Case study: Using Clinical Decision Support

Definition
Clinical decision support (CDS) provides clinicians, staff, patients or other individuals with knowledge and person-specific information, presented at the point of care to enhance health and health care. CDS encompasses a variety of tools to enhance decision-making in the clinical workflow. These tools include computerized alerts and reminders to care providers and patients; clinical guidelines; condition-specific order sets; focused patient data reports and summaries; documentation templates; diagnostic support, and contextually relevant reference information, among other tools.

Case Presentation
Medication errors occur at many points during the care process. To address the raising rates of medication errors occurring in their facility, St. Mark’s Medical Center deployed a medication clinical decision support tool. Their electronic medical record vendor provided a system that included computerized advice regarding drug doses, routes, and frequencies, drug allergy checks, drug–laboratory value checks, and drug-drug interaction checks and can provide reminders about corollary orders (e.g., prompting the user to order glucose checks after ordering insulin) or drug guidelines. Prescribers select medications from pull-down menus or from “favorites” lists and select directions from standardized text or typed as free-text. The system includes basic dosing guidance, presented in preference lists, and duplicate therapy checks. When the prescriber entered a patient’s weight, the system also calculated weight-based, dosing of drug, strength, and bottle size (if liquid medication). The prescriber either accepts or over-rides the recommendation. Clinic staff can queue prescriptions, but only licensed prescribers can sign and release them. Prescriptions are printed or electronically faxed to a pharmacy of the patient’s choice. The system’s implementation was associated with a significant reduction in medication errors.

Discussion
Despite increasing emphasis on the role of clinical decision-support for improving care and reducing costs, evidence to support widespread use is limited. There are several challenges impeding the adoption of clinical decision support. These systems must be integrated with a health care organization’s clinical workflow, which is often already complex. Most clinical decision support systems are standalone products that lack interoperability with reporting and electronic health record software. The sheer number of clinical research and medical trials published on an ongoing basis makes it difficult to incorporate the resulting data. Medication decision support has emerged as a valuable tool for reducing errors and adverse drug events.
References

http://www.healthit.gov/policy-researchers-implementers/clinical-decision-support-cds