P-1382

Genetic counseling report quality improvements utilizing a clinical decision support system

Kristi Fissell, MS, LCGC; Denise Ramsey, MSHS, HCQ; Lauren Petrarca, MS, CGC; Denise Cutillo, MS, LCGC
Labcorp, Boston, MA

Background

Creating a clear and accurate genetic counseling report (GC report) is critical to document the risks and recommendations conveyed in the genetic counseling encounter to the healthcare provider and the patient. In 2023, our clinical genetic counseling group transitioned our quality program to a new clinical decision support system (CDSS) to allow for real-time quality monitoring. Previously, the quality program involved the review of every final GC report for 67 quality metrics by the quality manager (QM). The goal was to confirm that GC reports were in compliance with established quality metrics. Some examples of these quality metrics are documenting age-related risks for chromosome abnormalities on all reports, documenting appropriate risks, and offering chromosome analysis to patients with multiple pregnancy losses. With the launch of the CDSS, the genetic counselor is presented with clinical recommendations based on best practices, which allows for proactive compliance with established quality metrics. The aim of this study is to evaluate the impact of the new CDSS on initial accuracy and overall quality of GC reports.

Methods

The QM reviewed quality metric data from two systems, six months pre-launch (n=11804) and six months post-launch (n=12245) of the CDSS. This study was limited to final genetic counseling summary reports for patients seen for comprehensive reproductive genetic counseling. The compliance to quality metrics in both systems was calculated for an overall measure of compliance to best practices per month (total noncompliant/total patients). When the QM identified noncompliance, the GC made corrections to provide documentation to patients consistent with best practices, and where appropriate, reports were revised for this purpose. The QM compared monthly compliance pre-launch (September 2022 – February 2023) and post-launch of a CDSS (June 2023 – February 2024) using a two-tailed paired t-test analysis.

Results

During the study period, genetic counselors used the CDSS to compose 12,245 GC reports. There was a significant increase in real-time compliance to best practices between the previous system (mean= 99.47%, SD=0.137) and the CDSS (mean=99.86%, SD=0.133); t=6.22, p=0.0016, Cohen's d=2.6 (Figure 1). While the previous system supported a high-quality report, the CDSS effectively allowed for a 59% improvement in real-time accuracy and concordance with best practices in the GC report.

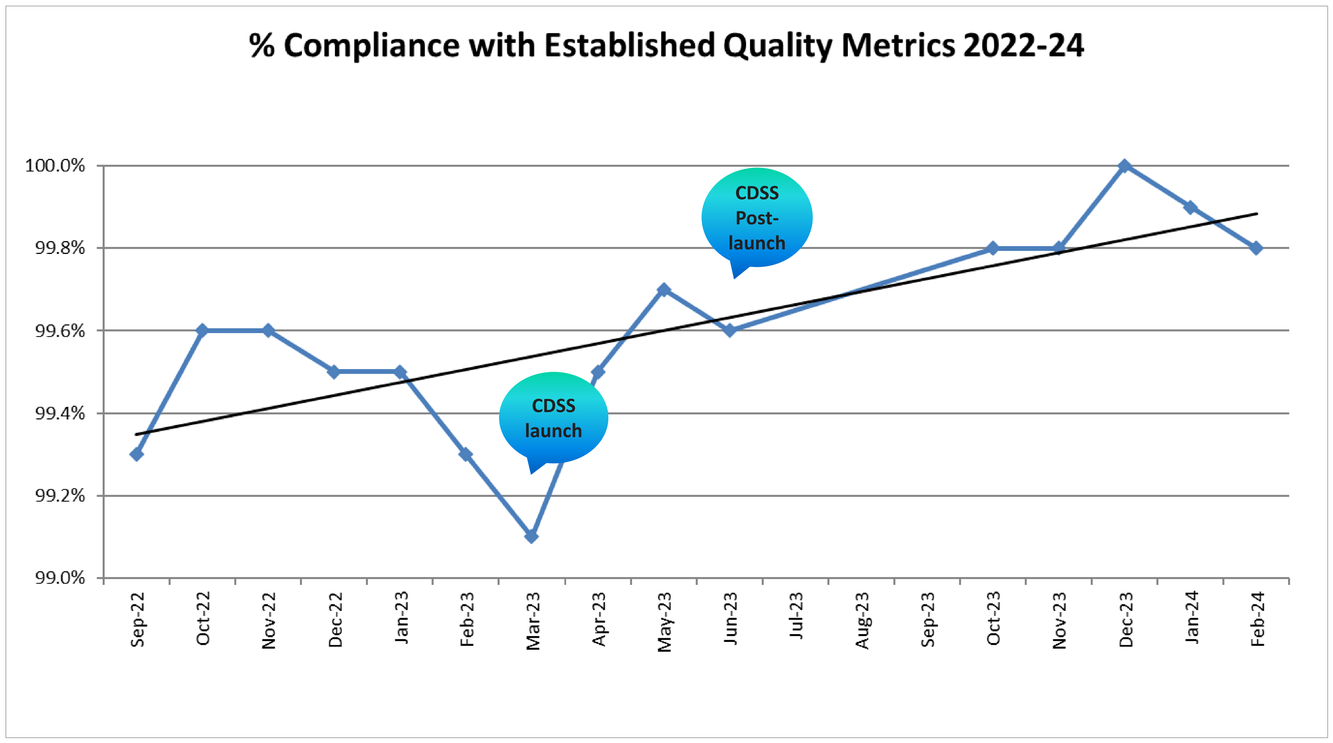

Figure 1. Quality metric compliance pre- and post-CDSS launch.

Conclusions

Quality improvement programs add significant value to the genetic counseling process. The goals of a robust quality program are accuracy and adherence to best practices in the creation of an individual's personalized genetic risk assessment contained in the GC report. The unique application of real-time best practices information in the CDSS significantly improved the accuracy of the GC report as indicated by the presented data. For patients, physicians and genetic counselors, the CDSS delivers enhanced excellence in GC reporting.

NSGC 43rd Annual Conference; September 17-21, 2024; New Orleans, LA

©2024 Labcorp. All rights reserved.