

Clinical decision support in the delivery of healthcare essay

[Business](#), [Decision Making](#)



The Purpose of Clinical Decision Support in Delivery of Healthcare A Clinical Decision Support System (CDSS) is a vital component used in managing patient data. It is a computerized information system designed to support clinical and administrative functions by gathering information from multiple databases for analyses of day to day organizational activities. The systems range from analysis of cost per patient for specific departments to clinical strategic analysis. In their article "The Clinical Support Systems Program: supporting system-wide improvement" Leigh, Long, and Barraclough (2004) reports that the "clinical support system was based on patient-centered systems which is an approach to evidence-based care. Therefore, the purpose of this program is to change the structure and culture for providing patient care". The gathered information from various sources is used to assist providers in clinical decision making regarding patient health. Information includes but is not limited to symptoms, diagnosis, lab test, treatment, and diseases. Another function of the system provides alerts and makes recommendations based on clinical guidelines making it an integral component of the EHR system.

The alerts can range from critical labs, physiological, and medication which are then transmitted to the provider by telephone, fax, email, or pager. Another feature of the support system is the Expert Support System (ESS). Its purpose is to take encoded information obtained from experts in a specialty field of medicine, and provide that knowledge to providers for analysis and advice regarding patient care. A third system in CDSS, is the Point-of-Care System. It acts like a repository of information which is gathered and can be entered in real time where care is being provided;

containing accurate updated readily accessible patient information. Potential Benefits of Computerized Physician/Provider Order Entry (CPOE) and Electronic Prescribing (e-prescribing) The potential benefits of CPOE and e-prescribing is that it will provide the framework for improvement in patient safety and quality of care. Compared to paper-based prescribing, the risk of medication error will decrease since an order will go directly to a pharmacy of choice from the point-of-care. In addition to eliminating medication errors, the CPOE also allows the user direct access for orders of test, allergies, patient care and physician referrals.

An article by Sengstack and Gugerty (2004) informs that medication errors top the list of mistakes and that these errors are the cause of adverse hospital events. Having the ability to electronically enter orders will help to prevent and eliminate the top cause for medication error - including illegible hand writing, mistaken dosage, and missed allergies. CPOE and e-prescribing gives the user online accessibility anytime, anywhere by means of the clinical decision support systems allowing real-time patient medication listing to be viewed. Delay in order completion is decreased and error checking for duplications and posting of charges can also be accomplished. For the pharmacy, less time is spent on questions, authorizations, and renewal request. Phone calls to the physician regarding hand writing, covered versus non-covered drugs are seen as a dinosaur with CPOE and e-prescribing.

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