Harvard Vanguard Medical Associates, Medford, MA

The Magic is in the Measurement

Andrew Schutzbank 11.9.2011

Harvard Vanguard Medical Associates is a multisite multispecialty clinic under the banner of Atrius Health. Each site offers slightly different services, and for the purposes of this visit the Medford site was chosen as exemplar of innovation in Primary Care. The Medford practice exists within a 3-story structure that also houses Medical & Surgical specialties, OB/GYN, and pediatrics. It also has an onsite laboratory, radiology (including MRI) and pharmacy.

The Internal Medicine practice is divided into teams, consisting of 2 MDs each with Dedicated MA (DMA), 1 RN case manager, 1 NP (functioning independently) and shared LPN and Medical Secretary resources.   I primarily spent time with Thad Schilling, MD, one of the leaders of the quality improvement process at Vanguard, and his Dedicated Medical assistant.

What is most striking about HVMA Medford is not actually their current work processes or improvements, but rather their ability to measure ongoing improvement activities. In this practice, the measurement IS the magic. They have fully embraced LEAN methodology and are the finest example in healthcare I have ever seen of such quality improvement & data management.

The day began at 7:30 in weekly clinical operations meeting, with members of the improvement staff, MDs and nursing. In this very formal meeting with prepared agendas, the team worked down a list of open improvement issues and checked the status, blockers to improvement, responsible parties, and expected due dates. They also reviewed the status of the Rapid Improvement Events (1-2 week change events), long-term projects, and the status of prior ongoing projects. One interesting conversation was a quick analysis of the order of options for the phone triage system ("Press 1 for Medical advice") The team was adeptly able to review data from calls that most were for refills, then appointments, then medical advice, and planned to reorder the options accordingly. This all took place in a room accurately identified as "Mission Control" as it was wallpapered with white boards with meticulously hand drawn strategy fish bone diagrams, important metrics, Pareto analysis, status of ongoing projects and overall projects, and schedules for observation.

The day then proceeded to Dr. Schilling's office where he and his dedicated Medical Assistant sat and planned out the day. They reviewed all of his scheduled office appointments and phone appointments. Dr. Schilling's desk is quite a sight to behold, with carefully marked areas, ringed in black electrical tape, which mark out work "To Do" "In Progress" and "Complete." Everything has its place. Throughout the day, the expectation is that both doctor and DMA will work through "deferrable tasks," things that have to get done soon, but not right now. Rather than building large queues of work backlog, the management & triage of which is often more time consuming than the work itself, work is completed throughout the day when there are any free moments. And the work is done in a standard fashion.

The pursuit of standard work is the cornerstone of the HVMA Medford. For many a (soon every) work process, there is a clearly defined series of steps to complete that work. The pursuit of standard work is to first create a process, which can later be revised and improved. There is standard work for all roles, such as form completion which starts with Medical Secretaries, moves to LPNs and then ultimately the MD for any additional work and signature. Of course there is a method to measure and track standard work. Throughout the workday, team members observe each other in a semi-planned fashion performing standard work in the form of a quick audit. If you get it right, the audit card goes in green. Wrong and it goes in orange. The purpose is not to scold workers, but to identify both the degree to which a process actually exists (the green %) and if a given member of the team needs assistance with a process. However, an all green process still has related outcome metrics, so if a process is followed but fails to deliver, then it is the process that needs revision. There did not appear to be tension between standard work and individual preference as the standards were still currently in development with each team member contributing to work flow design.

Returning to the day, after the 8:30-8:50 DMA/MD day planning session, the entire team reports to another white board for the daily huddle, called MDI or Managing Daily Improvement. Everyone's performance on clinical and process metrics are up on the white board for team review. During this particular huddle, team dynamics were discussed as brought up by one of the LPNs that found colleagues a bit less willing to help out than she had hoped. I found it hard to follow the format of the meeting. Once this meeting concluded, the formal day begin, approximately 90 minutes after everyone's arrival.

The practice is currently experimenting with a set schedule of 30-minute visits regardless of "type," including phone calls and office visits. This approach is designed to regularize the day and allow for smoother cross-subsidy in shorter vs. longer visits. The previous 20/40 minute visits made the day more difficult to predict.

