Leapfrog Standard: Computerized Prescriber Order Entry (CPOE) Systems

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<thead>
<tr>
<th>NQF#</th>
<th>Not NQF endorsed</th>
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<tbody>
<tr>
<td>Developer</td>
<td>The Leapfrog Group</td>
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<tr>
<td>Data Source</td>
<td>Leapfrog Hospital Survey</td>
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<td>Secondary Data Source</td>
<td>AHA Annual Survey</td>
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**Description:** Hospital use and effectiveness of electronic decision support to ensure medication ordering safety. To fully meet Leapfrog’s CPOE standard, hospitals must:
- Assure that physicians enter at least 75% of medication orders via a computer system that includes prescribing-error prevention software; and
- Demonstrate, via a test, that their inpatient CPOE system can alert physicians to at least 50% 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.

**Evidence for Rationale:**

**Impact:**
- Affects large numbers of 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.

**Evidence of High Impact:**

**Opportunity:**
- Fewer than 2% of hospitals have fully implemented CPOE systems and 17% have CPOE in one inpatient unit.
- Opportunity for improvement exists, as demonstrated by the coefficient of variation for the measure.

**Citations for Opportunity:**

**Evidence:**
- Randomized Controlled Trial, nonrandomized controlled trial, expert opinion

**Citations for Evidence:**

http://www.leapfroggroup.org/media/file/FactSheet_CPOE.pdf