Development and Implementation of a Data Centric Organizational Framework for Delivery of Services in Nevada's Community Action Agencies

This document introduces the concept of *data centricity* as a foundational basis for the delivery of human services with a focus on client delivered services including case management.

The document has three components:

The Data Centric Organization

The Application of Data Centricity to the Nevada Service Delivery Model

The Application of Technology to Managing Client Services and Data Analytics

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The Data Centric Organization

Human Service organizations are frequently characterized as data rich but information poor. They are competent data collectors usually in compliance with third party reporting requirements but rarely have the opportunity to review, interpret or synthesize the data into information that can be applied to the management of the organization.

In Creating a Data-Driven Organization, Carl Anderson starts off saying, "Data-drivenness is about building tools, abilities, and, most crucially, a *culture* that acts on data." It's about acquiring and analyzing data to make better decisions.

What is a Data Centric Organization?

A data centric organization is characterized by the following core values

1

The data-centric approach values decisions that are supported by verifiable data

2

The success of this approach is based on data that is accurate, reliable, timely, and complete

3

This requires a management system that monitors data entry and provides follow up

4

It is imperative that the agency also has a system (or process) to store, retrieve and aggregate the data so it can be analyzed

5

In addition to assuring the quality of data collection and storage, the data centric approach relies on effectiveness of analysis and interpretation of the data

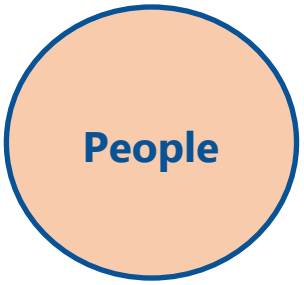
These values will only be effective if the information gained from the analysis is put to use to improve agency actions and produce results for families and communities

Data Centricity is the extent to which an organization is culturally and operationally oriented to apply data as a source of actionable insight in support of advocacy, marketing, engagement of stakeholders and the broader focus of the organization.

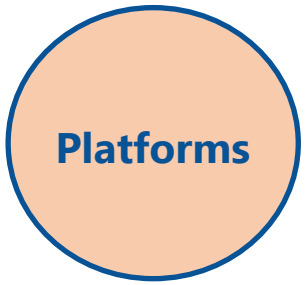
It implies that organizations have the right expertise, experience, and skills to get the most value out of their data with an emphasis on data analytics. Organizations needs to invest not just in data analytics, but across four operational pillars:

People **Platforms** **Partners** **Processes**

The Four Operational Pillars

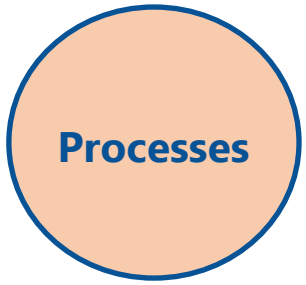


The organization must identify all persons and their roles and responsibilities in the collection and analysis of data. This includes staff within the organization itself as well as staff in other organizations such as those in the organization's referral network.



Organizations must establish clearly articulated work processes that identify the flow of information, the involvement of staff, timeframes and reporting requirements.

The organization must identify its database and any other databases with which it interacts or exchanges data. The platforms or databases must be clearly understood whether maintained in-house or by third party vendors.



Organizations rarely operate independently and the health and well-being of its partners are crucial to the accurate and reliable collection of data. Formal agreements are necessary for the sharing of data as are client confidentiality waivers and in many situations, HIPAA compliance.

Why Now?

In order for Community Action Agencies to demonstrate their effectiveness within a community, they need to establish data goals, their data needs to be verifiable through accountable and transparent work process, and there must be standards for service delivery and data collection. Additionally, ongoing analysis and evaluation of the organization's management and service delivery system must be implemented and maintained.

One of the driving forces and a welcome change is a re-emphasis on ROMA implementation with new training tools and curriculums designed for implementation at the agency level.

There are **three curriculums** recently developed with funding from the Community Action Partnership:

ROMA Series Beyond The Basics

- Conducting, Sharing, and Utilizing a Community Needs Assessment
- Developing an Agency Wide Strategic Plan
- Creating a Local Theory of Change
- Foundational Concepts – Reinforcing Intro to ROMA Basics

Board Training Series

- Introduction to Implementing ROMA for Boards
- Community Needs Assessment
- Creating a Local Theory of Change
- Strategic Planning
- Implementation of Services and Strategies
- Observing and Reporting Results
- Analysis and Evaluation

CAP Learning Communities Resource Center

- Setting the Stage for a Data-Centered Organization

This material was first introduced to the national Community Action Network in February 2018.

These materials are available to ROMA Trainers and Implementers from the CAP and ANCRT websites. They are encouraged to present the specific courses/trainings to their respective agencies, boards and their community partners. With the availability of these new materials, there is a clear "push" at the national level to have CAAs become "data centric", and that is the common thread for the three curriculums cited above:

ROMA Series Beyond The Basics

Board Training Series

CAP Learning Communities Resource Center

The Application of Data Centricity to the Nevada Service Delivery Model

There are **11 steps** that identify the Nevada Service Delivery Model with respect to data centricity. The **11 steps** have linearity, but when operational, are not always sequential. There are two central themes in this section:

1

Developing and establishing

generic policies, procedures, common definitions and monitoring practices that could be implemented within the organization.

