**Computerized Physician Order Entry (CPOE)**

**NQF#:** N/A  
**Developer:** The Leapfrog Group  
**Data Source:** Leapfrog Hospital Survey

**Description:** Computerized physician order entry (CPOE) systems are electronic prescribing systems that intercept errors when they most commonly occur — at the time medications are ordered. To achieve Leapfrog’s CPOE standard, hospitals must:
- Assure that prescribers enter at least 85% of medication orders via a computer system that includes decision support software to reduce prescribing errors and  
- Demonstrate, via a test, that their inpatient CPOE system can alert physicians to at least 60% of common, serious prescribing errors

**Rationale:** More than one million serious medication errors occur every year in U.S. Hospitals. Medication errors often have tragic consequences for patients. Many serious medication errors result in preventable adverse drug events (ADEs), approximately 20% of which are life-threatening. According to the 1999 Institute of Medicine report, *To Err is Human*, medication errors alone contribute to 7,000 deaths annually.

CPOE systems can be remarkably effective in reducing the rate of serious medication errors. A study at Boston’s Brigham and Women’s Hospital, demonstrated that CPOE reduced error rates by 55%. A subsequent study showed rates of serious medication errors fell by 88%. The prevention of errors was attributed to the CPOE system’s structured orders and medication checks. Another study conducted at LDS Hospital demonstrated a 70% reduction in antibiotic related ADEs after implementation of decision support for these drugs.

**Citations for rationale:**

**Impact:**
- Affects most hospitalized patients  
- More than 1 million serious medication errors occur every year in U.S. hospitals.  
- Many serious medication errors result in preventable adverse drug events (ADEs), approximately 20% of which are life threatening.  
- Research estimates that implementation of CPOE systems at all non-rural U.S. hospitals could prevent 3 million ADEs each year.

**Citations for impact:**

**Opportunity:**
- Opportunity for improvement exists, as demonstrated by the coefficient of variation for the measure.
Evidence of Opportunity for Improvement:

- Supported by suggestive clinical evidence

Citations for Evidence: