Case Study of a CME Quality Improvement Program

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The Problem: Chronic obstructive pulmonary disease (COPD) is the 4th leading cause of death in the US and a major economic burden to the healthcare system. In 2006, COPD was responsible for 8 million outpatient visits, 1.5 million emergency department visits, 726,000 hospitalizations, and 119,000 deaths.\(^1\)\(^2\) Quality improvement (QI) goals for COPD management have long been a focus of the National Committee on Quality Assurance (NCQA). In 2006, NCQA initiated efforts to address QI gaps in COPD care through improved quality measures; this initiative was part of the NCQA Healthcare Effectiveness Data and Information Set (HEDIS).\(^3\)\(^4\)

The Solution: To reduce quality gaps among COPD treaters, a QI approach to COPD treatment was developed which included real-world data and CME to improve knowledge and competence among primary care physicians (PCPs) treating patients with COPD.

The Partners: PRIME, the accredited provider, established strategic partnerships with one of the largest closed systems in the US and with a premier educational technology software provider. These partners provided (1) baseline claims data to identify poor performers against quality and clinical measures, (2) the ability to calculate measures and link quality solutions to performance gaps, and (3) a method to determine the impact through claims data. To reach the intended audience of PCPs, the closed system also agreed to disseminate program information to 40,000 providers in the network.

The QI Components: The quality demonstration project identified low-performing PCPs treating patients with COPD through the closed system’s claims data. Performance was measured through (1) a primary HEDIS indicator: *Use of spirometry testing in the assessment and diagnosis of COPD*; and (2) the Global Initiative for Chronic Obstructive Pulmonary Disease (GOLD) guidelines for assessment of disease severity and staging.\(^5\) HEDIS measures are utilized by more than 90% of US health plans to assess performance and quality improvement in healthcare delivery.\(^4\)

Low-performing PCPs were invited to participate in the program, which included the following components: (1) interactive and feedback-based education delivered in asynchronous fashion; (2) quality reporting to physicians showing their individualized COPD patient data, and benchmarking their patient data with a cohort of all treaters in the closed system (Figure 1); and (3) tools to improve adherence to the clinical guidelines and the HEDIS measure.

Content was tailored to learners as they were guided through their patient data compared with others in the...
cohort. The use of self-reflection and polling questions allowed physicians to assess their perceptions of their practice behaviors against actual data, as well as to assess their practice patterns against those of their peers in the cohort. PCPs were also able to compare their data, and the data of their PCP peers, with data of pulmonologists diagnosing and treating COPD patients in the same geographic region. This method of private physician performance feedback has been utilized by health plans for many years as a key endeavor to support internal quality improvement efforts. Private physician performance feedback enables participants to assess their performance relative to peers, benchmarks, or evidence-based practice guidelines, and can be a strong motivator to improve performance. The technology software utilized in this program enabled the learner to see when and where data were retrieved, the criteria for measurement, and the limitations of the data and exclusions, lending transparency and credibility to the learning environment. Participants obtained the latest evidence in COPD treatment reinforced through clinical case studies, which assisted physicians in applying evidence to practice.

The Outcome: The results of the QI initiative were successful. In pre- and post-program surveys conducted among PCPs, 53% reported that they were conducting annual spirometry testing on all patients with COPD when surveyed immediately prior to the program, while 78% of PCPs reported 60 days after the program that they were conducting annual spirometry testing on all patients with COPD (n = 1,039 pre-surveys, 274 post-impact surveys; responses were matched for 274 pre/post respondents.) Moreover, key barriers were assessed in the program outcomes (Table 1).

This case study is an early example of how CME can be connected to QI, and reminds us that QI in health care has been evolving for a long time. In addition, this case study demonstrates that QI projects involve many moving parts. Shortly after the conclusion of this project, the Physician Quality Reporting System (PQRS) was implemented in 2007 as an incentive to physicians for voluntary reporting of quality measures in accordance with Section 101 of Division B of the Tax Relief and Health Care Act of 2006. A focus on quality improvement in health care was further extended and enhanced by legislation including the Medicare, Medicaid, and SCHIP Act of 2007, and the Medicare Improvements for Patients and Providers Act of 2008. In 2009, incentives for electronic prescribers were introduced. The Affordable Care Act (ACA) brought sweeping reform in 2010, and in 2015 physicians will be penalized for failure to adhere to quality measures in patient care delivery, which opens many doors for successful QI projects that include CME as a solution. In a sense, this CME program was ahead of its time.

Table 1. Case Study Results.

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<th>What Worked</th>
<th>Barriers</th>
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<td>Inclusion of real-world patient data from claims information to identify low-performing physicians</td>
<td>Limitation of retrospective claims data in identifying treatment and management patterns</td>
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<td>Use of a technology platform to provide teachable moments for clinicians through comparator patient data and feedback modalities, as well as case-based application</td>
<td>Lack of multi-channel activities to meet diverse learning styles and preferences</td>
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<td>Significant gains in knowledge, attitudes, and beliefs about QI approaches to COPD treatment as a result of the program</td>
<td>Change in the leadership of the closed system during the program’s life cycle, which impacted continued commitment to the project, and eliminated access to post-program data</td>
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Figure 1. Example of presentation data.
This case study outlines several important issues to consider for future initiatives. First and foremost, this is an early example of a quality improvement (QI) CME program. As the author notes, this initiative was conceptualized and implemented in 2006 prior to the significant legislative changes that now incentivize clinicians and systems to deliver value. Second, it is important to note that the program included nationally recognized measures through HEDIS and clinical guidelines and utilized claims data to establish a baseline for each participant. Although claims data are limited in some respects, in 2006 this was likely the best available data source. The use of private physician performance feedback and comparative analyses in a CME activity as a means to motivate PCPs toward practice change is also noteworthy. Third, the CME project efficiently connected gaps to interventions using a standardized technology platform. Fourth, as the author indicates, partnerships were essential to the execution of the program. These partners are not the typical organizations that collaborate in CME. In this program, a major closed system was selected to ensure tracking, reduce external errors, customize the program to the baseline gaps observed within the population, and ensure participation (especially among poor performers). The size and geographic reach of the closed system provided a good sample which allowed PCPs to be compared with other PCPs and with specialists in their own regions. One limitation of such partnerships in this case study involves accounting for a potential lack of stability of a partner. A lesson that should be highlighted for any group that would like to implement QI is to conduct due diligence on the partners and put into place legal documents to ensure commitment and milestones.

Finally, as a reader of this case study, it was unfortunate that the group was unable to obtain significant post-program data to observe the impact over time. A merger by the closed system during the intervention period prevented this from occurring. Sometimes, despite our best intentions, situations will occur that are out of our control. Careful planning and backup plans should be engaged whenever possible to minimize adversity.

Overall, this is an excellent case study that provides a good mix of the components necessary to set up a quality improvement initiative, as outlined in Part 1 of the Connecting CME to Quality Improvement white paper (Figure 2). This case study also identifies potential hurdles that may impede or delay implementation. The infrastructure of data capture, analysis, and reporting has significantly improved since this 2006 example; however, many of the key elements still hold true to measure quality improvement in today’s healthcare environment.

**Figure 2. Five essential elements of successful QI Implementation.**

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<td>Consider and incorporate organization goals</td>
<td>Identify data sources to establish baseline on various levels of measures</td>
<td>Use logic models to benchmark improvements and barriers</td>
<td>Establish processes based on nationally accepted standards for correlating CME to quality improvement</td>
<td>Identify and partner with willing organizations</td>
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References


