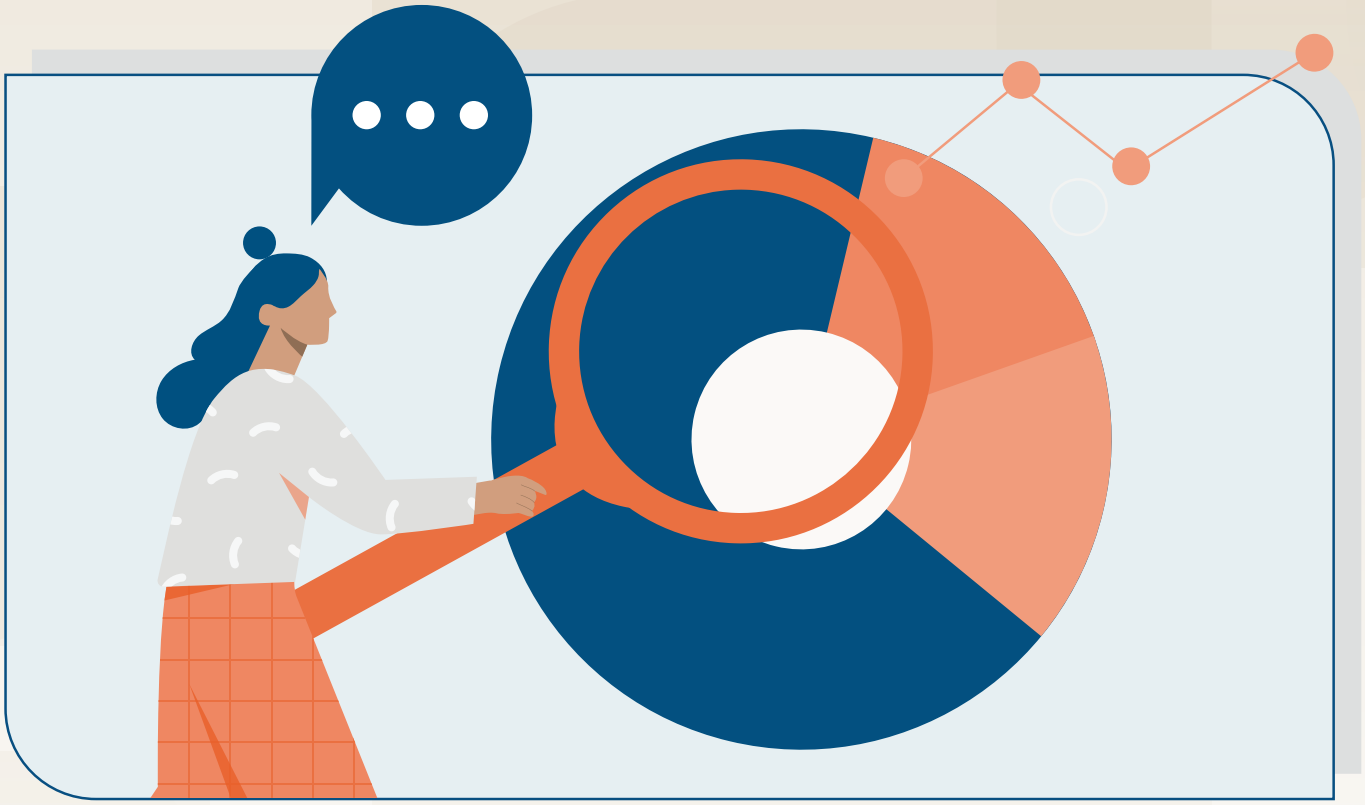
NATIONAL COUNCIL
for Mental Wellbeing

Organizational Analytics Capability Model: Health Care Organization Self-Assessment *Handbook*



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Wellbeing In Action

CCBHC-E National Training & Technical Assistance Center

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Glossary of Abbreviations

AI	artificial intelligence
API	application program interface
APM	Alternative Payment Model
CCBHC	Certified Community Behavioral Health Clinic
CMS	Centers for Medicare and Medicaid Services
DCO	Designated Collaborating Organization
EHR	electronic health record
ER	emergency room
FQHC	Federally Qualified Health Center
HIPAA	Health Insurance Portability and Accountability Act
HITECH	Health Information Technology for Economic and Clinical Health
HITRUST	Health Information Trust Alliance
HR	human resources
ISPG	Information Security and Privacy Group
IT	information technology
KPI	key performance indicator
NLP	natural language processing
OACM	Organizational Analytics Capability Model
OKR	objectives and key results
SDLC	software development lifecycle
SOP	standard operating procedure
USCDI	United States Core Data for Interoperability

Introduction

In today's rapidly evolving health care landscape, data has become a critical asset for organizations seeking to reduce costs and improve patient/client care, population health and staff experiences. Health care organizations, including Federally Qualified Health Centers (FQHCs), Certified Community Behavioral Health Clinics (CCBHCs) and hospitals, increasingly recognize the value of leveraging data analytics to inform decision-making and enhance care delivery. Organizational analytics capability refers to the sophistication with which an organization collects, manages, analyzes and applies data to achieve its strategic objectives. In this era of artificial intelligence (AI)-driven technology, lacking data analytics capacity puts organizations at risk of becoming obsolete.

Benefits of data analytics

Data analytics offers tangible benefits, particularly in supporting Alternative Payment Models (APMs). The success of these models, such as value-based care and bundled payments, requires sophisticated data management and practices. Analytics enables:

- **Risk stratification:** Identifying high-risk patients/clients for targeted interventions.
- **Cost prediction:** Forecasting care costs for specific populations.
- **Quality measurement:** Tracking and reporting on metrics tied to reimbursement in value-based care models.
- **Outcomes tracking:** Demonstrating improved outcomes and cost savings through analysis of clinical and claims data.
- **Population health management:** Identifying patients/clients based on risk levels and various group-level factors, developing targeted interventions, and measuring their impact, thus improving outcomes, promoting health fairness, and reducing health care costs.

Analytics also supports workforce and resource optimization. By analyzing workforce data, health care organizations can improve staffing, reduce turnover and enhance employee satisfaction. Simultaneously, they can identify potential waste and overuse of resources, aligning operations with risk-based payment models.

Enhanced operational efficiency and compliance

Data analytics improves operational efficiency by identifying bottlenecks, optimizing resource usage and streamlining workflows. It also aids in regulatory compliance by tracking metrics tied to programs like meaningful use and value-based financing structures, ensuring organizations meet quality standards and avoid penalties.

Moreover, analytics empowers executive-level decision-making by providing timely, accurate insights to support strategic planning. Organizations that demonstrate strong analytics capabilities are better positioned to attract patients/clients, secure funding and demonstrate value to stakeholders.

Developing organizational analytics maturity

Although many organizations invest in advanced electronic health records (EHRs) with data tools, having the technology alone is insufficient. To fully leverage these investments, organizations must build strong analytics capabilities, including data management strategies, skilled teams and a data-driven culture.

However, health care organizations often face barriers to analytics maturity, such as capital constraints, workforce shortages and data silos. To overcome these challenges, a structured approach is essential. The Organizational Analytics Capability Model (OACM)[1] Self-assessment is intended to be used by health care organizations delivering direct care services. It provides a comprehensive framework for evaluating and improving six key attributes: analytics opportunities, data, analytics techniques, people, technology and culture.

This model enables organizations to benchmark their analytics capability against industry standards and develop targeted improvement plans. It is a tool for assessing strengths, identifying gaps and guiding investments in personnel, technology and processes to enhance overall performance. Like a compass, it sets direction (i.e., goals and objectives to be achieved through an organization's established change management processes).

Assessment as a catalyst for change

The OACM is more than a measurement tool — it is a catalyst for organizational transformation. It reflects the complex nature of modern health care and serves as a roadmap toward higher analytics capability. The model allows organizations to discover best practices, challenge their current limitations and aspire to advanced data usage. This systematic approach helps organizations leverage data to deliver better care, make informed decisions and better serve their communities.

1 The OACM is an adaptation of the Advanced Analytics Capability Maturity Model (A2CM2) originally developed by the Social Security Administration. Wellbeing in Action adapted this model for health care organizations.

Model Overview

The OACM is structured around six key attributes, each representing a critical aspect of analytics capability within a health care setting. These attributes are: Analytics opportunities

- Analytics opportunities
- Analytics techniques
- Culture
- Data
- People
- Technology

Each attribute focuses on a specific area of organizational capability, from identifying and managing analytics projects to fostering a data-driven culture. These attributes provide a holistic view of an organization's analytics maturity and potential. Table 1 presents each attribute and its definition, contextualizing how it applies specifically to health care organizations. (See Appendix A for a comprehensive review of each category and subcategory definition.)

Table 1: Attribute definitions

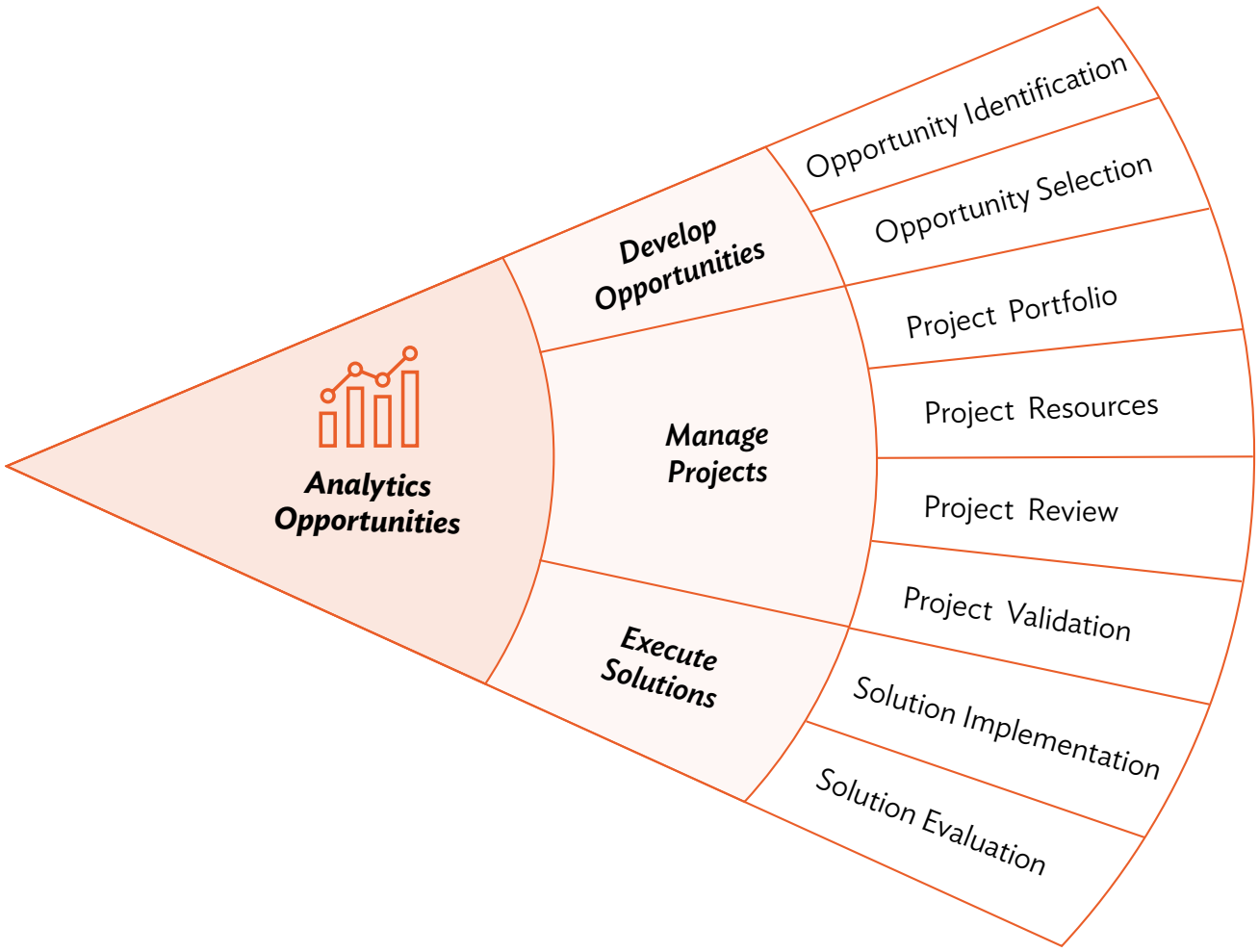
Attribute	Definition
Analytics opportunities	Processes for identifying, selecting, managing and evaluating analytics projects that align with the health care organization's mission.
Analytics techniques	Identifying analytics techniques and tradecraft[2] to generate and present insights from any data collected by the health care organization.
Culture	Organizational mechanisms that promote, communicate and emphasize the importance of analytics to support evidence-based decision-making.
Data	Leveraging new and existing data sets — such as patient/client records, claims, treatment outcomes and service usage data — to manage and govern data that supports analytics projects.
People	Human capital strategies needed to develop and maintain a skilled team of data analysts, clinicians and administrative staff capable of effectively using analytics to support the organization's mission. It includes both staff and other stakeholders such as clients and Designated Collaborating Organizations (DCOs).
Technology	Using new and existing technologies — EHRs, patient/client management systems, analytics software and virtual platforms — to conduct analytics projects that enhance patient/client care and operational efficiency.

2 Analytics tradecraft refers to the specialized skills, methods and practices used by data analysts and scientists to effectively collect, process, analyze and interpret data. It encompasses the techniques, tools and approaches that analysts employ to extract meaningful insights from data and to communicate those insights effectively to stakeholders, including skills such as data cleaning, statistical analysis, machine learning, data visualization and predictive modeling.

Self-assessment components

The core attributes and subsequent categories and subcategories comprise the OACM. Assessment occurs at the subcategory level, and scoring is anchored on five-point scales and accompanied by health care-specific examples to assist organizations in self-rating. In this handbook, examples are specific to CCBHCs. An example attribute is analytics opportunities, which has three categories divided into eight scored subcategories (see Figure 1).

Figure 1: Analytics opportunities categories and subcategories



Self-assessment Methodology

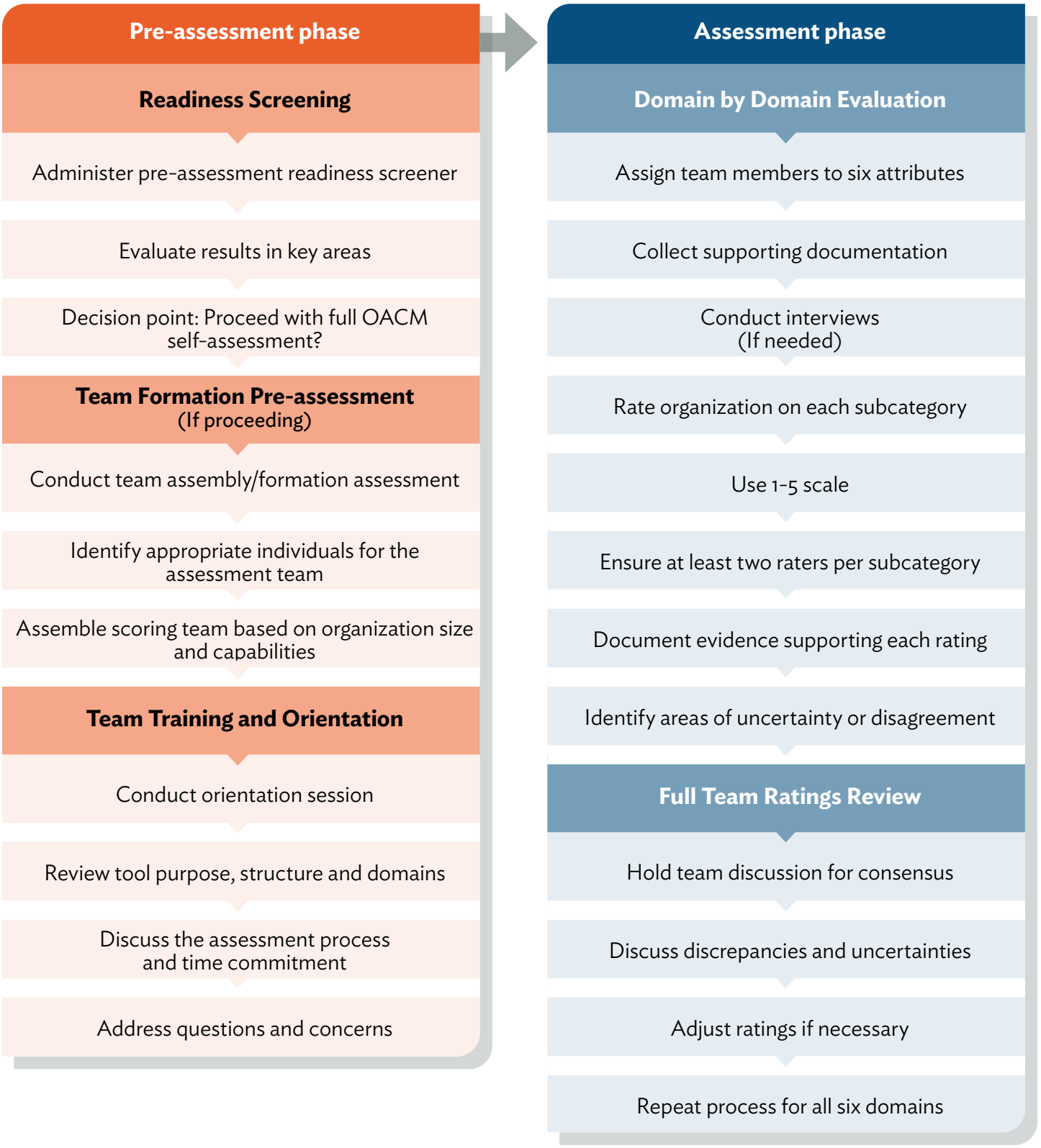
The self-assessment process outlined in this handbook is designed to be both evaluative and educational. It guides organizations through a structured approach to understanding their current analytics maturity and identifying areas for improvement. The process involves two main phases:

1. **Pre-assessment phase:** This includes a readiness screening to determine if the organization is prepared for a full assessment. If ready, the organization then conducts a team formation pre-assessment to identify suitable participants for the assessment team, considering factors such as expertise in data analytics, information technology (IT) systems, clinical operations and quality improvement. The team is then assembled based on the organization's size and capabilities, using evidence-based guidance provided in the handbook on team composition. This phase concludes with team training and orientation to ensure all members understand the assessment tool and process.
2. **Assessment phase:** This involves a detailed evaluation of the six key attributes, with team members assigned to specific areas. The evaluation process includes data gathering, rating each subcategory on a five-level scale and documenting evidence. This process not only measures current capabilities but also exposes organizations to best practices and possibilities they may not have considered previously. The assessment concludes with a full team review to reach a rating consensus and identify areas for further investigation or improvement.

Importantly, this assessment is not designed for quick fixes or surface-level changes. Rather, it is a commitment to deep, systemic change in how an organization views, values and uses data. It challenges organizations to aspire beyond their current limitations, setting benchmarks aligned with the most advanced data-using entities across industries.

By engaging with this tool, organizations embark on a transformative journey that can lead to better care delivery, more informed decision-making and, ultimately, better service to their communities. The appendices at the end of this handbook provide additional resources, including detailed definitions, pre-assessment tools and examples of supporting documents to aid in the assessment process.

Figure 2: Self-assessment process overview



Pre-assessment phase

Readiness screening

- Administer the pre-assessment readiness screening to determine organizational readiness.
- Evaluate results in four key areas: current analytics capability gaps, motivation, resource commitment, and current state and perceived value.
- Decide whether to proceed with a full OACM self-assessment based on screening results. If proceeding, the executive team should identify the executive sponsor and develop a timeline and output expectations.

Team formation pre-assessment

If proceeding, conduct a team formation pre-assessment to identify the most appropriate participants for the assessment team. Ideally, ensure your team has adequate organizational knowledge and experience pertaining to the following:

- Data analytics and management
- IT systems and infrastructure
- Clinical operations
- Quality improvement
- Organizational culture and change management

Team formation

Based on your preliminary self-assessment and understanding of your organization's structure and capabilities, assemble your scoring team by doing the following:

1. **Conduct team formation pre-assessment:** See Appendix C.
2. **Consult the team composition table:** Refer to Table 2 as a starting point. This table offers recommendations for team roles, based on your initial pre-assessment.
3. **Adapt it to your context:** While the table provides a useful framework, you should adapt it to your organization's specific needs and structure. Your distinctive insights into your organization's operations are crucial in fine-tuning the team composition.
4. **Ensure multidisciplinary representation:** Your team should include representatives from key areas as suggested in the table, such as leadership, clinical operations, quality improvement, IT and data analytics. The exact mix will depend on your organization's structure and the individuals' expertise. Select team members who have a deep understanding of your organization's processes, data systems and analytics capabilities. For organizations with the most basic capabilities, these are likely to be staff performing data entry and simple analytics. Look for staff members who can provide insights into the current state of your analytics efforts and potential future directions.
5. **Establish decision-making authority:** Include at least one team member with the authority to make or influence decisions about resource allocation and strategic direction, as indicated by roles like clinic manager/director or executive director/CEO in Table 2.

6. **Determine commitment and availability:** Be sure that selected members can commit the necessary time and effort to the assessment process.
7. **Include fresh perspectives:** Consider including one or two members who might bring a fresh or innovative perspective to the assessment, such as newer employees or those from departments not typically involved in data analytics discussions.
8. **Incorporate external input (optional):** If appropriate for your organization, consider including an external consultant or advisor who can provide an objective viewpoint or industry best practices, as suggested in Table 2 for larger organizations.

Best Practice Tip: The team composition table serves as a general guide to help with your team formation, but it is not an exact science. Your organization may not have each role or may have different job titles not reflected in the table. Your knowledge of your organization's structure, culture and personnel is crucial in selecting the right mix of team members to achieve the most accurate and comprehensive assessment of your organization's analytics capabilities. The general philosophy is that you should have enough team members across your organization to ensure that you have accurate ratings. Additionally, the team formation pre-assessment may indicate that you ought to have a small team, but based on organizational values you may elect to have a larger team. In other words, it's your leadership's responsibility to make sure the right people are on the team so there is high confidence that the group's consensus will yield accurate scores to inform strategic planning.

