ACCOUNTABLE CARE AND THE ROLE OF THE COMMUNITY MASTER PERSON INDEX

The Road to Value and Risk-Based Reimbursement
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Accountable Care Organizations (ACOs) aim to fundamentally alter the way healthcare organizations deliver care by changing the financial incentives involved with providing care. The primary goal of the ACO is to lower costs and improve quality by replacing the traditional fee for service (FFS) revenue model with a payment structure based on value and accountability. Through this new risk-based reimbursement model, providers will expect to see a direct relationship between the quality and cost of care they offer and the reimbursements they receive.

At its very core, the financial model of the ACO is designed to promote a collaborative care environment. In other words, healthcare providers participating in the care of the patient will need insight into the totality of care the patient is receiving in order to provide appropriate services and reduce duplicate procedures. These new ACOs will have a broad view of a patient’s health status and care and will monitor performance based on a combination of CMS core measure performance indicators and costs per member per year. In order to better manage the quality indicators as well as costs, hospitals and providers (primary and specialists alike) will need to have insight into what the other party is doing to manage the patient’s care.

Fortunately, the foundation for this level of care coordination has been put in place through the advent of Health Information Exchanges (HIEs). HIEs don’t solve all ACO issues, but they do help address some key points, including expanded clinical integration, understanding referral patterns, and the basic interoperability defined in the ARRA requirements.

Enabling Technologies

Whether a health system is building upon an already established HIE or starting from scratch, consultants to ACOs are recommending technologies that will do the following:

- Promote the integration of information from various provider locations,
- Enable health systems to normalize this information for comparative analytics, and
- Help facilitate population risk assessments.

A fundamental element of such a strategy is the requirement to effectively link patient information created in disparate systems into one logical view.

Enabling technologies such as the QuadraMed Enterprise Master Person Index (EMPI) are uniquely poised to address these requirements. QuadraMed’s EMPI serves as a
vendor-agnostic repository of person identification within a defined population, or community. This technology is sometimes referred to as a Community Master Person Index, or CMPI.

The CMPI’s role within the ACO is to ensure that there is an unambiguous understanding of each unique patient and provider participating in the organization. Unlike MPIs where one of the primary objectives of the indexing technology is to identify and resolve patient record duplicates and overlays, the CMPI serves as a “universal translator” of identities between ACO participants. Ensuring accurate exchange of information and precise population counts for quality measures are essential to a well-run ACO.

While a private HIE promotes clinical data exchange among closely aligned, participating providers, the ACO ecosystem is made up of a broad range of healthcare service providers (employed, affiliated, and non-affiliated), all participating in the patient’s care. In this type of exchange, there is no “single source of truth” and no one entity is able to dictate the correct identifiable attributes (e.g. name, address, phone numbers) that comprise an individual person’s demographic record. However, there is a need for all providers to be on the same page when asking for and receiving details about that patient’s care.

**Scenario 1: Reconciling Patient Information**

The following illustration shows an example of a patient participating in the ABC Healthcare System ACO. This patient is being treated for a broken leg by three different providers within the ACO. The patient, Timothy Clarke, was first seen in the hospital’s Emergency Department (ED). A record of that visit was established and patient details were captured. Timothy Clarke also has a primary care physician who was notified of his recent visit to the ED. At the time of Tim’s visit to the ED, the hospital requested prior medical records from his primary care provider. Tim was treated in the hospital by a specialist, an orthopedic surgeon, who will need to coordinate Tim’s follow up care with his primary care doctor.

In the example above, how can each provider be sure they are asking for and receiving clinical care documents on the same patient if each provider knows the patient by different attributes? How can the ACO be sure to properly count and measure this patient as a single entity and not three different individuals?

**The Role of the CMPI within the ACO:**

- Reconcile identity differences
- Provide a single enterprise identifier independent from facility-centric identifiers
- Support a process to better maintain Patient-to-Provider and Provider-to-Provider relationships
- Improve patient satisfaction by facilitating sharing of data within the ACO so patients don’t have to repeatedly provide the same information at the point of registration/scheduling
- Support analytics and quality measures
- Facilitate Patient and Provider Registries for self-service portals
- Unifies patient information and provides a view of encounters across the ACO
Scenario 2: Disambiguating between Provider Registries

Not only is there a need to reconcile patients between the coordinating providers, but there is also a need to disambiguate between the various provider registries. In the example below, each healthcare organization or physician knows Dr. Smith by different attributes: different spelling of the name, specialty, and even his national provider identifier (NPI). How does each of these organizations know if it is talking about the same Dr. Smith? And how does the ACO count and properly attribute the care rendered by this particular Dr. Smith and not confuse him with other Dr. Smiths participating in the same ACO?

The ability to clearly disambiguate patients and providers is a crucial technical component of any ACO and the CMPI addresses this requirement.

ACO FINAL RULE MANDATES

A Limited Data Set for Patient Identification

The ACO Final Rule published by CMS spells out a specific beneficiary data set that they believe is "sufficient to aid ACOs in focusing their initial care redesign efforts going forward." The data set is limited to the individual’s name, date of birth, sex, and Health Insurance Claim Number (HICN). CMS also goes on to state that they “believe these four data points are the minimum data necessary for providers to begin the process of developing care plans in an effort to provide better care for individuals and better health for populations.”

For most Medicare beneficiaries, the HICN is comprised of the 9-digit social security number (SSN) of the primary account holder (the wage earner who earned Medicare benefits) and a two-position Beneficiary Identification Code (BIC) which identifies the current relationship between the beneficiary and the wage earner. While this might seem fairly straightforward, it’s important to understand that an HICN can change over time. For example, as an individual changes from “spouse” to “widow,” the BIC will change as well. Medicaid identifiers are complicated even more as an individual may span several jurisdictions over time (e.g., move

from one state to another) or go on and off Medicaid during their lifetime as their financial circumstances change. Each of these changes creates a new Medicaid identifier by which that individual is known.

While this limited data set, promulgated by HHS, is specific to the design and payment of ACO organizations participating under CMS (Medicare/Medicaid), it does not mean that commercial health payers may not establish different identifiable data sets for their own ACO designs. However, healthcare organizations typically look to CMS as a reference in these matters and it is likely that most ACOs will adhere to this set of attributes as the minimum for patient identification.

Given only four data attributes (some with limited unique properties), one must ensure that the ACO technical design is capable of properly identifying the individual. The use of a robust probabilistic algorithm to generate accurate matches of demographic data, along with the ability to scale across a large population, is essential for the accurate patient identification needs of any ACO.

**Determining Provider Specialty**

While differentiating between providers within a given ACO is not as complicated as patient identification, it too involves some unique challenges. One challenge with provider identification is to assign a primary care practitioner to each patient participating in the ACO. This designated provider is considered the practitioner that renders the patient’s essential primary care services and is eligible to participate in the Shared Savings Program.

Determining provider specialty is not as simple as one might expect. While some providers declare a primary care specialty (e.g. Internal Medicine, General Practice), other providers may be classified as a specialist while performing the services of a primary care provider for some patients. In other words, one cannot just go by the provider’s self-reported taxonomy to determine specialty. The ACO Final Rule describes a Primary Care Assignment Process whereby a “step-wise” approach is designed to help address this issue. The process considers multiple factors in aligning a beneficiary with his or her appropriate primary care physician. It looks at the services rendered by that provider (primary care HCPCS codes), the type of practitioner providing the services (e.g. physician, NP, PA, CNS), and the physician’s specialty.

In order to accommodate the Primary Care Assignment Process, the ACO must be able to account for all of these variables to properly associate the patient with his or her primary care provider.
Managing Patient-to-Provider Relationships

The ability to establish, manage, and report on patient-to-provider relationships is crucial for entities participating in the ACO Shared Savings Program.

In the example below, the patient, Tim Clarke, has three providers associated with his care related to his recent visit at ABC Emergency Department: 1.) Dr. Brown, the ordering physician, who first saw Tim when he presented to the ED and ordered X-rays to be performed, 2.) Dr. Davis, the orthopedic specialist who performed the surgery, and 3.) Dr. Smith who is Tim’s pediatrician and primary care provider.

Appropriate coordination of care within the ACO is dependent upon the ability to capture and maintain the various patient-to-provider relationships.

Managing Provider-to-Provider Relationships

One of the organizations providing ACO accreditation, the National Committee for Quality Assurance (NCQA), is focused on expanded cost and quality measurements and reporting. In order to satisfy the level of rigor that NCQA and other accrediting organizations require, it is essential that the ACO be able to produce meaningful provider measurements. At a basic level, this means being able to know who and what you intend to measure and the ability to “drill up” and “drill down” through the data as necessary.

Understanding the relationships between the providers participating in the ACO is necessary for meaningful and accurate reporting. In this example, Dr. Smith (a pediatrician) is employed by Pediatric Associates, which is affiliated with ABC Hospital and has referred patients to Dr. White, a Pediatric Oncologist. While Dr. White is not affiliated with ABC Hospital, it would be beneficial for Dr. White to participate in the ACO since she is one of the providers involved in the continuity of care within this community.
The Role of the Community Master Person Index (CMPI)

The typical MPI solution helps to solve the problem of duplicate medical records within a single application.

An EMPI is useful in disambiguating patient records across multiple applications and affiliated organizations.

The Community Master Person Index or CMPI plays a unique role within ACOs. Not only does it address the challenges that are managed by an EMPI, it is also charged with properly translating and aligning the identities of patients and providers across disparate and sometimes unaffiliated organizations while also maintaining the multitude of patient-to-patient, patient-to-provider, and provider-to-provider relationships. The CMPI does not dictate a single source of truth regarding an individual’s identity, but instead is able to reconcile the differences between the HIT applications and is able to reasonably determine the likelihood that different demographic details represent the same individual. Because employed, affiliated, and non-affiliated providers may all participate in the ACO and exchange clinical information between one another, an indexing strategy that is based on creating the “golden record” is not optimal for the ACO framework.