2

Introducing the fundamentals

of data analysis and evaluation to orient staff as to their roles and responsibilities in the process, not necessarily as data analysts, but in the supporting role as stewards of good data collection and management practices.

A key **outcome** of data centricity is to ensure that data collection and the use of software (database) will be timely, accurate and complete.

While data collection and the use of software is frequently perceived by staff as an "additional" task resulting from a focus on compliance reporting, data centricity provides an opportunity to demonstrate how data—and its synthesis into information—can be used to support work processes, ongoing program evaluation, and performance driven services.

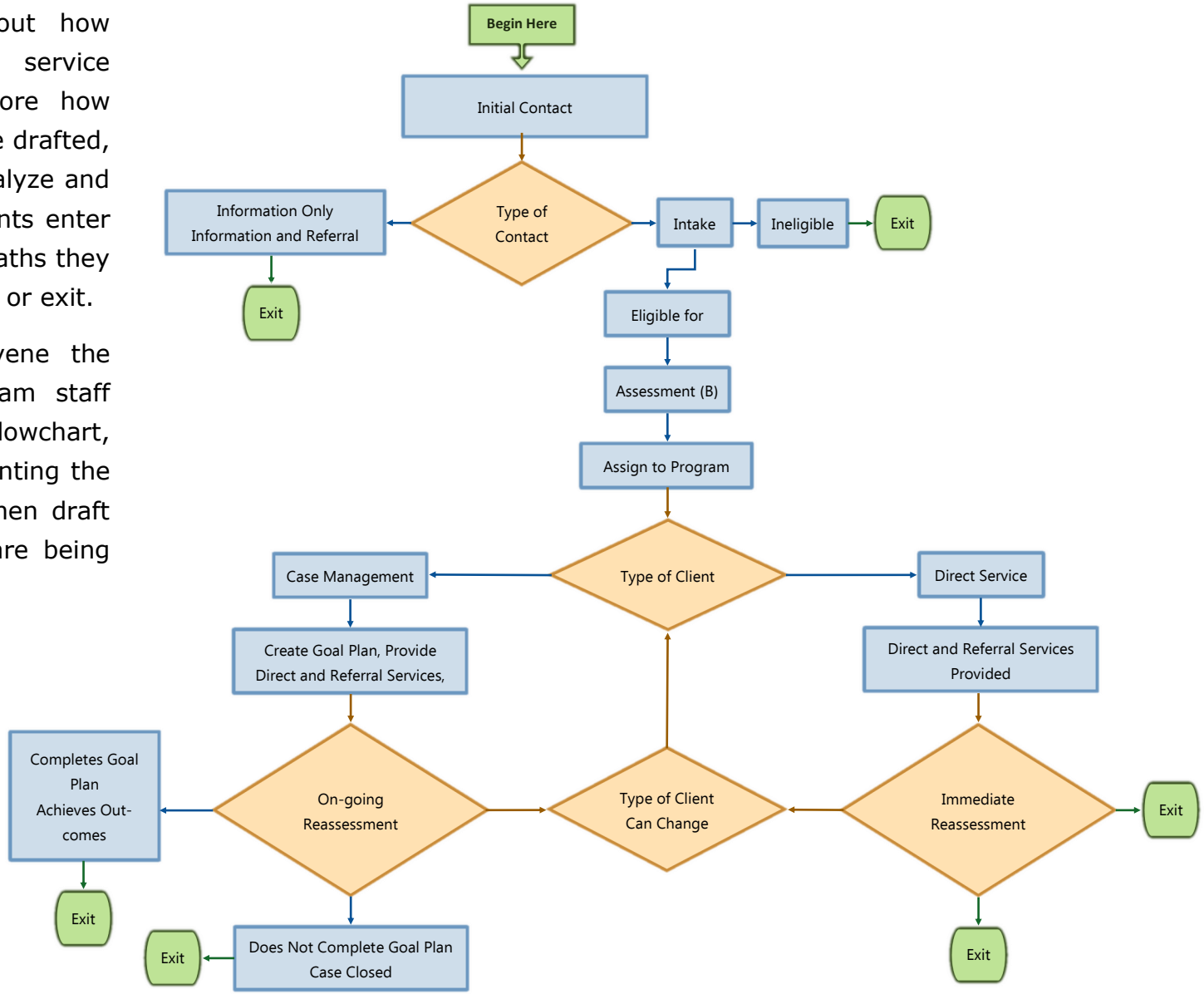
The Eleven Steps

Step One: Develop an Agency Flowchart

Develop an agency flowchart and the process for developing it

This effective tool maps out how clients flow through the service delivery system and therefore how client data flows as well. Once drafted, the organization can then analyze and identify where and when clients enter the system and the various paths they take from intake to resolution or exit.

A best practice is to convene the organization's various program staff and using the above sample flowchart, draft a similar model representing the current flow of clients and then draft an ideal design if changes are being contemplated.



Step Two: Determine When a Person Becomes a Client

Determining when a person becomes a client is fundamental to service delivery and the accuracy of client counts. This is especially important to an umbrella organization such as Community Action Agencies with its multiple programs, services and funding streams, all of which are CSBG reportable. If not implemented, individual programs having different criteria for determining clients will result in over and under reporting counts of persons.

