PATIENT SAFETY QUALITY INDICATOR:

Corrected Result Occurrence Rate

Background

Laboratory tests play a significant role in diagnosis, treatment, and monitoring of a patient. Errors in laboratory testing can occur in any of the three phases of testing, pre-analytical, analytical, or post-analytical. Error rates may vary in different areas of the laboratory, necessitating multiple approaches to reducing error rates[2]. Manual testing procedures, manual result entry and subjective interpretation may cause more errors in the analytical phase whereas more automated testing processes may be associated with more errors in the pre- or post-analytical phases. While most errors do not affect patient outcomes, one study showed that 19% of errors result in increased investigations and costs in providing care while 6.4% of errors resulted in inappropriate or altered care[1]. Anytime an incorrect test result is reported, it has the potential to negatively impact a patient's care, diagnosis, and treatment.

Measure Description

Testing errors that require result corrections should be identified and analyzed to determine the root causes of the errors and where improvements must be made to prevent error reoccurrence. A corrected result occurrence rate is defined as the occurrence frequency for which an incorrect test result is reported (e.g. released via fax, paper, electronic communications) and a corrected test report is required to document the correct test result. Not all test result errors require a corrected result report (e.g. result error corrected before reported, minor spelling, grammar etc. errors that are corrected but are determined to not impact test interpretation) and should not be included in the occurrence rate data collection.

Data Collection, Analysis, and Reporting:

Numerator: Total number of corrected results reported that required issuance of a corrected report

Instructions:

- Record and count each test result that required the issuance of a corrected report
- Do not record or count minor clerical (grammar, spelling, abbreviation) corrections in comments or free text results that would not have the potential to impact test interpretation (i.e. to instead of too; repeat instead of repet; greater than instead of >; bilirubin instead of bili; absolute neutrophil count instead of ANC)
- Do not count amended reports that occur due to reflex testing added on to original order

Denominator: Total number of test results reported

Data Collection Time Frame: 1 calendar month (e.g. January 1-31; June 1-30)

Instructions:

- Suggested Baseline Assessment: collect and report three (3) individual consecutive calendar months
- Data collection may be collected more frequently in a way that is manageable for the laboratory (e.g. daily, weekly, monthly)
- Final data collected must include all days in the calendar month

Occurrence Rate Calculation:

$$\frac{\text{Total \# of corrected results reported}}{\text{Total \# of test results reported}} \times 100 = \text{Corrected Result Occurrence Rate (\%)/reports issued}$$

References:

1. Plebani M, Carraro P. Mistakes in a stat laboratory: types and frequency. *Clin Chem*. 1997;43(8 Pt 1):1348-1351.
2. Yuan S, Astion ML, Schapiro J, Limaye AP. Clinical impact associated with corrected results in clinical microbiology testing. *J Clin Microbiol*. 2005;43(5):2188-2193. doi:10.1128/JCM.43.5.2188-2193.2005