

Comparison of eCQM Certification Programs

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Executive Summary

Diameter Health is the first and only health information technology vendor in the United States to receive certification for more than 25 electronic clinical quality measures (eCQMs) from the National Committee for Quality Assurance (NCQA), and use the same report as part of the effort to certify with the Office of the National Coordinator for Health IT (ONC). Our staff therefore has a unique perspective on the respective strengths of these programs and their roles in quality measurement. This whitepaper reviews key differences in these programs and strategic considerations for continued participation and certification in both programs.

Since billions of dollars are distributed each year based on quality measure performance, accurate quality measurement is a critical requirement for future care models in the United States. Diameter Health has found the NCQA program to be more robust and comprehensive than the ONC program for quality measurement. This results in more time required for testing, but the process delivers substantial value in verifying software accuracy and consistency. In addition, the NCQA program is more aligned with data seen in the real-world, requires annual measure updates and has safeguards to minimize test manipulation. Diameter Health will continue to focus on NCQA as its primary program for measure certification. Specific topics outlined in this paper may help inform both current and prospective customers of the differential value of NCQA certification, particularly when data are considered for downstream use in payer reporting programs such as Health Effectiveness Data and Information Set (HEDIS®).¹

Background

Electronic clinical quality measures (eCQMs) use data electronically extracted from electronic health records and other health IT systems to measure the quality of health care provided. The Centers for Medicare & Medicaid Services (CMS) use eCQMs in a variety of quality reporting and value-based purchasing programs, including the Merit-based Incentive Payment System (MIPS) and Accountable Care Organizations (ACOs).² The certification of technology that calculates eCQMs is made through testing bodies authorized by the ONC, using testing procedures overseen by the ONC with results listed

¹ HEDIS® is a registered trademark of the National Committee for Quality Assurance (NCQA).

² About eCQMs. <https://ecqi.healthit.gov/ecqms> Retrieved July 2019.



publicly in the Certified Health IT Product List (CHPL).³ The certification of technology for eCQMs began during Stage 1 of the Meaningful Use program in 2010 and 2011.

The NCQA has been involved in the calculation of quality measurement for over 25 years through its HEDIS program, the largest program supporting value-based care in the United States.⁴ Historically, HEDIS based most of its calculation on billing data rather than clinical data directly from EHRs and other health IT systems. Since more powerful and meaningful quality measures can be developed through the inclusion of clinical data, NCQA has progressively authored more measures in the eCQM program and become directly involved with incorporating clinical data into the future evolution of HEDIS.

The NCQA has also began offering an alternative certification program for software that performs eCQM calculation. This program does not follow the same testing procedures originally adopted by other testing bodies for the ONC program for eCQM certification, although it has now been recognized as an approved testing methodology for §170.315(c)(2) - Clinical quality measures (CQMs) - import and calculate, and §170.315(c)(3) - Clinical quality measures (CQMs) - report.⁵ The primary focus of this whitepaper is to compare the differences and respective strengths of those two testing approaches for certification.⁶

Comparative Differences

While there are many nuanced differences between the NCQA and other programs for eCQM testing and certification, our analysis focused on four primary areas of meaningful divergence.

1. Sample Size in Automated Testing. eCQMs are complex, often requiring multiple layers of logic to determine denominator eligibility, potential patient exclusion and numerator calculation. One challenge of quality measurement is the ever-changing groups of codes (known as “value-sets”) that may be used by multiple logic statements within a measure. These value sets may include dozens, hundreds, or even thousands of codes.

Due to measure complexity, it is difficult to test for many of the edge cases (i.e. comparatively rare events) for measure logic or value sets without including hundreds or

³ Certified Health IT Product List <https://chpl.healthit.gov/> Retrieved July 2019.

⁴ HEDIS and Performance Measurement <https://www.ncqa.org/hedis/> Retrieved July 2019.

⁵ §170.315(c)(2) Clinical quality measures (CQMs) — import and calculate: https://www.healthit.gov/test-method/clinical-quality-measures-cqms-import-and-calculate#test_tool; §170.315(c)(3) Clinical quality measures (CQMs) — report: https://www.healthit.gov/test-method/clinical-quality-measures-cqms-report#test_tool Retrieved July 2019.

⁶ Diameter Health tested c2 and c3 with the NCQA approach, and c1 with the ONC Cypress tool

thousands of synthetic test patients for calculation. NCQA generally uses between 800 – 2,000 patients for every measure’s certification test deck. The ONC procedures used by most certifying bodies (e.g. Cypress) often use less than 20 patients for each measure. Using so few patients limits the ability to completely test logical statements and value sets. We found that the test decks provided by NCQA revealed edge case issues in quality measure calculation (e.g. a patient’s birthday that occurs at the start of a measure period) that improved the accuracy of our quality measurement. While this often means that testing take longer, the resulting software is demonstrably more accurate.