Table 2: Team composition aid

	Level 1 (Basic)	**Level 2 (Developing)**	**Level 3 (Advanced)**
Role/Position	*Small Team (2-4 members)*	*Medium Team (4-6 members)*	*Large Team (6-10 members)*
Clinic Manager/Director	Priority	Priority	Priority
Quality Improvement Manager	Priority	Priority	Priority
IT Support Specialist	Optional	Priority	Priority
Data Entry Staff	Priority	Optional	Optional[3]
Data Analyst	Priority	Priority	Optional
Executive Director/CEO	Optional	Optional	Priority
Chief Information Officer	Optional	Optional	Priority
Sr. Data Analyst/Data Scientist	Optional	Optional	Priority
HR Director	Optional	Optional	Priority
IT Manager	Optional	Optional	Priority
Program Manager	Optional	Optional	Priority
Compliance Officer	Optional	Optional	Priority
Patient/Client Advisory Group Member	Optional	Optional	Priority
Clinical Supervisor	Optional	Optional	Optional
Community Support Supervisor/ Peer Support Supervisor	Optional	Optional	Optional
HR Manager	Optional	Optional	Optional

3 In larger organizations, quality improvement officers, information officers and managers may effectively represent the perspectives of analysts and data entry staff during the rating process. However, in smaller organizations, it may be best to include analysts and data entry staff directly on the team.

Team training and orientation

- Conduct an orientation session for the selected assessment team.[4] If necessary, obtain external training and consultation.[5]
- Review the tool's purpose, structure and six attributes.
- Discuss the assessment process and expected time commitment.
- For each attribute:

  - Review definitions and subcategories as a full team.
  - Ensure all team members understand the scope and meaning of each subcategory.
  - Discuss current organizational practices related to the attribute.
  - Share insights and examples from different areas of the organization.

- Address any questions or concerns raised by team members.

Assessment phase

Scoring

The OACM employs a five-level rating scale to assess an organization's analytics maturity across various subcategories. This scale, summarized in Table 3, ranges from Level 1 (Initial) to Level 5 (Optimizing). Each level is assumed to build upon the prior and represents a progressively more mature state of capability.

Table 3: General level descriptions

Level	Detailed Description
Level 1: Initial	No formal processes or minimal activity. Efforts are typically ad hoc, with no consistent approach, and often are reactive to internal or external organizational pressures.
Level 2: Defined	Standardized processes are in place, but they are applied inconsistently. Basic capabilities are developed, often in response to immediate needs required by internal or external pressures.

4 The time and effort required for orientation varies significantly based on team members' prior experience with analytics, their familiarity with organizational data systems, and the organization's complexity. Regardless of these variations, the orientation process is considered complete when all team members express confidence in their ability to fulfill their specific roles on the assessment team, ensuring a shared level of competence and readiness.

5 For example, external support can come from the National Council for Mental Wellbeing, Wellbeing in Action and other firms with adequate expertise across the OACM.

Level 3: Partially Managed	Formal processes and standardized procedures are established, and activities are proactive, follow formal structures and standards and are routinely measured.
Level 4: Managed	Processes are measured and controlled. Activities are aligned with strategic objectives, and regular reviews and updates are continuously reviewed and integrated.
Level 5: Optimizing	Continuous improvement processes are supported by a change management approach to develop capabilities that are responsive to internal and external factors. The organization proactively refines and enhances its analytics capabilities through structured change initiatives, integrating feedback, managing transitions systematically and implementing new best practices through established change frameworks.[6]

While this general scale provides an overarching framework, specific rating anchors have been developed for each subcategory within the OACM. These anchors are designed to align with the general capability scale while providing detailed, context-specific descriptions for each level within a particular subcategory. This approach ensures that the assessment is both consistent across the organization and tailored to the distinctive aspects of each area being evaluated.

6 The following are just a few examples of popular change management models that organizations adopt or adapt to varying degrees to support their change initiatives:

- Kotter's 8-Step Change Model is widely recognized for its structured approach to managing organizational change, emphasizing urgency, clear vision and cultural embedding of new processes.
  - » Kotter, J. P. (2012). Leading change. Harvard Business Review Press.
- The ADKAR Model, developed by Prosci, focuses on the transitions necessary for successful organizational change, offering a practical roadmap of awareness, desire, knowledge, ability and reinforcement.
  - » Hiatt, J. (2006). *ADKAR: A model for change in business, government and our community*. Prosci Learning Center Publications.
- Lewin's Model for Change offers a simple yet effective three-stage process — unfreeze, change and refreeze — that highlights the importance of preparing for change, implementing it and embedding it into the organization.
  - » Lewin, K. (1947). Frontiers in group dynamics. *Human Relations, 1*(1), 5–41. https://doi.org/10.1177/001872674700100103
- McKinsey's 7S Framework provides a holistic view of organizational alignment during change, addressing elements such as shared values, strategy, structure and systems.
  - » Waterman, R. H., Peters, T. J., & Phillips, J. R. (1980). Structure is not organization. *Business Horizons, 23*(3), 14–26. https://doi.org/10.1016/0007-6813(80)90027-0

Attribute-by-attribute evaluation

- To establish a successful team assessment, it's important to create a clear charter that outlines the purpose, scope and goals of the assessment process. It should include communication with the organization's executive team. The charter may be developed by the organization's executive team prior to team formation or developed by the assessment team and approved by the executive team. Additionally, establishing team ground rules that define expectations for communication, decision-making and collaboration will help ensure a smooth and productive assessment experience for all participants.
- Assign two or three team members to each of the six attributes (analytics opportunities, data, analytics techniques, people, technology and culture).
- Team members collect supporting documentation (e.g., policies, process maps and job descriptions) for their assigned attribute ratings. (See Appendix E for examples of documentation that can help inform/support a reviewer's rating.) The absence of certain documents during an OACM assessment can be a significant finding, often indicating gaps in an organization's analytics capabilities. For example, the lack of documentation may reveal areas where processes are not formalized, where strategic planning is lacking, or where certain aspects of data management and analytics have not been fully developed and need more support.
- If needed, conduct interviews with key stakeholders who are not on the assessment team.
- Rate the organization on each subcategory:
    - Use the five-level scale for rating.
    - Ensure at least two raters per subcategory, even if they're not part of the attribute group.
    - If two raters disagree, involve a third rater to break the tie.
    - Document evidence supporting each rating, including specific examples or data points.
    - Identify any subcategories where raters significantly disagree or feel uncertain, and note those areas of uncertainty or disagreement for further investigation. Plan follow-up actions to gather more information, if needed.

Full team ratings review

- After all subcategories are complete, hold team discussions and use a structured process to reach a consensus on any ratings where there's disagreement.
- Discuss any significant discrepancies or areas of uncertainty.
- Adjust ratings, if necessary, based on group discussion and consensus.
- Repeat the process for each attribute until all six are completed.
- Throughout the process, maintain a record of:
    - Individual ratings
    - Supporting evidence
    - Areas of disagreement or uncertainty
    - Follow-up actions required

Considerations for prioritizing subcategories and objectives after the assessment

After completing their analytics capability assessment, health care organizations must prioritize which capabilities to improve first, as not all gaps can be addressed simultaneously. This prioritization should consider key strategic factors, such as:

- **Feasibility with existing resources**
- **Potential impact on operations and outcomes**
- **Importance for organizational sustainability**
- **Alignment with organizational mission and vision**
- **Urgency**
- **External pressures from regulators, payers and policymakers demanding greater accountability and compliance**

By focusing on capabilities that intersect with key factors, organizations can efficiently use their resources to build lasting analytics capabilities and establish a sequence for developing them.

Further, organizations should prioritize key subcategories related to organizational sustainability before addressing areas with lower capability. Critical data capability aspects — such as data quality assurance, data management strategy and governance, data standards and procedures, and secure data access — are foundational for managing risk and meeting regulatory requirements. Essential analytics techniques related to data reporting and distribution will facilitate timely decision-making for population health management and financial planning. Additionally, technology components like data repositories, core services, analytical tools and interfaces enable secure data integration and real-time access to information. Prioritizing development in subcategories related to these areas positions organizations to better manage risk, maintain compliance, optimize resource usage and improve population health outcomes, thereby ensuring financial sustainability.

These subcategories can be prioritized by holding group discussions to build consensus or by conducting team-based ranking exercises. For example, team members can mark each objective or subcategory they believe is linked to a priority factor. They can do this with or without assigning weights — for instance, an organization might give more weight to external pressure than to the objective's impact on clinical outcomes or alignment with the mission. Through either approach (strategic dialogues or structured rankings), the organization arrives at a prioritized list of subcategories for organizational attention to strategically increase analytics capability.

Organizations should carefully assess their strategic objectives to identify which project management methodology or change management approach (e.g., Agile, waterfall or hybrid project management) will best facilitate improvement, and to determine if their change management should focus primarily on technical infrastructure, workforce development or cultural transformation to ensure successful adoption and sustainable improvement.

Example of self-assessment meeting series and action steps

Once the team is identified, this section outlines a process for holding team meetings and enacting a plan to operationalize next steps.

MEETING 1: KICKOFF MEETING

Objective: Introduce the self-assessment process, align on goals and assign responsibilities.

Agenda:

- Welcome and introductions
- Overview of the self-assessment process and objectives
- Review of the assessment framework and its importance
- Assignment of subcategories and responsibilities to team members
- Setting of timeline and milestones

Action steps:

1. **Distribute materials:** Provide all team members with relevant documents, including the assessment framework, self-assessment checklist and any previous assessment reports.
2. **Assign roles:** Each team member is assigned specific subcategories based on their expertise.
3. **Set deadlines:** Agree on deadlines for completing individual assessments and scheduling follow-up meetings.

MEETING 2: ORIENTATION AND TRAINING

Objective: Ensure all team members understand the self-assessment tool and methodology.

Agenda:

- Detailed walk-through of the self-assessment tool
- Explanation of scoring criteria and evidence requirements
- Q&A session to clarify doubts

Action steps:

1. **Training session:** Conduct a training session on how to use the self-assessment tool.
2. **Clarify doubts:** Address team members' questions or concerns regarding the assessment process.
3. **Provide resources:** Share templates, examples and additional resources to aid the assessment.

MEETING 3: EVIDENCE GATHERING, GAP REVIEW AND DETAILED ANALYSIS

This can be performed by individual assessment team members or conducted within smaller rating team assigned to specific domains or by the entire assessment team.

Objective:

- Discuss and align initial ratings from individual or sub-team assessments.
- Calibrate and confirm scoring consistency across all subcategories.
- Identify information gaps or discrepancies requiring further evidence.
- Develop and implement a plan for collecting additional information as needed.

Action steps:

For each subcategory, cycle through the following steps:

1. **Present initial ratings:** Each team member (or sub-team) reviews their initial scores and notable observations.
2. **Discuss as a group to calibrate scoring:** Align on scoring criteria, address inconsistencies and make necessary adjustments.
3. **Identify gaps and discrepancies:** Highlight areas needing further evidence or deeper investigation.
4. **Validate and finalize scores:** Confirm that all updated scores need no additional information.
5. **Plan evidence-gathering activities:** Assign responsibilities to team members and schedule follow-up tasks such as information requests, interviews or focus groups, if needed to strengthen the rating accuracy.

MEETING 4: FINAL SCORING REVIEW

To be held in the event that the entire assessment team was not involved in Meeting 3.

Objective: Finalize scores and validate the assessment results.

Agenda:

- Presentation of final scores and evidence by each team member
- Group discussion to validate and finalize scores
- Consensus on the final assessment findings

Action steps:

1. **Present final scores:** Each team member or rating team presents their final scores along with supporting evidence.
2. **Finalize report:** Compile the final scores into a comprehensive assessment report.

MEETING 5: REPORTING AND ACTION PLANNING

Objective: Develop an action plan based on the assessment results.

Agenda:

- Review of the final assessment report
- Identification of key areas for improvement
- Prioritization of action step goals and objectives
- Development of an action plan with specific goals and timelines

Action steps:

1. **Review report:** Review the final assessment report and discuss key findings.
2. **Identify priorities:** Identify priority areas for improvement based on the assessment results, including assigning responsibilities to a staff member for each objective.
3. **Develop action plan:** Create a detailed action plan with specific goals, timelines and responsibilities for addressing identified gaps.

MEETING 6: ACTION PLAN REVIEW AND APPROVAL WITH THE ENTIRE TEAM

Objective: Review and approve the action plan.

Agenda:

- Presentation of the action plan
- Group discussion and feedback
- Approval of the action plan

Action steps:

1. **Present action plan:** Present the detailed action plan to the team.
2. **Gather feedback:** Collect feedback and make any necessary adjustments.
3. **Approve plan:** Finalize and approve the action plan for implementation.

REGULAR IMPLEMENTATION AND MONITORING MEETINGS (monthly or quarterly)

Objective: Monitor progress on the action plan, address any challenges and adjust as needed.

Action steps:

1. **Track progress:** Regularly review progress on the action plan and ensure tasks are on track.
2. **Address challenges:** Identify and address any challenges or obstacles to implementation.
3. **Adjust plan:** Make any necessary adjustments to the action plan based on ongoing feedback and progress.

Appendix A: Model Construct Definitions

Definitions of attributes, categories and subcategories within the context of a health care organization

The definitions of attributes, categories and subcategories used in the model are listed below. While many of these use labels referencing specific projects, outputs or infrastructure, the definitions refer to the processes and policies used to manage these items. For example, the definition for the Project Portfolio subcategory does not define a project portfolio, but instead the activity of optimally managing a project portfolio. Explicit references to policies and procedures are used in some of the definitions and should be assumed throughout.

Analytics Opportunities Processes for identifying, selecting, managing and evaluating analytics projects that align with the organization's vision, mission and values.
Develop Opportunities: Identifying and selecting analytics opportunities to improve patient/client care processes, enhance systems, modify data reporting policies and increase operational effectiveness and efficiency.
Opportunity Identification: The process of identifying and prioritizing potential analytics projects, considering both clinical and operational success factors. The goal is to recognize opportunities that can improve patient/client outcomes, streamline operations and enhance overall clinic performance.
Opportunity Selection: The practices/procedures for reviewing and selecting analytics projects, including developing and refining criteria for prioritization, narrowing down opportunities to pursue as projects, and evaluating the potential impact on patient/client care and operational efficiency.
Manage Projects: The approach used to review, govern, oversee and validate analytics projects, ensuring alignment with clinical and operational goals to improve services and patient/client outcomes.
Project Portfolio: The approach used to review the range and collection of proposed, ongoing and future projects holistically, determining their relevance to clinic goals, relatedness to other projects, impact on capabilities and needs, and associated risks.
Project Resources: The process of investing time, money and people in analytics projects, evaluating business benefits and allocation resources as needed for the portfolio of projects, focusing on patient/client care improvements and operational efficiencies.
Project Review: The management and oversight of analytics projects, including initiating, planning, executing, controlling and closing of projects to achieve specific goals, improve patient/client care and meet operational efficiency criteria.
Project Validation: The process of validating the multiple stages of ongoing analytics projects. This includes internal and external validity checks, sample analysis and review of model assumptions to ensure project integrity and relevance to patient/client care and operational goals.

Analytics Opportunities

Processes for identifying, selecting, managing and evaluating analytics projects that align with the organization's vision, mission and values.

Execute Solutions: The methods for measuring, implementing and evaluating analytics solutions over time, ensuring they effectively enhance patient/client care and operational efficiency.

Solution Implementation: The processes for taking an analytics solution that was developed to address a specific problem or opportunity and integrating it into clinical and administrative operations. This includes planning for implementation, transferring ownership to the relevant teams, training end users and ensuring that the solution is effectively embedded into existing workflows and systems to address the identified problem or opportunity.

Solution Evaluation: The processes to review analytics solutions against success criteria, document lessons learned, consider opportunities for enhancements and discuss additional applicability to improve patient/client care and operational efficiency.

Analytics Techniques

Identifying analytics techniques and tradecraft used to generate and present insights from any data collected.

Data Preparation and Manipulation: Extracting, assessing and organizing structured and unstructured data to support analytical models, ensuring data is prepared and manipulated to meet clinical and operational requirements.

Organize Structured Data: The processing of structured data[7] to support analytics activities, ensuring data accuracy and readiness for patient/client care and operational decisions.

Organize Unstructured Data: The processing of unstructured data to support analytics activities, ensuring data accuracy and readiness for patient/client care and operational decisions.

Analytics Tradecraft: The techniques used for analytics, visualization and reporting to support data-driven clinical and operational decisions, thereby enhancing the overall quality of services.

Data Analysis: The process of examining unstructured or structured data to describe, discover, explain, predict and advise, ensuring that insights are aligned with patient/client care and operational efficiency.

Data Visualization: The methods and techniques used to represent data or information visually, enhancing clarity and effectiveness in communicating insights to various stakeholders.

Reporting and Distribution: The methods by which analytics reports are created, published and shared, ensuring timely and effective communication of insights.

7 Structured data refers to information that is organized and formatted in a predefined way, typically stored in relational databases with clearly defined fields, such as patient/client demographics, lab results, billing codes and medication lists. Unstructured data refers to information that does not have a predefined format and is often stored in a free-text or multimedia format, such as physician notes, diagnostic imaging, emails and audio/video recordings.

Culture Organizational mechanisms that promote, communicate and emphasize the importance of analytics to support evidence-based decision-making.
Engagement: The communications and organizational techniques that drive workforce engagement in analytics, build momentum for using data to improve patient/client care, and recognize staff for effectively leveraging analytics.
Communications: Tailored communications that focus on disseminating insights and fostering a culture of data-driven decision-making.
Marketing and Branding: Strategic marketing of analytics capabilities to enhance recognition and adoption of analytics tools and insights across all service areas.
Leadership: Leaders' active promotion of and engagement with analytics initiatives, demonstrating the importance of data-driven decision-making in improving patient/client outcomes.
Recognition: Programs that specifically honor and reward the use of analytics to improve service delivery and patient/client outcomes.
Organizational Enablers: The organizational programs and structures that support and nurture the use of analytics, including interdisciplinary teams, staff meetings and professional development events.
Structural Mechanisms: Mechanisms that promote the integration of analytics into daily practices and decision-making processes.
Policies and Procedures: Policies and procedures designed to ensure the ethical, secure and effective use of analytics.
Community: The community among team members that fosters a collaborative environment for sharing insights and best practices in analytics to enhance patient/client care and operational efficiency.
Learning: Learning opportunities that provide staff with the skills and knowledge to use analytics effectively in their roles, including data-related policies, procedures and culture.

Data Leveraging new and existing data sets — such as patient/client records, claims, treatment outcomes and service usage data — to manage and govern data that supports analytics projects.
Strategic Data Management: Establishing and supervising the management, organization and governance of data, including setting goals, creating oversight structures and formalizing processes to support continuous data management aligned with service needs.
Data Management Strategy: The goals, objectives and processes for prioritizing data management, focusing on improving patient/client care, ensuring data security and meeting regulatory requirements. This includes aligning with the United States Core Data for Interoperability (USCDI), the Health Information Technology for Economic and Clinical Health (HITECH) Act and the Health Information Trust Alliance (HITRUST) Framework on data handling and exchange, and following Centers for Medicare and Medicaid Services (CMS) guidelines on data handling, exchange and governance.
Data Governance Model: The framework and processes used to maintain, control, monitor and protect the use of data, ensuring data security, privacy and compliance with regulations.
Data Requirements Life Cycle: The processes of identifying, analyzing and verifying the business and operational requirements for data, including the implementation of logical and physical architectural components to ensure that data supports patient/client care, operational efficiency and regulatory compliance.
Data Operations: Administering data-related practices — including harvesting, acquiring, storing, patient/client-matching and transforming data — to ensure efficient and secure data management that supports analytics and patient/client care.
Data Standards and Procedures: The existing policies, requirements and structures for all aspects of data operations, including data standards to support interoperability, data flow, data duration, data metrics, organizational ontologies and change management, to ensure effective data usage and compliance with regulations.
Data Access: The processes and policies for requesting, granting and monitoring access to data, ensuring data security, privacy and compliance with regulations while supporting clinical and operational needs.

Data   Leveraging new and existing data sets — such as patient/client records, claims, treatment outcomes and service usage data — to manage and govern data that supports analytics projects.
Data Collection:[8] The processes and techniques used to access, capture, retrieve, load and format data to support analytics activities, ensuring compliance with privacy and security controls. This includes adhering to relevant regulations, such as the Health Insurance Portability and Accountability Act (HIPAA), to protect patient/client information while enabling meaningful insights and decision-making.
Data Sourcing: The processes involved in acquiring data from external partners following best practices in data governance, managing agreements and interacting with health care providers. This encompasses defining data sharing and exchange requirements, overseeing access activities and managing relationships with EHR vendors, ensuring that all interactions adhere to relevant regulations and standards for data privacy and security.
Data Persistence: The methods by which data is aggregated, matched at the patient/client level, formatted and stored to support analytics activities while ensuring data security, privacy and compliance with regulations.
Data Quality: The processes, criteria and approaches used to ensure the delivery of consistent, accurate, complete and timely data for analytics, supporting clinical decision-making, resource allocation, quality assurance and regulatory compliance.
Data Quality Framework: The formal structures and processes used to ensure and measure the delivery of consistent, accurate, complete and timely data to users, supporting patient/client care, operational efficiency and compliance with regulations.
Data Quality Assurance: The consistent application of the organizational data quality framework processes to support patient/client care and operational needs in the organization, involving methodologies, data standards, processes and business rules to measure and analyze quality.

8 Health care delivery organizations typically encounter a wide range of data types, each serving different purposes in patient/client care and research. EHRs form the foundation, containing comprehensive clinical data collected at the point of care, but often are not accessible to outside researchers. Administrative data, closely linked to EHRs, primarily consists of hospital discharge information reported to government agencies. Claims data, derived from billable interactions between insured patients/clients and health care providers, offers insights into various aspects of care across inpatient, outpatient, pharmacy and enrollment categories. Patient/client and disease registries provide focused information on specific chronic conditions, aiding in disease management. Lastly, health surveys, conducted at a national level, offer valuable population-level data on chronic conditions, making them more accessible for research purposes. Each of these data types contributes to a holistic understanding of health care delivery and patient/client outcomes.