For example, some programs may count a client after conducting an intake and making a referral to another agency. Other programs may not count that person as a client as they did not provide a service.

In general, for Nevada's CAAs, there are four conditions that define a client. The person:

1. has been administered an **Intake** which collects demographic data
2. has been administered an **Assessment** consisting of well-being scales to determine need*
3. is assigned to a **Program**, and
4. receives a **Service** directly from the agency or from a referral agency

** Additional or secondary scales may be added by the agency. These scales are more program specific and are separate from the Nevada Primary Assessment Scales.*

The definition of when a person becomes a client needs to be reviewed, accepted and implemented by all programs administered by the organization.

Step Three: Data Standards

In **Step Two**, developing standard definitions of clients significantly improves the accuracy and validity of data both within the agency and across agencies when aggregating data. If comparing client populations by aggregating data from multiple CAAs without agreement on common client definitions, the data will be inaccurate. The cliché comparing apples and oranges applies here with the likely ripple effect on measuring outputs and outcomes.

A similar situation presents itself when there is a lack of data standards. This can manifest in characteristic and demographic data, as well as services and outcome data. Data standards must be consistent with the type of data collected, apply to both the collection of output and outcome data, and be supported by appropriate software. The implications are obvious; measuring what may be thought of as the same data point when in fact it is different if there is no previous consensus, leads to flawed data collection and flawed analysis. As an example, there are many possibilities for housing services and housing outcomes:

Providing Housing Service

- Working with agencies to find affordable housing
- Working with landlords to avoid eviction
- Obtaining security deposits
- Obtaining credit
- Improving credit scores
- Etc.

Living in Safe and Affordable Housing

- Home ownership
- Non-subsidized rental
- Subsidized rental
- Public Housing
- Section 8 housing
- Etc.

Step Three: Data Standards, cont.

Each of the housing services/interventions needs to be accepted and used by all stakeholders as do the housing types or in this scenario, housing outcomes. In the development and implementation of a Data Centric Community Action Agency in Nevada, all CAAs use the identical data models to standardize definitions for services and outcomes for:

In Nevada, all the CAAs have implemented the identical data model across all 12 CAAs, including the second largest CAA that uses a software product that is different from the other 11 CAAs. However, that agency uses the same data model for services and outcomes so its data and reporting is consistent with the other 11 CAAs. All 12 CAAs use the identical outcomes scales so when reporting NPIs, the outcome data is consistent across the entire state CAA network.

Step Four: Develop and Implement a Universal Agency Wide Intake and Assessment Process

A universal **Intake** and **Assessment** process will be developed to be implemented across all agency programs. This will ensure that both CSBG and non-CSBG programs will use the same assessment tools and that the assessment is administered the same way across all programs. This will provide a profile of all clients in the organization, not just those CSBG eligible. The finalized flowchart resulting from a thorough analysis of the draft flowchart in **Step One** will be used for training and implementation of a universal agency Intake and Assessment process.

Step Five: Determine the Types of Clients

It's critical for any organization to identify the type of clients that are processed through their organization. Below are the several types of clients typically seeking services in a CAA:

1 Potential Clients

These are all persons seeking any services in the agency. Checking eligibility for any of the agency's programs determines if a person becomes a client. Potential clients may "enter" the agency as a walk-in, phone call, email or referral from another agency.

It is important to track how many potential clients approach the agency and how many actually become clients. This helps to better understand community need. At a minimum, the organization should collect where possible a first and last name or some other client identifier of this initial contact or encounter and what services are being requested.

2 Direct Service Clients

These are clients who are not case managed but receive a "quick" service. There is no expectation that providing the service(s) will change the customer's status but rather avoid a crisis or provide sufficient assistance to help the client out of a crisis situation. These services can be characterized as prevention services as they either maintain a client's stability above the Prevention Line or move the client to Stability which itself is a change in status.

A Direct Service client is administered the NV Primary Assessment Scales to identify need from which provision of service is determined. A reassessment is administered at the same time, since the presenting need was resolved during the session and an outcome achieved. For example, a client has a utility bill paid and as a result a shutoff was prevented, and the service remains connected thereby maintaining stability. Using an outcome scale to assess need as shown below indicates the client came in at a condition of Vulnerable (4) and as a result of the service; the client moved above the Prevention Line to a condition of Stable (6), indicating a positive outcome was achieved.

Energy and Utilities		Score
	Utilities included in rent	
	Homeless, Utilities Not Applicable	
Thriving	Pays all bills without subsidy	**10**
Safe	Pays all bills with established payment plan	**8**
Stable	Pays all or most bills with subsidy or utility payment made by agency on behalf of client	**6**
Prevention Line		
Vulnerable	At risk of loss of utilities or shut off (Needs to apply or reapply to continue utility benefits or prevent shut off)	**4**
In-Crisis	Notice of shut off; unable to pay bill(s)	**2**
	Utility shut off; unable to pay bill(s)	**1**

The movement from **4** to **6** captures the reapplication process to prevent an energy shut off and the continued payment of energy bills. A report can also be filtered by demographics.

Follow-up is done by administering the same scale immediately following the service. Case Management and a Goal Plan is not needed for direct service clients but careful documentation is required to demonstrate that the provision of the service resulted in a change for the client.

