Empowering informed decision DiagnosisOne™

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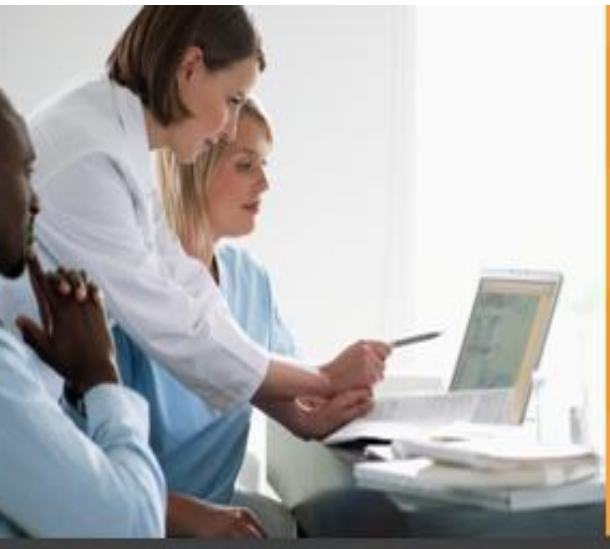


Panel 2: Clinical Decision Support - The "Improvement" Arm of Quality Improvement

Evidence-based, expert, and collaborative clinical knowledge technology empowering clinicians to make the most informed decisions.

smartPath

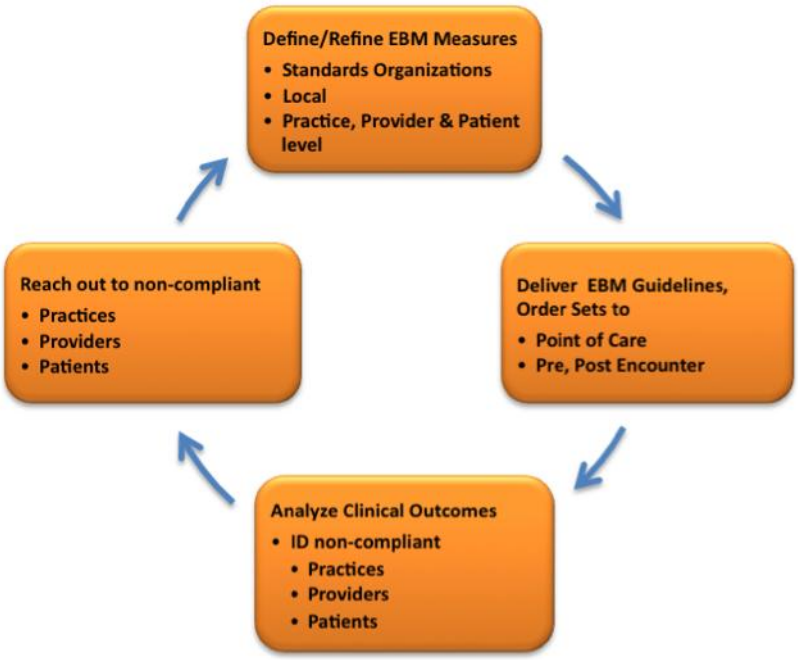
Introduction

Dr. Fauzia Khan has over a decade and half of experience in quality improvement and informatics. She is also an author and chief editor of "Guide to Diagnostic Testing" a textbook on diagnostic algorithms published by Lippincott, Williams and Wilkins.

As Chief Medical Officer of DiagnosisOne, Dr. Khan has been at the forefront of developing practical and scalable technologies that allow Clinical Decision Support capabilities to be seamlessly incorporated into clinical workflows.

What is the role of Clinical Decision Support (CDS) in the quality lifecycle? How does CDS relate to quality measurement?

We see Interventional CDS as being an integral part of any effective quality management program. In our judgment care providers will be required to deal with multiple quality programs involving many 100s of quality measures simultaneously. While many of these measures will be similar there will be many subtle differences that require them to manage patients in slightly different ways. This is simply not possible without a tool that can remind them of these differences at or very near the point of care.



A properly designed CDS system will form the heart of Continuous Quality Improvement processes that can be implemented by both large and small provider organizations. If we define quality measures as being developed both by Standards Organizations and locally by the provider organizations themselves, then CDS can be used to guide providers in real time to implement the standards of care the organization aspires to. Additionally, the same CDS capability can deliver the analytics needed to manage the quality program and implement provider and patient incentives that then drive the desired behavior.

How might aggregate measurements of the usefulness and outcomes of CDS interventions be used to foster improved techniques for CDS delivery?

Our experience with both retrospective and prospective studies has shown that when presented with evidence based interventions in areas that care providers have had some influence in selecting, providers are very receptive to both real time point of care and pre-encounter interventions. The key points being that the interventions should not be viewed as black boxes that the provider cannot examine and that the provider is not forced to receive alerts and interventions that they do not wish to receive.

As example we would present that in our experience the following interventions will be positively received:

- Informing a provider that a patient who had a positive mammogram 6 months ago has not had follow up
- Informing a provider just as they are ending an encounter and signing out of a note in their EHR that a diabetic patient has not had a HbA1c in over 6 months

Similarly the following interventions might be considered intrusive:

- Informing a provider at the beginning of an encounter that a diabetic patient has not had a HbA1c in over 6 months
- A patient who has had a double mastectomy is due for a mammogram.

How can the alignment between quality improvement initiatives and CDS be improved? What additional things need to happen to blend these communities?

The single biggest thing we can do is to require EHRs to incorporate a meaningful number (say >100 rules) of real time interventional CDS capabilities that are flexible enough to allow each user to choose what they wish to subscribe to. Progressive EHR vendors like Allscripts and Aprima are all ready deploying such capabilities and can deliver real time alerts to the point of care based on the Quality Program that might apply to the specific patient at that point in time.

The technologies required to enable this are available in production today. However, MU has had a counterintuitive effect on their deployment. The very weak requirement to deploy 1 CDS rule (Stage 1) and 5 CDS rules (Stage 2) has created a ceiling rather than a floor on the CDS capabilities that EHR vendors feel they need to be competitive. As a result most EHR vendors have relegated meaningful CDS capabilities to the back burner and have hard coded the required number of rules to meet the MU requirement.

How can Health IT better support quality measurement/improvement?

We believe that HL7 v3 is a critical part of the answer to this question. The HL7 v3 CDA is a comprehensive document that allows for the integration of CDS capabilities directly into the clinical workflow, in most cases without requiring any substantial changes to that workflow.

At DiagnosisOne we have been using the CDA and CCD document structures for over 6 years to deliver comprehensive multi-parameter CDS capabilities directly into EHR systems in real time. Our CDS capabilities cover a spectrum of interventions including:

- Real time patient specific alerts covering over 80 major conditions
- Patient education material both in the form of real time patient specific alerts and in the form of generic brochures
- Quality measure sets including PQRS, HEDIS etc. including real time patient specific alerts and capturing the numerators and denominators for analytical and reporting purposes
- Order sets
- Real time radiology and pharmacy utilization management
- Core measure predictive modeling
- Clinical surveillance for Infection Control, Coagulation and Medication Management.

We deliver all these capabilities based only on receiving CCDs from various EHR systems, thus allowing for very quick integration and low cost deployments.