People Human capital strategies needed to develop and maintain a skilled team of data analysts, clinicians and administrative staff capable of effectively using analytics to support the organization's mission.
Talent Definition: Identifying the necessary data and analytics skills, work activities and position requirements to maximize value and quality of services.
Role Definition: The process of defining the work duties and position qualifications required for analytics roles and aligning those positions with strategic objectives for patient/client care and operational efficiency.
Position Requirements: The process of defining the work duties and position qualifications required for analytics roles, and aligning those positions with strategic objectives such as improving patient/client outcomes, quality, operational efficiency and compliance with behavioral health standards.
Talent Recruitment: Processes for acquiring and hiring high-quality data and analytics talent, including effective recruitment, enhancing the external image of analytics roles, and building relationships with educational institutions and professional organizations.
Attracting Talent: The attraction of high-quality analytics talent by marketing to and engaging prospective candidates in the recruitment process.
Sourcing Talent: The process by which the ideal characteristics of analytics candidates are determined and recruitment sources (e.g., social media, professional organizations, educational institutions) are prioritized to identify, assess and engage potential analytics candidates.
Hiring Talent: The intentional efforts used to ensure analytics candidates are vetted properly to ensure organizational fit.
Talent Placement: Placing appropriate data and analytics talent to support service goals and mitigate workforce risks.
Workforce Planning: The processes used to determine the analytics staffing requirements (e.g., composition, size, position design) necessary to effectively support and enhance community behavioral health services.
Workforce Management: The processes used to identify and track analytics positions within the clinic and outline succession plans for mission-critical positions.
Workforce Design: The approach used to organize the workforce into a cohesive and collaborative organization, designed to enhance the clinic's capabilities in community behavioral health analytics.

People
Human capital strategies needed to develop and maintain a skilled team of data analysts, clinicians and administrative staff capable of effectively using analytics to support the organization's mission.
Talent Development: Targeted programs and plans designed to motivate, shape and grow the data and analytics workforce, ensuring continuous development and alignment with evolving service needs.
Talent Management Strategy: The strategic framework and processes used to prioritize and support talent management efforts annually, to enhance the clinic's capabilities through effective use of analytics.
Career Development: The structured professional development opportunities designed to build and enhance the behavioral health analytics skills of a clinic's workforce.
Performance Management: The ongoing process by which employees and supervisors collaboratively plan, monitor, review and provide feedback on the performance of analytics positions.
Retention Strategies: The customized strategies implemented to identify and use motivational factors such as compensation, professional development opportunities and recognition to retain analytics professionals.

Technology Using new and existing technologies — such as EHRs, patient/client management systems, analytics software and virtual platforms — to conduct analytics projects that enhance patient/client care and operational efficiency.
Planning and Development: The process of planning, developing, procuring, implementing and maintaining analytics technology, ensuring alignment with clinical and operational goals to enhance services.
Analytics Technology Strategy: The processes to establish and refine the mission, goals, action plans, roles/responsibilities and budget priorities for analytics technology, ensuring alignment with patient/client care and operational needs.
Planning Review: The assessment of current state and future needs for analytics technology, identifying gaps and recommending areas for improved integration, development and maintenance to enhance patient/client care and operational efficiency.
Technology Research: The processes for conducting research into and development of technologies such as AI, EHRs and data analytics platforms aimed at enhancing behavioral health service delivery.
Internal Development: The series of structured processes used internally to create and refine IT tools and applications that support the analysis of behavioral health data, aimed at enhancing the clinic's mission through advanced technology.
Purchasing New Tools: The structured procedures followed to evaluate, test and acquire new IT tools and software solutions that enhance behavioral health analytics capabilities, ensuring alignment with the clinic's mission and compliance with regulations.
Implementation/Deployment: The process of integrating and launching fully evaluated IT tools, including upgrades to existing systems and newly acquired software, ensuring these tools align with the clinic's operational and clinical workflows.
Maintenance/Support: The ongoing support and routine maintenance of IT tools and systems, aimed at ensuring these resources remain effective, secure and aligned with the evolving needs of behavioral health services.
Infrastructure: The foundational layer of an analytics solution, which ensures secure and low-risk deployment of servers and hosting services to support patient/client care, operational efficiency and compliance with federal regulations.
Physical Resources: The tailored hardware and infrastructure that meet requirements for securely storing, processing and facilitating access to behavioral health data across the organization.

Technology Using new and existing technologies — such as EHRs, patient/client management systems, analytics software and virtual platforms — to conduct analytics projects that enhance patient/client care and operational efficiency.
Resource Abstraction: The implementation of resources such as virtual machines and cloud-based data storage, enabling staff to manage and configure software tools independently, and optimizing the use of physical infrastructure to support extensive behavioral health data analysis and services.
Application Program Interfaces Management: Oversight and maintenance of clinic APIs that allow secure and efficient access to centralized data resources, ensuring that all services are integrated and data can be shared safely across platforms.
Technical Data Management: The secure storage of data of all types and origins, ensuring availability for a wide range of analyses to support clinical decision-making and operational improvements.
Data Repository: A centralized system that consolidates all behavioral health data, enabling structured and secure access regardless of the data's origin, format or type, ensuring compliance with data regulations.
Data Sources: The integration of varied data types from various sources, including EHRs, patient/client surveys, billing information and external databases, into a unified data warehouse. This process ensures a comprehensive view that is crucial for patient/client care and operational analysis.
Analytics Services and Interaction: The analytics technologies used to unlock the value of data, generating insights to improve patient/client care, treatment outcomes and operational efficiency.
Service Delivery and Automation: Advanced computational platforms and tools that support the analysis of behavioral health data, enabling informed decision-making and effective treatment planning.
Tools and Software: A suite of software tools and applications that enable staff to access, manipulate and manage data efficiently, supporting the clinic's operations and service delivery.
Human Insights and Actions: Visualizations and interfaces used to synthesize and communicate data effectively, supporting clinical decisions and improving the overall quality of services.
Visualization Tools: Software and tools that enable the creation of dashboards and graphics, simplifying complex data into actionable insights for improving patient/client outcomes and clinic operations.
Interfaces: User interfaces that enable dynamic interaction between staff and the clinic's analytics platforms, facilitating real-time access to data insights and decision support.

Appendix B: Pre-assessment Readiness Screening

Introduction

This screening is designed to help your organization determine if it's ready to learn about the multifaceted aspects of developing its organizational analytics capability, commit resources to undertake a self-assessment, and develop a comprehensive plan to assess and enhance its analytics capabilities.

Instructions

Rate your organization on a scale of 1-5 for each statement, where:

1 = Strongly Disagree
2 = Disagree
3 = Unsure
4 = Agree
5 = Strongly Agree

Item	Score
Current Analytics Gaps	
1. We would benefit from a more structured process for identifying, selecting, managing and evaluating analytics projects that directly support our mission (e.g., improving care quality, patient/client experience, staff satisfaction and resource allocation).	
2. We need to better use varied data sets (e.g., patient/client records, treatment outcomes, service use data) for analytics projects while ensuring data quality, integrity, privacy and security in compliance with health care regulations.	
3. We need to better use a range of techniques, from descriptive to advanced (predictive and prescriptive) analytics and data visualization, to generate actionable insights that inform clinical decisions, enhance patient/client care, support quality reporting and guide strategic planning.	
4. We need better human capital strategies to develop, recruit and retain a skilled workforce (including data analysts, clinicians and administrative staff) capable of effectively using analytics to support our mission and meet the needs of our patients/clients.	
5. We don't effectively use and integrate various technologies (e.g., EHRs, patient/client management systems, analytics software, virtual platforms, large language models) to conduct analytics projects that enhance patient/client care, improve operational efficiency and meet reporting requirements.	
6. We need to establish mechanisms that effectively promote a data-driven culture, emphasizing the importance of analytics in evidence-based decision-making, encouraging the use of analytics in clinical and administrative processes, and fostering continuous improvement through regular training and communication.	

Item	Score
Motivation	
7. We recognize a strong need to improve upon our current analytics capability.	
8. We are generally dissatisfied with our current ability to use data for decision-making across the organization.	
9. Our leadership is committed to transforming how we use data across the organization.	
10. Improving our data analytics capabilities could significantly impact our clinical outcomes, operational efficiencies and financial sustainability.	
11. We are willing to challenge our current practices and make data-driven decisions, even if they go against traditional approaches.	
Resource Commitment	
12. We are willing to dedicate significant time (potentially two or more workdays per team member during the process) to assess and improve our analytics capabilities.	
13. We (including leadership) are prepared to assemble a cross-functional team (including clinical, IT and management staff) to work on this initiative.	
14. We are willing to invest financial resources in improving our data infrastructure and analytics tools.	
15. We are committed to long-term change and understand that improving analytics capabilities is not a quick process.	
16. Our leadership is willing to champion this initiative and allocate necessary resources over an extended period.	

Item	Score
Current State and Perceived Value	
17. We struggle with integrating data from different parts of the organization for comprehensive analysis.	
18. Our staff often expresses frustration with the quality or accessibility of data for decision-making.	
19. We believe improving our analytics capabilities is essential to meeting industry standards (e.g., CCBHC criteria).	
20. We see the potential for significant return on investment from improving our data analytics capabilities.	
21. We value innovation and are open to new approaches to data use.	

Sum your scores for each section:	
Current Analytics Gaps (Questions 1-6):	____ / 30
Motivation (Questions 7-11):	____ / 25
Resource Commitment (Questions 12-16):	____ / 25
Current State and Perceived Value (Questions 17-21):	____ / 25
Total Score:	**____ / 105**

Section-specific interpretation

Current Analytics Gaps

This section contains six items, leading to a maximum possible **score of 30**.

Total Score: A score of **24 or above** (which is an average of 4 or higher per item) is considered high. A high score in this section indicates that your organization is strongly aware of current analytics capability gaps, which will help you identify the objectives of advancement during the self-assessment.

Motivation

This section contains five items, giving a maximum possible **score of 25**.

Total Score: A score of **20 or above** (an average of 4 or higher per item) is considered high. A high score in this section signifies that your organization is highly motivated to enhance its analytics capabilities. This includes strong leadership commitment and a clear understanding of the potential benefits, which are crucial for driving the change process and overcoming any resistance.

Resource Commitment

This section contains five items, giving a maximum possible **score of 25**.

Total Score: A score of **20 or above** (an average of 4 or higher per item) is considered high. A high score here indicates that your organization is willing to commit the necessary resources — time, personnel, finances and leadership support — to improve analytics capabilities. This commitment is essential for successfully implementing and sustaining change initiatives.

Current state and perceived value

This section contains five items, giving a maximum possible **score of 25**.

Total Score: A score of **20 or above** (an average of 4 or higher per item) is considered high. A high score in this section shows that your organization clearly understands its current challenges and strongly believes in the value of enhancing analytics capabilities. This awareness can drive the prioritization of analytics improvements and resource allocation.

Overall readiness

- **65-105: Moderate to High Readiness for Change (an average section score of 3 or higher**) — Your organization shows high need, motivation, willingness to commit resources and recognition of the value of advanced analytics. You are well-positioned to benefit from a full OACM assessment.
- **64 or Below: No or Limited Readiness to Perform the Assessment** — Your score indicates that your organization may not be ready to invest the time and resources in a comprehensive assessment and orientation to advanced data analytics. Consider smaller, focused initiatives to build awareness and learn about the value of analytics before reassessing in the future.

Next steps

If your score indicates Moderate to High Readiness, you are encouraged to commit to seeking educational opportunities to learn how to conduct an OACM self-assessment. This comprehensive tool will help you understand your current capabilities across multiple attributes and identify areas for improvement.

Remember, the assessment process is educational and will help your organization understand what's possible regarding data analytics capabilities. It requires a significant time investment but can provide valuable insights for long-term organizational improvement.

If your score indicates No or Limited Readiness, consider focusing on smaller analytics projects or educational initiatives with a consulting specialist, to build awareness and demonstrate value within your organization before committing to the full assessment process.

Appendix C: Team Formation Pre-assessment

Instructions: Review the following statements and check all that apply to your organization. The total number of checked statements determines your preliminary analytics maturity on a three-level scale.

Basic Analytics Capability (Level 1)

- We primarily use spreadsheets for data collection and analysis.
- Our data analysis is limited to basic descriptive statistics (e.g., mean, median, count).
- We have no formal data management strategy or policies.
- Our data is stored in multiple places with no centralized data repository.
- We rely on ad hoc reports and manual data-handling processes.
- There are no dedicated analytics roles or teams within the organization. No or few staff members use data analytics to inform patient/client care.

Developing Analytics Capability (Level 2)

- We use basic analytics tools like Microsoft Access or Excel for data analysis.
- We have started to implement standardized data management policies and procedures.
- Our data is somewhat centralized, but integration is limited.
- We conduct basic discovery methods and simple explanatory analytics.
- There are a few dedicated roles for data analysis within the organization.
- We occasionally review data to inform decision-making but lack a formal process. No or few staff members use data analytics to inform patient/client care.

Advanced Analytics Capability (Level 3)

- We use advanced analytics tools like R, Python or specialized software (e.g., SAS, SPSS).
- We have a formal data management strategy that includes governance and quality assurance.
- Our data is centralized in a unified data warehouse, accessible across departments.
- We conduct predictive and prescriptive analytics to inform decision-making.
- There are dedicated analytics teams and roles with specialized expertise.
- We have standardized processes for data integration, analysis and reporting.
- Leadership actively supports and promotes the use of analytics in decision-making.
- Data analytics are used to inform patient/client care.
- We use real-time data tracking system (e.g., a real-time inpatient bed tracking system for a specific service area) with the capacity to notify involved behavioral health providers of an encounter with crisis services, and the capacity for real-time health information exchange.
- We use advanced visualization tools to monitor and improve operations.

Scoring:

Level 1 (Basic Capability):
If you checked mostly Level 1 statements.

Level 2 (Developing Capability):
If you checked mostly Level 2 statements, with some Level 1.

Level 3 (Advanced Capability):
If you checked mostly Level 3 statements, with some Level 2 and a few at Level 1.

Appendix D: Brief Overview of Analytics Types

In health care, organizations can leverage four main types of analytics to drive insights, improve decision-making and optimize performance. These types of analytics are often viewed as a progression, with each level building upon the capabilities of the previous one.

Descriptive Analytics

Descriptive analytics provides a foundation for understanding the current state of operations and can highlight areas for further investigation or improvement. Descriptive analytics focuses on answering the question "What has happened?" It involves collecting, aggregating and summarizing historical data to depict past events and performance. *All health care organizations should strive to master descriptive analytics, as it forms the basis for more advanced analytics and is essential for basic reporting capabilities and data-driven decision-making.* In health care, descriptive analytics can be used to:

- Monitor key performance indicators (KPIs) and/or objectives and key results (OKRs), such as patient/client volumes, length of stay and readmission rates.
- Identify trends and patterns in patient/client demographics, diagnoses and treatment outcomes.
- Analyze resource usage, such as staffing levels, bed occupancy and supply consumption.
- Generate reports and dashboards to visualize and communicate key metrics to stakeholders.

Mastering descriptive analytics requires organizations to have robust data collection and management processes and the tools and skills necessary to analyze and interpret the data. This may involve investing in data infrastructure, such as EHR systems and data warehouses, and building a team of skilled analysts and data scientists.

Once organizations have established a strong foundation in descriptive analytics, they can progress to more advanced types of analytics, such as diagnostic, predictive and prescriptive. Higher-level analytics (described in the following sections) build upon the insights generated through descriptive analytics and enable organizations to identify root causes, anticipate future trends and optimize decision-making for better patient/client outcomes and operational performance.

Diagnostic Analytics (aka Exploratory Analytics)

Diagnostic analytics seeks to answer the question "Why did it happen?" It involves "drilling down" into the data to identify the causes and contributing factors behind observed trends or problems. In health care, diagnostic analytics can be used to:

- Investigate the reasons behind variations in patient/client outcomes or treatment effectiveness.
- Identify the drivers of high-cost patients/clients or frequent hospital readmissions.
- Analyze the impact of different clinical protocols or care pathways on patient/client outcomes.
- Assess the effectiveness of quality improvement initiatives or process changes.

Diagnostic analytics enables organizations to move beyond surface-level observations and better understand the factors influencing performance.

Predictive Analytics

Predictive analytics focuses on answering the question "What is likely to happen in the future?" It involves using statistical modeling, machine learning and data mining techniques to identify patterns and relationships in diagnostic and historical data that can be used to forecast future events or behaviors. In health care, predictive analytics can be used to:

- Identify patients/clients at high risk of developing chronic conditions or experiencing adverse events.
- Predict the likelihood of hospital readmissions or emergency department visits.
- Forecast patient/client volumes and resource requirements to optimize capacity planning.
- Estimate the impact of proposed interventions or policy changes on patient/client outcomes and costs.
- Estimate the impact of workforce shortage and turnover on patient/client outcomes and costs.

Predictive analytics enables organizations to proactively identify risks and opportunities and develop targeted interventions and strategies to improve outcomes.

Prescriptive Analytics

Prescriptive analytics seeks to answer the question "What should we do about it?" Based on predictive analytics forecasts, it uses optimization algorithms and simulation techniques to evaluate scenarios and recommend the best course of action based on defined objectives and constraints. In health care, prescriptive analytics can be used to:

- Optimize resource allocation and scheduling to minimize costs and improve efficiency.
- Advance person-centered care by determining the most effective treatment plans for individual patients/clients based on their specific characteristics and preferences, including treatment and intervention history.
- Identify the optimal location and timing of preventive health screenings or immunization campaigns.
- Evaluate the impact of different payment models on patient/client access and financial sustainability.

Prescriptive analytics enables organizations to move beyond predicting future events to actively shaping outcomes and driving performance improvement.

It's important to note that these four types of analytics are not mutually exclusive, and organizations may use a combination of approaches depending on their specific needs and capabilities. As organizations progress along the analytics capability curve, they can use more advanced techniques to gain deeper insights and drive more significant improvements in patient/client care, operational efficiency and financial performance.

Appendix E: Examples of Support Documents

The OACM assessment process is supported by a wide range of documents that provide evidence and context for an organization's analytics capability. By reviewing these documents, organizations can gain a nuanced understanding of their current analytics capabilities and identify areas for improvement.

Attribute	Subcategory	Example Documents
Analytics Opportunities	***Opportunity Identification, Opportunity Selection***	Gap analysis reports; needs assessments; data analysis reports; strategic plans; analytics portfolio dashboards or plans; case studies of successful analytics applications; KPIs; OKRs
	Project Portfolio, Project Resources, Project Review, Project Validation	Project charters; project progress reports; KPIs; OKRs; project management frameworks; operational performance data; governance committee reports; meeting minutes; post-implementation review reports; executive summary of lessons learned
	Solution Implementation	Training agendas and feedback; implementation plans; user experience/stakeholder feedback (e.g., surveys, interviews or focus groups of users)
	Solution Evaluation	Executive summary of lessons learned; KPIs; OKRs; continuous improvement plans
Analytics Techniques	***Organize Structured Data, Organize Unstructured Data***	Extract, transform and load process documentation

Attribute	Subcategory	Example Documents
Culture	***Communications***	Community engagement plans; communication plan; memos or other formal communication strategies used in the organization (e.g., company newsletter)
	Marketing and Branding	Marketing plans; company newsletter
	Leadership	Presentations given by leaders; town hall meetings; meeting minutes from strategy sessions
	Recognition	Reward programs; employee-of-the-month recognitions; gratitude and kudos initiatives
	Structural Mechanisms	Examples of team support like huddles, briefs, debriefs and standups
	Policies and Procedures	Policy and procedure manual; standard operating procedures (SOPs)
	Community	Team ground rules; charters
	Learning	Professional development plans; webinars attended; learning management system statistics

Attribute	Subcategory	Example Documents
Data	***Data Management Strategy***	Technical maps; data management plan
	Data Standards and Procedures, Data Persistence	Data dictionary; SOP for data standards; technical maps; data audits
	Data Access, Data Sourcing	Data integration documentation
	Data Collection	Comprehensive data collection protocols; consent forms; data security protocols; user access logs; data integration documentation
	Data Governance Model	Document describing the data governance frameworks, structure or processes; data security protocols; user access logs; policies and procedure manuals; data management policies; governance committee reports; meeting minutes from data governance committee
	Data Quality Framework, Data Quality Assurance	Data quality assurance protocols; data quality metrics dashboard; Plan-Do-Study-Act cycles; quality improvement projects
	Data Requirements Life Cycle	Security audit reports; cloud storage documentation; risk assessment documentation; security assessment

Attribute	Subcategory	Example Documents
People	***Career Development***	Training manuals and materials; comprehensive learning management system documentation; learning management system documentation
	Hiring Talent, Sourcing Talent, Attracting Talent, Retention Strategies	Recruitment and retention plans; exit surveys; hiring plan
	Performance Management	Performance evaluation criteria; employee feedback reports
	Position Requirements, Role Definition	Job descriptions; exit surveys
	Retention Strategies	Staffing plans; strategic plans
	Talent Management Strategies	Training manuals; training materials
	Workforce Planning, Workforce Management, Workforce Design	Staffing model; organizational chart; strategic plans; SWOT analysis; SOPs
	Career Development	Professional development plans
	Performance Management	Performance evaluations; exit surveys

Attribute	Subcategory	Example Documents
Technology	***Data Sources, Data Repository***	Maintenance logs; maintenance schedules; IT infrastructure plans
	Technology Research	Vendor procurement and analysis; demo feedback
	Internal Development	SOPs; tool review; technical map
	Implementation/Deployment	Technical map; process maps
	APIs, Service Delivery and Automation	Technical map; APIs in place; clinical decision supports
	Visualization Tools	Vendor agreement; dashboards; dashboard requests
	Data Sources, Data Repository	Interoperability documentation between data technologies or with external data sources; compliance reports; technical map; data management plan
	Interfaces, Tools and Software, Physical Resources, Maintenance/Support, Purchasing New Tools, Planning Review, Analytics Technology Strategy, Resource Abstraction	IT infrastructure plans; comprehensive cloud storage documentation; vendor agreements/ contracts including service-level agreements; procurement protocols; SOPs; training plans; support tickets

Appendix F: Team Charter and Ground Rules Example

Team charter

Our team is tasked with comprehensively assessing our organization's analytics capabilities using the Organizational Analytics Capability Model self-assessment tool. The goal is to identify our current capabilities across all six attributes, pinpoint areas for improvement, and develop an action plan to enhance our overall analytics capabilities. We aim to complete this assessment within eight weeks and present our findings and recommendations to senior leadership. An executive sponsor should be selected for this project along with the communication plan with the executive team includes multiple members of the organization from different departments and disciplines.

Ground rules

1. Meetings will start and end on time. All team members are expected to arrive prepared.
2. Everyone's input is valued. We will practice active listening and respect varied viewpoints.
3. Decisions will be made by consensus whenever possible. The team lead will make the final decision if consensus cannot be reached.
4. All team members are responsible for completing their assigned tasks by agreed-upon deadlines.
5. Confidentiality will be maintained regarding sensitive information discussed during the assessment process.
6. Team members will communicate openly and honestly, providing constructive feedback when necessary.
7. We will use a shared document repository for all assessment materials, to ensure transparency and easy access.
8. If conflicts arise, we will address them promptly and professionally, focusing on issues rather than personalities.
9. Team members will actively participate in all assessment activities, including data gathering, analysis and report writing.
10. We will celebrate our successes and learn from our challenges throughout the assessment process.

