The Health and Human Services Referral Systems' Measurement and Evaluation Playbook

Network for Nonprofit and Social Impact
Northwestern University

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network for Nonprofit and Social Impact

About the Organizations

About Asheville Buncombe Community Christian Ministry (ABCCM)

Asheville Buncombe Community Christian Ministry is one of North Carolina's largest faith-based human service organizations, dedicated to addressing poverty, hunger, homelessness, and access to health care for vulnerable individuals and families. Founded in 1969 as a collaboration of local churches, ABCCM operates a comprehensive continuum of care delivered through eight integrated ministries. These ministries include four crisis centers providing emergency assistance and food security programs; transitional and permanent supportive housing across three campuses with more than 400 beds serving individuals experiencing homelessness, including Veterans and women with children; expanded access to healthcare through a free medical clinic and two pharmacies; jail ministry and reentry services; and comprehensive workforce development programs focused on job readiness, mentoring, and placement. Through **Veterans Services of the Carolinas**, ABCCM serves Veterans and their families in all 100 North Carolina counties, providing housing stabilization, employment services, suicide prevention, outreach, and coordinated service navigation. Grounded in faith and informed by data-driven strategies, ABCCM advances measurable outcomes that promote stability, dignity, and long-term resilience for Veterans and communities across the state. For more information on ABCCM's work please contact ABCCM's Chief Operating Officer Brandon Wilson (brandon.wilson@abccm.org).

The Network for Nonprofit and Social Impact at Northwestern University (NNSI)

NNSI is a research lab at Northwestern University dedicated to understanding how networks can have a greater social impact. We thrive on projects that produce rigorously studied results and practical applications for the social impact sector. Our work has been funded by the National Science Foundation, the Bill & Melinda Gates Foundation, and the Army Research Office in the past eight years. Our research is featured in academic journals and in venues such as *Stanford Social Innovation Review* and *Nonprofit Quarterly*. The lab has developed metrics to evaluate client outcomes over time based on clients' requests. In addition, it has worked with dozens of health and human service referral networks to assess its impact. If your network is interested in partnering with NNSI for its evaluation, please contact NNSI's director, Michelle Shumate (shumate@northwestern.edu).

Michelle Shumate is the founding director of the Network for Nonprofit and Social Impact (NNSI), and the Delaney Family University Research Professor at Northwestern University. She offers workshops, consulting, and coaching through Social Impact Network Consulting. Her research focuses on how to design interorganizational networks to make the most social impact.

Qiwen Zhang is a Research Data Analyst at NNSI, focusing on data analysis and program evaluation while providing data-driven policy insights for health and human service stakeholders. She holds a B.A. in International Liberal Studies from Waseda University in Japan and an M.P.P. from the University of Chicago, with concentrations in Data Analytics and Finance & Policy.

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Executive Summary for Policy Leaders

This executive summary is designed for state-level decision-makers overseeing social infrastructure investments. While the full **Measurement and Evaluation Playbook** serves as a technical manual for data analysts and network managers, this brief provides high-level policy insights to inform contracting, legislative oversight, and the assessment of return on social investment.

The Strategic Value of Referral Networks

Health and human service referral networks connect vulnerable populations to essential programs — such as housing, food, and healthcare — that are vital to a region's function. Effective state-level evaluation allows leadership to:

Identify Service Deserts: Detect misalignments between community demand and available service supply.

Ensure Accountability: Monitor whether providers and navigators are meeting performance standards.

Demonstrate Impact: Use data-driven evidence to justify funding and show improvements in constituent well-being.

Examples of Technologies That Support Referrals and Track Data

- Channels 360
- IBM Connect360
- Integrated Referral and Intake System (IRIS)
- FindHelp
- UniteUs
- VisionLink
- Bespoke systems built on Salesforce or Amazon Web Services

Infrastructure Models and Policy Implications

The design of a network dictates its measurable outcomes and required state support. Policymakers should distinguish between these four primary models:

Model	Strategic consideration	Resolution profile
Centralized Coordination (Hub-and-Spoke)	A central "hub" acts as air traffic control for all client intake, triage, and assignment.	Highest resolution rates and accountability, but requires dedicated funding for the central entity.
Human Navigation (High-Touch)	Relies on professional staff (CHWs, social workers) to guide clients through complex barriers.	Highly effective for maternal health and outcomes requiring long-term trust-building.
Peer-to-Peer (Closed-Loop)	Providers send direct digital referrals to one another via a shared technology platform.	Promotes local coordination but often lacks a single point of accountability; resolution rates can be low without incentives.
Self-Referral (Helpline)	Searchable directories and helplines where clients receive information to act on themselves.	Lowest cost entry point; however, long-term outcomes are typically unknown after the initial call.

