

COMPETENCY ORIENTATION GUIDE

Competency: The process by which relevant data is acquired from varying sources, assimilated into stakeholder's infrastructure, stored securely, and applied in a meaningful way to improve care delivery and reduce costs.

[The Committee on Data Aggregation](#)

JULY 2020

BACKGROUND

The Accountable Care Learning Collaborative (ACLC) is a non-profit organization dedicated to accelerating the transition to value-based care. To this end, the ACLC has identified care delivery competencies required for providers to succeed in risk-bearing payment models. ACLC-developed Competency Orientation Guides (COGs) provide an overview of each competency, including key components, to support provider implementation. Each COG represents the distilled insights from the deliberations of a dedicated committee comprised primarily of leaders from provider organizations, as well as industry partners, and ACLC staff. The Committee on Data Aggregation, which convened between January and June of 2020, supported the development of this COG.

COMPETENCY IMPORTANCE & CONTEXT

Providers reimbursed under a value-based care model are incentivized to proactively seek out the neediest of patients, a process which often requires the assimilation of multiple information streams to inform risk stratification efforts. This committee focused its discussions on the various methods employed by organizations to integrate HIE data, ingest claims data from a payer partner, and apply data insights to improve care delivery and reduce costs.

Competency Framework

Competency: The process by which relevant data is acquired from varying sources, assimilated into stakeholder's infrastructure, stored securely, and applied in a meaningful way to improve care delivery and reduce costs.

1. Acquiring relevant data from varying sources
 - a. Identifying which data are needed to inform care strategy (e.g., EHR, claims, patient-generated, etc.)
 - b. Collaborating with the right partners to gather high-value data
2. Assimilating or incorporating data into care strategy
 - a. Enabling data-system intercommunication
 - b. Breaking down silos of data
 - c. Cleansing data so that it delivers meaningful, actionable insights
3. Storing data effectively and securely for optimal call/pull
 - a. Governing and monitoring data to ensure integrity is maintained
 - b. Creating seamless access for the stakeholders that need the data
4. Applying data insights to improve care delivery and reduce costs
 - a. Applying data insights to improve patient-specific care delivery
 - b. Applying data insights to improve population health management

IMPORTANT TERMS

The ACLC committee on Data Aggregation identified that there are differing terms that may be used when speaking about the elements of data aggregation. The original competency language terminology aligns with the framework, but the committee felt it important to include additional commonly used industry terms which have been mapped to the competency language and framework. The original terms and new terms are defined below and mapped according to this format: **Original** ▶ **New**: Definition.

Acquisition	Sourcing	Sourcing and storing the data "as is" from a wide variety of sources, such as a range of various EHRs, pharmacy, lab, claims, consumer, social, economic, geographic sources.
Assimilation	Ingesting	Cleaning, securing and cataloging the data so as to structure and manage the data.
Storage	Unification	Curating, enriching, and standardizing the data by performing various quality checks, indexing, and mapping the data to healthcare-specific vocabulary, ontology, and semantic standards into a health care-specific data model.
Storage	Preparation	Giving meaning to the data by applying health care-specific rules, definitions, criteria, or models (e.g., Machine Learning, etc.).
Application	Activation	Making the data available for a wide variety of uses including business intelligence tools, various applications, software development kits, etc.

COMMON ELEMENTS

1: Acquiring relevant data from varying sources

Committee Insights:

- Data would be compiled and presented in a meaningful way that helps improve quality, reduce costs, increase access, and improve the caregiver experience (the "quadruple aim").
- When acquiring data, consider: What is the use case? What is the approval process? What will the data extraction process be like? Who is governing this data?
- Health systems should work with community partners to acquire and coordinate data sharing for elements like data on housing, personal finances, transportation, education, workforce, and public health indicators to help inform clinical care decisions.
- Data acquisition should provide something that is actionable by helping to assess historic performance, current performance, or project and plan for future performance.