Appendix G: Self-assessment Rating Scales and Examples[9]

Analytics Opportunities

Opportunity Identification

Level	Score	CCBHC Example
Level 1: Initial	▪ No formal process exists for recognizing analytics opportunities, apart from reactions to external pressures.	The CCBHC's clinical staff relies on reactions to external pressures to examine analytics related to patient/client care and operations. No documented process for identifying analytics opportunities exists.
Level 2: Defined	▪ Internally driven opportunities are identified sporadically, and most opportunities are reactive, prompted by external changes such as regulatory updates or significant events.	The clinic begins recognizing the potential of analytics due to new CCBHC reporting requirements for time-to-service quality measures. Identification of internally driven opportunities remains sporadic and reliant on individual champions for specific needs.
Level 3: Partially Managed	▪ A formal, regular process for identifying internally and externally driven opportunities is established, integrating clinical and operational data. This level emphasizes the development of analytics opportunities based on evidence-based medical practices and guidelines. ▪ Efforts are made to align analytics initiatives with clinical outcomes and operational efficiencies, involving multidisciplinary teams that include clinicians, administrators and IT staff. ▪ Clinical and operational leaders are actively involved in the identification process.	The clinic establishes a proactive, formal process for identifying analytics opportunities, documented in the continuous quality improvement plan and SOPs. A multidisciplinary team, including clinical directors, operations managers, IT specialists and frontline clinicians, regularly collaborates to identify opportunities.

9 This tool includes CCBHC-specific examples for each score anchor and may not be directly applicable to other health care settings.

Analytics Opportunities

Opportunity Identification		
Level	**Score**	**CCBHC Example**
Level 4: Managed	■ The opportunity identification process is standardized across the organization and designed to directly impact patient/client outcomes and experiences. ■ It focuses on enhancing interoperability among different health systems and uses advanced data-sharing frameworks to support coordinated care. ■ The process has a patient/client-centered approach in analytics, where patient/client feedback and satisfaction metrics influence the identification of new analytics opportunities. ■ Clinical and operational leadership and patients/clients are actively involved in the identification process.	The opportunity identification process is standardized across all departments, incorporating patient/client feedback and advanced data-sharing frameworks to enhance interoperability and coordinated care. Key roles involved include the medical director, clinical supervisors, data analysts and patient/client representatives.
Level 5: Optimizing	■ This highest level involves a continuous review and improvement of the opportunity identification process, with a strong focus on adapting to changing health care regulations and technological advancements. ■ Processes are refined to incorporate patient/client and staff feedback, clinical outcomes and resource optimization insights. ■ The organization engages in proactive identification of opportunities that leverage emerging technologies and data sources to enhance patient/client care and operational effectiveness. ■ Clinical and operational leaders, as well as patients/clients, continue to be actively involved in the identification process.	The clinic includes a continuous review process in the continuous quality improvement program, seeking input from patients/clients and staff to refine opportunity identification. Emerging technologies and data sources are proactively explored. The process actively involves the executive director, clinical directors, operations managers, data scientists and patient/client advisory board members.

Analytics Opportunities

Opportunity Selection		
Level	**Score**	**CCBHC Example**
Level 1: Initial	▪ No formal documented process exists for identifying, prioritizing (including criteria) or selecting analytics opportunities. ▪ Selection is characteristically reactive, and there is limited alignment with the health care organization's strategic plans, objectives or values. ▪ There is little to no engagement from clinical staff or administrative leadership in opportunity development. ▪ There is no governance or oversight for analytics initiatives.	There is no alignment between project selection and the CCBHC's strategic goals. Projects are chosen haphazardly, without a clear understanding of their potential impact on patient/client care or operational efficiency.
Level 2: Defined	▪ A basic selection process exists but is inconsistently applied. ▪ There is some alignment with the health care organization's strategic plans, but it is not consistently prioritized. ▪ There is limited engagement from clinical staff or administrative leadership, primarily driven by external factors or immediate needs. ▪ Criteria for project prioritization and selection are loosely defined. ▪ Minimal governance or oversight exists for analytics initiatives.	The clinic updates its selection criteria in response to significant health care events, such as a new mental health crisis in the community. However, the criteria are not consistently applied, and projects are still selected reactively.
Level 3: Partially Managed	▪ There are established and documented processes for identifying and selecting analytics opportunities, although staff members indicate that they are not generally followed. ▪ There is clear alignment with the health care organization's strategic plans and objectives. ▪ Key stakeholders are engaged, including clinical directors, operations managers and IT specialists. ▪ There are defined criteria for project prioritization and selection. ▪ An analytics governance committee meets and makes decisions regularly.	The clinic has documented processes for identifying and selecting analytics opportunities, involving clinical directors, operations managers and IT specialists. Regular meetings are held to discuss and prioritize projects, but some staff members report that these processes are not always followed.

Analytics Opportunities

Opportunity Selection		
Level	**Score**	**CCBHC Example**
Level 4: Managed	▪ There is cross-functional collaboration and executive sponsorship in opportunity selection. ▪ A formal decision-making approach is specified (e.g., consensus, delegation by specific team members). ▪ There is active governance and oversight with regular reporting and decision-making, and there is proactive monitoring with continuous improvement based on project outcomes and feedback.	The clinic employs a structured and collaborative approach to selecting analytics opportunities, with defined decision-making criteria and active participation from clinical staff and executive leadership. Decision-making processes include methods such as consensus and delegation. Regular reporting and feedback loops are established to ensure continuous improvement.
Level 5: Optimizing	▪ Process documentation is continuously refined based on best practices and industry trends. ▪ There is systematic engagement and collaboration across the organization, including clinical staff, administrative leadership and patient/client representatives. ▪ Dynamic and data-driven project prioritization and selection criteria are employed. ▪ There is strong governance and oversight, with a focus on strategic alignment and resource optimization. ▪ The characteristics of Level 4 are retained and continuously refined based on feedback and new developments.	The clinic continuously refines its process documentation for selecting analytics opportunities, incorporating best practices and industry trends. There is comprehensive engagement from clinical staff, administrative leadership and patient/client representatives. The clinic uses advanced data-driven criteria for project prioritization, ensuring alignment with strategic goals and optimal resource usage. Continuous feedback and review processes are in place to adapt to new developments.

Analytics Opportunities

Project Portfolio

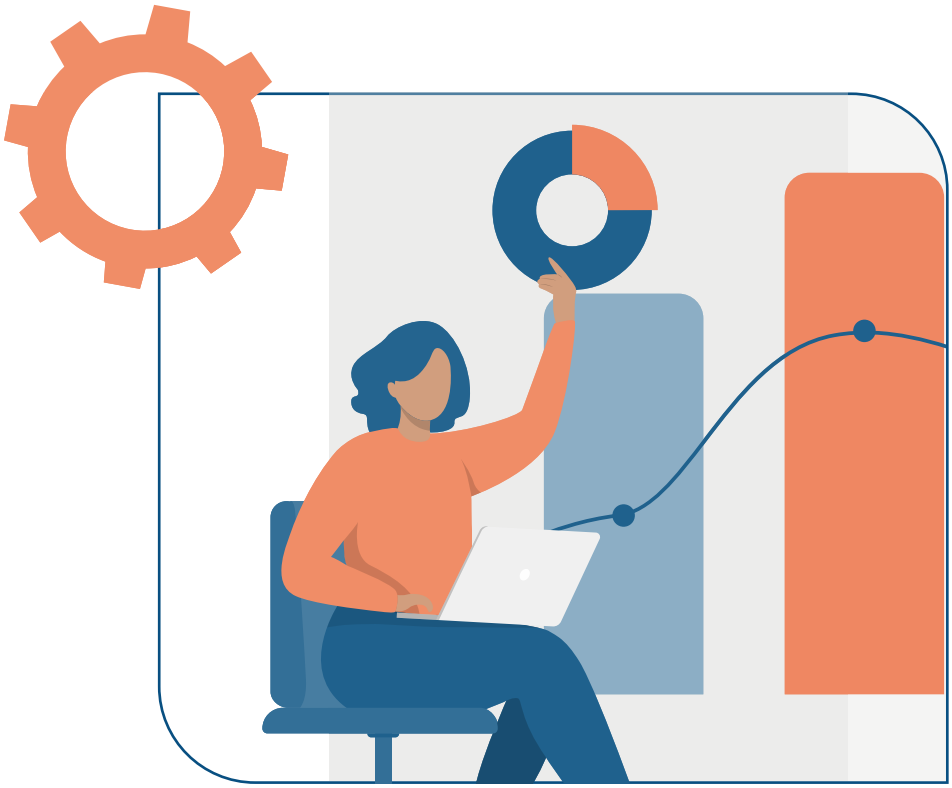
Level	Score	CCBHC Example
Level 1: Initial	Projects are managed individually, without a coordinated approach to align them with the organization's goals.	Analytics projects are selected and managed based on immediate demands or staff availability, without a structured approach to prioritize projects based on their potential impact on patient/client care or operational efficiency.
Level 2: Defined	Projects are managed simultaneously, due to immediate needs or resource constraints. Connections between projects are identified and communicated after completion.	The CCBHC undertakes multiple projects in response to new events, such as a surge in patient/client admissions. These projects are managed in isolation, and their interconnections are identified only after completion.
Level 3: Partially Managed	A formal process for opportunity development and portfolio evaluation is established. The process integrates past project experiences and identified needs to inform the collective management of analytics projects.	A multidisciplinary team meets regularly to review and prioritize analytics projects, integrating past experiences and identified needs. The project management process includes formal documentation and alignment with the clinic's strategic goals, as shown in meeting minutes and project plans.
Level 4: Managed	The project portfolio is managed as a holistic function, ensuring alignment with clinic goals and regular oversight. Established processes facilitate coordination and resource allocation.	The clinic's project portfolio management process includes detailed documentation and templates to ensure consistency. Projects are chosen based on their potential to improve patient/client outcomes and operational efficiency, with regular oversight from the governance committee.
Level 5: Optimizing	The project portfolio includes a robust pipeline of analytics opportunities, with no overlap in projects. Processes are continuously reviewed and refined to ensure efficiency and alignment with clinic objectives.	The clinic's project portfolio management process is part of a continuous improvement cycle, incorporating feedback from past projects and aligning with best practices. The clinic proactively identifies high-impact projects, leveraging advanced data sources and technologies to enhance patient/client care and operational effectiveness.

Analytics Opportunities

Project Resources		
Level	**Score**	**CCBHC Example**
Level 1: Initial	▪ No formal process exists for managing and tracking resources for analytics projects.	The CCBHC's approach to resource management is ad hoc, with no formal process in place. Resources are allocated based on immediate demands, without considering long-term needs or strategic goals. For instance, a project to implement telehealth services receives resources because it is seen as a quick win.
Level 2: Defined	▪ Resources are managed differently for each project, often responding to immediate needs or external pressures without a consistent approach.	Projects are managed individually, with resources allocated differently for each project. For example, an effort to implement telehealth services receives funding based on immediate patient/client demand, while another project to enhance data analytics capabilities is postponed due to budget constraints.
Level 3: Partially Managed	▪ A formal process for resource allocation is established, using a business case to ensure resources are identified. ▪ The process is made available for analytics projects. ▪ It focuses on the impact on patient/client care and operational efficiency.	A formal resource management process is established, involving key stakeholders from clinical, operational and administrative departments. Resources are allocated based on a standardized process, ensuring alignment with the clinic's strategic goals and the impact on patient/client care.
Level 4: Managed	▪ Resource information is standardized and tracked across the organization, informing opportunity selection and project portfolio management. ▪ Resource management processes are regularly reviewed for continuous improvement.	Resource management is integrated into the clinic's overall project portfolio management. Resource information is tracked and used to inform project selection, ensuring that all projects receive the necessary resources for successful implementation. For instance, resource allocation is reviewed quarterly to adjust for changes in project needs.

Analytics Opportunities

Project Resources		
Level	**Score**	**CCBHC Example**
Level 5: Optimizing	▪ A centralized resource management system proactively manages and deploys resources across all projects, optimizing efficiency and alignment with the clinic's strategic goals. ▪ Regular reviews ensure the process adapts to changing needs and industry best practices.	The clinic's resource management system is continuously reviewed and refined to ensure efficiency. A centralized hub manages all resources, optimizing their allocation to support high-impact projects and align with the clinic's strategic objectives. Regular stakeholder meetings ensure that resource allocation aligns with clinic priorities and patient/client care improvements.



Analytics Opportunities

Project Review

Level	Score	Example
Level 1: Initial	No formal process exists for reviewing analytics projects.	The CCBHC has no formal methods for reviewing analytics projects. Projects are managed without structured oversight, leading to inconsistent outcomes and missed opportunities for improvement.
Level 2: Defined	Project review occurs sporadically, often prompted by project failures or external pressures. When reviews occur, metrics are applied inconsistently.	Project reviews are conducted only when a project fails or when required by external factors, such as funding agency demands. The reviews use different metrics each time, resulting in inconsistent evaluations.
Level 3: Partially Managed	Established policies, procedures and metrics exist to review projects in a regular and repeatable manner, ensuring alignment with clinic goals.	The clinic establishes formal policies and procedures for project reviews, documented in its quality improvement plan. Regular project reviews are conducted using standardized metrics to ensure alignment with clinic goals and improve patient/client care.
Level 4: Managed	Project review criteria are well defined, documented and consistently applied as a formal step in the project life cycle. Regular reviews ensure alignment with patient/client care and operational efficiency objectives.	The clinic implements well-defined project review criteria that are consistently applied across all projects. Reviews are documented, and findings are used to refine project management practices, ensuring that all projects support patient/client care and operational efficiency.
Level 5: Optimizing	Continuous project reviews occur throughout the project life cycle. They include ongoing monitoring and feedback loops to ensure continuous improvement and alignment with strategic goals.	Continuous project review processes are integrated into the clinic's project management framework. Ongoing monitoring and feedback mechanisms ensure that projects are continuously evaluated and improved, aligning with the clinic's strategic goals and patient/client care objectives.

Analytics Opportunities

Project Validation		
Level	**Score**	**CCBHC Example**
Level 1: Initial	▪ No formal process exists for validating analytics projects.	A project aimed at reducing emergency room (ER) visits for mental health crises is initiated without any formal validation steps. Outcomes are not analyzed systematically, leading to uncertain results and lack of actionable insights.
Level 2: Defined	▪ Project validation is introduced only in high-risk projects or when required by external factors, leading to inconsistent application and timing.	The validation process for a new telehealth implementation project is inconsistent. It is reviewed only after implementation issues arise, resulting in delayed identification of problems and corrective actions.
Level 3: Partially Managed	▪ Repeatable processes for project validation are established and integrated into the project life cycle. ▪ These processes are consistently applied to ensure alignment with patient/client care and operational goals.	The CCBHC implements a formal validation process for a project to improve medication adherence among patients/clients. Regular validation steps, including sample analysis and model assumption reviews, are conducted throughout the project life cycle, ensuring reliable and actionable results.
Level 4: Managed	▪ Standardized tests and controls are consistently introduced as part of the project life cycle. ▪ They include validation results incorporated into the governance process for ongoing review and improvement.	A project to integrate primary care screening within the clinic's behavioral health services includes standardized validation procedures. Tests and controls are consistently applied, and the results are reviewed by a governance committee, ensuring alignment with the clinic's strategic objectives.
Level 5: Optimizing	▪ Continuous project validation is an integral part of the project life cycle. ▪ It includes ongoing reviews and updates to processes ensuring alignment with the clinic's strategic goals and improvements in patient/client care and operational efficiency.	A continuous validation process is applied to a project aiming to enhance peer support services. The project undergoes regular reviews and updates, with validation results informing adjustments and improvements in real time, ensuring the project aligns with the clinic's strategic goals and enhances patient/client care.

Analytics Opportunities

Solution Implementation

Level	Score	CCBHC Example
Level 1: Initial	▪ No formal process exists for implementing analytics solutions.	Analytics solutions are implemented ad hoc at the CCBHC, with no formal process. Staff members are often unprepared to use new systems, leading to underuse.
Level 2: Defined	▪ Solution implementation is considered only after project design, leading to reactive and inconsistent integration into ongoing operations.	Implementation processes are reactive. A new analytics dashboard is introduced without prior planning, resulting in low adoption rates among clinicians.
Level 3: Partially Managed	▪ Formal planning for post-solution implementation is established. ▪ It includes basic end-user training and initial stakeholder engagement to address specific needs.	A formal implementation process is introduced, with basic planning and post-implementation review involving innovation and IT leadership. However, the process lacks consistency and comprehensive stakeholder engagement. Additionally, executive leadership and IT staff members were intimately involved in process planning and development, but only clinical staff members were involved in implementation.
Level 4: Managed	▪ Solution implementation is standardized and repeatable. ▪ It involves comprehensive planning, training and engagement with patients/clients, staff and community partners to ensure successful integration into operations.	A repeatable and standardized implementation process is established. For example, the rollout of a new data analytics tool includes detailed planning, end-user training and documentation of lessons learned.
Level 5: Optimizing	▪ Solution implementation processes are continuously reviewed and refined, involving ongoing stakeholder engagement. ▪ The processes include real-time feedback and adjustments that align with the dynamic needs of patient/client care and operational efficiency.	The implementation process is integrated into the clinic's strategic planning. Continuous feedback loops ensure that solutions are adapted to meet evolving needs, such as the integration of a new mobile health application that continuously receives updates based on user feedback and clinical outcomes.

Analytics Opportunities

Solution Evaluation

Level	Score	CCBHC Example
Level 1: Initial	No formal process exists for evaluating analytics solutions, and metrics used may not be appropriate.	The CCBHC has no formal methods for evaluating analytics solutions. Projects are completed without structured reviews, leading to missed opportunities for improvement.
Level 2: Defined	Evaluation occurs sporadically, often driven by external pressures or solution failures, with basic metrics like adherence to deadlines being the primary focus.	Evaluation of a new patient/client tracking system occurs only after significant issues arise, using basic metrics such as whether deadlines were met.
Level 3: Partially Managed	Evaluation criteria are established and standardized, but their application may still be inconsistent, focusing on the alignment with patient/client care and operational goals.	The clinic establishes standardized evaluation criteria for all analytics solutions. For example, the implementation of a new appointment scheduling system is reviewed using these criteria to ensure it meets patient/client care goals.
Level 4: Managed	Evaluation criteria are consistently applied across the clinic, informing the success of solutions and identifying future opportunities for improvement in patient/client care and operational efficiency.	Evaluation criteria are consistently applied across all projects. For instance, the introduction of a new telehealth platform is evaluated based on its impact on patient/client care and clinic efficiency, with results used to inform future implementations.
Level 5: Optimizing	Evaluation criteria are continuously reviewed and refined, ensuring alignment with strategic goals, with regular reviews documenting lessons learned and identifying scalable enhancements.	Continuous review and refinement of evaluation criteria occur, involving all stakeholders. The implementation of a comprehensive patient/client management system is evaluated regularly, and lessons learned are documented and used to enhance future projects.

Analytics Techniques

Organize Structured Data		
Level	**Score**	**CCBHC Example**
Level 1: Initial	■ The ability to analyze structured data does not exist.	The CCBHC tracks patient/client appointment schedules and basic demographics. There is no capability to analyze the data beyond simple tallying and basic reporting.
Level 2: Defined	■ Basic analytics techniques are available to characterize structured data for descriptive analyses.	The clinic generates basic descriptive reports, such as the average number of visits per patient/client per month, but it lacks more advanced capabilities to analyze trends or patterns.
Level 3: Partially Managed	■ Techniques support the development of attributes for exploratory analysis. ■ Additional techniques are used to meet reporting needs.	The clinic uses its EHR system to develop reports on patient/client no-show rates, identifying trends over time. These reports are used to make administrative decisions and improve scheduling.
Level 4: Managed	■ Techniques support pattern discovery of multiple structured data fields for on-demand applications *or* downstream analyses. ■ Additional techniques are regularly considered for business, clinical or operational needs.	The clinic employs a data analyst who uses the EHR to run advanced queries and pattern recognition algorithms. For example, the clinic can identify patients/clients at risk of dropping out of treatment, based on historical attendance patterns and other indicators.
Level 5: Optimizing	■ Techniques support a broad spectrum of analytics needs. ■ Techniques are continuously refined to support advanced analytics capabilities over multiple years.	The clinic uses machine learning models integrated with the EHR system to continuously monitor patient/client data and predict potential crises. These insights are used to proactively adjust treatment plans and allocate resources efficiently.

Analytics Techniques

Organize Unstructured Data		
Level	**Score**	**CCBHC Example**
Level 1: Initial	The ability to analyze unstructured data does not exist.	Different departments within the CCBHC use inconsistent methods for handling unstructured data, leading to fragmented and unreliable analysis.
Level 2: Defined	Basic analytics techniques are available to support limited categorization of unstructured data, or techniques are limited to simple searches.	The clinic scans paper records into PDFs and uses basic keyword searches to find specific information within these documents.
Level 3: Partially Managed	Techniques support categorization of unstructured data for various applications. Additional techniques are used to meet immediate needs.	The clinic uses text recognition software to convert scanned documents into searchable text, categorizing information for different clinical applications like follow-up reminders and patient/client history reviews. The clinic can categorize information based on progress notes entered through free text.
Level 4: Managed	Techniques support downstream analyses (e.g., entity tagging/ extraction) and summarization. Additional techniques are regularly considered for business, clinical and operational needs.	The clinic employs natural language processing (NLP) techniques to tag and extract relevant client data elements (e.g., symptoms, medications) from clinical notes and uses these insights to support downstream analyses like treatment coordination studies, program fidelity and resource planning.
Level 5: Optimizing	Techniques for unstructured data are linked to a taxonomy to enhance discoverability. Techniques are continuously refined to support advanced analytics capabilities over multiple years.	The clinic integrates NLP and machine learning techniques to continuously analyze and categorize unstructured data from multiple sources (e.g., patient/client portals, clinician notes) into a comprehensive taxonomy. This taxonomy is regularly updated to support advanced analytics and improve patient/client care outcomes.

