whether treatment plans are improving outcomes. For example, a patient presenting with swollen lymph nodes had physical signs and lab values documented. Upon follow-up, a different physician noted even larger lymph nodes and worsening lab values, indicating possible cancer. This diagnosis was possible due to improved continuity of care provided by athenaNet. Anecdotally, there has been an increase in patients remarking positively on self-care after more comprehensive consultations, and diagnosticians are noting better control and self-efficacy for chronically ill patients. The new system provides monitoring parameters that the previous system was not able to provide by documenting patient progress. As such, more formal evaluation of patient outcomes in several diseases is underway.
- Scribes are able to quickly view information on past visits and share this information with the providers. This is especially critical for continuity of care, as most patients will see a different provider during subsequent appointments. This reduces any ambiguity for the physician regarding the patient's ongoing care plan. Additionally, having lab values automatically downloaded onto the patient's profile accompanied with target ranges for those values provides additional time-saving and optimization of care planning.
- The new EMR provides a greater number of and more accurate/modernized alerts for nurses. The system recognizes keywords from triage, and a data field is highlighted in the patient's chart. Nurses are trained to recognize these alerts and perform any relevant tests or ask questions before the patient is seen by the physician. Examples include diabetes follow-up triggering the need for additional blood glucose assessments and a complaint of pain with urination triggering an alert for urinalysis. Nurses believe the tool has facilitated identification of patients at risk for diabetes and promotes early counsel for lifestyle modifications. Patients have been observed to be more adherent to these lifestyle modification recommendations due to more time spent with them.

## Limitations of the Model or Restrictions that Limit its Portability

RotaCare Concord is currently the only RCBA affiliate utilizing the new EMR. The EMR does not provide prescription labels, so separate printer software is required. Another constraint is the inability for various RCBA affiliates to share information due to use of different EMRs in their clinics.

Additionally, the EMR does not ease challenges associated with the need for multilingual care. Translators are still needed, and finding volunteers who are fluent Spanish (and other language) speakers is difficult. Furthermore, some patients do not have proper identification, and referring them for lab work or other procedures can be problematic.

The staff are volunteers who, thankfully, dedicate much time and effort; however, identifying champions among them to create culture change and facilitate implementation of new technology is difficult given that these persons are already challenged for time, given other work and family obligations.

The superusers were the staff most involved with educating and ensuring the system functioned optimally, but were also volunteers. They were not able to fully educate providers on all functions of the EMR until well after implementation. By involving superusers as change champions, more diagnosticians would be aware of functions and benefits of the EMR.<sup>(5)</sup>

## Business Case and Legal / Regulatory Restrictions on the Model

RCBA does not bill or receive direct reimbursement for services rendered. It receives donations and grants from Rotary International, various California foundations, local hospitals, and the city of Concord.

RCBA clinics are all under the same umbrella of RotaCare Bay Area Inc.; however, they are not considered a chain medical center. They do not necessarily use the same technology, they do not share staff, and each has different capabilities and scopes of practice.

The Concord affiliate is among the few that provides free medicines. It does not treat pediatric patients but does offer clinics specifically for women. Some other RCBA affiliates operate as clinics specifically for families with children.

## Future Plans and Direction

Other RCBA affiliates have plans to implement the new EMR. This will allow patients to be seen at different clinics and have their information be accessible to all clinics. A patient portal is also planned that will allow patients to access their medical records and communicate with clinics. The EMR system is critical to any medical care operation, particularly for continuity of care to at-risk populations. Accompanying any modifications or new technology must be the right culture fueled by effective agents of change. This is important in any setting, but especially clinics operated by volunteers caring for the underserved.

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