Multnomah County Health Department Case Study

About the Practice
Multnomah County Health Department is a federally qualified health center that serves up to 45,000 patients and averages 170,000 visits per year. MCHD delivers care through family practice, pediatrics, mental health, and internal medicine at eight clinic locations in the greater Portland, Oregon area. They first adopted their electronic health record (EHR) system, Epic, in 2005. They are currently using EpicCare, version Summer 2009.

Quality Improvement Goal
To use the EHR to capture patient and clinical information for quality measurement and reporting.

Meaningful Use Objectives Addressed
- Record patient demographics: At MCHD, patient demographic information is entered into their Epic EHR as discrete data during the patient registration process.
- Record vital signs and chart changes: Vital signs are entered into discrete data fields by the Clinic Medical Assistant during the “rooming” stage of a patient visit.
- Maintain up-to-date problem list of current and active diagnoses: As a key competency for providing high quality care, up-to-date problem lists for individual patients are readily available in their EHR, and they are considered an essential part of a patient’s electronic medical record.
- Maintain active medication allergy list: As with the medication lists, allergy lists are integrated into MCHD’s clinical workflow using the EHR, and are reviewed during patient visits.
- Incorporate clinical laboratory test results into EHRs as structured data: MCHD’s Clinical Systems staff and its collaborating partners have worked to build an EHR that incorporates laboratory results received electronically from multiple sources and formats, then stores them in uniform, discrete data fields that will be functional for the clinical end-users (physician and other providers).
- Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research, or outreach: Patient registries generated through the EHR allow the MCHD clinics to conduct better outreach to patients with chronic diseases, and to be more proactive in their patient care. To date, MCHD has developed patient registries for diabetes mellitus, hypertension, prenatal care, depression, persistent asthma and HIV.

EHR Implementation Process
MCHD, like other safety net providers nationwide, has a guiding vision: to improve the outcomes of their needy patients. Around 2001, they realized that in order to achieve this vision, they would need better data. They began a search for an EHR, but quickly realized that they would not be able to purchase a system that would meet their needs on their own. In 2002, they joined forces with other members of OCHIN, a non-profit provider of health information technology in Oregon, to purchase the Epic EHR.

In addition to support from senior leadership, MCHD benefitted from having a strong implementation team comprised of both clinicians and dedicated IT staff. Dr. Amit Shah, MCHD’s medical director and EHR champion, was involved from the beginning to design and tailor the EHR to fit the health center’s needs.

He stressed that having a physician who is involved in the practice’s leadership, and partnering with a nurse champion are essential for provider buy-in and EHR adoption. The MCHD team also emphasized that it is important to have a clinical systems manager who understands the clinical system, but also speaks the language necessary to communicate with the IT department staff who are more computer oriented.
MCHD’s implementation team worked to develop a “core” EHR that could then be adopted to fit in with the workflows of the individual clinics. To determine workflow requirements, the MCHD team first determined specific performance measurements and clinical improvement goals, and then determined what needed to be reported to support those objectives. At the same time, MCHD implemented team-based care in each of their clinics, with each team comprising of two primary care providers, one registered nurse, one panel/patient manager, two support staff, and one team clerical assistant. These multiple teams are supported by front office staff, administrators, and clinical medical assistants. Establishing these teams standardizes the roles and responsibilities of staff within and across all of the MCHD clinics. The EHR implementation team believes this standardization is crucial for EHR implementation and training. As new EHR functionalities continue to be rolled out, the EHR implementation team works with each clinic’s practice management team to “train the trainer”, who then disseminates the information on the new EHR functionalities to their teams. MCHD has not yet decided on which of the clinical quality measures (CQMs) they will report under Meaningful Use. However, they expect that reporting the CQMs will not significantly affect MCHD’s workflow. MCHD already generates reports through Epic that provide clinic-specific and provider-specific quality performance data, to which providers have access. While MCHD has not yet seen clinical benefits of these process measures on patient outcomes, they have observed organizational improvements.

**Working with the Oregon REC**

MCHD has a symbiotic relationship with their REC, the Oregon’s Health Information Technology Extension Center (O-HITEC). O-HITEC helps MCHD staff understand the rules of meaningful use, and MCHD is providing the REC with first-hand experience in adopting and using their EHR for meaningful use, so that their lessons learned can be passed onto other implementation team. Also, identify the best practices to make the rollout better at the next center.”

- MCHD staff noted that practices should avoid the illusion that having an EHR automatically means access to data. To retrieve meaningful information from the EHR that is actionable by clinical providers and health center managers requires significant planning and design.

- Staff need time and training to learn how to use the EHR to standardize and optimize clinical work. This requires developing and implementing business rules within each new practice or organization, and training staff to adhere to those rules.

- The MCHD team believes that the EHR is just one part of the process that improves clinical outcomes. In their view, quality improvement must involve three arms: 1) the EHR; 2) clinical operations; and 3) reporting; and all three arms must operate in tandem. That way, staff can better identify problems or gaps in patient outcomes and implement improved clinical processes and improved chronic disease management.

**Next Steps**

Next steps for MCHD include improving and expanding use of their HIT and EHR utilization for quality improvement purposes. Part of MCHD’s strategy is to move toward a patient-centered medical home care delivery model. MCHD leadership believes that all of the MU objectives will be met if they focus on their efforts towards creating a medical home-based delivery model for their vulnerable patient populations. Another major focus is improving patient safety, and MCHD staff believe that they can discover medical errors more readily with an EHR. As Dr. Shah said, “We need to be proactive and not just reactive.”

**Taking Action**

Consider developing and implementing business rules to streamline the data entry process and to make data retrieval for clinical quality measurement easier. For more information about this and other aspects of Meaningful Use, contact Allen Traylor, Office of Provider Adoption Support Office of the National Coordinator for Health Information Technology U.S. Department of Health and Human Services e: allen.traylor@hhs.gov