3 Case Management Clients

These are clients who can benefit from case management. The goals and expected outcomes of case managed clients are to achieve a significant change in client status by creating a Goal Plan that organizes the services/interventions with clear and measurable goals and objectives with a starting and end point for the case managed client. Services are linked to the Goal Plan which has short and long term goals negotiated between the client and the case worker. Clients may receive services and assessments throughout the year and can be case managed for more than one year.

It is important to determine if a person is a direct service or case management client as it affects the understanding of need, the type, frequency, and duration of services provided based on the need(s) and the expected outcomes. This distinction reflects the way clients are characterized in Goal 1 of the OCS-CSBG Theory of Change: Individuals and Families with low incomes are stable and achieve economic security. In this paradigm, the CAAs may operationalize clients receiving a service to avoid or exit a crisis (i.e. achieving stability) as Direct Service clients and clients with a Goal Plan organizing multiple services across domains to meet short and long term goals (i.e. achieving economic security) as Case Management clients.

The distinction between the two types of clients should result in a more efficient delivery of services, a clarification of outcomes, better allocation of agency and referral resources, and a rational way to determine caseloads. These expected changes will be part of the CAA's self-evaluation.

Step Six: Develop Policy and Procedures for Providing Services to Either Type of Client

Intake

Determines Eligibility
Identifies Client Characteristics

Assessment

Determines a Direct Service Client or Case Management Client

Direct Service	Case Management
• Provide Service(s) • Immediate Reassessment	• Create Goal Plan • Provide Service(s) • Monitor Plan • Reassess as identified on plan and no longer than 90 days out
Direct Service Clients	**Case Management Clients**
• Comes to the agency for a single service or multiple services • Have an immediate need that can be addressed with agency resources • Do not have or need a Goal Plan The service may avoid a crisis, or provide sufficient assistance to help the direct service client out of a crisis situation. There *is no expectation* that providing the service(s) will change the client's status.	• Comes to the agency with multiple needs • May receive multiple services • Have a defined Goal Plan • Are actively managed It *is expected* that case management clients will achieve a change in their status achieving stabilization and movement toward self-sufficiency.
Client Exits Maintains Stability	Client Exits Achieves Goals—Improves Status

Step Six: Develop Policy and Procedures for Providing Services to Either Type of Client, cont.

The graphic on the previous page outlines the path for services to the **two types** of clients in the CAA.

To become data centric, each path will be developed with explicit policies and procedures for administering programs and services. An excellent resource, Guidance for Setting the Stage for Data-Centric Organizations, developed by Dr. Barbara Mooney, can be used to create policies, procedures and buy-in from agency staff.

A part of service delivery for either **Direct** or **Case Management** clients is to associate the costs of services to the client and the source of funds that supports the service:

1. Each service should have a cost associated with the service entered as a dollar amount

2. Each service should be associated with a specific funding stream(s)

The discussion of how costs are assigned and calculated is part of the agency's accounting function. There are direct costs such as a monthly bus pass at $50, or the numbers of hours of staff time working with a client as well as indirect costs for agency overhead. These need to be determined by each agency although a statewide work group can be convened to discuss a process and methodology for determining and accounting for costs.

This is the segue for introducing **Step Seven: Implementation of the Carter-Richmond Methodology**

Step Seven: Implementation of the Carter-Richmond Methodology

Fundamental to ROMA is the expectation that every CAA will be able to answer the seven core questions of the Carter-Richmond Methodology. It is not only the capacity to answer each question independently but how the data from the seven questions can be answered relationally. To what extent can the agency link the demographics to the services to the outcomes? It is not only the technical capacity to do so, but the understanding by agency staff that this is important and necessary to demonstrate impact for both **Direct Service** and **Case Management** clients.

The agency will establish data collection practices, procedures and training to ensure that Questions 1-7 (Carter-Richmond Methodology) can be answered by the CAAs.

Initially, implementation of this model will focus on training and data collection that addresses Questions 1, 2, 3 and 6, the core of data collection and reporting as evidenced by the NPIs, the Annual Report and the CSBG Organizational Standards.

Following successful training on data collection and reporting, the CAA will begin to address the financial aspect of service delivery. Questions, 4, 5, 7, 8 and 9 identify unit cost and valuation of outcomes that are the building blocks of return-on-investment calculations, a valuable tool for demonstrating impact and the cost effectiveness of programs and services. The ability to answer questions 4, 5, 7, 8 and 9 are dependent on the quality of the data from Questions 1, 2, 3 and 6, the first order of business.

Questions 1-5 are used to measure the efficiency of the agency …

1

How Many Clients Are You Serving?

When does a client become a client? A duplicated or unduplicated count.

2

Who Are They?

Basic characteristic and demographic data include but are not limited to age, gender, income, employment, education, disability level, race, and ethnicity.

3

What Services Do You Give Them?

There can be multiple services within a single program or process. Establish the number of services delivered (Sometimes the number of clients is used in lieu of a number of services).

4

What Does It Cost?

Identify hidden administrative costs, personnel costs and benefits, and client income transfers. Derive the total cost of providing the services.

5

What Does It Cost Per Service Delivered?

Divide the total cost by either the number of services delivered or the number of clients served, as appropriate.

... Questions 6-9 are used to measure its effectiveness.

