Lessons Learned: A Case Study in Primary Care Redesign and Community Health Centers
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In 2012, Arrowhead Regional Medical Center (“ARMC” or “Medical Center”) embarked on a journey to redesign care delivery in three off-campus primary care community health centers (“Clinics”) associated with the 456-bed safety-net teaching hospital. The goal of the project was to move to a patient-centered medical home model to provide timely, proactive, and coordinated care by redesigning the patient visit to increase Clinic access, efficiency, and improved use of physician time.

As a participant in California’s Delivery System Reform Incentive Payment program (“DSRIP”), (California’s Medicaid Waiver program designed to incentivize improved access and care delivery for the uninsured in preparation for 2014 healthcare coverage expansion), the Medical Center was eligible for incentive payments if it achieved performance thresholds, including:

- Reduce patient visit time (“cycle time”) from the current 73 minute cycle time to 45 minutes or less
- Improve patient access
- Improve patient experience and prepare the Clinics for implementation of the Clinicians and Groups: Consumer Assessment of Healthcare Providers and Systems Survey (“CG-CAHPS”)  
- Improve provider and staff satisfaction

In this article, we will discuss the critical success factors that drove successful implementation and replication of the Clinic’s redesign efforts, while achieving DSRIP goals. The article will also explore the challenges faced by the Clinics and lessons learned from the experience.

Six factors critical to the successful implementation and spread of ARMC’s redesign efforts were:

1. **Beginning the redesign with a well-defined vision with measurable goals and objectives provides necessary focus and direction.**

   The redesign process began with the identification of the ideal patient experience; this established the blueprint for the redesign effort and allowed the Team to meet its defined goals and objectives. The blueprint was created by the redesign team (“Team”) which included clinical and non-clinical staff, management, physicians, information technology staff, business services staff, and a facilitator.

2. **Multidisciplinary leadership is necessary to drive buy-in and facilitate systems thinking.**

   The care model redesign process was designed and piloted at one Clinic and further replicated and refined at two other locations and as such, representatives from all Clinics participated in the Team. This multi-site, multidisciplinary team was critical in ensuring the workflows created would be successful in all Clinic sites and ensured buy-in from non-participating staff.

3. **Identification of gaps in the current state to the ideal care model is essential in the creation of ideal workflows.**

   A gap analysis was conducted early on to assess the current Clinic network state against the ideal patient experience and required key capabilities in such areas as provider capacity, facility design, check-in process, appointment scheduling, messaging, referral tracking, patient throughput, medical supply availability, and practice efficiency. Each key capability was given a performance score by the Team and gaps in service standards identified.
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The Team was subdivided into front-office and back-office workgroups. Each of the workgroups was accountable to map current workflows and then redesign workflows to eliminate duplication and address service gaps. Spending time to identify gaps in service standards enabled the Team to visualize the changes needed to realize the ideal patient experience. Mapping current workflows identified the major areas of waste that could be eliminated to reduce cycle time and improve efficiency. In some cases, best practice workflows were identified and adopted from one of the three Clinic locations.

4. **Identification of metrics and surveying current state to benchmark ensures redesign efforts are moving in the right direction.** Early on in the process, key performance metrics were identified and benchmarked to best practices. Current performance was compared to the benchmark targets to gauge current performance. It was essential for staff and providers to understand current performance in order to determine the positive or negative affect of each element in the newly designed workflows. As new workflows were implemented, performance was monitored compared to benchmarks and were revised when results were less than targeted. It is important to remember that monitoring of benchmark targets does not end once targets have been achieved; ARMC continues to monitor performance against targets to ensure that the redesigned care model and expected results are sustained.

5. **Don’t wait to implement.** Another critical success factor was implementing the redesigned workflows as they were developed. While the Ideal workflows could not always be achieved immediately due to technological limitations or other factors, implementing quickly allowed staff and providers to see the results of their efforts. This strategy aided in building confidence that change not only could happen, but the new workflows did improve care, thus gaining acceptance and compliance. Implementation of the workflows in stages made them less overwhelming and provided a better opportunity to test and improve processes.

6. **Successful redesign implementation requires a culture that accepts change and focuses on improvement.** Significant changes to Clinic workflows requires physicians who are engaged, effective leaders committed to a common vision. Successful implementation necessitates a long term commitment to continuous improvement to patient-centric care. ARMC successfully involved physician leadership from the initiation of the engagement which aided in the adoption and roll-out of the redesigned care model. Acceptance of change builds over time as physicians and staff attain success and see the care of their patients and their work lives improve.

Four lessons learned during the patient care model redesign process are:

1. **System redesign is necessary to completely transform patient satisfaction and throughput.** Departments outside the four walls of the Clinics play a role in the quality of patient care delivery and must be part of the redesign effort. True transformation to patient centered care will not occur until all components of the outpatient delivery system work in concert.

   The redesign process began in the three primary care Clinics; however, to fully achieve desired goals, the redesign process needed to extend beyond the Clinic to other functions including centralized scheduling, referral management center, and the specialty centers. To truly provide efficient, coordinated care, specialists need to be brought into the care model redesign process. ARMC is now embarking on a continuation of its journey to redesign care models in its specialty care centers.

2. **Variation in work flow and volume from session to session and across days makes it difficult to achieve consistency in performance.** ARMC is a teaching facility and has various levels of resident participation in Clinics throughout the year. Attending physician capacity varied greatly from session to session, creating significant variation in staff workloads from day-to-day. This variation prevented staff from achieving the goal of completing tasks same day. In order to streamline workloads, a process was developed to assist in scheduling providers more evenly across sessions. In situations where this was not possible, a staffing plan was developed that accounted for these variations in work assignments and staffing patterns to adjust for disparities in physician capacity. Proactively predicting changes in workflows and modifying roles and accountabilities to accommodate variations in volume increased consistency in performance.

3. **The need for over-communication, development of new skills, and teamwork cannot be underestimated.** Clinic staff and providers were organized into clinical PODs with assigned panels of patients. It was discovered during the roll-out phase of the project that providers and staff were not always clear on their new roles and responsibilities and were in some cases continuing to perform work that was not to the top of their license. Additional education was needed for both staff and providers to understand the concepts of the workflow changes and to ensure that all Clinic members were performing their new roles and responsibilities.
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4. **Use the technology you have to achieve quick results.** ARMC was in the process of implementing its ambulatory electronic medical records ("EMR") system while relocating one of the Clinics to a new facility and initiating its care model redesign process. While the Clinics couldn’t immediately realize all of the benefits of the EMR to reduce waste and had to rely on paper processes for a period of time, some areas were identified in which existing technology could be utilized to improve cycle time and patient satisfaction.

    These included increasing the publication of scheduling templates, using an automated attendant to appropriately direct phone calls, utilizing an automated appointment reminder system to reduce staff time and expense, and using E-Prescribing to reduce the volume of faxes from pharmacies to improve the Clinics’ ability to refill medication requests promptly. Implementing just a few of these initiatives resulted in big gains for the Clinics.

While the journey to patient-centered care continues to evolve for ARMC, this case study provides a unique example of their experience in developing the infrastructure and foundation of a patient-centered medical home in its ambulatory facilities. Like many safety net providers, this organization had the challenge of implementing a redesign effort in multiple locations in a relatively short period of time, while simultaneously implementing an EMR and moving to a new facility.

As a teaching facility, there was added complexity in redesigning clinic workflows and increasing patient through-put. Despite the challenges the organization was able to meet its DSRIP goals by increasing patient, staff, and provider satisfaction and decreasing cycle time.

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