Analytics Techniques

Data Analysis		
Level	**Score**	**CCBHC Example**
Level 1: Initial	The ability to analyze data beyond basic mathematical functions does not exist.	Different departments within the CCBHC perform only basic calculations on data, resulting in fragmented and limited insights.
Level 2: Defined	Data analysis methods include descriptive analytics, basic discovery methods and simple explanatory analytics.	The CCBHC employs basic discovery and descriptive analytics techniques but does not use advanced methods, leading to inconsistent data insights.
Level 3: Partially Managed	Data analysis methods include discovery analytics and may involve predictive models for structured data, or they include advanced statistical methods for explanatory analytics.	The clinic undergoes a series of predictive analytics analyses: • Discovery Analytics: The clinic performs exploratory data analysis to identify key variables correlated with ER visits, such as age, comorbidities and recent changes in mental health status. • Predictive Modeling: The CCBHC develops advanced statistical techniques such as logistic regression model to predict the likelihood of an ER visit based on identified risk factors. Variables include age, number of chronic conditions, recent medication changes and frequency of previous ER visits. • Model Implementation: The predictive model assigns risk scores to patients/clients, identifying those at high risk for an ER visit. These patients/clients are flagged for additional monitoring and proactive intervention by the care team. • Advanced Statistical Methods: The clinic validates the model using advanced statistical methods such as cross-validation to ensure its accuracy and reliability. The model is refined based on new data and emerging trends.

Analytics Techniques

Data Analysis		
Level	**Score**	**CCBHC Example**
Level 4: Managed	Data analysis methods include predictive analytics and likely involve predictive models for unstructured data, enhancing patient/client care and operational decisions.	The clinic enhances its predictive model by incorporating NLP techniques to analyze clinician notes and patient/client-reported symptoms. The model now includes unstructured data from clinical notes, identifying patients/clients at risk for an ER visit based on recent mentions of severe symptoms or crisis indicators. This integrated approach allows the clinic to provide real-time interventions for high-risk patients/clients.
Level 5: Optimizing	Data analysis methods include prescriptive analytics, employing machine learning to develop and train predictive models, and they are consistently refined to enhance capabilities.	The clinic uses machine learning algorithms to develop a dynamic predictive model that continuously learns from new data inputs, including real-time patient/client monitoring through wearable devices. The model predicts potential ER visits with high accuracy and suggests prescriptive actions, such as scheduling an immediate follow-up appointment or adjusting medication. The clinic continuously refines the model to adapt to changing patient/client behaviors and health care trends, ensuring optimal care and resource allocation.

Analytics Techniques

Data Visualization

Level	Score	CCBHC Example
Level 1: Initial	Visualization techniques do not exist or are very limited, requiring manual reproduction each time.	Staff members manually compile data on ER visits into an Excel sheet and create a simple bar chart to show the number of ER visits per month. When the chart is needed again, they have to redo the entire process from scratch.
Level 2: Defined	Basic visualization techniques exist but are applied inconsistently.	The clinic has some basic visualization techniques, such as using Excel to create bar charts and line graphs, but these are applied inconsistently across departments, resulting in variability in the quality and clarity of visual insights. One department uses pie charts to visualize ER visit data, while another uses line graphs. This inconsistency leads to confusion when comparing reports from different departments.
Level 3: Partially Managed	Formal visualization techniques are documented and applied consistently across the organization.	The clinic has documented visualization techniques, such as standardized templates for dashboards and reports, ensuring that all departments use consistent and clear methods to present data on ER visits. The clinic develops a standardized dashboard template in a tool like Tableau, which all departments use to visualize ER visit trends, ensuring consistency and clarity in the reports.
Level 4: Managed	Visualization techniques are aligned with the organization's business needs, clinical needs, and operational objectives, and they are regularly reviewed.	Visualization techniques are regularly reviewed and updated to align with the CCBHC's strategic goals, enhancing the clarity and impact of visual data presentations on ER visit predictions. The clinic uses advanced visualization tools to create interactive dashboards that allow stakeholders to drill down into ER visit data, aligning these visualizations with goals like reducing ER visits through early intervention.
Level 5: Optimizing	Visualization techniques are continuously improved and adapted to meet changing needs and regulatory requirements.	The clinic continuously refines its visualization techniques, incorporating the latest best practices and technologies to ensure that visual data presentations on ER visit predictions are as clear and effective as possible. The clinic integrates machine learning predictions with real-time data visualization tools, allowing for dynamic updates and scenario modeling to anticipate and prevent ER visits.

Analytics Techniques

Reporting and Distribution		
Level	**Score**	**CCBHC Example**
Level 1: Initial	Reporting and communication methods do not exist or are inconsistently applied.	The CCBHC staff manages ER visit data through a labor-intensive, manual process. Staff members either manually input data into an Excel spreadsheet or export it from another source, then create a simple bar chart to display monthly ER visits. This entire procedure must be repeated from scratch each time an updated report is needed. The resulting report is then emailed to department heads without a standardized format. This approach is not only time consuming and error prone but also leads to inconsistencies and confusion among recipients. The lack of automation and standardization in this process highlights a significant opportunity for improvement in how the CCBHC tracks, analyzes and communicates critical ER visit data.
Level 2: Defined	Basic reporting and communication methods exist but are applied inconsistently.	Some departments use a standard template for reporting ER visit data, while others create their own reports. This inconsistency leads to mixed formats and incomplete data communication, making it difficult to track and compare ER visit trends accurately.
Level 3: Partially Managed	Formal reporting and communication methods are documented and applied consistently across the organization.	The clinic uses a standardized report template for all departments to summarize monthly ER visit data. Reports are automatically compiled and communicated via a shared platform like SharePoint, ensuring all stakeholders have access to consistent and accurate information.
Level 4: Managed	Reporting and communication methods are aligned with the organization's business objectives and regularly reviewed.	The clinic integrates reporting software that aligns with strategic goals, such as reducing ER visits. The templates and communication schedules are regularly updated based on feedback and performance metrics, ensuring that the data presented supports strategic decision-making.
Level 5: Optimizing	Reporting and communication methods are continuously improved and adapted to meet changing needs and regulatory requirements.	The clinic employs advanced reporting tools that automatically generate and communicate real-time reports on ER visit trends. These tools integrate with EHRs and ensure compliance with regulatory standards, providing dynamic updates and scenario modeling to anticipate and prevent ER visits.

Culture

Communications

Level	Score	CCBHC Example
Level 1: Initial	The organization has not yet implemented any formal analytics-focused communications.	Misconceptions about data analytics persist due to a lack of communication, affecting staff buy-in.
Level 2: Defined	Occasional analytics updates are shared but lack consistency and broad reach.	An annual report on analytics activities is published, reaching a limited audience within the CCBHC.
Level 3: Partially Managed	Regular, formal communications on analytics successes and insights are initiated though not fully integrated into regular workflows, as communication efforts are shared to meet one-time needs.	Dedicated intranet resources provide on-demand access to analytics tutorials and case studies, increasing visibility. Additionally, quarterly reports on analytics projects are shared with key external stakeholders, such as funding agencies and partner organizations, to keep them informed about progress and outcomes.
Level 4: Managed	A structured communication strategy is in development or early implementation, aiming to regularly engage all levels of staff with analytics findings and their implications.	Interactive dashboards are introduced, allowing staff members to explore data and insights relevant to their departments. Biannual meetings are held with external stakeholders, including community partners and regulatory bodies, to discuss analytics insights and collaborative strategies for improving patient/client care.
Level 5: Optimizing	A robust analytics communication protocol is fully integrated into organizational practices, with targeted messaging reinforcing the value of analytics in addressing clinical, operational and administrative needs.	A continuous feedback loop is established, where staff can contribute to and learn from analytics projects, enhancing organizational adaptation. In addition, annual public reports and presentations are made to external stakeholders, including community leaders and policymakers, showcasing the impact of analytics on community health outcomes and securing ongoing support and collaboration.

Culture

Marketing and Branding

Level	Score	CCBHC Example
Level 1: Initial	There is no formal marketing effort to communicate the benefits of analytics.	Staff members are largely unaware of the analytics tools available to them, leading to low adoption and missed opportunities for enhanced care.
Level 2: Defined	Initial efforts to market analytics are sporadic and not aligned with a broader organizational strategy.	A promotional campaign introduces analytics tools during Mental Health Awareness Month, generating initial interest.
Level 3: Partially Managed	A formal marketing strategy for analytics is developed, highlighting specific case studies and observed benefits.	Regular success stories from the analytics team are featured in internal communications, highlighting tangible benefits and encouraging adoption.
Level 4: Managed	A comprehensive marketing strategy for analytics is being executed, with tailored messages for different departments emphasizing the direct benefits to their work.	Analytics achievements are regularly celebrated in town hall meetings, with discussions on how these tools aid in patient/client management and treatment planning.
Level 5: Optimizing	Highly targeted marketing efforts are in place, with analytics success stories integrated into daily communications and training programs, ensuring high visibility and engagement.	The clinic conducts a series of targeted workshops and seminars focusing on specific analytics tools and their direct impact on patient/client outcomes, driving deeper engagement and more skilled use.

Culture

Leadership

Level	Score	CCBHC Example
Level 1: Initial	Leadership has not yet visibly supported or promoted the use of analytics.	Without active leadership advocacy, analytics initiatives struggle to gain traction and necessary resources, stalling progress. For example, staff members are unaware of how analytics can benefit their roles, leading to underuse of available data resources.
Level 2: Defined	Some leaders occasionally discuss the benefits of analytics, but there is no consistent message or widespread leadership engagement.	An influential leader uses analytics results (change in patient/client ER visits in the past 12 months) to make a decision in a high-profile case, which is informally shared as a "success story."
Level 3: Partially Managed	A leadership-driven initiative for analytics use is formally introduced, with leaders actively participating in training and discussions.	Leaders host a series of workshops highlighting how analytics has transformed certain aspects of patient/client care, setting an example for others. Leaders send a monthly email series highlighting specific analytics-driven improvements in patient/client care, encouraging staff engagement across their respective programs.
Level 4: Managed	Leaders regularly demonstrate their commitment to analytics through continuous involvement in analytics projects and decision-making processes.	Leadership awards are given to departments that effectively integrate analytics into their daily operations, reinforcing the importance of data-driven decisions.
Level 5: Optimizing	Leaders fully demonstrate and advocate for the use of analytics in all aspects of organizational management, setting a standard for a data-driven culture.	Senior leaders consistently reference analytics insights in public statements and internal communications, embedding analytics into the organizational culture.

Culture

Recognition

Level	Score	CCBHC Example
Level 1: Initial	No formal recognition exists for staff members who use analytics in their work, leading to missed opportunities for encouraging engagement.	Staff members who use analytics tools to improve patient/client scheduling and treatment outcomes go unrecognized, limiting motivation for further use.
Level 2: Defined	Occasional recognition is given for successful use of analytics, often through impromptu mentions in meetings or internal newsletters.	A staff member who successfully implemented an analytics-driven project is mentioned in a department meeting, providing some motivation.
Level 3: Partially Managed	A structured recognition program is developed, awarding staff members who effectively use analytics to drive improvements in patient/client care.	Annual awards for innovative use of analytics in patient/client care are introduced, recognizing and inspiring staff across the organization.
Level 4: Managed	Performance evaluations include metrics related to effective use of analytics, integrating it into the broader goals of staff development.	Employees who consistently use analytics to inform their work are nominated for "Data Champion" awards, integrating recognition into career development paths.
Level 5: Optimizing	A comprehensive recognition system is in place, continuously evolving to incorporate feedback and celebrate innovations in analytics use.	Leaders regularly highlight and reward teams that use analytics to make data-driven changes, fostering a competitive and innovative atmosphere.

Culture

Structural Mechanisms

Level	Score	CCBHC Example
Level 1: Initial	The organization lacks dedicated structures for supporting the use of analytics, limiting its potential impact on patient/client care and operational efficiency.	Without formal support, staff members find it difficult to access analytics tools and resources, hindering the development of analytics-driven initiatives.
Level 2: Defined	Temporary task forces or informal groups are occasionally formed to address specific analytics needs, but without a long-term strategy.	A temporary committee is formed to oversee the deployment of a new analytics tool, gaining some early buy-in but lacking long-term support.
Level 3: Partially Managed	Formal structures such as dedicated analytics teams and roles are established, ensuring analytics is integrated into key operational areas.	A permanent analytics department is created, providing ongoing support and resources for staff to incorporate analytics into daily tasks.
Level 4: Managed	Organizational policies are adapted to include roles responsible for analytics, ensuring consistent application and support across all departments, with clear expectations for staff performance associated with data-related activities.	Analytics liaisons are appointed within each department, facilitating communication and encouraging consistent use of analytics insights in decision-making. Staff performance reviews include assessment of data-related responsibilities.
Level 5: Optimizing	A well-defined analytics framework is integrated at all levels of the organization, and it is regularly reviewed and updated to keep pace with advancements in analytics and health care needs.	The organization establishes an analytics center of excellence, continuously evolving analytics practices and supporting staff in adopting new tools and methods.

Culture

Policies and Procedures

Level	Score	Example
Level 1: Initial	The clinic lacks formal policies on the use of analytics, resulting in inconsistent practices and potential data security risks.	In the absence of formal policies, staff members use analytics tools without guidance, leading to potential breaches in data security and patient/client confidentiality.
Level 2: Defined	Some departments have developed their own guidelines for analytics use, leading to a patchwork of practices that vary in effectiveness.	A departmental initiative to draft analytics usage guidelines results in increased awareness and better handling of analytics tools in that department.
Level 3: Partially Managed	A clinic-wide policy on analytics use is established, providing clear guidelines on data handling, privacy and ethical considerations.	Clinic-wide training on newly implemented analytics policies enhances staff understanding and adherence, fostering a secure and ethical analytics culture.
Level 4: Managed	Comprehensive analytics policies are actively governed and reviewed, ensuring they meet both operational needs and compliance requirements.	Regular policy reviews and updates are conducted, involving stakeholder feedback to ensure that analytics practices remain relevant and compliant.
Level 5: Optimizing	Advanced policies and robust support documents guide analytics practices, and they are regularly updated to incorporate new technologies and health care guidelines.	Annual policy review sessions incorporate case studies of successful analytics applications, continuously improving guidelines to foster best practices and innovation.

Culture

Community		
Level	**Score**	**CCBHC Example**
Level 1: Initial	There is no cross-organization community forum for interested staff members, leaving them without a support network.	Staff members interested in analytics work in isolation, with no platform to exchange ideas or collaborate on projects, stifling innovation and growth.
Level 2: Defined	Informal groups of staff members with an interest in analytics begin to form, sharing insights and experiences sporadically.	An informal monthly coffee meetup allows interested staff members to share insights from their analytics work, sparking initial collaborations.
Level 3: Partially Managed	An official analytics community is established, organizing regular meetups and discussions that foster a shared understanding of analytics tools and techniques.	The community launches an "Analytics Insights" newsletter to share success stories and tips, enhancing engagement and skill development.
Level 4: Managed	The established analytics community plays a central role in onboarding new staff members and providing ongoing education on analytics practices.	The community organizes regular analytics workshops and guest speaker events, enhancing skills and fostering a culture of continuous learning.
Level 5: Optimizing	The analytics community actively contributes to the clinic's strategic planning, ensuring that analytics insights are incorporated into all major decisions and innovations.	The community hosts an annual analytics conference, bringing together external experts and internal staff to share advances and best practices in analytics applications.

Culture

Learning

Level	Score	CCBHC Example
Level 1: Initial	The clinic lacks formal programs for learning about analytics, limiting staff members' ability to effectively use data in their work.	Staff members are unaware of how analytics can be applied in their roles, resulting in low engagement and underuse of available data tools.
Level 2: Defined	Some staff members independently seek out analytics training, but there is no organized support or recognition of these efforts.	An interested staff member attends an external seminar on analytics and shares learnings with their team, raising some interest.
Level 3: Partially Managed	The clinic begins to formalize learning opportunities, offering workshops and online resources to improve analytics skills.	Regularly scheduled training sessions introduce staff members to analytics tools and techniques, increasing their comfort and competence in using data.
Level 4: Managed	A comprehensive analytics learning program is developed, including regular training sessions and access to external courses. All staff members have a basic understanding of data-related policy, procedure and culture.	The clinic offers certification programs in data analysis, encouraging staff members to deepen their expertise and apply new skills in their daily work. All staff members have an orientation to data-related policy, procedure and culture that helps them understand their role in a data-driven organization.
Level 5: Optimizing	A sophisticated knowledge management system is in place and accessible to all staff, and it is continuously updated with the latest analytics techniques and best practices.	Leadership endorses and encourages participation in a continuous learning program that includes advanced analytics courses, fostering a culture of lifelong learning and innovation.

Data

Data Management Strategy		
Level	**Score**	**CCBHC Example**
Level 1: Initial	■ No formal data management strategy exists.	The CCBHC has no formal data management strategy. Data is managed ad hoc, leading to inconsistencies and inefficiencies in patient/client care and operational processes.
Level 2: Defined	■ A data management strategy exists in isolated departments, such as clinical or administrative units, but is not standardized or broadly adopted across the organization.	A data management strategy exists within the clinical department, focusing on patient/client data, but it is not standardized or shared with other departments. For example, the administrative team manages data separately, leading to duplication of efforts.
Level 3: Partially Managed	■ A formal data management strategy is in place, with the primary goals of enhancing patient/client care and increasing operational efficiency. ■ The current data management strategy partially aligns with the USCDI and HITECH/HITRUST guidelines on data handling, exchange and security. ■ The strategy adheres to some of the CMS guidelines regarding data governance. However, this strategy is not completely integrated with the organization's broader strategy.	The clinic develops a formal data management strategy that balances improving patient/client care and operational efficiency with robust data security and privacy measures. This comprehensive strategy adheres to HITECH and HITRUST guidelines, implementing encryption for data at rest and in transit, role-based access controls, secure data exchange protocols and proper data retention and disposal policies. It establishes a data governance framework that assigns ownership, defines stewardship roles and implements quality management processes. The strategy ensures consistent collection of patient/client demographic data in alignment with USCDI standards, while maintaining HIPAA compliance through regular security risk assessments, a breach notification protocol and continuous monitoring of data access. By prioritizing both data utility and protection, the clinic creates a secure environment for handling sensitive patient/client information, fostering trust and enabling effective, privacy-conscious health care delivery.

Data

Data Management Strategy		
Level	**Score**	**CCBHC Example**
Level 4: Managed	▪ The data management strategy is standardized, integrated with the organization's goals and regularly reviewed. ▪ It includes input from clinicians, administrators and other stakeholders, ensuring compliance with USCDI standards and CMS guidelines.	A standardized data management strategy is implemented across the CCBHC. It integrates data from clinical, administrative and operational units to support comprehensive patient/client care. Regular reviews ensure the strategy aligns with clinic goals, and stakeholder input is actively sought. The strategy ensures compliance with all USCDI standards and CMS guidelines for data handling and governance.
Level 5: Optimizing	▪ The data management strategy is fully integrated with the organization's goals, continuously improved and made an integral part of decision-making processes. ▪ The strategy aligns with evolving patient/client care standards and regulatory requirements, ensuring continuous compliance with USCDI and CMS guidelines.	The clinic continuously improves its data management strategy, integrating it fully with organizational goals. The strategy supports decision-making processes, aligns with regulatory requirements and adapts to evolving patient/client care standards. Regular stakeholder engagement ensures the strategy remains relevant and effective, maintaining continuous compliance with USCDI and CMS guidelines.

Data

Data Governance Model

Level	Score	CCBHC Example
Level 1: Initial	▪ No formal data governance structures exist.	The CCBHC lacks any formal data governance structures. Data management practices are inconsistent, leading to potential data security and privacy issues.
Level 2: Defined	▪ A structure for data governance exists in certain departments, such as clinical or administrative units, but roles are not defined, processes are ad hoc and metrics are inconsistent.	A data governance structure is in place within the clinical department, focusing on patient/client data. However, roles and processes are not clearly defined, resulting in inconsistent application and monitoring.
Level 3: Partially Managed	▪ A formal data governance model describes the governing structures, roles, processes, metrics, ensuring alignment with the organization's goals and regulatory requirements. ▪ The model aligns with state Medicaid or CMS guidelines on promoting data governance, which include establishing a comprehensive data governance framework that outlines roles and responsibilities and developing and enforcing data governance policies that cover data quality, security, privacy and management.	The clinic implements a formal data governance model, including clearly defined roles, processes and metrics. For example, data access controls and audit mechanisms are established to ensure data security and compliance with regulations. The model includes roles such as data owners and data stewards responsible for data quality, security and compliance.

Data

Data Governance Model

Level	Score	CCBHC Example
Level 4: Managed	▪ A data governance model exists that is compliant with health care regulations and monitored and enforced by a dedicated governance committee within the organization. ▪ The model ensures compliance with state or CMS guidelines by establishing roles for data ownership and stewardship. ▪ It facilitates the development of policies for data quality, security, privacy and management.	A comprehensive data governance model is enforced across the CCBHC. A governance committee regularly monitors compliance with health care regulations, and processes are standardized across all departments, ensuring robust data management practices. The model includes data owners and stewards who ensure data quality and security and compliance with CMS and state guidelines.
Level 5: Optimizing	▪ The organization's data governance model is continuously reviewed and refined based on strategic goals and evolving health care regulations and performance metrics. ▪ The model ensures robust data security and compliance with CMS guidelines. ▪ It includes continuous feedback loops and regulatory updates to improve data governance practices.	The clinic continuously refines its data governance model, aligning it with strategic goals and evolving health care regulations. Regular audits and performance reviews ensure data governance practices remain effective and compliant with CMS guidelines, and all data governance paperwork and legal contracts for data sharing are in place. For example, the model includes feedback loops for continuous improvement and regular updates based on regulatory changes and changes to state and federal guidelines.

Data

Data Requirements Life Cycle		
Level	**Score**	**CCBHC Example**
Level 1: Initial	▪ No formal process exists for collecting data requirements.	The CCBHC has no formal methods for collecting data requirements. Data needs are identified on an ad hoc basis, leading to incomplete and inconsistent data support for patient/client care and operations.
Level 2: Defined	▪ Data requirements are collected sporadically, often to meet immediate needs, resulting in inconsistencies and gaps.	Data requirements are collected only when issues arise. For example, a need for better tracking of patient/client appointments is identified after several missed appointments, but the collection process is not standardized.
Level 3: Partially Managed	▪ Formal processes for collecting data requirements focus on aligning data with patient/client care and operational needs and are managed proactively. ▪ Management includes adherence to best practice guidelines for data collection, storage, usage, archiving and disposal. ▪ It follows CMS Information Security and Privacy Group (ISPG) and HIPAA guidelines on risk management, access controls, data encryption and incident response.	The clinic implements a formal process for data collection, storage, usage, archiving and disposal, involving regular meetings with clinical and administrative staff to identify and document data needs. This process ensures that data supports patient/client care and operational goals. However, not all life cycle elements follow best practices. For example, the policy does not reference compliance with specific data protection regulations, such as HIPAA, which require certain safeguards for data disposal.

