Analytics Capability Assessment

Instructions: Evaluate each question in the first column of the assessment matrix and select a score that reflects your organization's capability by circling a corresponding number. Total your score in each of the three domains then divide by the number of factors in each one (People = 4, Process = 8, Technology = 3) to determine your average score for that domain. To assess your organization's capability level overall, total the scores of each domain and divide by 3. General characteristics of each level are described below.

Capability Levels	Reactive	Responsive	Proactive	Predictive
General Characteristics	No evidence or very limited evidence of capability, decentralized efforts to get data, access to information for the first time, situational reporting.	Some departmental evidence but not integrated or aligned, initial data marts, standardized reporting through IT, improved data capture at department level, some historical trending and analysis.	Evidence of an emerging integrated approach, clinical and business process improvements based on analytics, analytics driving change and strategy, culture change, integration of measure across domains (clinical, financial, operations, patient experience).	Fully integrated and aligned organizationally, leading edge tools and skills, data services provide robust support across the health center, automated analytic results are fed back into predictive models for value-driven health care.

ASSESSMENT

1. PEOPLE												
Capability Levels	**Reactive**			**Responsive**			**Proactive**			**Predictive**		
Senior Leader Sponsorship: Senior Leader Sponsorship assesses the degree to which leaders in the organization sponsor healthcare analytics efforts, advocate for a structured approach to analytics and allocate resources to it.												
1A. To what extent are senor leaders involved with and supportive of data efforts, issues and analytics in your organization?	Managers typically firefight data issues as they arise; senior leaders are rarely involved in the detail of such issues.			Managers/Directors are responsible for departmental data issues and resolving problems as they relate to operations.			Senior leaders have responsibility for ensuring that data is available for driving decisions and allocate resources to ensure its quality, availability and timeliness.			Senior leaders sponsor efforts throughout the organization to ensure healthy data and analytics efforts, and ensure that departmental efforts are balanced and aligned to maximize the use of data as a strategic asset.		
SCORE	0	1	2	3	4	5	6	7	8	9	10	11

1. PEOPLE												
Capability Levels	**Reactive**			**Responsive**			**Proactive**			**Predictive**		
Data Stewardship: The role of the "data steward" may be formally defined or informally recognized and is typically the "go to" person within a department or site for all the queries/issues and usability of the data. Data stewards ensure the data is complete, accurate, and timely and that it is useful to the department or site in measuring performance and making improvement.												
1B. To what extent are departmental staff identified as being responsible for defining data requirements and ensuring departmental or project based data quality and effective use?	No formal ownership within departments; staff use their own initiative and rely on "gut feel" or self-defined standards of accuracy and quality.			Departmental data users or experts have an informally acknowledged role in assuring that data are captured consistently and accurately.			Clearly defined, formal roles are called out for data stewardship in some high-priority areas or departments.			Data stewards are present and acknowledged throughout all departments the organization, and held accountable for accurate, reliable, integrated data to achieve organizational goals.		
SCORE	0	1	2	3	4	5	6	7	8	9	10	11
Clinical and Business Analysts: Clinical and business analysts are the human resources that facilitate analysis and use of data throughout the organization. Analysts understand the clinical and business purpose of the data and can translate it into useful intelligence.												
1C. To what extent do skills, roles and staff exist within the organization to understand existing organization data, explore new sources of data, and to present insights from data.	Limited to no analytics staff; analytic capabilities ebb and flow with staff turnover in informal roles/skills.			De facto roles for experts within the organization or limited assigned roles for analysts (i.e., part-time or not the staff member's primary responsibility).			Dedicated and centralized analytics staff exist that participate in cross functional teams and support data driven decision-making; analytics staff may be provided by a support organization (network, consortia, hospital) but not always sufficient for all analytics needs.			Advanced analytics skills are in place (e.g., research scientist, clinical informaticist, epidemiologist); analysts promote advanced uses of data (e.g., predictive modeling) and build data literacy across the organization.		
SCORE	0	1	2	3	4	5	6	7	8	9	10	11

1. PEOPLE

Capability Levels	Reactive	Responsive	Proactive	Predictive
Data Driven Culture: A data-driven culture refers to an organizational climate that embraces use of data in achieving organization goals and making positive change through continuous improvement in all areas.				
1D. To what extent does the organization promote data literacy and require supporting data to make decisions?	The focus of data and information management is mostly on accurate historical data and retrospective reporting.	Data and information is available and used by department heads, but not uniformly required when making operational decisions or changing strategy.	Data and information is used by managers and leaders on a regular basis, is pushed down and across the organization, and is required to support business cases and key decisions.	Data-driven decisions are pervasive in the organization at all levels. Line staff knows how their day-to-day actions affect performance metrics and achievement of goals. Data literacy is a hallmark of the organization.
SCORE	0 1 2	3 4 5	6 7 8	9 10 11

Total your scores and divide by 4 to determine your organization's average score within the People domain:

2. PROCESS

Capability Levels	Reactive	Responsive	Proactive	Predictive
Data Strategy: A data strategy is a documented plan and/or systematic approach that defines resource allocation, activities and timeframes to address the acquisition, completeness, accuracy, timeliness and use of data in the organization.				
2A: To what extent does your organization have a systematic approach to developing and executing a data strategy that supports the organization's strategic goals and objectives?	Data strategy or data needs are not explicitly considered when defining or executing strategic plans and objectives; data needed to evaluate progress toward goals is often missing.	Data strategy may be evident for specific projects and efforts such as PCMH recognition, MU, UDS or other reporting requirements but it's not well-documented, widespread or integrated with organization strategy.	Departmental plans and organizational strategy explicitly include an accompanying data strategy and analytics approach; the data strategy also addresses increasing data literacy throughout the organization.	Strategic priorities and the data analytics strategy are aligned and widely understood, including consideration of data from external sources that are critical to achieving goals; strategy is periodically reviewed and updated to remain responsive to changing priorities.
SCORE	0 1 2	3 4 5	6 7 8	9 10 11

2. PROCESS

Capability Levels	Reactive			Responsive			Proactive			Predictive		
Data Governance: Data governance refers to the processes and structures in place to oversee and manage the Data Strategy, data and information needs, conflicts, definitions and gaps within an organization. The purpose of data governance is to improve data quality, increase data literacy and maximize data use in achieving organization goals.												
2B: To what extent are data issues and opportunities prioritized, resourced, and managed within your organization?	Motivated individuals or groups within a department take ownership of their priority data needs and do what they can within their control; IT generally makes most data decisions.			Teams are formed to address data management for one-off initiatives when a problem or new clinical/business case requires it and depends on the project team to execute.			A formal data governance project management structure is emerging in the organization to ensure that priority goals and objectives can be met and the data needed is available.			Cross-functional team(s) meets regularly to ensure that data definitions and data requirements are integrated, standardized and documented, and data access is optimized both across the organization and with external partners.		
SCORE	0	1	2	3	4	5	6	7	8	9	10	11
Performance Measurement: The use of data in the organization for monitoring performance using a balanced set of industry standard measures in clinical, operational, financial and patient experience domains.												
2C: To what extent does your organization turn data into measures that assess performance on the organization's strategic goals?	No performance measures in place or very few measures beyond those mandated by federal, state or other reporting such as UDS, MU.			Performance measures developed as needed to monitor selected clinical/business processes; teams or departments are beginning to measure performance but measurement areas are not well connected.			Measures are developed to monitor clinical/business process performance of strategic priorities; teams or departments measure performance in alignment with strategic goals.			A strategically balanced set of clinical, operational, financial and patient experience measures are in place to systematically monitor performance for all strategic priorities (e.g., MU, P4P, PCMH).		
SCORE	0	1	2	3	4	5	6	7	8	9	10	11

2. PROCESS												
Capability Levels	**Reactive**			**Responsive**			**Proactive**			**Predictive**		
Data Quality: Data quality refers to the trustworthiness of data used in the organization for decision-making and the efforts to ensure accuracy, completeness, timeliness.												
2D. To what extent does your organization ensure accurate data across the organization?	Not a priority. Most efforts are focused on cleanup and individual intervention; data quality review does not occur with rigor or regularity in the organization.			Data quality reviews occur within selected teams, departments or sites but the efforts are usually one-time efforts and not sustained on an ongoing basis.			Departmental data quality tracking reports are produced on a regular basis and are integrated and aligned across the organization; common errors are assessed and training occurs to address them.			Data collection and aggregation is highly automated with built-in data quality checks and exception reports; measures of data quality (e.g., % accuracy) prioritize and inform ongoing data quality efforts and trace errors to individuals for training.		
SCORE	0	1	2	3	4	5	6	7	8	9	10	11
Analysis of Data: Analysis of data refers to how well data and performance measures are turned into information, and communicated in a visually appealing format for effective use by all stakeholders in the organization.												
2E: To what extent are data analyzed and results communicated to allow staff at all levels to act on information?	Required reporting (UDS) bring together data from multiple domains but the information is not widely accessible and it is difficult to draw conclusions from the presentation of data (no dashboards or scorecards produced).			Some teams, departments report on performance with at least quarterly frequency and produce basic dashboards and/or scorecards but they are not widely accessible or cascading.			Information is available, timely and accessible to track performance on a monthly basis but varies across departments; departmental and enterprise-wide data analysis (dashboards, scorecards) cascades to all levels with some exploration using externally available data.			Information is used to manage and drive performance and improvement at all levels, with timely dashboards and scorecards available across the organization. Predictive analytics are used to inform care decisions in advance or at point of care. Analyses and visualizations incorporate internal and externally available data.		
SCORE	0	1	2	3	4	5	6	7	8	9	10	11

2. PROCESS

Capability Levels	Reactive	Responsive	Proactive	Predictive
Acting on Results: Translating data into action to successfully harness opportunities from data analytics, identifying processes that need to change and motivating staff to take accountability for improvement.				
2F. How effectively does the organization act on the results of data analyses and reports, ensuring that change and improvement efforts are prioritized with assigned accountability and demonstrate measurable impact and sustainability?	• Using data to make improvement is not a primary consideration, focus is on fixing a specific problem; individuals in the organization are involved in ad hoc efforts and informal knowledge sharing is the primary source of acting on data. • Information quality is too uneven to permit acting on it with confidence.	Using data to make improvement is recognized as important by senior leadership but limited to major projects; some departments/sites are more successful at improvement efforts than others but there is limited accountability for measurable outcomes.	• Data and measurable outcomes are used routinely to demonstrate impact of prioritized improvement efforts • Most departments / sites successfully leverage data for improvement and sustainability, with some accountability for measurable outcomes (e.g., selected projects or departments).	• Data and measurable outcomes drive organization focus and improvement efforts towards industry leading performance with clear accountability, incentives and consequences for improvement; • Data literacy is pervasive; staff in the organization are fully trained to leverage data for improvement.

SCORE	0	1	2	3	4	5	6	7	8	9	10	11

Total your scores and divide by 8 to determine your organization's average score within the Process domain:

3. TECHNOLOGY												
Capability Levels	**Reactive**			**Responsive**			**Proactive**			**Predictive**		
IT Tools and Support for Analytics: Qualified IT staff help select, integrate, support and maintain analytics technologies and tools, and provide access to data for clinical and business analysts as required.												
3A: To what extent does IT provided the needed staff, services, and resources to help the organization integrate and support data analysis and visualization tools?	IT support for analytics consists mainly of maintenance and support of database platforms that capture health record data (e.g., EHR, PM). Dedicated analytics systems or tools are limited in functionality and utility.			IT support for analytics includes support for reporting and data mining from existing systems and basic analytics support. Analysis tools are limited to spreadsheets and databases with limited functions for systematic reporting, advanced data analyses, and self- service analytics.			IT supports analytics systems to meet needs of selected high priority areas; there are pockets of IT analytics support for some departments or data stakeholders who have keen interest but analytics systems are not fully integrated with existing health IT platforms ("standalone analytics").			IT supports analytics systems that interface with and leverage existing IT platforms (e.g., data warehouse), fully support organization data needs to achieve strategic goals, and support a data-driven culture with self-service analytics for all departments and data stakeholder groups.		
SCORE	0	1	2	3	4	5	6	7	8	9	10	11
Integration: Data is integrated from multiple domains (clinical, operational, financial, patient experience) and sources (hospitals, HIEs, health plan/claims, public health data, social determinants, geographic) in a warehouse or repository to help organizations drive toward achieving the Triple Aim.												
3B: To what extent are data from different internal and external sources/systems consistent and readily available through the organization's analytics systems and tools?	Important internally-generated data is stored in separate systems and is not consistent or requires extensive time-consuming manual efforts to integrate.			Specific reports combining data from different internal sources are available but only for limited sets of data and conducted on a project-by-project basis; some effort is made to identify, combine and use important external data, but it is not reconciled or audited.			Core data from internal and selected external sources are periodically combined to support performance measurement needs for strategic goals; Automated data feeds to a repository are available with limited manual intervention.			Data from multiple external sources are systematically (fully automated) combined with internal data to provide full data insight on performance relative to industry and help drive achievement of Triple Aim.		
SCORE	0	1	2	3	4	5	6	7	8	9	10	11

3. TECHNOLOGY												
Capability Levels	**Reactive**			**Responsive**			**Proactive**			**Predictive**		
Self Service Analytics: Self-service analytics refers to the degree to which data and performance measures are available to all stakeholders in the organization at the time and place needed via information technology tools and access points.												
3C. To what extent are the right data tools in place and accessible to meet the needs of all users in the organization?	• The data available is largely raw and requires additional processing to turn into useful, actionable information. • Access to and timeliness of actionable data is based on individuals that process the data (e.g., QI, IT staff).			• Reports, typically monthly, provide actionable information for selected departments and reports may be generated at any time. • Data and information to support the care team is limited.			• Reports, typically real-time, provide actionable information for all departments and reporting capability is widely available. • Data and information selectively support proactive care efforts and point of care decision-making to improve care.			• Data is widely accessible in a variety of formats and delivery modes to provide actionable information required by all data stakeholders. • Advanced analytics (prescriptive, predictive) provide intelligence on proactive care management and improving and sustaining business and quality outcomes.		
SCORE	0	1	2	3	4	5	6	7	8	9	10	11
Total your scores and divide by 3 to determine your organization's average score within the Technology domain:												

