QPP/MIPS Success with Longitudinal Quality Measurement

Session #299, March 9, 2018
Laura McCrary, Executive Director, KHIN
John D’Amore, President, Diameter Health
Conflict of Interest

Laura McCrary, Ed.D. Executive Director of KHIN

Has no real or apparent conflicts of interest to report.
Conflict of Interest

John D’Amore, M.S., President of Diameter Health

Salary: Diameter Health, Inc.

Ownership Interest (stocks, stock options or other ownership interest excluding diversified mutual funds): Diameter Health, Inc.
Agenda

- Introduction to KHIN
- Qualified Clinical Data Registry (QCDR) Perspective
- MACRA/MIPS Introduction
- Quality Measurement Approaches
- Research Overview & Care Fragmentation
- Challenges & Findings with Longitudinal Quality Measurement
- Conclusion & Questions
Learning Objectives

- Explain how MACRA/MIPS quality measurement affects physician reimbursement
- Discuss how quality measures may be calculated by Electronic Health Records (EHR) and Qualified Clinical Data Registries (QCDR)
- Share data on care fragmentation and value of longitudinal quality measurement
- Compare how different modalities for quality measurement may affect benchmarking and reimbursement
Kansas Health Information Network: Overview

- 5.2 million unique patients in KHIN
- Over 25 million patients available for query through connections with other exchanges
- 9,900 providers
- 1,000+ healthcare organizations in production with CCDs and HL7v2
  - 120,000 HL7 messages daily
  - 9,000 CCDs daily
MACRA/MIPS Overview

- **MACRA/QPP** Medicare Access and CHIP Reauthorization Act of 2015
- **MIPS**: Merit-based Incentive Payment System
- 50% of 2018 MIPS dollars allocated based on quality of care
- 6 quality measures need to be reported, one of which must be an outcome measure or high priority measure
- Payment lags performance by 2 years (e.g. performance from 2017, reported in 2018, paid in 2019)
- Payment will be based on benchmarked performance
What is a QCDR (Qualified Clinical Data Registry)?

- Explain how MACRA/MIPS quality measurement affects physician reimbursement
- Centers for Medicare & Medicaid Services (CMS) approved QCDRs to collect clinical data from clinicians (both individual and groups) and submit on their behalf
- CMS is national authority over the program where QCDRs self-nominate annually
- >100 organizations which are a mix of vendors, medical societies, and health information exchanges (HIEs). Not all QCDRs do all measures
Becoming a QCDR: Challenges

- Lack of Clarity from CMS regarding responsibilities, timelines etc.
- Developing QRDA III format for electronic clinical quality measures:
  - Build vs. technology partner decision
- Developing an attestation process for the practices.
- Developing a QRDA III format for IA and ACI-in process
- Auditing requirements of being a QCDR

**Acronyms:**

- **CMS**: Centers for Medicare and Medicaid Services
- **QRDA**: Quality Reporting Document Architecture (XML format)
- **QRDA III**: Aggregate level QRDA report for practice or organizations
- **IA**: Improvement Activities, (part of the other 50% not quality measure driven)
- **ACI**: Advancing Care Information (successor to Meaningful Use)
## QRDA III Report Header

<table>
<thead>
<tr>
<th>Author</th>
<th>C-CDA/QRDA Generator v3.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact info</td>
<td>623 West 10th Ave.</td>
</tr>
<tr>
<td></td>
<td>Topeka, KS 66612, US</td>
</tr>
<tr>
<td>Legal authenticator</td>
<td>of Doctors Quality Reporting Network signed at September 11, 2017, 08:28:39, EST</td>
</tr>
<tr>
<td>Contact info</td>
<td></td>
</tr>
<tr>
<td>Document maintained by</td>
<td>Doctors Quality Reporting Network</td>
</tr>
<tr>
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<td>623 West 10th Ave.</td>
</tr>
<tr>
<td></td>
<td>Topeka, KS 66612, US</td>
</tr>
</tbody>
</table>
QRDA III Report Detail

- Performance Rate for Cardiovascular Disease: Controlling High Blood Pressure: 53.7%
- Reporting Rate for Cardiovascular Disease: Controlling High Blood Pressure: 53.7%
- Initial Population
  - ethnicity stratification
    - 2186-5: 33
    - NI: 8
  - gender stratification
    - F: 25
    - M: 16
  - payer stratification
    - 1: 2
    - 5: 1
    - 6: 1
    - 9999: 37
  - race stratification
    - 2028-9: 1
    - 2106-3: 33
    - NI: 7
# QCDR Provider Attestation

**Attestation Type**
- I attest for myself
- I attest for my practice

**Attestation Period**
10/01/2017 to 12/31/2017

<table>
<thead>
<tr>
<th>Name</th>
<th>This activity has been met</th>
</tr>
</thead>
<tbody>
<tr>
<td>Care transition standard operational improvements</td>
<td>[ ]</td>
</tr>
<tr>
<td>Chronic care and preventative care management for empaneled patients</td>
<td>[ ]</td>
</tr>
<tr>
<td>Engagement of community for health status improvement</td>
<td>[ ]</td>
</tr>
<tr>
<td>Engagement of patients through implementation of improvements in patient portal</td>
<td>[ ]</td>
</tr>
<tr>
<td>Implementation of formal quality improvement methods, practice changes or other practice improvement processes</td>
<td>X</td>
</tr>
<tr>
<td>Implementation of methodologies for improvements in longitudinal care management for high risk patients</td>
<td>[ ]</td>
</tr>
<tr>
<td>Measurement and improvement at the practice and panel level</td>
<td>[ ]</td>
</tr>
<tr>
<td>Participation in a QCDR, that promotes use of patient engagement tools.</td>
<td>X</td>
</tr>
<tr>
<td>Population empanelment</td>
<td>X</td>
</tr>
<tr>
<td>Practice Improvements for bilateral exchange of patient information</td>
<td>[ ]</td>
</tr>
<tr>
<td>Practice improvements that engage community resources to support patient health goals</td>
<td>X</td>
</tr>
<tr>
<td>Regular review practices in place on targeted patient population needs</td>
<td>[ ]</td>
</tr>
<tr>
<td>Use of QCDR data for quality improvement such as comparative analysis reports across patient populations</td>
<td>[ ]</td>
</tr>
<tr>
<td>Use of QCDR for feedback reports that incorporate population health</td>
<td>[ ]</td>
</tr>
</tbody>
</table>
Other Quality Considerations

- Development of Educational Programs to support clinicians in understanding QPP and making appropriate choices regarding MIPS measures
  - CME (Continuing Medical Education)
  - Webinars
- Development of Products to support clinicians in meeting MIPS measures
  - HIE
  - PHR
  - Analytics
- Expansion of certificate model to MIPS measures
MIPS Dollars at Stake

Consider:

MIPS Potential Impact on $200,000 Annual Medicare Reimbursement per physician

Source: CMS MIPS Scoring Methodology Overview Deck
Where Quality Can Be Calculated

Clinicians

Hospitals

Health Information Exchange

Registries

Clearinghouse

Measure Submission

Calculation

Clinical Data

Custom Data

Claims Data

Quality Report

Value Based Payment

Payers

HEDIS & STAR

IQR ACO & More
How Quality Measures Work?

Qualifying Encounter?

Age or Diagnosis*

Denominator

Process or Outcome Met/Unmet

Basis to Exclude?**

Numerator

Denominator - Exclusions

More Technical Definition

(Numerator – Numerator Exclusions)

(Denominator – Denominator Exclusions – Denominator Exceptions*)

* This is a generalization. Specific quality measures may examine other criteria

** Exclusions may be in entirety (denominator exclusion) or other criteria, see technical definition

* Where exceptions are included if numerator met
Current Model

- Physicians self-select quality measures under pay-for-reporting method adopted by Meaningful Use
- Reported performance rates do not affect incentive
- Most providers use local data and their certified EHR to report quality

**Patient John**

**Problems**
- Hypertension
- Heart Failure

**Vitals**
- BP of 90/60 mmHg

**Dr. Tyrell**

**Problems**
- Diabetes
- Heart Failure

**Vitals**
- BP of 95/65 mmHg

**Dr. Stark**

**Problems**
- Hypertension
- Diabetes

**Vitals**
- No BP recorded

**Dr. Greyjoy**

**Problems**
- Hypertension
- Diabetes

**Vitals**
- No BP recorded

**Compliance**

- ✔️ Compliance
- Not Eligible
- ✖️ Non-Compliance

BP = Blood Pressure: Systolic / Diastolic

* Measure Logic for Measure CMS165v5 Controlling High Blood Pressure
Local Methods Fail Patients, Providers and Payers

- A **patient** can only have a single state for a quality measure during a given time frame (i.e. based on all data from all sites of care)
- **Providers** suffer from incomplete information or the time-consuming need to incorporate data from other systems into their EHR
- Payers cannot measures performance accurately and have insufficient audit capabilities

**Bottom Line:** Flaws in using local data only for quality measurement compromises validity for value-based purchasing
Longitudinal Model

- Collecting all the data across care settings provides more robust basis for quality measurement
- Multi-source data fills gaps without having to labor with EHR integration
- Single source of truth assures validity and meets audit requirement for VBP

Dr. Tyrell
Problems: Hypertension, Heart Failure
Labs: BP of 90/60 mmHg

Dr. Stark
Problems: Diabetes, Heart Failure
Labs: BP of 95/65 mmHg

Dr. Greyjoy
Problems: Hypertension, Heart Failure, Diabetes
Labs: BP of 95/65 mmHg

BP = Blood Pressure: Systolic / Diastolic
* Measure Logic for Measure CMS165v5 Controlling High Blood Pressure
Approved Research Study

- Research approved by University of Texas, School of Biomedical Informatics (Research Leads: Dean Sittig, PhD, Adam Wright, PhD, Allison McCoy)
- Data from July 1, 2016 through June 30, 2017
- 51,700 patients selected from 50+ facilities with ambulatory care
- Longitudinal data collected from 214 care sites
- Refinement of measures made through a subset of 1,100 patients
- Care fragmentation and longitudinal quality measures from full data set
Research Methods

Longitudinal Data + Data Normalization
Data on Care Fragmentation

No single EHR has all the data!

### Quality Measure Examined (17)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>cms122v5</td>
<td>Diabetes: Hemoglobin A1c Poor Control</td>
</tr>
<tr>
<td>cms123v5</td>
<td>Diabetes: Foot Exam</td>
</tr>
<tr>
<td>cms124v5</td>
<td>Cervical Cancer Screening</td>
</tr>
<tr>
<td>cms125v5</td>
<td>Breast Cancer Screening</td>
</tr>
<tr>
<td>cms127v5</td>
<td>Pneumonia Vaccination Status for Older Adults</td>
</tr>
<tr>
<td>cms130v5</td>
<td>Colorectal Cancer Screening</td>
</tr>
<tr>
<td>cms131v5</td>
<td>Diabetes: Eye Exam</td>
</tr>
<tr>
<td>cms134v5</td>
<td>Diabetes: Medical Attention for Nephropathy</td>
</tr>
<tr>
<td>cms146v5</td>
<td>Appropriate Testing for Children with Pharyngitis</td>
</tr>
<tr>
<td>cms153v5</td>
<td>Chlamydia Screening for Women</td>
</tr>
<tr>
<td>cms154v5</td>
<td>Appropriate Treatment for Children with Upper Respiratory Infection (URI)</td>
</tr>
<tr>
<td>cms155v5</td>
<td>Weight Assessment/Counseling for Children and Adolescents</td>
</tr>
<tr>
<td>cms156v5</td>
<td>Use of High-Risk Medications in the Elderly</td>
</tr>
<tr>
<td>cms165v5</td>
<td>Controlling High Blood Pressure</td>
</tr>
<tr>
<td>cms166v6</td>
<td>Use of Imaging Studies for Low Back Pain</td>
</tr>
<tr>
<td>cms74v6</td>
<td>Primary Caries Prevention Intervention as Offered by PCPs and Dentists</td>
</tr>
<tr>
<td>cms82v4</td>
<td>Maternal Depression Screening</td>
</tr>
</tbody>
</table>
Encounter Qualification

- Many clinical documents do not codify the “billable” encounter which is determined by revenue cycle. Sometime the coding lacks desired terminology (was not part of Meaningful Use Common Clinical Data)

- That’s acceptable in measure logic, but requires encounter normalization to appropriately qualify patients. Examples of population uplift shown below (from measure refinement sample):