Data

Data Requirements Life Cycle		
Level	**Score**	**CCBHC Example**
Level 4: Managed	▪ Standardized processes for collecting data requirements are in place, with regular input from clinicians, administrators and stakeholders. ▪ These processes are integrated into the data management strategy. This includes developing and enforcing policies that cover data quality, security, privacy and management and follows CMS ISPG and HIPAA guidelines on security audits, policy development, continuous quality monitoring and third-party risk management.	A standardized process for collecting data requirements is established, involving comprehensive stakeholder engagement. For example, regular work group meetings with clinicians, administrators and IT staff ensure that data needs are identified and addressed proactively. The process includes policies for data quality, security, privacy and management, following CMS ISPG guidelines on security training and continuous monitoring.
Level 5: Optimizing	▪ The data requirements life cycle is continuously reviewed and refined to ensure alignment with strategic goals, regulatory requirements. ▪ It evolves with patient/client care standards and includes continuous feedback loops. ▪ It ensures compliance with CMS ISPG and HIPAA guidelines and best practices on data minimization, compliance with regulations and ongoing security auditing.	The data requirements life cycle is continuously reviewed and refined. The data management strategy is updated based on published best practices and CMS ISPG guidelines. The clinic conducts regular audits and stakeholder feedback sessions to ensure data collection processes are aligned with strategic goals and regulatory requirements.

Data

Data Standards and Procedures

Level	Score	CCBHC Example
Level 1: Initial	Data complies with basic privacy and security policies, but formal definitions and rules related to data use do not exist.	The CCBHC lacks formal definitions and rules for data use. Data is managed based on basic privacy and security policies, leading to inconsistencies.
Level 2: Defined	Data may be defined in a data dictionary and model, but the rules related to data use are inconsistent and not always compliant with health care regulations.	A data dictionary exists, but its use is inconsistent. For example, patient/client data definitions vary between clinical and administrative departments, leading to discrepancies.
Level 3: Partially Managed	The data format is standardized. The organization has formal processes for data updates, descriptions and exchange formats, ensuring alignment with patient/client care and operational needs.	The CCBHC standardizes data formats and establishes formal processes for data updates and descriptions. Regular meetings are held to ensure compliance with these standards across all departments. For example, at a meeting, a unified procedure for obtaining, documenting and managing patient/client consent across all departments is established.
Level 4: Managed	A comprehensive set of data standards is enforced across the organization, including format and exchange standards (e.g., Health Level Seven International, Office of the National Coordinator for Health IT). Regular training ensures staff adherence to these standards.	Comprehensive data standards are implemented, covering all aspects of data operations, including the Health Level Seven International guidelines and the Office of the National Coordinator for Health IT guidelines. Staff members undergo regular training to ensure compliance and understanding of these standards.
Level 5: Optimizing	Data standards are continuously reviewed and refined to enhance data exchange, ensure compliance and support evolving patient/client care and operational requirements.	Comprehensive data standards are implemented, covering all aspects of data operations, including data collection, storage, usage, archiving and disposal. These standards ensure data integrity, security and compliance with relevant regulations. Staff members undergo regular training to ensure compliance and understanding of these standards.

Data

Data Access

Level	Score	CCBHC Example
Level 1: Initial	Data access is highly restricted, and there are no clear processes for requesting or granting access to data.	The CCBHC lacks formal processes for data access. Staff members request access to patient/client data through informal channels, leading to inconsistencies and potential security risks.
Level 2: Defined	Data access is granted on an ad hoc basis, with inconsistencies in processes and policies. Some departments have their own methods, but there is no standardization across the organization.	Different departments grant data access independently. For instance, the clinical department uses one process, while the administrative department uses another, leading to confusion and security gaps.
Level 3: Partially Managed	A formal data access process is established, including a request-and-approval system. Access is governed by a comprehensive, organization-wide data access policy, ensuring security and compliance with health care regulations.	The clinic implements a formal data access process, with a clear request-and-approval system. For example, staff members must submit a request form to access patient/client records, which is reviewed and approved by a data governance committee.
Level 4: Managed	Data access policies and processes are standardized and enforced through monitoring across the organization. Access is regularly monitored for security and compliance. Staff members are trained on data access policies.	Data access policies are standardized and routinely monitored across the CCBHC. Staff members undergo regular training on these policies, ensuring everyone understands and complies with the access procedures. Security audits are conducted regularly to identify and address potential issues.
Level 5: Optimizing	Data access policies are continuously reviewed and refined. Regular audits and stakeholder feedback ensure data is accessible, while maintaining high levels of security and compliance. The process is dynamic, adapting to evolving clinical and operational needs.	The clinic continuously reviews and updates its data access policies. Regular stakeholder meetings are held to gather feedback and ensure the policies meet the clinic's evolving needs. Advanced security measures are implemented to protect sensitive data.

Data

Data Collection[10]		
Level	**Score**	**CCBHC Example**
Level 1: Initial	■ Data collection practices are informal and lack standardized security controls.	The CCBHC has no formal data collection practices. Staff members access and collect data using informal methods, leading to inconsistencies and potential security risks.
Level 2: Defined	■ Data collection practices are inconsistent and applied ad hoc across different departments, with minimal security controls.	Different departments collect data in various ways, leading to inconsistencies. For example, clinical staff members use one method to capture client data, while administrative staff members use another, with minimal security measures.
Level 3: Partially Managed	■ Data collection practices are standardized and include security controls, ensuring compliance with health care regulations. However, practices may still be inconsistently applied.	The clinic standardizes its data collection practices, including security controls. Regular training sessions are held to ensure all staff members understand and comply with these practices, but inconsistencies still occur.
Level 4: Managed	■ Data collection practices are standardized and enforced across the organization, with regular training to ensure compliance. ■ Security controls are robust and regularly monitored.	Comprehensive and standardized data collection practices are enforced across the CCBHC. Staff members receive regular training, and security controls are robust. Data collection methods are regularly monitored and updated.
Level 5: Optimizing	■ Data collection practices are continuously reviewed and refined to enhance security, improve data quality and adapt to changes in technology or health care regulations. ■ Stakeholder feedback is regularly incorporated.	The clinic continuously reviews and updates its data collection practices. Regular stakeholder meetings and feedback sessions ensure that practices are effective, secure and aligned with regulatory requirements. Advanced security measures are implemented.

10 Health care delivery organizations typically encounter a wide range of data types, each serving different purposes in patient/client care and research. EHRs form the foundation, containing comprehensive clinical data collected at the point of care, but they often are not accessible to outside researchers. Administrative data, closely linked to EHRs, primarily consists of hospital discharge information reported to government agencies. Claims data, derived from billable interactions between insured patients/clients and health care providers, offers insights into various aspects of care across inpatient, outpatient, pharmacy and enrollment categories. Patient/client and disease registries provide focused information on specific chronic conditions, aiding in disease management. Lastly, health surveys, conducted at a national level, offer valuable population-level data on chronic conditions, making them more accessible for research purposes. Each of these data types contributes to a holistic understanding of health care delivery and patient/client outcomes.

Data

Data Sourcing		
Level	**Score**	**CCBHC Example**
Level 1: Initial	▪ No formal processes exist for acquiring data from external partners.	The CCBHC lacks formal processes for acquiring data from external partners. Data acquisition is handled on an ad hoc basis, leading to inconsistencies and potential compliance issues.
Level 2: Defined	▪ Processes to share or exchange data with health care providers exist but are inconsistently applied or managed.	Different departments acquire data from external partners using various methods, resulting in inconsistencies and inefficiencies. For example, the clinical department and administrative department have different approaches to data sourcing.
Level 3: Partially Managed	▪ Formal processes to share or exchange data with health care providers exist and are regularly reviewed.	The clinic establishes formal processes for acquiring data from external partners, including clear guidelines and regular reviews. These processes ensure that data acquisition supports patient/client care and operational goals.
Level 4: Managed	▪ Standardized data sourcing processes are enforced across the organization, ensuring consistency and compliance. ▪ Regular training ensures staff adherence to these processes.	Standardized data sourcing processes are implemented across the CCBHC. Staff members receive regular training on these processes, ensuring consistency and compliance. Regular audits are conducted to ensure adherence.
Level 5: Optimizing	▪ Processes to share or exchange data with health care providers are continuously reviewed and refined to ensure alignment with organizational needs and regulatory requirements.	The clinic continuously reviews and updates its data sourcing processes. Regular stakeholder meetings and feedback sessions ensure that the processes remain effective and compliant with regulatory requirements. Advanced data management tools are used to streamline data acquisition.

Data

Data Persistence

Level	Score	CCBHC Example
Level 1: Initial	▪ No formal processes exist for data aggregation, persistence, matching, formatting and storage.	The CCBHC lacks formal processes for data persistence. Data is managed on an ad hoc basis, leading to inconsistencies and potential security and privacy issues. For instance, patient/client records may be stored in various formats and locations without standardized procedures, increasing the risk of data breaches.
Level 2: Defined	▪ Processes for data aggregation, persistence, matching, formatting and storage exist but are inconsistently applied or managed across different departments.	Different departments manage data persistence independently, resulting in inconsistencies and inefficiencies. For example, the clinical department uses a different data storage system than the administrative department, leading to difficulties in data sharing and integration, as well as increased potential for errors.
Level 3: Partially Managed	▪ Formal processes for data aggregation, persistence, matching, formatting and storage are established and regularly reviewed to ensure they meet the organization's needs.	The clinic establishes formal processes for data persistence, including clear guidelines and regular reviews. These processes ensure that data aggregation, persistence, matching, formatting and storage support patient/client care and operational goals. For example, a centralized data repository is created with defined procedures for data entry and maintenance, improving data accuracy and accessibility.
Level 4: Managed	▪ Standardized data persistence processes are enforced across the organization, ensuring consistency and compliance. ▪ Regular training ensures staff adherence to these processes.	Standardized data persistence processes are implemented across the CCBHC. Staff members receive regular training on these processes, ensuring consistency and compliance. Regular audits are conducted to ensure adherence. For instance, a comprehensive training program is established, and periodic internal audits are performed to verify compliance with data persistence protocols.
Level 5: Optimizing	▪ Data persistence processes are continuously reviewed and refined, ensuring they align with the evolving needs of the organization and comply with health care regulations. ▪ Regular stakeholder feedback and regulatory updates are incorporated.	The clinic continuously reviews and updates its data persistence processes. Regular stakeholder meetings and feedback sessions ensure that the processes remain effective and compliant with regulatory requirements. Advanced data management tools are used to streamline data persistence. For example, the clinic employs automated data validation tools and holds quarterly stakeholder meetings to discuss process improvements and address any regulatory changes.

Data

Data Quality Framework		
Level	**Score**	**CCBHC Example**
Level 1: Initial	▪ No formal data quality framework exists, or it is only loosely defined.	The CCBHC lacks a formal data quality framework. Data quality issues are addressed on an ad hoc basis, leading to inconsistencies and potential impacts on patient/client care.
Level 2: Defined	▪ A data quality framework is defined and supported by documented policies and procedures, but these are inconsistently applied across different departments.	A data quality framework is in place, but its application is inconsistent. For example, data quality checks are performed irregularly, leading to variations in data accuracy and completeness.
Level 3: Partially Managed	▪ A standardized data quality framework is established across the organization, with general adherence to policies and procedures. ▪ Regular reviews ensure the framework supports patient/client care and operational efficiency.	The clinic establishes a standardized data quality framework, including regular data quality checks and reviews. These practices ensure data supports patient/client care and operational efficiency.
Level 4: Managed	▪ A comprehensive data quality framework is enforced across the organization. ▪ Adherence to policies and procedures is monitored and measured, ensuring data quality supports strategic goals and compliance.	A comprehensive data quality framework is implemented across the CCBHC. Regular audits and monitoring ensure adherence to data quality policies and procedures, supporting the clinic's strategic goals.
Level 5: Optimizing	▪ The data quality framework is continuously reviewed and refined. ▪ Performance metrics and data quality improvement plans are integrated into the organization's strategic goals, ensuring ongoing enhancement of data quality.	The clinic continuously reviews and updates its data quality framework. Regular stakeholder meetings and feedback sessions ensure that data quality improvement plans are effective and aligned with strategic goals. Advanced data quality tools are used to enhance data accuracy and completeness.

Data

Data Quality Assurance		
Level	**Score**	**CCBHC Example**
Level 1: Initial	▪ No formal processes exist to assure data quality, or they are inconsistently applied.	The CCBHC lacks formal data quality assurance processes. Data quality issues are addressed on an ad hoc basis, leading to inconsistencies and potential impacts on patient/client care.
Level 2: Defined	▪ Data quality assurance processes are documented, but compliance is inconsistent, and there is limited integration with patient/client care and operational needs.	Data quality assurance processes are documented but not consistently followed. For example, some departments perform regular data quality checks while others do not, leading to variations in data quality.
Level 3: Partially Managed	▪ Based on a data quality framework, standardized data quality assurance processes are established and regularly reviewed, ensuring they support patient/client care and operational needs. However, gaps in compliance may still exist.	The clinic establishes standardized data quality assurance processes, including regular data quality checks and reviews. These practices ensure data supports patient/client care and operational needs.
Level 4: Managed	▪ Based on a data quality framework, data quality assurance processes are standardized, enforced across the organization and integrated with patient/client care and operational needs. ▪ Compliance is regularly monitored and measured.	Comprehensive data quality assurance processes are implemented across the CCBHC. Regular audits and monitoring ensure adherence to data quality policies and procedures, supporting the clinic's strategic goals.
Level 5: Optimizing	▪ Based on a data quality framework, data quality assurance processes are continuously reviewed and refined. ▪ Performance metrics and quality improvement plans are integrated into the organization's strategic goals, ensuring ongoing enhancement of data quality.	The clinic continuously reviews and updates its data quality assurance processes. Regular stakeholder meetings and feedback sessions ensure that quality improvement plans are effective and aligned with strategic goals. Advanced data quality tools are used to enhance data accuracy and completeness.

People

Role Definition

Level	Score	CCBHC Example
Level 1: Initial	▪ No formal procedures exist for defining roles related to analytics. ▪ Responsibilities and required skills are unclear, leading to inefficiencies and gaps in expertise in key areas such as patient/client data management and reporting.	The CCBHC's clinical team is uncertain about who is responsible for analyzing patient/client outcomes data. As a result, no one reviews the data collected from patient/client surveys, missing out on identifying trends that could improve treatment plans. This lack of clarity results in duplicated efforts, with some team members sporadically analyzing data while others overlook it entirely.
Level 2: Defined	▪ Basic role definitions exist, but they are inconsistently applied. ▪ Roles such as data analysts and IT support staff are often defined reactively, based on immediate needs rather than strategic planning.	The clinic has designated roles for data analysts, but these roles are not clearly communicated or are consistently applied across departments. For instance, the data analyst in the behavioral health unit regularly generates monthly reports, while the analyst in the substance use disorder unit does not, leading to inconsistent data management practices and delayed reporting.
Level 3: Partially Managed	▪ Roles and responsibilities for analytics positions are formally defined and documented. ▪ There are established processes for updating roles, including modifications based on the most advanced analyses the organization has conducted.	CCBHC staff members adhere to their defined roles, but the clinic lacks a process for regularly updating these roles. As a result, when operational needs or regulatory requirements change, the data management roles fail to adapt proactively. This leads to a reactive approach where staff members struggle to keep up with evolving demands in real-time, potentially causing inefficiencies and compliance issues.

People

Role Definition		
Level	**Score**	**CCBHC Example**
Level 4: Managed	■ Analytics roles are well defined and integrated into the organization's structure. ■ Processes for regular review and updating of roles are in place and generally followed. ■ Clinical and operational leadership, as well as staff, are involved in the review process.	The clinic has clear and well-documented roles for data scientists and patient/client care coordinators, which are reviewed quarterly with input from clinical supervisors and administrative staff. This ensures that the responsibilities of these roles align with the clinic's goals of enhancing patient/client outcomes and service delivery. For example, data scientists work closely with patient/client care coordinators to analyze patient/client data and develop predictive models that identify high-risk patients/clients who need more intensive follow-up.
Level 5: Optimizing	■ Analytics roles are continuously refined based on feedback, best practices and evolving organizational needs. ■ Processes for role definition and updates are proactive and systematic, involving clinical and operational leadership, staff and patient/client feedback to ensure roles meet the clinic's evolving needs.	The roles and responsibilities of the CCBHC's analytics staff are regularly updated based on feedback from clinical staff, operational leaders and patients/clients. For instance, after receiving feedback that data analysis reports were not user-friendly, the role of the data analyst was refined to include collaboration with the communications team, to ensure that analytics outputs are clear and actionable. Additionally, patient/client feedback led to the creation of a new role focused on analyzing patient/client experience data to further improve service delivery.

People

Position Requirements		
Level	**Score**	**CCBHC Example**
Level 1: Initial	The activities and qualifications for analytics positions are developed individually, without connection to broader organizational needs, leading to gaps in expertise and inefficiencies.	No process exists to determine the ideal characteristics of analytics candidates and prioritize recruitment sources (e.g., social media, professional organizations, educational institutions) to identify, assess and engage potential analytics candidates who are aligned with the distinctive needs of community behavioral health services.
Level 2: Defined	Methods to define work activities and qualifications for analytics positions exist but are shared minimally or applied inconsistently, resulting in varied qualifications and unclear responsibilities.	Hiring criteria for analytics roles at the CCBHC exist but are inconsistently applied, often leading to gaps in required skills and qualifications.
Level 3: Partially Managed	There are standard position descriptions to define work activities and qualifications for analytics positions, and they are coordinated with broader talent management goals, involving clinical and operational leadership in the process.	The clinic has formalized the criteria for hiring analytics positions such as clinical data coordinators and operations managers, involving clinical and operational leadership in the process, but adherence to these criteria is inconsistent.

People

Position Requirements		
Level	**Score**	**CCBHC Example**
Level 4: Managed	▪ Position descriptions involving any aspect of data collection or use are customized and tailored to specific positions, such as data analysts, clinical data coordinators and IT support staff, to define the work activities and qualifications for each role.	The clinic has well-defined criteria for hiring analytics roles, including data scientists and patient/client data coordinators, that are regularly reviewed and updated with input from clinical and operational leaders.
Level 5: Optimizing	▪ There is a robust process to create specific position descriptions, including the documentation of the requirements for each role. ▪ These descriptions are linked to and aligned with enterprise-wide qualifications for analytics positions and are regularly updated based on feedback, best practices and evolving needs.	Continuous refinement of position requirements for analytics roles at the CCBHC involves a proactive and systematic approach, with contributions from clinical leaders, operational staff and patient/client representatives, ensuring criteria are aligned with best practices and the clinic's strategic objectives.

People

Attracting Talent		
Level	**Score**	**Example**
Level 1: Initial	No proactive action is taken to attract analytics talent prior to the receipt of applications, leading to missed opportunities to recruit top talent.	Without a clear strategy to attract analytics professionals, the CCBHC relies solely on standard job postings, missing out on reaching a broader talent pool.
Level 2: Defined	Small, ad hoc efforts have been made to entice analytics candidates, including basic marketing materials that highlight the clinic's community health mission.	Occasional posts on professional networks attempt to highlight the CCBHC's work but lack a cohesive message or clear call to action.
Level 3: Partially Managed	Formal efforts are established to engage analytics candidates, with standardized employer branding materials that emphasize the clinic's role in community health and mental wellness.	The clinic develops a series of targeted ads on social media focused on its cutting-edge analytics projects and their impact on community health.
Level 4: Managed	Ongoing activities are undertaken to actively engage analytics candidates in the organization's recruitment process, supported by a strategic plan that highlights the benefits and impact of working in community behavioral health.	The clinic establishes a referral program encouraging current employees to refer skilled analytics professionals, enhancing the recruitment process.
Level 5: Optimizing	Analytics candidates are consistently engaged through a comprehensive employer branding message that communicates the clinic's commitment to community health, and the ongoing enhancements to the recruitment strategy ensure alignment with industry best practices.	The clinic's talent attraction strategy includes partnerships with universities and professional organizations to continuously engage with upcoming and established analytics professionals.

People

Sourcing Talent		
Level	**Score**	**CCBHC Example**
Level 1: Initial	The organization only becomes aware of analytics candidates after they apply for an existing position, missing opportunities to proactively engage potential talent.	The CCBHC reacts to applications as they come, without a strategy to attract analytics talent proactively, potentially missing out on highly qualified candidates.
Level 2: Defined	Analytics candidate sourcing occurs irregularly, lacking a cohesive strategy that aligns with the needs of community behavioral health.	The clinic sporadically reaches out to potential analytics candidates through social media or local events, without a regular or strategic approach.
Level 3: Partially Managed	The organization has developed an approach for profiling analytics talent, which includes prioritizing sources that are most likely to reach candidates with a passion for community behavioral health.	The clinic systematically assesses and prioritizes recruitment sources like professional health care analytics conferences to engage with potential candidates.
Level 4: Managed	The organization uses a standardized and strategic approach to profile analytics talent and prioritize sources, integrating these efforts into regular strategic planning to ensure alignment with community health goals.	The clinic's recruitment team collaborates with department heads to define specific analytics roles, and it uses targeted recruitment campaigns to attract the right talent.
Level 5: Optimizing	The organization's approach to profiling and sourcing analytics talent is standardized, strategic and centralized, ensuring consistent engagement with the best sources to meet the clinic's needs.	The clinic maintains a centralized database of recruitment sources and actively updates sourcing strategies to reflect changes in the analytics field, ensuring access to top talent.

People

Hiring Talent		
Level	**Score**	**CCBHC Example**
Level 1: Initial	The analytics talent is hired as needed, without any coordination or connection to broader talent management efforts, leading to misaligned skills and inefficiencies in addressing community behavioral health challenges.	Without coordinated hiring efforts, the CCBHC struggles to build a cohesive analytics team that can fully address the nuances of community behavioral health.
Level 2: Defined	Processes for hiring analytics roles exist but vary significantly, with decisions often based on subjective criteria rather than structured assessments.	Individual departments within the CCBHC make efforts to attract analytics talent, but the lack of a unified strategy leads to inefficiencies.
Level 3: Partially Managed	Formal hiring criteria for analytics roles have been defined, but the processes remain unstandardized across different departments, leading to inconsistencies.	While some departments excel at attracting suitable candidates, the lack of a unified hiring strategy across the CCBHC prevents optimal outcomes.
Level 4: Managed	The organization employs standardized processes for hiring analytics talent, governed at the organizational level to ensure consistency and alignment with behavioral health service goals.	Standardized hiring procedures at the CCBHC ensure that candidates meet the high standards required for impactful analytics work in behavioral health care.
Level 5: Optimizing	Analytics candidates are hired through an enterprise-wide, standardized process, enhancing efficiency and ensuring that all hires are optimally aligned with community behavioral health services.	The systematic approach to hiring at the CCBHC maximizes efficiencies and ensures that new hires are well prepared to contribute to community behavioral health initiatives.

People

Workforce Planning		
Level	**Score**	**CCBHC Example**
Level 1: Initial	The organization lacks a process to identify workforce requirements for analytics, leading to misaligned staffing and unmet needs in behavioral health services.	The CCBHC operates without a clear understanding of the number of data analysts needed. As a result, some departments have excess staff while others are understaffed, causing delays in data reporting and analysis.
Level 2: Defined	Workforce requirements for analytics are calculated using inconsistent methodologies and time horizons, leading to varied staffing outcomes.	The clinic calculates the need for data analysts based on short-term projects rather than long-term goals, resulting in periods of overstaffing followed by staff shortages. Some departments use historical data to predict staffing needs, while others rely on immediate demands, causing inconsistencies.
Level 3: Partially Managed	The organization has a formal approach to calculating workforce requirements for analytics practitioners, but findings are inconsistently reported and used across departments.	The clinic conducts an annual review to determine the number of data analysts needed, based on projected patient/client data volumes. However, the results of this review are not consistently communicated across all departments, leading some teams to hire more staff while others remain unaware of the new requirements.
Level 4: Managed	A regular, required planning process is in place to identify organizational workforce requirements related to analytics, ensuring alignment with behavioral health service goals.	The clinic holds quarterly meetings to review and adjust the staffing plan for data analysts. These meetings involve clinical and operational leaders who assess current workloads, future projects and alignment with mental health goals. Adjustments are made proactively to ensure all departments have the necessary analytics support.
Level 5: Optimizing	Governed processes identify workforce requirements for analytics and continuously inform the overarching talent management strategy, supporting community behavioral health service goals.	The clinic employs a strategic workforce planning tool that integrates data from multiple sources, including patient/client care trends and regulatory changes. This tool helps to continuously refine staffing models and ensures that analytics staffing aligns with long-term community behavioral health goals. Regular feedback from staff and patients/clients is also incorporated to improve the process.

People

Workforce Management		
Level	**Score**	**CCBHC Example**
Level 1: Initial	The organization has no established criteria for identifying analytics positions, leading to a lack of visibility and coordination in workforce management.	Critical data analysis roles remain unfilled for long periods or are filled by inadequately trained staff due to the lack of an established workforce management strategy.
Level 2: Defined	The identification of analytics positions is haphazard and department specific, causing inconsistencies and data fragmentation.	Some departments maintain informal lists of analytics personnel, but without consolidation, the CCBHC cannot fully use expertise across the organization.
Level 3: Partially Managed	The organization has set formal criteria for identifying analytics positions, though application across departments remains inconsistent.	A formal process for identifying analytics roles is documented, yet its inconsistent application leads to periodic shortages and surpluses of specialized staff.
Level 4: Managed	The organization has established a centralized system for tracking analytics positions, ensuring consistent and up-to-date workforce data across the clinic.	A centralized database is used to track qualifications and project allocations for analytics staff, improving operational efficiency and staff satisfaction.
Level 5: Optimizing	The organization maintains a specialized team for managing analytics talent, proactively supporting workforce planning and succession strategies aligned with behavioral health service goals.	Succession planning and career development paths are clearly defined and actively managed, ensuring continuity and growth in the CCBHC's analytics capabilities.

People

Workforce Design		
Level	**Score**	**CCBHC Example**
Level 1: Initial	The organization's operating model lacks analytics focus, failing to incorporate analytics as a core component of behavioral health service delivery.	The CCBHC's various departments operate independently, without any integration of analytics. For example, the clinical team collects patient/client data, but it is not analyzed for trends or used to inform treatment plans, leading to missed opportunities for improving patient/client care.
Level 2: Defined	The organization's operating model inconsistently supports analytics, with some departments better aligned than others to use analytics for mental health services.	Some departments, like outpatient services, use basic data analysis to monitor patient/client attendance and outcomes, while other departments, such as crisis intervention, rely solely on anecdotal evidence, resulting in uneven application of analytics and inconsistent quality of care.
Level 3: Partially Managed	The organization's operating model formally integrates analytics to enhance community mental health services across all departments.	The clinic has established a formal analytics team that works across departments to integrate data analysis into daily operations. This team regularly analyzes patient/client outcome data to identify areas for improvement, ensuring that all departments benefit from data-driven insights.
Level 4: Managed	Analytics is a central focus in the organization's operating model, with standardized practices across the clinic to support comprehensive mental health service delivery.	The clinic has standardized its data collection and analysis processes, ensuring that all departments use the same methods and tools. Regular training sessions are held to ensure staff members are proficient in using analytics to improve patient/client care and operational efficiency.
Level 5: Optimizing	The organization's workforce is dynamically structured to maximize the effective use of analytics in improving community behavioral health, with ongoing assessments to adapt to emerging needs.	The clinic continuously evaluates and adjusts its workforce structure to ensure optimal use of analytics. For instance, new roles such as data scientists and business intelligence analysts are added as needed, and existing staff members are regularly trained to keep up with the latest analytics techniques. This dynamic approach ensures the clinic can quickly adapt to new challenges and opportunities in behavioral health care.

People

Talent Management Strategy		
Level	**Score**	**CCBHC Example**
Level 1: Initial	The organization lacks a formal talent management strategy, impacting its ability to effectively use analytics in behavioral health service delivery.	The CCBHC hires staff based on immediate needs, without any long-term planning or consideration for analytics capabilities. For example, new hires are made reactively to fill vacancies without evaluating their potential contributions to the clinic's analytics goals.
Level 2: Defined	Talent management objectives exist but lack coherence and alignment with the organization's mission to integrate analytics into organizational operations.	The clinic sets some basic goals for staff development, such as offering occasional training sessions on data entry. However, these efforts are sporadic and not part of a cohesive strategy, resulting in inconsistent skill levels among staff.
Level 3: Partially Managed	Talent management goals are established, yet they are not fully integrated into the clinic's broader strategic objectives for organizational improvement.	The clinic has set goals for enhancing analytics capabilities, such as implementing regular training programs for data analysts. However, these goals are not systematically aligned with the clinic's overall mission, leading to fragmented efforts that do not fully leverage analytics to improve patient/client care.
Level 4: Managed	A comprehensive talent management strategy is actively implemented, aligning staff development with the clinic's analytics-driven organizational enhancement goals.	The clinic conducts annual assessments of staff skills and develops targeted training programs to address gaps. This strategy includes mentorship programs where experienced data analysts guide new hires, ensuring continuous improvement and alignment with the clinic's goals.
Level 5: Optimizing	The talent management strategy is central to all HR activities, continuously refined to support the evolving needs of services through analytics.	The clinic's HR department integrates analytics into all aspects of talent management, from recruitment to performance evaluation. For instance, data-driven insights are used to identify high-potential employees and create personalized development plans, ensuring that the clinic remains at the forefront of behavioral health service delivery.

People

Career Development

Level	Score	CCBHC Example
Level 1: Initial	The organization does not provide internal career development opportunities, forcing staff members to seek external resources to improve their analytics capabilities in behavioral health.	Staff members must seek external workshops for analytics training, leading to inconsistencies in the skills applied within the clinic's behavioral health services.
Level 2: Defined	Limited career development programs exist, often unrecognized and unevenly distributed, failing to support comprehensive staff development in behavioral health analytics.	Isolated initiatives by some departments to train staff in analytics are not sufficient to address the comprehensive needs at the CCBHC.
Level 3: Partially Managed	Formal career development programs exist but lack uniformity across different roles, hindering consistent development in behavioral health analytics skills.	While formal training is available, the lack of standardization prevents a unified approach to deploying analytics in behavioral health care strategies.
Level 4: Managed	The organization offers a structured career path with tailored development programs that enhance specific analytics skills that are crucial for behavioral health services.	Each career path is supported by specific training programs, ensuring that staff development is aligned with the CCBHC's strategic goals in behavioral health.
Level 5: Optimizing	Comprehensive career paths are continuously refined, incorporating the latest in behavioral health analytics to keep pace with industry advancements and learning opportunities.	Regular updates to career development programs incorporate new behavioral health analytics technologies and methodologies, fostering a culture of continuous learning and improvement.

People

Performance Management		
Level	**Score**	**CCBHC Example**
Level 1: Initial	The organization lacks a formal performance management process for analytics positions.	Data analysts receive no structured feedback on their work, leading to inconsistencies in data quality and reporting.
Level 2: Defined	The organization has informal and subjective performance measures for analytics positions.	Individual supervisors provide occasional feedback based on personal observations, resulting in inconsistent evaluations across departments.
Level 3: Partially Managed	The organization has implemented objective performance measures and metrics for analytics positions, which are standardized across the organization.	All data analysts are evaluated quarterly, based on specific criteria such as data accuracy, timeliness of reporting and contribution to team goals.
Level 4: Managed	The organization enforces standardized and objective performance measures for analytics positions across the entire organization. This includes annual performance reviews with clearly defined metrics that align with the clinic's strategic goals and objectives.	Regular performance reviews using standardized metrics ensure that all analytics staff members' performance is aligned with the CCBHC's goals and quality standards.
Level 5: Optimizing	The organization continuously reviews and refines objective, competency-based performance measures for analytics positions. These measures are regularly updated to reflect changes in the nature of the work and to ensure alignment with evolving behavioral health analytics needs.	Data analysts are evaluated on their ability to incorporate new analytics techniques and tools, with regular feedback sessions to support professional growth.

People

Retention Strategies		
Level	**Score**	**CCBHC Example**
Level 1: Initial	The organization lacks a formal retention strategy, leading to high turnover and reduced effectiveness in behavioral health service delivery.	Without a retention strategy, the CCBHC experiences high staff turnover, affecting continuity of care and service quality.
Level 2: Defined	Retention efforts are sporadic and based on anecdotal feedback, resulting in inconsistent staff engagement and retention.	Staff recognition events are held occasionally, but they lack consistency and do not effectively address the underlying issues of job satisfaction and retention.
Level 3: Partially Managed	Research-backed retention strategies are developed, focusing on the specific motivational needs of behavioral health professionals.	The introduction of a mentorship program based on identified motivational drivers improves job satisfaction and staff retention.
Level 4: Managed	The organization uses a structured process to collect data on staff motivation and satisfaction, which forms the basis for effective retention plans.	Regular staff surveys assess satisfaction and engagement, directly influencing the development of targeted retention initiatives.
Level 5: Optimizing	Comprehensive retention strategies are integrated into the clinic's policies, supporting a stable and engaged workforce in behavioral health analytics.	A holistic approach to staff retention, including regular reviews and updates of compensation and benefits, ensures that the CCBHC remains a preferred employer in behavioral health.

People

Analytics Technology Strategy		
Level	**Score**	**CCBHC Example**
Level 1: Initial	An analytics technology strategy does not exist.	Some analytics are managed natively in the EHR, and some analytics are exported to other platforms ad hoc for analysis, differing by department.
Level 2: Defined	An initial draft strategy for analytics technology is identified on an ad hoc basis or in support of immediate needs.	A preliminary strategy document is created, outlining the need for better data collection methods but failing to address how these methods will be integrated or scaled across the organization over time for processing and reporting.
Level 3: Partially Managed	A formal strategy for analytics technology has been established, and goals/objectives are defined regularly in support of patient/client care and operational needs.	The CCBHC's formal strategy for analytics technology includes regularly defined goals and objectives, ensuring coordinated efforts across departments to support patient/client care and operations, where encounters and visits share a common taxonomy across all technology platforms.
Level 4: Managed	An analytics technology strategy is regularly defined and developed and includes prioritized goals/objectives and action plans to support implementation.	The clinic consistently develops its analytics technology strategy, aligning goals and objectives with action plans to support implementation and improve efficiency. The clinic aligns its analytics strategy with patient/client care initiatives, implementing action plans that include training staff on new data analysis tools and integrating these tools into daily operations to enhance patient/client outcomes.
Level 5: Optimizing	The formal strategy, along with individual goals and objectives (reviewed/refined annually), is prioritized against the overarching technology strategy. Action plans are continuously monitored to identify improvements and increase efficiencies.	The clinic continuously refines its technology strategy, prioritizing goals and monitoring action plans to enhance efficiencies and address evolving patient/client care and operational needs. Leadership conducts regular reviews and updates to the technology strategy, integrating new data sources and analytics techniques to continually enhance patient/client care and operational efficiencies, with a focus on proactive adaptation to regulatory changes and emerging health care trends.

Technology

Planning Review

Level	Score	CCBHC Example
Level 1: Initial	Planning review processes for advanced analytics technology do not exist.	The CCBHC does not have any planning review processes for analytics technology, leading to unaddressed gaps and inefficiencies. The clinic's IT department purchases new data analytics software without consulting clinical staff, resulting in tools that are underused because they do not meet the actual needs of patient/client care.
Level 2: Defined	Needs assessments for analytics technology occur in response to immediate needs, with no formal gap analysis process.	The clinic conducts needs assessments for analytics technology only in response to immediate needs, lacking a formal gap analysis process. The clinical department requests a new analytics tool to handle a specific patient/client data analysis requirement, but this request is handled in isolation, without considering how it fits into the overall technology landscape of the organization.
Level 3: Partially Managed	Regular needs assessments and formal gap analysis occur to identify technology requirements.	The clinic regularly assesses technology needs and conducts formal gap analyses to identify requirements and improve integration. The clinic implements a biannual review process where all departments submit their current technology needs and gaps, which are then formally analyzed to create an integrated technology improvement plan.
Level 4: Managed	Planning review processes for analytics technology are integrated into the organization's programs, to ensure continuous improvement.	The clinic integrates planning review processes into its programs, ensuring continuous improvement of advanced analytics technology. Continuous improvement processes are embedded into the clinic's operational strategy, with regular feedback loops from staff members who use the analytics tools, to ensure that the technology evolves in alignment with patient/client care goals and operational efficiencies.
Level 5: Optimizing	Planning review processes for analytics technology are regularly reviewed and revised as part of a multiyear planning process, to ensure alignment with patient/client care and operational needs.	The clinic regularly reviews and revises its planning review processes for advanced analytics technology as part of a multiyear planning process, ensuring alignment with patient/client care and operational needs. An annual comprehensive review of all analytics technologies is conducted, involving external experts to benchmark the CCBHC's tools against industry best practices, leading to strategic decisions that keep the organization at the forefront of health care analytics.

Technology

Technology Research		
Level	**Score**	**Example**
Level 1: Initial	No structured process exists for exploring new technological solutions, including EHRs, that are crucial for advancing behavioral health services analytics.	The CCBHC is using EHR software that lacks advanced data analytics capabilities, leading to inefficient data management and missed opportunities for improving patient/client outcomes.
Level 2: Defined	Reactive technology research occurs only when immediate issues arise, often leading to rushed and potentially suboptimal solutions.	After a major server crash, the clinic is forced to upgrade its IT infrastructure, causing significant downtime and disruption to patient/client care due to the lack of a preemptive upgrade plan.
Level 3: Partially Managed	A formalized research process is established to evaluate and select technologies like EHR systems that support behavioral health analytics.	The clinic creates a cross-departmental task force that meets monthly to review emerging technologies, leading to the selection and pilot testing of a new secure patient/client data management system that complies with the latest privacy regulations.
Level 4: Managed	The organization incorporates technology research into its strategic planning, ensuring that new tools like advanced EHRs are effectively integrated and aligned with service goals.	After conducting a thorough needs assessment and market evaluation, the clinic invests in an advanced analytics tool that provides real-time insights into patient/client outcomes, enabling more personalized treatment plans and better resource allocation.
Level 5: Optimizing	Ongoing evaluation and adaptation of technology research processes ensure that the organization stays at the forefront of technological advancements in behavioral health care.	The clinic establishes a continuous improvement cycle where technological needs and advancements are reviewed quarterly, resulting in the adoption of AI-assisted documentation tools that enhance clinicians' ability to identify patient/client issues early and recommend appropriate treatments.

Technology

Internal Development

Level	Score	CCBHC Example
Level 1: Initial	IT processes do not currently include the development of tools for advanced behavioral health analytics, missing opportunities to enhance patient/client care through data-driven insights.	When the clinic needs data analysis, staff members manually extract data using general-purpose software, because there are no specialized tools developed for behavioral health analytics. This process is unstructured and varies by who performs the task.
Level 2: Defined	Development of behavioral health analytics tools occurs sporadically and without adherence to standardized IT software development life cycles (SDLCs), typically in response to immediate operational demands.	An IT specialist at the clinic put together an ad hoc report for a funding review using a basic query tool, without following any formal SDLC or future maintenance plan.
Level 3: Partially Managed	The organization has standardized software development life cycle processes that specifically incorporate the requirements and design needs of behavioral health analytics tools, ensuring consistent and effective development practices.	Development processes at the clinic include routine stakeholder input from behavioral health professionals to ensure that the functionality of newly developed IT tools aligns with clinical needs.
Level 4: Managed	The organization employs development testing and review processes that are tailored specifically to the needs of behavioral health analytics tools, enhancing tool reliability and efficacy in supporting clinical decisions.	IT development at the CCBHC is characterized by structured feedback loops with end users such as therapists and case managers, to refine tools continually before full-scale deployment.
Level 5: Optimizing	The organization regularly reviews and updates its standardized SDLC processes to align with the evolving needs of behavioral health analytics, ensuring that the tools developed are at the forefront of technological and clinical practice advancements.	The CCBHC has established a continuous improvement team that includes IT professionals and clinical staff. They focus on updating and enhancing analytical tools to incorporate new research findings and emerging best practices in behavioral health.

Technology

Purchasing New Tools		
Level	**Score**	**CCBHC Example**
Level 1: Initial	The organization lacks formal processes for evaluating and purchasing any tools involved in analytics, leading to sporadic acquisitions without strategic planning.	The finance department purchases a new billing system independently to address an urgent need, without evaluating its integration with existing EHR systems.
Level 2: Defined	Occasional evaluations and purchases of new tools involved in analytics are performed as immediate needs arise, without following a standardized procurement process.	Despite the finance department conducting a comprehensive needs assessment and vendor comparison before purchasing a financial analytics platform, the data management tool was selected by the clinic's IT manager alone, based solely on personal preference and immediate need.
Level 3: Partially Managed	The organization has a documented procurement process with standard procedures for testing and vetting new tools related to analytics, ensuring they meet specific needs for behavioral health analytics.	Before purchasing, a new case management system undergoes a pilot phase, with feedback from end users to ensure it meets clinical and operational needs. However, the procurement process is sometimes circumvented or only used in part.
Level 4: Managed	The procurement process evaluating and purchasing new tools related to analytics is well-defined and routinely followed. There is a procurement process in place for evaluating and purchasing new tools related to analytics, which ensures consistency and compliance with health care standards.	All potential IT tools undergo rigorous testing and approval processes that involve multiple departments, to ensure they support comprehensive care coordination.
Level 5: Optimizing	The purchasing process for tools used for analytics is regularly reviewed and strategically aligned with overall capital planning and clinical needs.	The procurement process is integrated with the clinic's overall strategic planning, ensuring that new tools not only meet immediate needs but also support long-term operational goals.

Technology

Implementation/Deployment

Level	Score	CCBHC Example
Level 1: Initial	The organization does not have a formal plan for implementing and deploying new IT tools, leading to haphazard integration and potential disruptions.	A new EHR system is implemented without a clear plan, leading to significant downtime and confusion among staff.
Level 2: Defined	The clinic occasionally develops implementation plans for new IT tools, often reacting to immediate demands rather than following a consistent strategy.	A new EHR module for appointment scheduling is quickly deployed to meet an urgent need, without a thorough assessment of its impact on other systems.
Level 3: Partially Managed	The organization has standardized plans for the implementation and deployment of new IT tools, which include detailed steps for integration and staff training.	Before deployment, a new EHR software update undergoes a structured pilot testing phase with designated staff members, to ensure functionality and user training.
Level 4: Managed	There are comprehensive, governed procedures in place for the implementation of IT tools, ensuring alignment with clinical practices and data security standards.	A new EHR-integrated clinical decision support tool is implemented following a strict governance process, including risk assessment and data security evaluations.
Level 5: Optimizing	The organization continuously evaluates and refines its implementation and deployment strategies to integrate the latest technological advancements and best practices.	Regular reviews of the EHR deployment process lead to continuous improvements, incorporating the latest technological advancements and best practices, enhancing user satisfaction and efficiency.

Technology

Maintenance/Support		
Level	**Score**	**CCBHC Example**
Level 1: Initial	The organization lacks structured maintenance or support processes for IT tools, leading to potential service disruptions and security vulnerabilities.	A server crash disrupts service because the CCBHC has no routine maintenance schedule for its IT infrastructure.
Level 2: Defined	Maintenance efforts are sporadic and reactive, focusing on immediate fixes rather than systematic improvements or preventive measures.	When a software glitch occurs, IT support is called to make an ad hoc fix, without reviewing underlying issues that could prevent future occurrences.
Level 3: Partially Managed	The clinic has formal processes for regular maintenance and support of IT systems, including software updates and security patches to ensure operational continuity.	IT staff members conduct monthly reviews of system performance and apply necessary updates to ensure all tools function efficiently.
Level 4: Managed	Comprehensive policies govern the maintenance and support of IT systems, ensuring consistent updates and adherence to security standards across all departments.	An annual audit of IT security practices ensures that maintenance routines are compliant with the latest health data protection regulations.
Level 5: Optimizing	The clinic actively reviews and enhances its maintenance and support strategies to incorporate best practices and technological advancements, ensuring optimal performance and security.	Continuous improvement processes are in place for IT systems, with quarterly strategy reviews to adapt to new technological developments.

Technology

Physical Resources		
Level	**Score**	**CCBHC Example**
Level 1: Initial	The organization's lack of adequate hardware and infrastructure leads to challenges in accessing and analyzing behavioral health data effectively.	Insufficient storage capacity limits the clinic's ability to implement new software tools for patient/client management.
Level 2: Defined	Physical resources are acquired as immediate needs arise, without a long-term strategy or consistency in technological standards.	Temporary fixes are applied to network issues, leading to recurring problems and security vulnerabilities.
Level 3: Partially Managed	The clinic has standardized its physical infrastructure to meet current technological demands and makes regular updates to hardware systems.	A scheduled upgrade to the data storage systems is conducted to enhance data processing speeds and security.
Level 4: Managed	Oversight processes are in place to maintain and optimize the clinic's physical resources, ensuring they support the complex data needs of behavioral health services.	Systematic reviews of the IT infrastructure (using inventories) are conducted to identify opportunities for efficiency and risk mitigation.
Level 5: Optimizing	The organization actively plans and adapts its physical infrastructure to anticipate future technological advancements and expanding service requirements.	The CCBHC invests in scalable infrastructure to support an expanding array of telehealth services and data analytics capabilities.