To assess your organization's capability level overall, total the scores of each domain and divide by 3:

Action Plan Worksheet: DATA STEWARDSHIP

Capability Levels	Reactive	Responsive	Proactive	Predictive
Data Stewardship: The role of the "data steward" may be formally defined or informally recognized and is typically the "go to" person within a department or site for all the queries/issues and usability of the data. Data stewards ensure the data is complete, accurate, and timely and that it is useful to the department or site in measuring performance and making improvement.				
1B. To what extent are departmental staff identified as being responsible for defining data requirements and ensuring departmental or project based data quality and effective use?	No formal ownership within departments; staff use their own initiative and rely on "gut feel" or self-defined standards of accuracy and quality.	Departmental data users or experts have an informally acknowledged role in assuring that data are captured consistently and accurately.	Clearly defined, formal roles are called out for data stewardship in some high-priority areas or departments.	Data stewards are present and acknowledged throughout all departments the organization, and held accountable for accurate, reliable, integrated data to achieve organizational goals.

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IDEAS FOR ACTION: Immediate Next Steps	Success Criteria (Approval, Buy In, Resources, etc.)

IDEAS FOR ACTION: 3-6 Months	Success Criteria (Approval, Buy In, Resources, etc.)

Action Plan: DATA GOVERNANCE

Capability Levels	Reactive	Responsive	Proactive	Predictive
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2B: To what extent are data issues and opportunities prioritized, resourced, and managed within your organization?	Motivated individuals or groups within a department take ownership of their priority data needs and do what they can within their control; IT generally makes most data decisions.	Teams are formed to address data management for one-off initiatives when a problem or new clinical/business case requires it and depends on the project team to execute.	A formal data governance project management structure is emerging in the organization to ensure that priority goals and objectives can be met and the data needed is available.	Cross-functional team(s) meets regularly to ensure that data definitions and data requirements are integrated, standardized and documented, and data access is optimized both across the organization and with external partners.

SCORE	0	1	2	3	4	5	6	7	8	9	10	11

IDEAS FOR ACTION: Immediate Next Steps	Success Criteria (Approval, Buy In, Resources, etc.)

IDEAS FOR ACTION: 3-6 Months	Success Criteria (Approval, Buy In, Resources, etc.)

Data Strategy Worksheet

This worksheet contains a set of questions that can be used to build and review your data strategy to align with your organization's key performance metrics or a family of measures for a specific improvement effort. Not all questions need to be answered for each data point or measure; use this as a guide to highlight potential data integrity and data management issues.

Component	Typical Questions	
Data Requirements	• What core data elements do you need to start with? • Which ones will you need in the future? • What are the sources of that data?	
	Current State:	**Plan of Action:**
Data Governance	• Who owns the data element(s)? • Who defines meanings and valid values? • What is the division of responsibilities between admin, clinical, and IT?	
	Current State:	**Plan of Action:**
Data Quality	• What validity issues are there with the required data? • Availability, accuracy, consistency, timeliness? • What data fixes are required?	
	Current State:	**Plan of Action:**
Granularity	• What level of detail do you need? • Does the data need to be at different levels of detail for different uses?	
	Current State:	**Plan of Action:**
Integration	• How do you get the data? • Does it need to be reformatted for consistency? • Does it need to feed back to other systems?	
	Current State:	**Plan of Action:**

Component	Typical Questions	
Stage and Store	• What is your data architecture - specifically where is the data held? • Will you have a central repository or data warehouse?	
	Current State:	**Plan of Action:**
Analysis	• What information and tools are required to perform the analysis? • What skills are required to understand the data? • What actions will result from the analysis? What are the criteria for those actions?	
	Current State:	**Plan of Action:**
Privacy	• Are there any sensitive data elements? • What are the HIPAA compliance requirements? • Will this data be shared with third-parties and what risks does that create?	
	Current State:	**Plan of Action:**
Reporting	• Do you have a need to report your data to others? • Do you need to alter the data to properly graph/report it? • Do you have the appropriate reporting tools? • Who needs access and how will they get it?	
	Current State:	**Plan of Action:**
Access	• What are the requirements to make the right data available to the right people at the right time? • Who are the data stakeholders and what are their data and reporting needs?	
	Current State:	**Plan of Action:**
Versioning and Retention	• If data is regularly updated, what data changes do you need to capture? • How do you track what version you are using? • How long do you keep data? When do you archive it?	
	Current State:	**Plan of Action:**