Office Visit

Observed Office visits begin with the patient checking in at the front desk. The DMA is alerted through a status change in the EPIC medical record/practice management system and then goes to the waiting room to room the patient. Vitals are obtained, medicines reconciled and agenda for the visit set, all entered into the visit note that is populated by prior data, which the MA confirms. This is done in a standard fashion. Once the preparatory work is complete, the DMA signals the doctor, through another status change in EPIC, that the patient is ready for the physician.

The physician enters the room and rapidly confirms the agenda, but does not repeat the work performed by the MA. Patient issues are addressed, with HPI entered into the computer in real time by the physician. The exam portion of the visit is typical and entered by the physician into EPIC after it is complete. At the end of the visit, the physician writes a brief To Do list in EPIC, which is left for the MA, signals that the patient is ready and leaves the room. He then returns to his shared office and dictates (via Dragon) any remaining components of the visit note which is usually HPI, Assessment and a formal plan. Meanwhile, the MA is in the room with the patient finishing out the visit by scheduling any appointments, sending off any refilled prescriptions and answering any other questions. MD and MA communicate almost exclusively through EPIC, seamlessly from the patient's perspective.

This pattern repeats throughout the day with deferrable tasks such as unscheduled phone calls, forms, results letters, etc. dealt with by MA and MD. The plan is to have all work complete at the end of the session, but the MD reports approximately 60 minutes of after session work per full day, with no homework. One initiative about to launch after a successful pilot is a standard schedule, where all visits are planned at 30 minutes, representing a blended rate of all patient needs (rather than 20 or 40 minute appointments). This is intended to allow a regular tempo to the day (which will be lengthened) with more time for deferrable tasks.

RN Case Management

The RN Case Manager sits in an office adjacent to the MD/MA pair and has responsibilities derived from a list of chronically ill patients, post-hospital discharge patients and ad hoc referrals from the physicians. She spends much of her day on the phone with patients arranging appropriate follow up, answering questions, and trying to squeeze in blood pressure checks, blood sugar downloads, and similar services with their other planned visits to the practice. One interesting strategy is the "future message" option, whereby the RN will send herself a message that will sit in EPIC until a specified future date, effectively acting as a reminder/to-do list.

When asked about her role, she "Feel[s] more like a team player, we have our own office here but have support outside."

LPN

The LPN has an independent schedule, often acting as the effector arm of the RN case manager- checking blood pressures, glucometer data, and administering vaccines. They too are involved in completing deferrable tasks throughout the day. One LPN very much appreciated the culture of HVMA Medford as her suggestions were often incorporated into new standard work processes. She enjoys the clinical time with patients, and the sense of reinforcement from the clinic.

Funding

HVMA Medford sees patients both in a Fee for service and Capitated payment system, approximately 50/50 by patients, but 25/75 by dollar (with capitation predominating). Bills & codes are submitted after every visit despite only some of them ever translating into real reimbursement. They are otherwise used for tracking productivity. The support for this ongoing improvement project from Atrius comes in the form of protected time for physicians and other staff to be "out of production mode" as well as two full time Care Improvement Facilitators. We did not explore when/where this funding would end, and the return on investment as seen by Atrius.

Conclusions

HVMA Medford's magic is in the measurement. They have an elaborate, LEAN-based process to collect information about their work processes and outcomes, and then innovate on those processes in a deliberate manner. Key metrics are displayed on the wall, goals are set and progress is tracked. I have often heard this type of method discussed in healthcare, but I have never seen anyone implement it to this degree. They do proceed with a great deal of formality, which is obviously a strength of the organization.

The observed downside of such rapid and continuous improvement is a degree of change fatigue, and the notion that there are "too many meetings." The process seems too formal and rigid from my observation, but I do not live it so I will withhold judgment and marvel in the results. As with many of these innovative practices, payment is still a mixed bag with billing/coding an expense that will not go away. The role of Atrius funding is also unclear to the future success of the innovation apparatus, as it is not clear if the practice's innovation arm is expected to become self-sufficient at some point in the future.