6

What Happens to the Clients as a Result of the Service?

There can be multiple outcomes for each service delivered. Establish a number of successful outcomes.

7

What Does It Cost Per Outcome?

Divide the total cost by the total number of positive outcomes.

8

What is the Value of a Successful Outcome?

Establish the financial value of each individual success.

9

What is the Return on Investment?

The return-on-investment should be thought of as the **value** of the outcome compared to the **cost** of the outcome; a comparison of Question Eight with Question Seven.

$$\text{ROI} = \frac{\text{Value of Outcome (Question 8)}}{\text{Cost of Outcome (Question 7)}}$$

Step Eight: Training, Testing and Certification of CAA Staff

All CAA staff would be enrolled in an agency wide training program. There are **four levels** of training. The training program will be an ongoing agency program for current and new staff and could also include agencies associated in the local referral network.

Tier I

Modeled after the current ROMA training program, all staff are initially provided the basics on the principles and practices of data-centric organizations. There are sufficient materials available for this initial or Tier One training.

Tier II

The second level or Tier Two training is targeted to case managers and other staff that work with the agency's software. The focus of this training is to ensure that the service delivery model is understood and followed and that agency staff who are on the front lines of data collection understand their importance to the data collection process.

Tier III

The third level or Tier Three training is for supervisors and managers whose job is to manage the process.

A certification would be awarded to persons completing the appropriate level of training and on-going or maintenance of certification similar to a continuing education program would be maintained through use of Diagnostic Reports discussed in Step Ten.

Tier IV

This is special training to introduce selected staff to the fundamentals of data analysis and evaluation. It will focus on the ability to generate Management Reports and Diagnostic Reports referenced in Step Ten and analysis of data and program evaluation referenced in Step Eleven.

Step Nine: Develop Monitoring Procedures to Ensure the Quality and Timeliness of Data

Specific monitoring procedures are developed to ensure data quality and timeliness. A "cookbook" or guide will provide staff with a checklist of tasks that can be monitored by supervisors and managers for internal quality assurance. These procedures will be in the agency wide training program and will use as a foundation, Dr. Mooney's Guidance for Setting the Stage for Data-Centric Organizations.

Step Ten: Reporting-Development and On-Going Production of Diagnostic and Management Reports

The CAA will develop and routinely run both **Diagnostic** and **Management** Reports.

The **Diagnostic Reports** will cover the extent to which agency staff are implementing the service delivery model including administering the client Intake and Assessment, the accuracy, completeness and timeliness of data collection, and conducting follow-up. This is to ensure the quality of CAA data that is provided to DHS.

The **Management Reports** provide data to establish baseline outcomes and realistic performance expectations for both Direct Service and Case Managed clients. These are the reports that are used to generate NPI data and the Annual Report.

Step Eleven: Analysis of Data and Program Evaluation

Data from both types of reports are routinely analyzed and the information evaluated. From the **Diagnostic Reports**, it can be determined what are optimal caseloads for each type of client, the time it takes to provide services and the type of errors found. These finding can be the basis for any corrective action.

From the **Management Reports**, baselines for client performance can be established showing the impact of services as shown on the next page in the sample Movement Report from the CAAs in Nevada.

Step Eleven: Analysis of Data and Program Evaluation, cont.

In the report below, assessment data was collected on all clients who presented with a condition placing them below the Prevention Line on their initial assessment and compared to follow-up data collected from subsequent assessments to determine how many clients moved above the Prevention Line following the provision of services.

For example, the data for the **Food and Nutrition** domain shows a 34.75% positive movement. This compares to the overall state movement of 15%. What is not shown in this display however, is the services data that can be associated with positive movement on the scale. The much sought after Bundling Effect from the Annie E. Casey Foundation can be derived in the CAAs with the existing tools.

Douglas County Movement Report 7/1/16-6/30/17	N/D	% Chg.	Rank	State N/D	% Chg.	Rank
How many clients came in below the prevention line and moved above the prevention line? - **Food and Nutrition**	221			467		
How many clients came in below the prevention line? - **Food and Nutrition**	636	34.75%	1	3115	15.00%	5
How many reassessments were administered? - **Food and Nutrition**	759					
How many clients came in below the prevention line and moved above the prevention line? - **Employment**	19			443		
How many clients came in below the prevention line? - **Employment**	276	6.88%	8	3268	13.56%	6
How many reassessments were administered? - **Employment**	397					
How many clients came in below the prevention line and moved above the prevention line? - **Health Insurance-Adults**	13			129		
How many clients came in below the prevention line? - **Health Insurance-Adults**	111	11.71%	6	1512	8.53%	8
How many reassessments were administered? - **Health Insurance-Adults**	647					
How many clients came in below the prevention line and moved above the prevention line? - **Primary Healthcare**	4			78		
How many clients came in below the prevention line? - **Primary Healthcare**	44	9.09%	7	921	8.47%	9
How many reassessments were administered? - **Primary Healthcare**	644					
How many clients came in below the prevention line and moved above the prevention line? - **Energy and Other Utilities**	32			569		
How many clients came in below the prevention line? - **Energy and Other Utilities**	129	24.81%	3	1621	35.10%	1
How many reassessments were administered? - **Energy and Other Utilities**	510					
How many clients came in below the prevention line and moved above the prevention line? - **Housing**	25			310		
How many clients came in below the prevention line? - **Housing**	147	17.01%	4	1898	16.33%	4
How many reassessments were administered? - **Housing**	602					

Step Eleven: Analysis of Data and Program Evaluation, cont.