Accommodating Multiple Message Types

MPIs and EMPIs have traditionally focused on patient identity details contained within clinical records and HL7 administrative transactions such as PIX/PDQ (Patient Identifier Cross-Reference and Query) and the ADT (Admission, Discharge & Transfer) messages. However, ACOs will find that much of the patient demographic details they use will come from other sources including healthcare claims (HIPAA 837 claim format) and pharmacy claims (NCPDP). While some of the demographic data content is the same between clinical, administrative, and financial transactions (for example: most healthcare transactions contain data fields for patient name, gender, and date of birth), there are differences.

HL7 messages tend to have a much finer granularity in the data content about a patient. The HL7 PID segment, which contains about 30 different fields, is used to convey demographic details about the patient. It contains a field for the patient’s name, the mother’s maiden name, the patient’s date and time of birth, the patient’s race, religion,
ethnic group, and even the patient’s driver’s license number, to name just a few. The X12 claim transaction contains details about the subscriber and the patient (these can be two different people). The claim transaction supports details about the patient’s date of birth, not the time, and it contains a unique composite identifier comprised of the patient’s name and SSN. Unlike the HL7 PID segment, there are no fields within the X12 claim transaction that capture the patient’s mother’s maiden name, religion, or driver’s license number.

One other key difference between the X12 and HL7 messages is in the fact that the HIPAA administrative transactions (such as the healthcare claim) are regulated under federal law and as such adhere to a strict set of enforceable implementation guides. The HL7 transactions are not subject to this same level of compliance, and as a result, organizations may vary in the data content used in some of the segments. Reliance upon an MPI that is tuned for HL7 messages will become a challenge for ACOs as they attempt to accommodate other, non-HL7 transaction types.

Tracking Readmissions:
A QuadraMed Client Case Study

Another key role of the CMPI is to help the ACO track readmission rates and unnecessary duplicate procedures. Dallas Forth Worth Hospital Council Foundation (DFWHCF) explains that their CMPI solution—which they term REMPI (Regional Enterprise Master Person Index)—allows them to track patients across time, hospitals, and payers using the patient’s unique enterprise number. Leveraging QuadraMed’s Smart Identity Exchange solution, DFWHCFC is able to produce studies regarding readmissions for notable conditions like congestive heart failure or pneumonia occurring within the same hospital or spanning across different hospitals.

DFWHCF READMISSION RATE STUDY

QuadraMed’s matching algorithm allows DFWHCF to correctly link and analyze over 7.3M inpatient records with plans to include additional patient records from primary care and specialists. Parkland Health & Hospital System has stated that the ability to link these patient records “enables the region to research causes for readmissions.” Armed with that information, they are now able to improve the quality of care for their patients.

A Foundation for Enterprise Healthcare Analytics

Accurate linking of patient identities across disparate facilities (hospital and provider), along with an understanding of the relationships between patients and providers, is the foundation for sophisticated enterprise analytics and ad-hoc reporting required by any ACO. ACOs will be tasked with a number of analytic challenges including:

- Identifying and proactively managing readmission risk by provider, by facility, etc.
- Pinpointing high cost/high risk patients
- Trending quality measure performance
- Hospital acquired conditions (HAC) incidents and trending by provider
- Calculating admissions and length of stay (LOS) by Plan

Are you prepared?

To understand if you are prepared to meet the challenges inherent in any community-wide healthcare exchange, ask the following questions:

- Can a single view of the patient be determined across the enterprise?
- Will you be able to accurately link patient identities based only on the patient’s name, date of birth, gender and insurance ID number?
- Is your existing “HL7-focused” MPI extensible to an exchange environment comprised of disparate transaction types?
- Is your identity matching technology scalable to the needs of a multi-million patient index?
- Will your MPI accommodate both patient and provider indices?
QuadraMed and the Community Master Person Index

Achieve the benefits of a central, enterprise-level database of patients and providers with QuadraMed’s Smart Identity Exchange. Our technology empowers facilities to exchange identity information through the use of a single enterprise person identifier, known as the QuadraMed ID or QUID. And by using our Smart Identity Management solutions and our advanced, probabilistic searching and linking capabilities, you can be sure you’re using the correct patient record.

QuadraMed’s Smart Identity Management solutions offer many benefits, including:

- Provides an enterprise index with an “enterprise” identifier independent from facility centric identifiers
- Improves patient satisfaction by facilitating sharing of data within the organization so patients don’t have to repeatedly provide the same information
- Improves patient safety by using probabilistic searching for person identification
- Unifies patient information and provides a longitudinal view of encounters across the ACO

IN SUMMARY:

*Accurate Patient and Care Information is Critical to an ACO’s Success. QuadraMed Can Help You Get There.*

As Accountable Care Organizations (ACOs) work to lower costs and improve quality, it has become even more critical to ensure that patient, facility, provider, and other care information is accurate and reconciled across various locations and systems. QuadraMed’s #1 in KLAS Enterprise Master Person Index technology and QuadraMed’s other access management solutions empower health systems to meet their most pressing needs. This helps improve patient safety, lower costs, and also promote the overall success of an ACO.