

Subject: Clinical Protocols in the EMR

Clinical Protocols are a tremendous feature within any EMR system. Physicians who use the recommendations put forth by the clinical protocol system will reduce their medical risks and afford much better care for their patients.

What are Clinical Protocols? Essentially, they are a series of action items for a particular patient based explicitly upon that patient's medical record. Clinical Protocols are sometimes referred to as "Treatment Guidelines" and are generally based largely upon NCQA or ACQA standards of care. Such protocols are typically displayed to a physician during the charting process within the EMR and optimally offer a physician the choice of handling of the individual action items.

A simplified example of a Clinical Protocol would be as follows:

Case Patient: Tony Feelfine. Tony is a 57 year old male who has not had a PSA in over 3 years. He has a BMI of 35, Total Cholesterol of 270 and his latest HbA1c is 7.6. When the Clinical Protocol is run against Tony's chart it produces the following action items:

- PSA recommended
- Foot exam recommended due to elevated HbA1c.
- Retinal exam recommended due to elevated HbA1c.

Ideally, the Protocol system would give the physician the ability to (1) accept, (2) reject, (3) ignore, (4) defer and/or (5) annotate the individual action items. In this case, Tony Feelfine has been told by his physician that he should come in for a PSA test. Tony "rejects" the item because the PSA is too expensive. The physician should then be able to document that Tony rejected the PSA due to the expense of the test. Should the patient have the unfortunate luck of contracting prostate cancer in later years, the physician is somewhat protected against malpractice lawsuits because the recommendation of the PSA would have been thoroughly documented directly in the chart.

An EMR should ideally present the clinical protocols to the physician in several manners. The first manner is an alert screen that appears when the patient is first selected. This should be an optional pop-up window that displays a series of "alerts" about the patient including any current clinical protocol action items.



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The second manner of protocol presentation would be during the charting process. The physician should be given every opportunity to both see and interact with the clinical protocols in a non-obtrusive fashion during the creation of the chart. Ideally, the clinical protocols should present at the end of the chart in the "Plan" section. Thus after the physician has entered template or free text data and completed the majority of the documentation, s/he would ideally see the clinical protocol action items directly in the chart as a "cue" to inspect the entire set of protocols for appropriate action.

The purpose of the clinical protocol is to "recommend" treatment to the physician about the patient using standard quality of care guidelines. Current guidelines include NCQA and ACQA but may go into sub-specialty guidelines such as ACOG for OB/Gyn. Sub-specialists will find that treatment guidelines are especially beneficial to remind them of critical action items. An example is pediatric protocols concerning specific immunizations that are recommended at particular age intervals of children.

The clinical protocols within an EMR should be run as a batch on patients in the daily schedule but should also be able to be run individually "on demand" whenever dictated by the physician. Frequently, protocols need to be "refreshed" based upon new or modified information. An example is the presence of certain lab results that may have been aggregated since the last run of the protocols.

In order for protocols to be "exact" in nature, the EMR system must have a discrete nomenclature system linked to patient chart items. Nomenclature is a coding system that institutes a unique code for each medical condition of the patient. An example would be "a history of cancer in the patient's family." As it turns out, there is a specific nomenclature "code" for that condition. Whenever the protocol software needs to scan the patient's chart to find key information items, it has the capability of scanning text in history or chart notes, but that kind of subjective scanning is fraught with error and misinformation. Instead, accuracy is ensured by the presence of a nomenclature code for every key item of the patient medical record. The protocol engine's job then is to simply query the EMR database tables and look specifically for those nomenclature codes. This gives the clinical protocol system the highest level of accuracy possible.

When designed and implemented correctly, clinical protocols give the physician a tremendous edge when it comes to patient care. Moreover, it affords the patients much better patient care. The simple example is that with clinical protocols the physician will see that the patient is due to have a PSA (in the case of our fictitious patient) and will advise the patient that the test is needed. Most patients love to have this kind of timely information from their physician during routine exams or other procedures.

About eCast Corporation

eCast Corporation, based in Raleigh, NC, is an eight year old medical software company with over 600 clients in 28 states. Its flagship EMR product is eCast EMR™ that complies with CCHIT certification standards of 2007. Clinical Protocols are a key ingredient of the eCast EMR system.

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