- **Pneumococcal Vaccine**: +81%
- **Colon Cancer Screening**: +103%
- **High Risk Meds in Elderly**: +80%
Quality Measure With Low Populations (e.g. Chlamydia Screening for Women)

While there are many patients in range, structured sexual activity assessments were very infrequent

Consideration 1: Use measure acknowledging that eligible population may be smaller than anticipated (i.e. ~10%)

OR

Consideration 2: Use measure with an active focus on encoding sexual activity for provider reporting
Data Normalization & Use

• The CMS Blueprint outlined that only LOINC should be used for diagnostics studies, such as breast mammography

  ▪ **PROBLEM**: LOINC is rarely used to record mammography today

  ▪ **SOLUTION**: Create mappings for other terminologies (e.g. CPT and SNOMED). NCQA has verified that this is acceptable

• High risk medications in the elderly assume that RxNorm codes are always provided and categorized appropriately.

  ▪ **PROBLEM**: Many EHRs provide NDC or other. In addition, most EHRs do not use medication “moodCode” or “status” appropriately

  ▪ **SOLUTION**: Map medications to RxNorm from all vocabularies and fix issues related to medicxatoin
## Quality Measures with Rates (12)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>cms122v5</td>
<td>Diabetes: Hemoglobin A1c Poor Control</td>
<td>✓</td>
</tr>
<tr>
<td>cms123v5</td>
<td>Diabetes: Foot Exam</td>
<td>Exam rarely documented</td>
</tr>
<tr>
<td>cms124v5</td>
<td>Cervical Cancer Screening</td>
<td>✓</td>
</tr>
<tr>
<td>cms125v5</td>
<td>Breast Cancer Screening</td>
<td>✓</td>
</tr>
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<td>✓</td>
</tr>
<tr>
<td>cms130v5</td>
<td>Colorectal Cancer Screening</td>
<td>✓</td>
</tr>
<tr>
<td>cms131v5</td>
<td>Diabetes: Eye Exam</td>
<td>✓ Exam info limited</td>
</tr>
<tr>
<td>cms134v5</td>
<td>Diabetes: Medical Attention for Nephropathy</td>
<td>✓</td>
</tr>
<tr>
<td>cms146v5</td>
<td>Appropriate Testing for Children with Pharyngitis</td>
<td>Timing information often unavailable</td>
</tr>
<tr>
<td>cms153v5</td>
<td>Chlamydia Screening for Women</td>
<td>✓ Population limited</td>
</tr>
<tr>
<td>cms154v5</td>
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<td>Timing information often unavailable</td>
</tr>
<tr>
<td>cms155v5</td>
<td>Weight Assessment/Counseling for Children and Adolescents</td>
<td>✓ Counseling info limited</td>
</tr>
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</tr>
<tr>
<td>cms82v4</td>
<td>Maternal Depression Screening</td>
<td>Child info and screening often unavailable</td>
</tr>
</tbody>
</table>
Conclusions

Considerations for Quality Developers / Authors (and policy-makers!)

- Need to use real-data to validate measures before adoption
- Measures need to be consistent across programs, EHRs and validators
- Federal interoperability framework needs to require data for quality calculation

Considerations for Quality Reporters

- Clinical data collected from multiple EHRs using interoperability standards can be used to support MACRA/MIPS quality reporting
- Challenges exist to data capture and transmission which makes certain measures easier
- Clinical documentation remains key to quality measurement
- Longitudinal quality measurement presents a means to measure quality which accurately reflects fragmented patient care. It aligns with former payer methods and provides an unambiguous patient-centric view of care quality
Interoperability

• Need to create a usable longitudinal record
• Need to structure data which is critical to high quality care
• Interoperability will improve with financial imperative

Quality

• Ambulatory quality care is a team sport
• Reports used to affect reimbursement must have an audit trail
• No EHR has the entire picture, so must share data

DATA

DOLLARS
Questions

Laura McCrary, EdD
LMcCrary@khinonline.org
https://www.linkedin.com/in/laura-mccrary-ed-d-b2b11129
@KHINinfo (Twitter)

John D’Amore, MS
jdamore@diameterhealth.com
https://www.linkedin.com/in/jdamore
@jddamore (Twitter)