In the report below, the same data was displayed in rank order of success and also provides insight into the needs of the clients:

Transition to Stability and Self-Sufficiency 7/1/16-6/30/17 The Impact of CSBG Funded Programs and Services on Nevada's Low Income Population	State	% Change
How many clients came in below the prevention line and moved above the prevention line? - **Energy and Other Utilities**	569	
How many clients came in below the prevention line? - **Energy and Other Utilities**	1621	35.10%
How many clients came in below the prevention line and moved above the prevention line? - **Early Childhood Ed (ECE)**	402	
How many clients came in below the prevention line? - **Early Childhood Ed (ECE)**	1211	33.20%
How many clients came in below the prevention line and moved above the prevention line? - **Human Services**	602	
How many clients came in below the prevention line? - **Human Services**	1823	33.02%
How many clients came in below the prevention line and moved above the prevention line? - **Housing**	310	
How many clients came in below the prevention line? - **Housing**	1898	16.33%
How many clients came in below the prevention line and moved above the prevention line? - **Food and Nutrition**	467	
How many clients came in below the prevention line? - **Food and Nutrition**	3115	15.00%
How many clients came in below the prevention line and moved above the prevention line? - **Employment**	443	
How many clients came in below the prevention line? - **Employment**	3268	13.56%
How many clients came in below the prevention line and moved above the prevention line? - **Health Insurance-Children**	49	
How many clients came in below the prevention line? - **Health Insurance-Children**	574	8.54%
How many clients came in below the prevention line and moved above the prevention line? - **Health Insurance-Adults**	129	
How many clients came in below the prevention line? - **Health Insurance-Adults**	1512	8.53%
How many clients came in below the prevention line and moved above the prevention line? - **Primary Healthcare**	78	
How many clients came in below the prevention line? - **Primary Healthcare**	921	8.47%
How many clients came in below the prevention line and moved above the prevention line? - **Household Budgeting**	292	
How many clients came in below the prevention line? - **Household Budgeting**	3736	7.82%

From the Management Reports, important information can be generated that explains why persons move from a state of dependency (below the Prevention Line) to independence (above the Prevention Line).

In addition, it is important to filter for client demographics and associated services to the outcome scales as shown in the methodology below:

1. What are the characteristics of persons above and below the Prevention Line?
   Associate demographic data to outcomes
2. What services help persons move above the Prevention Line?
   Associate demographic data with services
3. Who benefits from the services?
4. What services are in the highest demand?
5. What are the characteristics and demographics of direct service and case management clients?
6. What is the ROI (Return-On-Investment)?
7. How can this analysis fit into Strategic Planning?

A similar analysis can be conducted using initial Assessment data to identify need as shown on the next page. These are the baseline numbers on all new clients receiving services in the fiscal year. Red indicates the highest needs upon entry to the CAA warranting an intervention; yellow is stable which may or may not warrant an intervention; and green is doing well and an intervention is not warranted. Analyzing the data indicates the top three highest needs are in the domains of Household Budgeting, Early Childhood Education and Health Insurance Children while the three lowest needs are in the domains of Education-Adults/Youth (Over 18), Primary Health Care and Transportation.

From the analysis of the data we can determine the following:

- What are demographics of need? Why is this important?
- Who is our client/customer?
- How can we compare need with community data?
- How can we compare need with available resources?
- How do we plan for future service delivery and resource allocation having mined the agency data?

Douglas County 7/1/16-6/30/17 Scale	In-Crisis	Vulnerable	Highest Needs		Stable	Safe	Thriving	Total	% Below	Rank 7/1/16-6/30/17	% Above 7/1/16-6/30/17	Rank 7/1/17-1/30/18
Household Budgeting	295	636	931		153	44	3	1131	82%	1	18%	1
Early Childhood Education (ECE)	920	6	926		118	201	11	1256	74%	2	26%	2
Health Insurance-Children	698	12	710		0	0	389	1099	65%	3	35%	3
Human Services	380	239	619		445	135	13	1212	51%	4	49%	4
Employment	502	110	612		399	212	41	1264	48%	5	52%	7
Food and Nutrition	736	678	1414		1512	45	32	3003	47%	6	53%	5
Energy	506	40	546		189	278	288	1301	42%	7	58%	6
Housing	231	28	259		477	0	345	1081	24%	8	76%	8
Health Insurance-Adults	100	65	165		0	0	947	1112	15%	9	85%	11
Education-Adults/Youth (Over 18)	7	98	105		571	176	240	1092	10%	10	90%	10
Primary Health Care	4	63	67		266	678	102	1113	6%	11	94%	12
Transportation	34	0	34		0	0	414	448	8%	12	92%	9