2. Format for Data Import. The ONC program began by using the HL7 format approved for exchanging data specific to quality measurement, namely the Quality Reporting Document Architecture (QRDA).⁷ While this format makes logical sense when testing the output of eCQM applications, it is not representative of how clinical data are imported in the real-world. Specifically, Diameter Health has had the opportunity to work with over two dozen health information exchanges over the past 3 years. To our knowledge, no EHR (either ambulatory or inpatient based) routinely sends QRDA data downstream to other providers for quality measurement. While many EHRs are capable of producing QRDA extracts, the workflows for routine export do not exist in large part because there is no requirement to exchange this data.

In contrast, EHRs are required to export clinical document summaries, primarily using Consolidated Clinical Document Architecture (C-CDA) document types, and the exchange of such data has been required as part of the Meaningful Use program (now Promoting Interoperability) for several years. The NCQA certification program uses the more mature and routinely exchanged C-CDA format within their testing process. This aligns with exchange in the real world, where several hundred million C-CDA documents are shared annually within the United States. In addition, NCQA staff have been active HL7 participants in considering how clinical data may be recorded in C-CDA documents to support quality measurement.⁸

3. Results Testing Methodology and Technology. The ONC program for eCQM certification uses tooling where a limited set of patients are requested and then quality measurement must be performed in real-time with a test proctor. While the test proctor ensures that technology is used to perform eCQM calculation, there are several risks and concerns raised in this process. First, since the test decks are limited in size, it is possible to examine the data provided and estimate the answers through manual review. While there is no evidence that any such manipulation has ever been attempted, Diameter Health believes that this flaw should be unacceptable in the high-stakes environment of software certification. Second, a live test proctor incurs unnecessary cost in technology

⁷ Quality Reporting Document Architecture (QRDA) <https://ecqi.healthit.gov/qrda-quality-reporting-document-architecture> Retrieved July 2019.

⁸ HL7 CDA Example Repository, <http://cdasearch.hl7.org> Retrieved July 2019



validation. Testing should take as long as needed for a vendor to reach accurate calculation and not be forced into timelines of test proctor availability. In contrast, NCQA's program does not use a live test proctor and uses large quantities of synthetic test data. This significantly diminishes the risk of manual data review (i.e. software alone must perform such calculation) and adopts a self-service approach to testing. This approach simultaneously adopts increased rigor by preventing data reuse (each deck is uniquely generated) while also providing increased flexibility in certifying systems.

4. Annual Certification. Both the ONC and NCQA provide the opportunity for annual certification. Many vendors in the ONC program, however, do not utilize annual testing. This originates from the original Meaningful Use program which did not mandate annual re-certification. While many quality reporting programs require annual updates to clinical quality measures, the use of EHRs and health IT technology with updated measures that have not been re-certified poses a risk to accurate quality calculation.

The NCQA program recognizes the importance of annual re-certification. Annual re-certification is required for the use of clinical data in downstream payer measurement programs, such as HEDIS. As a consequence, Diameter Health, as well as other vendors in the NCQA program, plan to continue annual measure re-certification. We have uncovered errors in our annual changes to quality measure logic (e.g. out-of-cycle value set updates) which may have not been discovered without re-certification. We believe this supports more accurate and consistent measurement across eCQM technology vendors. Annual certification has higher costs (both in direct testing and engineering resources) but Diameter Health has found this investment to be worthwhile.

Implications for Quality Programs

Technology certification in quality measurement is often considered ancillary to the delivery of high-quality care. Clinicians often complain of the administrative burden of recording data to attain specific quality measures. eCQM certification programs that use widely adopted interoperability standards to import data and adopt rigorous testing methodologies are positioned to improve the workflow and accuracy of quality measurement. Such improvements will position quality measurement closer to the center of the healthcare ecosystem where immediate feedback can provide more timely decision support to improve care.

CMS, as well as commercial payers and state agencies, have universally expressed the intent to move care models towards value-based purchasing rather than simple fee-for-service reimbursement. Value-based care requires consistent, accurate quality measurement, particularly during the transition from manual chart abstraction and quality reporting to fully end-to-end electronic measurement. NCQA's program for quality



measurement, which has been accepted as a testing methodology for eCQM certification, provides several advantages versus alternative programs for quality measurement. These advantages accrue first to the software vendors that participate in this program. That value is then passed onto the many plans that use quality measurement as a basis for value-based care. Finally, increased value is realized by patients as caregivers deliver higher quality care in a fashion that minimizes administrative burden.

Conclusion

Diameter Health's internal recommendation is to continue certification of new measures (and re-certification of existing measures) through NCQA's program. We will continue to provide feedback to NCQA on how the program can be improved, to which historically they have been receptive. Our selection of the NCQA program over other alternatives is informed by its more comprehensive, error-resistant and realistic approach to clinical data and quality measurement. In addition, certification in NCQA's program provides additional benefit through the inclusion of clinical data in downstream HEDIS reporting when they meet the requirements outlined by the NCQA for standard supplemental data.

Perspectives shared in this whitepaper represent the opinions of Diameter Health staff. These perspectives should not be substitutes for critical business judgment in the evaluation of any program, particularly since testing criteria and program regulations may change over time. No guarantee or warranty of information accuracy, completeness or fitness for use is provided. Please contact the authors of the paper with questions.