Challenges:

- Maintaining compliance with HIPAA standards and other privacy regulations can be burdensome. Response: Utilize checklists to ensure compliance with relevant standards.
- Difficulty matching SDOH data with clinical data, particularly when communicating between disparate EHRs. Response: Use SDOH platforms built into EHRs when possible.
- Aggregating data from other health care providers working to protect their own business interests can be difficult. Response: Use demonstrated improvements in patient outcomes to establish buy-in and encourage collaboration.
- Clinical and financial data have traditionally been two different channels of data and lack unity. Response: Ensure both financial leaders and clinical leaders are engaged in data aggregation decisions.
- Enormous gaps between data that is discreetly collected and the underlying patient condition (e.g., coding data vs. what happened with the patient). Response: Data should tell the story of what happened to the patient. Make efforts to ensure the data collected meets the needs of the organization.

Potential Qualitative Indicators:

- Is the organization partnering with community organizations to acquire data on other social indicators? (Y/N)
- Does the organization use checklists when acquiring data to ensure compliance with regulatory and legal guidance? (Y/N)
- Have data acquisition requirements been clearly defined? (Y/N)
- Percentage of staff trained on data acquisition requirements.

2: Assimilating or incorporating data into care strategy

Committee Insights:

- Data quality is important, but enterprise identity management is a more pressing issue (e.g., enterprise master patient index), including deduplication of data.
- Ensuring that the CEO has a clear strategy for data and assimilation is crucial for incorporating data into care delivery.
- Assimilation of all the patient encounter data, including both financial and clinical data, enables true care management. Further, data should be **unified** by applying structure and data management indexing and by mapping data to health care-specific vocabulary, criteria, and models (i.e., semantic standards).

Challenges:

- The reconciliation process is extremely cumbersome. **Response:** Assign specific responsibilities to individuals and hold them accountable through progress updates.
- Data presented to leaders is not always presented in readable format. **Response:** Present only the data needed to make decisions and limit presenting unnecessary data.
- Improved data science skills are needed to assimilate data from varying sources. **Response:** Review potential training opportunities and team member skillsets that need to be developed.

Potential Qualitative Indicators:

- Have data assimilation protocols been developed? (Y/N)
- Percentage of staff trained on data assimilation protocol.

3: Storing data effectively and securely for optimal call/pull

Committee Insights:

- A lack of agreed upon data governance standards means many organizations have unstructured governance and some have no governance at all.
- Organizations face challenges when researchers intentionally or unintentionally withhold necessary data from the rest of the organization.
- CEO Leadership and ownership over data is crucial for the success of data use within an organization.

Challenges:

- Defining system governance standards and protocols can be challenging. Response: Develop a committee structure to help define governance expectations. The CEO of the organization should be included on the committee to support outcomes and enforce expectations for how data will be governed within the organization.
- Setting limits for heavy users of data can cause compliance problems. Response: Make sure that heavy data users have a seat at the table to help define and develop governance protocols.
- Lack of executive leadership support will limit how data is governed and managed. Response: Ensure CEO is involved in data governance decisions. CIO should report directly to CEO to help drive support for how data is governed within an organization.

Potential Qualitative Indicators:

- Has a data governance committee been established within the organization? (Y/N)
- Is the CEO part of the data governance committee? (Y/N)
- Percentage of employees who require heavy data user access.

4: Applying data insights to improve care delivery and reduce costs

Committee Insights:

- Further innovation and refinement are needed within the ACO environment surrounding data use cases.
- Transparency is crucial to enable widespread data use adoption.
- If data is accurate and clean it will naturally inform clinical treatment decisions. The end goal of data aggregation is to distribute data that will enable the user to make informed decisions.

Challenges:

- Semantic interoperability can be challenging if data from differing sources do not have the same definitions or alignment. **Response:** Ensure interoperability measures have been taken, use one EHR across the organization.
- The overall quality and cleanliness of data can limit use case and adoption for the data. **Response:** Assign specific responsibility to clean and perform quality checks on data before it is distributed for use.
- Some individuals are heavy users of data and others have not become accustomed to integrating data use into their workflow. **Response:** Provide adequate training to employees to help them understand how data use can optimize their work.
- Organizations do not have the data assets or capabilities to use data efficiently. **Response:** Make necessary IT investments part of capital planning process to enable organizational data use case efficiency.

Potential Qualitative Indicators:

- Percentage of individuals who have completed training on using data to optimize their daily work.
- Does the organization have a data quality and cleaning protocols established? (Y/N)

GENERAL RESOURCES FOR FURTHER EXPLORATION:

- [Collaboration: The Power of Data Aggregation](#)
- [The "Big Data" Revolution in Healthcare](#)

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