Douglas County 7/1/17-1/30/18	In-Crisis	Vulnerable	Highest Needs		Stable	Safe	Thriving	Total	% Below	Rank 7/1/17-1/30/18	% Above 7/1/17-1/30/18	Rank 7/1/16-1/30/17
Household Budgeting	121	255	376		82	13	10	481	78%	1	22%	1
Early Childhood Education (ECE)	429	1	430		28	100	13	571	75%	2	25%	2
Health Insurance-Children	285	6	291		0	0	183	474	61%	3	39%	3
Food and Nutrition	610	408	1018		666	12	21	1717	59%	4	41%	6
Human Services	233	89	322		156	56	8	542	59%	4	41%	4
Energy	242	63	305		50	117	122	594	51%	6	49%	7
Employment	181	58	239		149	73	34	495	48%	7	52%	5

The Application of Technology to Managing Client Services and Data Analytics: Steps 12 through 21

Step Twelve: Digitize Paper Records and Forms

Paper forms and records should be phased out and replaced with a digital platform. The benefits of electronic record keeping are obvious including improved storage and confidentiality, easier access to historical records, reduction in errors and ease of use.

Another advantage of digitization is the ability to share data across forms. For example, CAAs are umbrella organizations that are tasked with filling out similar forms for various programs. Many forms such as eligibility applications have redundant data requirements, especially true for demographic, characteristic and financial data. A digital platform can populate similar forms once entered into the electronic system thereby increasing accuracy and completeness and reducing level of effort by minimizing repetitive data entry.

Step Thirteen: Consolidate Software Systems

In many umbrella organizations, it is not unusual to find program specific software applications that operate independently of each other requiring duplicate/triplicate data entry. Every effort should be made to connect or associate these various applications including client management software, scheduling and emailing software and SMS and CRM systems.

To become a data centric organization it is necessary to evaluate the various software applications and determine the best way to consolidate (where possible) the various applications into a centralized data management system. It may not be possible for an organization to have a single system but it is possible for various systems to be integrated and share data through an API (Application Program Interface) or other means.

Step Fourteen: Establishing a Client Portal

A client portal allows the client to have direct access to their own records and actively communicate with their case worker or other agency staff. Given that many clients have Internet access via a smartphone, tablet or public computer, a client can use the portal to enter data, self assess and monitor their own progress. For example, a client who has found employment can use the portal to enter follow-up data or other data elements rather than scheduling an appointment with the agency that could interrupt the work day. This increases staff time to work with other clients and increases the responsibility of the client to act independently and self-monitor their progress, steps towards self-sufficiency. A client portal requires a secure environment that includes:

- Secure authorized access to the agency's database (See **Step Sixteen - Identify Data Security Protocols**)
- Identification of the data elements required by the agency/caseworker for remote entry
- Identification of any technical barriers or access issues. In addition, development of a workflow policy and flow chart (**Step One**) should be developed to support the Client Portal. *This would be helpful to clients who have had limited or no access to electronic communication or the Internet*
- Establish proper notifications and reminders

Step Fifteen: Identify Eligibility Criteria, Implement an Eligibility Calculator and Calculate Federal Poverty Levels

Eligibility determination is required to determine if a person becomes a client. Depending on the program, the agency or the funder determines the eligible income criteria and categories as well as other household criteria such as family size, etc. These data elements are embedded into the software as fields and when financial or other data is entered into the software, the calculations are automated eliminating any errors. Data can be aggregated providing important information on the agency's client population. If the client can access the eligibility calculator through the Client Portal, this could reduce the level of effort to update financial data while the person is an active client. The case worker could also monitor the client without having the need for a scheduled appointment. Part of this process is that the agency identifies the necessary documents and documentation needed to determine eligibility. This can be automated as well.

Once all the financial and related household data is entered into the software, it will automatically calculate the Federal Poverty Level (FPL) or similar benchmarks such as used by HUD. It is the review and analysis of this data that agency staff uses to determine if the person is eligible and qualifies for services.

Step Sixteen: Identify Data Security Protocols

With the use of software, especially software that is cloud based, the agency must establish and maintain stringent security protocols. Although not required, a best practice would be to follow HIPAA guidelines for establishing data security. The following is a generalized guidance that is the foundation for establishing data security:

1. **One Account Per User:** It is not unusual that agency staff share accounts (usernames and passwords). This is typically a result of trying to minimize costs. To prevent any sensitive information from being exposed, it is important that staff members do not share accounts. **This is considered a HIPAA violation.**

2. **Storing Passwords:** Staff members should not store their password on their desktop or laptop. Keeping physical records of a password is cautioned against and ideally, all passwords should be memorized. It is recommended that administrators store their passwords in an encrypted cloud based storage system.

3. **Delete Old Account Password:** Account information and/or passwords from former staff members must be deleted. If deleting a staff member results in a loss of data, a password change or deactivation can be initiated.

4. **Use Strong Passwords:** Stronger passwords are necessary to ensure data security. The following is recommended:
    - Use a minimum of 8 or more characters.
    - Include lowercase and uppercase letters, numbers, and symbols.
    - Do not use common words or relatable words and instead use a random combination. Avoid things such as your pet name or a favorite show.

