

The Here and Now

Error Reduction Utilizing CPOE

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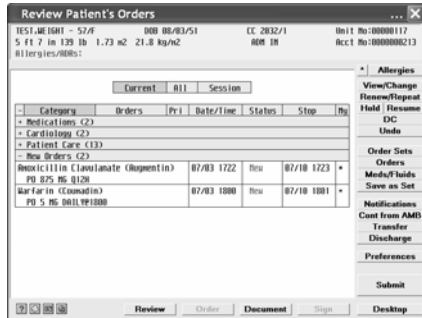
Learning Objectives

- Differentiate between two definitions of Computer-based Provider Order Entry (CPOE).
- Describe specifically how CPOE functions in reducing medical errors and improving patient safety.
- List four types of orders outside of pharmacy where CPOE improves patient safety.
- Explain the importance of the HL7 application in regard to automated distribution machines (ADM's) and electronic health records.
- Identify transition areas where CPOE reduces medication errors during a patient hospital visit.
- Describe the process from admission to discharge utilizing CPOE technology to produce interactive orders that directly address medication error sources.

CPOE Defined

1. A system that enables the physician (or prescriber) to enter orders into a computer and transmits these orders directly to the respective departments or individuals to be carried out. (Literal)
2. An interactive decision support ordering system based on rules that integrate with other hospital systems providing the prescriber with information necessary to develop and transmit an effective, error-free order. CPOE is distinguished by the requirement that the prescribing physician is the primary user. (Assumed/Accepted)

Difference (Literal = No Checks)



CPOE is Proactive

CPOE Reduces Medical Errors and Improves Patient Safety by Being Proactive

The Prescriber is Prompted for Medication Order Checking Including but not Limited to...

- › Allergy History
- › Laboratory Results
- › Interactions
- › Contraindications
- › Formulary Choices
- › Therapeutic Substitution
- › Evidence based order sets

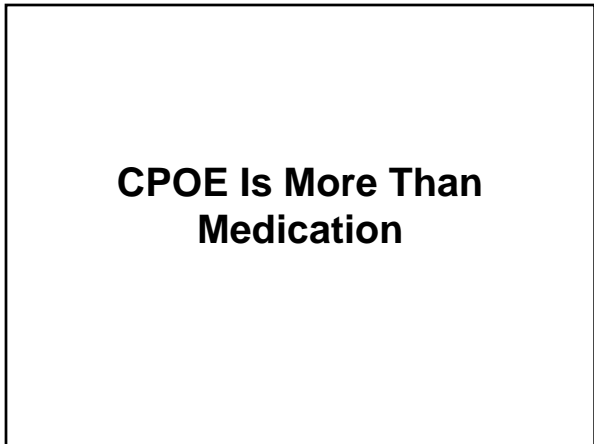
Formulary Choices/Tsub



Evidence Based Orders



CPOE Is More Than Medication

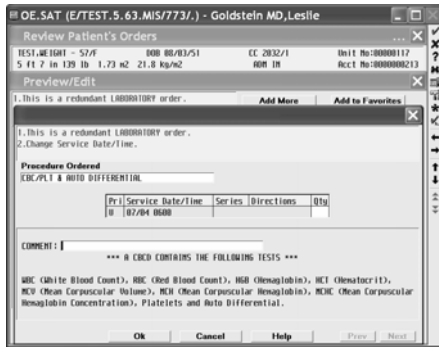


CPOE Improves Patient Safety in Areas Outside of Pharmaceutical Services

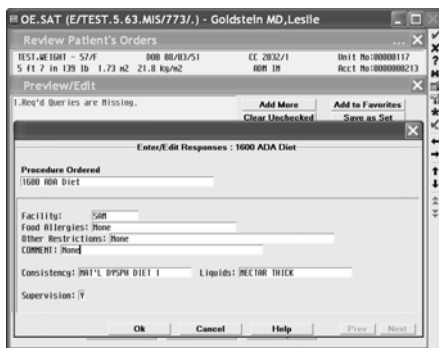
Although the Majority of Literature Focuses on Medication Ordering, Other Areas Identified Include:

- .Laboratory
- .Radiology
- .Consults
- .Admissions
- .Discharges
- .Ambulatory Services

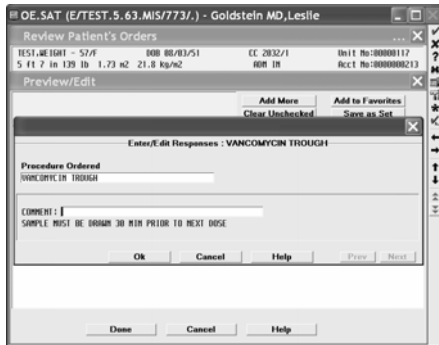
Prevents Duplicate Lab Orders



Provides Complete Dietary Orders



Accurate/Timely Drug Levels



CPOE and Health Level 7

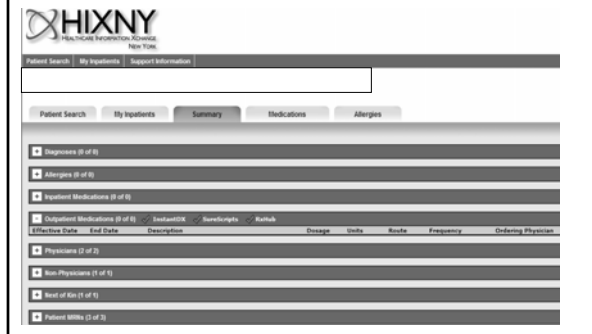
HL7 and CPOE

Health Level Seven (HL7) is one of the most widely used application standards in the information technology industry. It packages healthcare data to be transmitted among computer systems.

Key Types of Information

- Sends Orders to Distribution Machines
- Sends Txn Info to Pharmacy
- Sends Remote Results to Hospital
- Sends Hospital Results to Physician Office
- Sends Patient Records to RHIO (Regional Health Information Organization) = eHealth Record

This Same Process is Used to Create the Patient Emr (i.e. RHIO)



CPOE Transitions

Areas Where CPOE Reduces Medication Errors

Transitions of Care

- Triage (Medication Reconciliation)
- Admission (Medication Reconciliation)
- Transfer (Medication Reconciliation)
- Discharge (Medication Reconciliation)

CPOE and Error Sources

CPOE Directly Addresses Medication Error Sources

- .Knowledge: Drug Data Base (Dose/ Indication/Formulary)
- .Transcription Errors: Handwriting and Interpretation
- .Patient Information: Labs, Med History, Allergies
- .Drug ID: Sound Alike, Bar Code Identification, Patient ID
- .Order Transmission: No Faxing or Courier Delays

Demo/Discussion/Wrap Up
