Identifying and Measuring Radiography Ordering Errors Using a Web-Based Event Reporting Tool and RIS to Analyze Errors and Identify Opportunities for Improvement

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**Purpose**
Performing the correct examination is a fundamental goal in good patient care. Our internal voluntary Safety Event Reporting Form (SERT) indicated an opportunity for improvement in accurate ordering of radiographic exams.

We sought to understand the nature and severity of this problem, assess opportunities for change, and implement change where appropriate.

**Define Phase (partial snapshots)**

**Measure Phase**

**Panor Chart**
2010 Inaccurate Outpatient Orders by Ordering Department

**Histogram**
Order Orders by Body Part

**Check Sheet**

**2010 Sigma Level**
- 37,888 Ortho exams ordered
- 264 corrected orders
- 10 actual wrong radiographs (4.8 sigma)

**Conclusion & Lessons Learned**
1. Stable order error rate of 3.5%
2. Radiology work flow “time out” process reduces actual rate to 0.04%
3. Cost of in-process error correction is low at a mean $3,250 per year
4. Providers with a high volume of orders appear to have better accuracy

**Future Opportunities**
1. Delegated ordering appears to increase order errors
2. Ordering providers statistics suggest opportunity to find “best practice”

**Technology Time**
- Corrected exams 2010 - 2011
  - 1,948 corrected cases
  - 5 avg minutes to investigate and correct discrepancy
  - $0.67 avg tech compensation per minute
  - $3,250 assuming correct exam per year