Step Seventeen: Quality Control

The timely collection of accurate and complete data is central to the data centric organization. Quality control policies and procedures should be instituted at all levels in the agency as follows:

- Identify all **data elements** required by the organization
- Identify which **staff members** are required to capture the data elements
- Identify when the various **data elements** are to be collected and how they are to be collected
- Identify the management or diagnostic **reports** that can be used to assess staff data entry and proper use of software
- Identify successful data quality **benchmarks**
- Institute **monthly quality control** report to support a review of staff performance
- Identify **key personnel** with authority to manage the quality control process

To ensure quality control, a best practice would have the agency develop a **policy and procedures manual** for data collection

Step Eighteen: Quality Control - Counting Clients and Follow-up

It is important that client counts for the three types of clients identified in **Step Five** be instituted. The larger the client population, the more complex it is to ensure quality control practices. The agency should implement the following steps:

1. **D**etermine the total count of clients seen in the agency: **potential**, **direct service** and **case management** clients. This should be an unduplicated count.

2. **O**f the **potential** clients, identify the number that become eligible for services and therefore become clients.

3. **O**f the **direct service** clients, identify the number that received quick services and that were immediately followed up at the time of the service by a reassessment on the appropriate NV Primary Assessment Scales(s). Baseline assessments are required of all direct service clients.

4. **O**f the **case management** clients, identify the number that have goal plans which is a proxy for active case management. Case management clients are reassessed on a regular basis.

5. **I**nstitute simple calculations to determine performance which can also be used to establish performance benchmarks:

    - The number of **Potential** clients who became active agency clients *divided by* the number of **Potential** clients
    - The number of **Direct service** clients who followed-up (quick service) *divided by* the number of **Direct service** clients
    - The number of **Case management** clients who followed-up *divided by* the number of **Case management** clients

Ideally, there should be 100% follow-up for **Direct Service** and **Case Management** clients. Follow-up or reassessment is the only accountable way to identify achieved outcomes. Under-reporting of outcomes or success will be the result of not properly following up.

These calculations can be used to assess staff performance in reassessment or follow-up. Collecting the data over a period of time can be used to establish performance benchmarks. While 100% follow-up is the ideal goal, it is recognized that clients may not come back for services once the goal is achieved, especially if the achieved goal is employment. Collecting and analyzing this data can be used to establish realistic benchmarks for follow-up which should be communicated to all agency staff and become part of the agency's quality control process. If specific staff are not achieving agency performance benchmarks, managers can explore the reasons for subpar performance and provide corrective action. Collecting this data from all CAAs can be used to establish statewide performance benchmarks. Agencies that can exceed a statewide benchmark could be rewarded with additional discretionary funds or other incentives.

$$\frac{\textbf{Potential}\text{ Clients who became active agency clients}}{\text{Total }\textbf{Potential}\text{ Clients}}$$

$$\frac{\textbf{Direct Service}\text{ clients who followed up (quick service)}}{\text{Total }\textbf{Direct Service}\text{ clients}}$$

$$\frac{\textbf{Case management}\text{ clients who followed up}}{\text{Total }\textbf{Case management}\text{ clients}}$$

Step Nineteen: Baseline Assessment and Reassessments

Baseline assessments which determine need, and reassessments which identify positive, neutral and negative movement are two critical data activities conducted by the organization. This is important for the individual client as well as aggregating data for the entire agency and compiling statewide data.

To ensure quality data collection, the following actions are recommended:

- A baseline assessment *must be administered at the first meeting* with the client for both **direct** and **case management** clients.
- The **direct service** client is reassessed at the time of the service using the appropriate scale(s) from the Nevada Intake Assessment Scales. There is no waiting period. *There should be a 100% reassessment rate.*
- The **case management** client is *reassessed on a regular basis* using the entire Nevada Intake Assessment Scales as case management is comprehensive and addresses multiple issues. A general rule is if **there are changes, there should be a reassessment**. The agency can establish a minimum monthly or quarterly reassessment procedure.

Step Twenty: Communication

Effective communication with clients is essential to success. Effective communication strengthens active participation, rapport and trust. Use of the client portal can establish a two-way communication channel where both the client and agency staff can monitor activity and increases the client's responsibility for their own well being.

Step Twenty-One: Communication-Notifications, Reminders and Appointments

Notifying clients of upcoming services and appointments is necessary to ensure proper service delivery:

- Establishing specific time frames for agency staff and clients of upcoming activities such as appointments within and outside the agency, upcoming assessments, check-ins, etc.
- Emergency notifications (weather, service disruption, personal emergency issues, etc.) where an appointment cannot be kept and has to be rescheduled.
- Training and registration notifications.

Recommended Technology

- **SMS (Short Message Service)** – This is a text message service which can alert groups of clients about upcoming events, emergency weather conditions, service disruption, etc. These are typically software products that enable a user to rapidly contact a large group of people. This is useful when alerting clients of emergencies (weather, etc.), upcoming events, and any other short message(s) for the organization's client base.
- **Bulk email** – These are used to quickly communicate with a client base and can be used in addition to—or in lieu of— SMS systems. These are not used to replace email notifications but are used for mass communication with clientele.
- **Appointment Manager** – It is critical that both staff and clients are made aware of staff members' availability. It is recommended that staff members schedule and post their availability at the beginning of each month. This availability is then communicated to clients so they schedule around staff availability. This technology can either be purchased as a single module that specializes in appointments, or preferably, is part of a CRM/database management system.
- **CRM (Customer Relational Management) System**- Software that provides scheduling and messaging features.
- **Client Portal** – An access point where clients can actively engage in case management and other direct communication.