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Panel 3: Care Coordination in the Ambulatory Environment

First, I thank the Meaningful User Group for this opportunity to share my thoughts regarding HIT and care coordination. My name is Rajeev Chaudhry, MBBS, MPH, and I am a board-certified internist in the Primary Care Practice of Mayo Clinic Rochester. As the medical director of Health Information Management Systems, I also lead the development and implementation of population management systems, point-of-care decision-support systems, and quality reporting systems for our Primary Care Practice. On behalf of the Primary Care physicians, I would like to share my views of the future opportunities for HIT for supporting the care coordination for improved results.

1. What is the evidence for effective use of HIT to support coordination of care in the ambulatory environment?

The principle tasks necessary for effective care coordination as explained thoughtfully in the recent article (1) are :

- Maintain patient continuity with primary care provider and team.
- Document and compile the patient information generated within an outside primary care office.
- Using information to coordinate care for individual patients and for tracking different patient population within the primary care office.
- Referrals and consultations initiating, communicating, and tracking.
- Sharing care with clinicians across practices and settings.
- Providing care and/or exchanging information for transitions and emergency care.

Mayo Clinic in Rochester is a multispecialty group practice and in our primary care practices we provide care for 140,000 patients from Olmsted County in SE MN. According to the Dartmouth Atlas on Medicare spending we are in the country's lowest spending areas especially for the last 6 months of life which accounts for a significant amount of total spending (2).
We have a shared EMR for inpatient and outpatient practice. Our EHR's support coordination of care in following areas:

a. We have an electronic notifications to our primary care physicians whenever their paneled patients are admitted to the hospital or have an emergency room visit. Processes also need to be in place so that patients get a follow up visit after inpatient hospitalization within seven days or an emergency room visit, and these have been shown to reduce the readmission rates. Recent study has demonstrated that the readmission rates after hospitalization are lower for patients who had a follow up visit after hospitalization (3).
b. We have an electronic notifications to our primary care physicians whenever their paneled patients are seen by the specialist after being referred. Processes also have been put in place for the primary MD team to act upon the specialist recommendations. We also share the same EMR across outpatient practice. In addition we have developed electronic consultations between primary care physicians and the specialists to further improve coordination of care.

c. We share the same EHR with the laboratory, radiology and specialty systems (e.g. ECHO in cardiology or Colonoscopy in GI) and thus the results are available to all providers. Again we have put in processes so that care is coordinated after a test is completed.

2. What might EHRs do in the future to assist with care coordination?

The opportunities for improving care coordination would be related to both chronic condition management and following acute illnesses. For chronic condition management, the EHRs must support population management and support the workflow for the visits. For population management, the advanced registries, which support multiple chronic conditions, are needed in order to proactively engage with the patients and provide them with coordinated care. At Mayo Clinic Rochester, we have demonstrated improved delivery of both preventive services and care for diabetes by utilization of population management systems(4-6). During the visits also, the EHRs must support the workflow for patients, which can be dependent upon the patients' chronic condition, advanced clinical decision support for preventive services and chronic conditions, and having shared decision-making process with the patients is imperative to improve the delivery of care (7) . To fulfill the medical home requirements, the EHRs must support the creation of a care plan, which needs to be updated with the change of the status of the patient and is electronically shared with both patients and other providers of care in the community, including public health agencies, schools for children, and specialists. To support the care coordination during acute episodes, having a shared EMR between inpatient and outpatient facilities and between emergency room and outpatient physicians is a must. Also, a shared EMR between primary care physicians and specialists helps with the coordination of care.

From the recent study, published in General Internal Medicine in December 2009 (1) , the current EHRs facilitate within office care coordination. However, they are less able to support coordination between settings due in part to their lack of standardization. There are opportunities for improving information overflow from EHRs capturing the decision-making process and future care planning. Improving coordination also requires practice operational processes that are challenged by the current fee-for-service reimbursement structure.

There have been benefits associated with improved processes of care in the Medicare Physician Group Practice Demonstration Project (8) . Also, for the patients who had a follow up outpatient visit after hospitalization for heart failure, they have shown to have reduced secondary readmission rate (3).

3. How can the electronic record help reduce readmission rates, and unnecessary emergency room visits?

To support the care coordination during acute episodes, having a shared EMR between inpatient and outpatient facilities and between emergency room and outpatient physicians is a must. Also, a shared EMR between primary care physicians and specialists helps with the coordination of care. Electronic notification to primary MD of admission to hospital and Emergency room helps , however technology alone is not the answer, processes also must be in place to provide the continuity of care to reduce unnecessary admissions.

In addition, we have developed predictive modeling to proactively identify patients at risk for re-hospitalizations or emergency room visits. Currently, we are undertaking a trial to assess the benefits of initiating remote monitoring in a randomized control trial as soon as the risk for readmission score changes .

4. How do privacy and trust issues affect these areas?

The EHRs must support the privacy and confidentiality requirements for patient care. However, standards should be developed for sharing health care data between the members of the care team, outpatient and inpatient facilities, different practice locations, and with the community and public health organizations. The standards should be enhanced so that they are easy to understand and implement with the patient health records. Also, these standards must protected. The PHR's should also allow the patients to have a choice with whom their information can be securely exchanged.

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