Technology

Resource Abstraction		
Level	**Score**	**CCBHC Example**
Level 1: Initial	The clinic lacks any form of resource abstraction, leading to inefficient use of physical IT resources and limited scalability.	The team is unable to efficiently extract the necessary data, leading to delays in treatment adjustments and patient/client care planning.
Level 2: Defined	Ad hoc resource abstraction measures are taken as immediate needs arise, without a cohesive or secure strategy.	Data can be abstracted, but the process is time consuming and uncoordinated, causing delays in obtaining useful insights.
Level 3: Partially Managed	The organization has implemented a plan for resource abstraction, ensuring secure and scalable access to virtual resources in line with current health data standards.	The data abstraction process still requires significant cleaning before data can be used for analytics, leading to inefficiencies.
Level 4: Managed	Resource abstraction processes are fully integrated and standardized, providing robust, secure and efficient access to computing resources across the clinic.	Data abstraction allows for analysis with minimal cleaning, streamlining the process and improving the timeliness of insights.
Level 5: Optimizing	Ongoing evaluations and enhancements are made to the resource abstraction framework, ensuring it supports the latest in health care analytics and can adapt to future growth and technological advancements.	Data abstraction is efficient and coordinated, enabling seamless integration and analysis and supporting proactive decision-making in patient/client care.

Technology

Application Program Interfaces Management		
Level	**Score**	**CCBHC Example**
Level 1: Initial	The clinic lacks a formalized API management strategy, leading to fragmented data access and potential security vulnerabilities.	Data silos persist due to the absence of integrated API management, complicating comprehensive patient/client care.
Level 2: Defined	API management is reactive, addressing specific needs as they arise without a proactive or strategic approach.	Temporary API patches are applied to integrate new health apps, resulting in unstable data exchanges.
Level 3: Partially Managed	The clinic has established a basic API management framework that supports essential services and begins to integrate systems.	Secure API protocols are established, allowing seamless data flow between different systems within the clinic.
Level 4: Managed	Comprehensive governance is applied to API management, ensuring robust functionality and security across the clinic's systems.	Regular security audits are conducted for APIs, to ensure compliance with health care regulations and prevent data breaches.
Level 5: Optimizing	Ongoing refinement and expansion of API management practices ensure future-proofing and adaptability to new technological advancements.	API infrastructure is expanded to support advanced analytics and machine learning models, driving insights into patient/client care improvements.

Technology

Data Repository		
Level	**Score**	**CCBHC Example**
Level 1: Initial	The clinic does not have a centralized data repository, causing inefficiencies and potential data integrity issues.	Manual data-handling processes are prevalent due to the lack of a centralized data repository, leading to inefficiencies.
Level 2: Defined	Limited data integration capabilities exist, with basic data storage and retrieval functions that do not support complex analytics.	Basic electronic data storage is implemented but lacks the functionality needed for detailed data analysis.
Level 3: Partially Managed	The data repository includes comprehensive security measures and supports detailed querying across all clinical data systems.	A data repository is established, centralizing patient/client data and ensuring secure access for authorized staff.
Level 4: Managed	Advanced data management practices are in place, ensuring that data is continuously updated and accessible in a distributed environment.	The data repository is upgraded to include automatic data synchronization across platforms, enhancing data availability and accuracy.
Level 5: Optimizing	The data repository is capable of real-time data interactions and is regularly enhanced to meet the evolving needs of health care analytics.	Predictive analytics capabilities are integrated into the data repository, allowing for real-time health monitoring and decision support.

Technology

Data Sources		
Level	**Score**	**CCBHC Example**
Level 1: Initial	The clinic lacks integration processes for data warehouses, resulting in siloed and inaccessible data from sources such as EHRs, patient/client surveys and billing information.	Manual data handling of EHRs results in frequent errors and incomplete patient/client records.
Level 2: Defined	Ad hoc data integration processes are employed as immediate needs arise, leading to inconsistent access to EHRs, patient/client surveys and billing data.	A temporary database solution is used during a health campaign to handle participant information from patient/client surveys.
Level 3: Partially Managed	Established standards for data integration into a centralized data warehouse improve consistency and accessibility across various systems, including EHRs and external databases.	A centralized data warehouse is implemented, streamlining multiple departments' access to data, including EHRs and billing systems.
Level 4: Managed	Data integration into a unified data warehouse is comprehensively managed and governed, ensuring reliability and security of EHRs, patient/client surveys and other critical data.	An enterprise data warehouse aggregates all patient/client data, including from EHRs, surveys and external databases, supporting complex analysis and reporting.
Level 5: Optimizing	Continuous review and improvement of data integration strategies support long-term planning and adaptability, incorporating new data sources such as wearable technology and social media.	Strategic updates to data architecture incorporate new data sources like wearable technology and social media into the centralized data warehouse.

Technology

Service Delivery and Automation		
Level	**Score**	**CCBHC Example**
Level 1: Initial	The clinic has no capacity for performing clinical analytics, severely limiting insights into patient/client care and operations.	Clinicians' analytics tools can only perform basic statistical methods for patient/client data analysis, hindering deeper insights.
Level 2: Defined	Limited analytics capabilities are available, supporting basic data review and simple analytics tasks.	Tools that can only perform descriptive analytics are used to review historical treatment outcomes, providing some insights for care improvement.
Level 3: Partially Managed	The clinic employs a variety of analytics tools that effectively support day-to-day clinical and administrative operations.	Analytics tools can help identify patterns in patient/client admissions, supporting resource allocation decisions.
Level 4: Managed	Predictive analytics tools are employed to anticipate patient/client needs and optimize care strategies.	Tools can perform predictive models forecasting patient/client care needs, enabling proactive resource planning and staffing.
Level 5: Optimizing	Advanced prescriptive analytics tools are used to proactively manage patient/client care and operational efficiency.	Tools can provide decision-support systems using real-time data to recommend personalized treatment plans, improving patient/client outcomes.

Technology

Tools and Software

Level	Score	CCBHC Example
Level 1: Initial	Basic data tools are lacking, limiting effective data use across the clinic.	The clinic has no capacity for performing clinical analytics, severely limiting insights into patient/client care and operations. Tools/Software: No analytics platforms are systematically used for analytics.
Level 2: Defined	Commercial off-the-shelf tools are introduced for specific analytics needs, improving data handling capabilities.	Limited analytics capabilities are available, supporting basic data review and simple analytics tasks. Tools/Software: Descriptive analytics tools such as Microsoft Access and Excel are used to review historical treatment outcomes, providing some insights for care improvement.
Level 3: Partially Managed	Open-source tools are available, enhancing the clinic's ability to handle a variety of data tasks with more flexibility.	The clinic employs a variety of analytics tools that effectively support day-to-day clinical and administrative operations. Tools/Software: Open-source tools like R and Elasticsearch are used to help identify patterns in patient admissions, supporting resource allocation decisions.
Level 4: Managed	Tools are developed to be user-friendly for trained staff, increasing efficiency and data accessibility.	Predictive analytics tools are employed to anticipate patient/client needs and optimize care strategies. Tools/Software: Open-source tools are used to develop tools that are intuitive for all users.
Level 5: Optimizing	Tools are designed to be intuitive, requiring minimal training, ensuring that all staff can effectively use them for data-driven decision-making.	Advanced prescriptive analytics tools are used to proactively manage patient/client care and operational efficiency. Tools/Software: Decision support systems like IBM Watson or advanced EHR systems with real-time data integration provide recommendations for personalized treatment plans, improving patient/client outcomes.

Technology

Visualization Tools		
Level	**Score**	**CCBHC Example**
Level 1: Initial	The clinic lacks tools capable of creating meaningful visualizations, hindering data communication.	Paper-based reports are cumbersome and fail to convey complex data relationships effectively.
Level 2: Defined	Basic visualization tools are employed to address specific needs, improving data presentation for limited uses.	New software enables the finance team to visualize budget trends, aiding in fiscal planning.
Level 3: Partially Managed	Advanced visualization tools are adopted, enabling the creation of detailed reports and dashboards that support a broader range of clinical and administrative needs.	Custom report templates are created for various departments, standardizing data presentation and enhancing communication.
Level 4: Managed	Dynamic, customized visualizations are developed for specific data sets, enhancing decision-making processes.	Interactive visualizations are used in strategic planning meetings to explore operational data and inform decisions.
Level 5: Optimizing	Visualization tools and processes are continually enhanced to keep pace with the clinic's evolving data needs, ensuring that visualizations provide maximum value.	Continuous feedback from users drives the refinement of visualization tools, integrating new data sources and analytics techniques to enhance usability.

Technology

Interfaces		
Level	**Score**	**CCBHC Example**
Level 1: Initial	The current interfaces do not support the use of analytics, limiting the staff's ability to engage with data effectively.	Staff cannot access basic analytic reports, leading to delays in understanding patient/client trends and outcomes.
Level 2: Defined	Basic interfaces allow staff to monitor analytics results, aiding in routine data review processes.	Staff members use a dashboard to track daily patient/client admissions and treatment outcomes, simplifying data review.
Level 3: Partially Managed	Alert-based interfaces inform staff about critical analytics findings, enhancing responsiveness to data-driven insights.	Alerts notify care teams of potential health risks identified through ongoing data analysis.
Level 4: Managed	Dynamic reporting interfaces provide real-time data visualizations, aiding operational and clinical decision-making.	A dynamic reporting tool visualizes treatment efficacy across different patient/client demographics, enhancing strategic planning.
Level 5: Optimizing	Advanced interfaces enable exploratory data analysis, supporting innovative approaches to patient/client care and clinic management.	Clinicians use exploratory analysis tools to hypothesize and test new treatment modalities based on existing patient/client data.

Technology

Communications		
Level	**Score**	**CCBHC Example**
Level 1: Initial	The organization has not yet implemented any formal analytics-focused communications.	Misconceptions about data analytics persist due to a lack of communication, affecting staff buy-in.
Level 2: Defined	Occasional analytics updates are shared but lack consistency and broad reach.	An annual report on analytics activities is published, reaching a limited audience within the CCBHC.
Level 3: Partially Managed	Regular, formal communications on analytics successes and insights are initiated though not fully integrated into regular workflows, as communication efforts are shared to meet one-time needs.	Dedicated intranet resources provide on-demand access to analytics tutorials and case studies, increasing visibility. Additionally, quarterly reports on analytics projects are shared with key external stakeholders, such as funding agencies and partner organizations, to keep them informed about progress and outcomes.
Level 4: Managed	A structured communication strategy is in development or early implementation, aiming to regularly engage all levels of staff with analytics findings and their implications.	Interactive dashboards are introduced, allowing staff members to explore data and insights relevant to their departments. Biannual meetings are held with external stakeholders, including community partners and regulatory bodies, to discuss analytics insights and collaborative strategies for improving patient/client care.
Level 5: Optimizing	A robust analytics communication protocol is fully integrated into organizational practices, with targeted messaging reinforcing the value of analytics in addressing clinical, operational and administrative needs.	A continuous feedback loop is established, where staff can contribute to and learn from analytics projects, enhancing organizational adaptation. In addition, annual public reports and presentations are made to external stakeholders, including community leaders and policymakers, showcasing the impact of analytics on community health outcomes and securing ongoing support and collaboration.

Appendix H: Scoring Form

Analytics Opportunities	Rater 1	Rater 2	Final	What objective tasks are necessary to assess the organization at the next capability level?
Develop Opportunities				
Opportunity Identification				
Opportunity Selection				
Manage Projects				
Project Portfolio				
Project Resources				
Project Review				
Project Validation				
Execute Solutions				
Solution Implementation				
Solution Evaluation				

Analytics Techniques	Rater 1	Rater 2	Final	What objective tasks are necessary to assess the organization at the next capability level?
Data Preparation and Manipulation				
Organize Structured Data				
Organize Unstructured Data				
Analytics Tradecraft				
Data Analysis				
Data Visualization				
Reporting and Distribution				

Culture	Rater 1	Rater 2	Final	What objective tasks are necessary to assess the organization at the next capability level?
Engagement				
Communications				
Marketing and Branding				
Leadership				
Recognition				
Organizational Enablers				
Structural Mechanisms				
Policies and Procedures				
Community				
Learning				

Data	Rater 1	Rater 2	Final	What objective tasks are necessary to assess the organization at the next capability level?
Strategic Data Management				
Data Management Strategy				
Data Governance Model				
Data Requirements Life Cycle				
Data Operations				
Data Standards and Procedures				
Data Access				
Data Collection				
Data Sourcing				
Data Persistence				
Data Quality				
Data Quality Framework				
Data Quality Assurance				

People	Rater 1	Rater 2	Final	What objective tasks are necessary to assess the organization at the next capability level?
Talent Definition				
Role Definition				
Position Requirements				
Talent Recruitment				
Attracting Talent				
Sourcing Talent				
Hiring Talent				
Talent Placement				
Workforce Planning				
Workforce Management				
Workforce Design				
Talent Development				
Talent Management Strategy				
Career Development				
Performance Management				
Retention Strategies				

Technology	Rater 1	Rater 2	Final	What objective tasks are necessary to assess the organization at the next capability level?
Planning and Development				
Analytics Technology Strategy				
Planning Review				
Technology Research				
Internal Development				
Purchasing New Tools				
Implementation/Deployment				
Maintenance/Support				
Infrastructure				
Physical Resources				
Resource Abstraction				
Application Program Interfaces Management				

Technology	Rater 1	Rater 2	Final	What objective tasks are necessary to assess the organization at the next capability level?
Technical Data Management				
Data Repository				
Data Sources				
Analytics Services and Interaction				
Service Delivery and Automation				
Tools and Software				
Human Insights and Actions				
Visualization Tools				
Interfaces				

Appendix I: Considerations for Post-assessment Planning

After completing the organizational analytics capability assessment, health care organizations face a critical decision: determining which capabilities to advance first. Although the self-assessment reveals gaps across multiple areas, not all advancements can or should be pursued simultaneously. Prioritizing these opportunities requires careful consideration of six fundamental factors:

- Feasibility with existing resources
- Potential impact on operations and outcomes
- Importance for organizational sustainability
- Alignment with organizational mission and vision
- Urgency
- External pressures from regulators, payers and policymakers demanding greater accountability and compliance

This prioritization is essential because it allows organizations to focus their limited resources on the most meaningful improvements — those that are achievable, create substantial value and support long-term viability. By thoughtfully prioritizing, organizations can build their analytics capabilities to create a lasting impact while efficiently using available resources. The prioritization process will help the organization establish a sequence of capability development efforts.

Attention to key subcategories related to organizational sustainability

Health care organizations must address critical imperatives in risk management, financial planning, regulatory compliance and population/utilization management — all of which directly impact operational sustainability and the effectiveness of care delivery. From a sustainability perspective, it is particularly important to address the following key OACM attributes and subcategories before focusing on other areas with lower capability:

- **Data** is a foundational element directly affecting an organization's ability to manage risk and meet regulatory requirements. Critical subcategories include:
  - Data Quality Framework and Assurance: Ensuring data accuracy and completeness
  - Data Management Strategy and Governance Model: Protecting and controlling data use
  - Data Standards and Procedures: Maintaining consistent data operations
  - Data Access: Securing protected health information
- **Analytics techniques** are essential for population health management and financial planning, specifically:
  - Reporting and Distribution: Facilitating timely decision-making
- **Technology** plays a vital role in enabling secure data integration and access:
  - Data Repository: Integrating data across various sources
  - Application Programming Interfaces Management: Providing secure API access
  - Tools and Software: Supporting analysis
  - Interfaces: Enabling more real-time access to critical information

Organizations prioritizing development in these areas may be better positioned to manage essential risk elements, maintain compliance, optimize resource usage and improve population health outcomes — all while ensuring financial sustainability.

Appendix J: Glossary of Common Terms

Ad hoc analysis: Nonroutine analysis conducted to answer specific questions or solve distinctive problems as they arise.

Analytics frameworks: Structured approaches used to systematically analyze data and extract meaningful insights.

Analytics needs: The specific requirements for data analysis to support decision-making and improve outcomes.

Analytics capabilities: The skills, tools and processes that enable an organization to effectively analyze data.

Analytics community: A group that collaborates on analytics projects and shares best practices.

Analytics culture: The collective mindset and practices that promote the use of data analytics in decision-making across an organization.

Analytics governance: The policies, roles, responsibilities and processes that ensure the effective and ethical use of analytics.

Analytics tools: Software and applications used for collecting, processing, analyzing and visualizing data.

Automated processes: Systems that automatically perform repetitive tasks using data to improve efficiency and accuracy in operations.

Capacity planning: The process of determining the resources needed to meet future demands.

Case studies (aka use cases): Detailed examinations of specific instances that illustrate the application and impact of analytics.

Change management: The approach to transitioning individuals, teams and organizations to a desired future state focused on adopting new routines to optimize operations.

Clinical analytics: The analysis of clinical data to improve patient/client care and health outcomes.

Compliance requirements: The regulations and standards organizations must follow to ensure legal and ethical operations.

Continuous learning: Ongoing educational efforts to keep staff up to date with the latest knowledge and skills, often associated with workforce development.

Data accessibility: The ease with which data can be accessed and used by authorized personnel.

Data architecture: The design and structure of data systems within an organization and between organizations.

Data cleaning: The process of identifying and correcting errors in data.

Data documentation: Records and descriptions of data sources, structures and usage in analytics.

Data governance framework: A structured approach to managing data quality, security and usage aligning with policy, legal and ethical principles.

Data handling: The processes involved in managing data from collection, to storage, to analysis.

Data integration: Combining data from different sources to provide a unified view for analysis.

Data literacy: The ability to understand and use data effectively.

Data monitoring: Regular review and tracking of data to ensure accuracy and compliance.

Data privacy: Ensuring that patient/client data is protected and used in accordance with privacy regulations.

Data quality: The overall fitness, reliability and effectiveness of data for its intended use. It encompasses multiple dimensions including accuracy, completeness, consistency, timeliness and relevance. High-quality data meets the needs of its users and supports effective decision-making and operational processes within an organization.

Data quality assurance: Processes to ensure that data is accurate, complete and reliable.

Data security: Protecting data from unauthorized access, breaches and other threats.

Data standards: Established terminology, codes and guidelines for data usage and management.

Data stewardship: The responsibility for managing and overseeing data.

Data strategy: A plan outlining how data will be managed and used to support organizational goals.

Data validation: A specific process or set of procedures used to verify data's accuracy, correctness and conformity to predefined rules or criteria. It involves checking data inputs against established standards to ensure they meet required formats, fall within acceptable ranges and adhere to business rules, thereby preventing erroneous or invalid data from entering a system or database.

Clinical decision support: Clinical decision support provides timely information, usually at the point of care, to help inform decisions about a patient's care. Clinical decision support can effectively improve client outcomes and lead to higher-quality health care.

Diagnostic analytics: Analysis aimed at understanding the reasons behind specific outcomes.

Efficiency metrics: Measures used to evaluate the efficiency of services and operations.

Emerging technologies: New and innovative technologies that have the potential to improve analytics and outcomes.

Engagement strategies: Approaches to involve and motivate stakeholders in analytics initiatives.

Financial analytics: The use of data analysis to manage and optimize financial performance.

Health analytics: The use of data analysis to improve health outcomes and health care delivery.

Health information systems: Systems used to manage health care data and support clinical and administrative functions.

Health care compliance: Adhering to laws, regulations and standards governing health care practices.

Human capital strategies: Approaches to managing and developing the workforce.

Implementation strategies: Plans and approaches for introducing new tools, systems or processes.

Information security: Protecting information from unauthorized access and breaches.

Interoperability: The ability of different systems and software to work together and exchange data seamlessly.

Information technology infrastructure: The hardware and software systems that support operations and analytics.

Key performance indicator: A KPI is a quantifiable measure used to evaluate the success of an organization, employee or project in meeting specific performance objectives. KPIs provide a way to track progress, assess effectiveness, and make data-driven decisions. They are typically aligned with the organization's strategic goals and are used to monitor performance over time.

Knowledge management system: A system for capturing, distributing and effectively using knowledge.

Leadership engagement: Active involvement of leaders in promoting and supporting analytics initiatives.

Machine learning: A type of artificial intelligence that enables systems to learn from data and improve over time.

Machine learning models: Algorithms and statistical models used to make predictions and insights from data.

Objective and key results: A goal-setting framework used by organizations to define and track objectives and their outcomes. The OKR methodology consists of two main components:

- Objectives: Qualitative, ambitious goals that define what the organization wants to achieve
- Key results: Specific, measurable and time-bound metrics used to track the achievement of the objective.

Operational efficiency: The ability to deliver services effectively while minimizing waste and maximizing resources.

Patient/client management systems: Software systems used to manage patient/client information and care processes.

Patient/client matching: The process of accurately linking patient/client records across different systems. A patient/client matching protocol is often called an Enterprise Patient Matching Index.

Performance dashboards: Visual tools that display key performance metrics to monitor and manage services.

Performance management: The ongoing process of evaluating and improving staff performance.

Predictive analytics: The use of data analysis to predict future outcomes and trends.

Predictive models: Statistical models used to forecast outcomes based on historical data.

Prescriptive analytics: Advanced analysis that suggests specific actions to achieve desired outcomes.

Proactive decision-making: Making informed decisions in advance to prevent issues and improve outcomes.

Quality reporting: Compiling and submitting data on quality measures to regulatory bodies and stakeholders.

Real-time data: Data that is collected and processed immediately (within minutes), providing up-to-date information for decision-making.

Regulatory compliance: Adhering to laws and regulations.

Risk management: The strategies and processes used to minimize and manage risks.

Software development life cycle: The process used to plan, create, test and deploy software.

Security protocols: Measures and procedures to protect data from unauthorized access and breaches.

Strategic planning: Defining the direction and goals of an organization and making decisions on resource allocation.

Structured data: Types of data that follow terminology, ontology and/or data standards (e.g., USCDI or ICD-10 codes).

Unstructured data: A type of data that is often narrative in nature and does not follow a structure. Typically, this data must be analyzed using natural language processing.

System integration: Combining different systems and software to work together seamlessly. This is often done with an API.

Talent acquisition: The process of attracting and hiring skilled professionals.

Talent pools: Groups of candidates who are considered potential hires for future roles.

Taxonomy: A classification system used to organize data and terminology.

Trend analysis: The analysis of data over time to identify patterns and trends.

Unified data warehouse: A centralized system that consolidates all data for analysis and reporting.