Key Performance Indicators (KPIs) for Oversight

State leadership should prioritize six critical evaluation areas, ordered from basic operations to long-term well-being:

Navigation Quality Control: Are state-funded navigators, social workers, or coordinators performing consistently and accurately?

Demand for Services: What are the most requested needs (e.g., housing, food, behavioral health) by zip code and demographic?

Supply of Services: Which services are requested but unavailable due to provider capacity constraints?

Provider Engagement: Are listed organizations actively participating (i.e., sending/receiving referrals) or merely "passive" entries?

Referral Efficiency and Effectiveness: How long does it take for a client to be matched and for a service to be rendered? What percentage of service requests are resolved?

Client Outcomes: Does the client's long-term well-being improve after the referral? What client benefits result from state investment?

The State Referral Network Contracting Checklist

PURPOSE: To assist DHHS Contract Officers and Oversight Committees in evaluating the data capabilities and accountability standards of referral network vendors.

1 ☐ **Data Architecture & Infrastructure**	**Persistent Identifiers:** Does the system use unique, consistent IDs for clients, referrals, and cases to enable cross-table and longitudinal analysis? **Cross-System Linkage:** Can the platform's client ID be linked to other state systems (e.g., Medicaid/HIE, housing/HMIS, or veteran benefits)? **Standardized Taxonomy:** Does the system use a recognized taxonomy (e.g., Inform USA/AIRS) for categorizing service requests and supply?
2 ☐ **Provider Engagement & Capacity**	**Active Engagement Reporting:** Does the vendor provide user activity logs to distinguish between active participants and passive directory listings? **Inbound/Outbound Tracking:** Does the network track both who is sending referrals (trust in network) and who is receiving them (demand/participation)? **Capacity Constraint Detection:** Can the system report on referrals rejected specifically due to a "lack of capacity" to inform state resource allocation?
3 ☐ **Referral Process Accuracy & Efficiency**	**First-Contact Acceptance:** Does the vendor report the percentage of cases resolved at the first referral, or is the client being "bounced" across providers? **Time to Match & Close:** Are there clear benchmarks for the duration between referral creation, provider acceptance, and final case closure? **Resolution Definition:** Is "service resolution" defined strictly as "service provided" rather than just "information given" or "client self-resolved"?
4 ☐ **Client Outcomes**	**Demographic Stratification:** Can demand and outcomes be filtered by age, zip code, income, race, ethnicity, and military status to identify gaps? **Persistence (Drop-off) Analysis:** Does the system track where clients disengage from the process (e.g., failing to contact a provider after a referral is made)? **Long-Term Impact Strategy:** Does the vendor have a mechanism for linking referral success to external client well-being surveys or state administrative datasets?

Contents

Introduction

Health and human service referral networks are a central part of the social infrastructure needed for a municipality, region, and state to function. These networks help connect individuals experiencing health or material hardship to the programs, benefits, and services designed to help them.

Most referral networks consist of five key components.

A set of providers that are willing to send and receive client referrals. These providers may offer *similar services*, but share referrals to maximize the resources available to clients. For instance, when domestic violence providers make referrals to one another, it's often because some providers are at capacity and others have beds available. Other times, it may be because some providers have the needed room configuration (e.g., ADA accessible, able to accommodate a large family) that another one doesn't. Some referral networks have providers that offer *different types of services*. For example, Veterans Services of the Carolinas offers 21 service categories. Some providers offer only one of these service categories, and others offer several. These providers refer clients to services their agency doesn't provide.

A resource directory that records up-to-date information about these providers, the services they offer, and eligibility criteria to receive those services. One reason why referral networks are needed is that it's not easy to figure out which provider does what for whom. A quality resource directory is a key knowledge asset that referral networks leverage to route clients in need to the right provider that can help them.

A solution for routing clients to the right resource. Referral networks have adopted a variety of solutions. One of the first solutions was *publishing information and referral directories*. These directories allowed clients to look up which providers offered what service. In the 1970s, public libraries in the United States offered these directories. More recently, *human navigator solutions* have been introduced, in which a resource navigator, community health worker, or community resource advocate speaks with a client and helps them locate the right provider. In some cases, they may help facilitate the referral with a warm handoff. In others, they may give the client the information and encourage the client to seek help. Most modern 211 systems operate a human navigator-dominated system. Finally, *technology solutions* have been introduced that allow referrals to be made directly to providers. These technology solutions include community resource referral technologies and community information exchanges. In these systems, referrals are entered, and the receiving agency receives an alert about them. For example, the NCCARE360 network uses a community resource referral technology platform to send referrals directly to agencies.

Operational procedures and (at times) accompanying incentives for providers. All referral networks have a set of operating procedures they use to maintain the network. These procedures include how resource directories are kept up to date, staff procedures for processing referrals into programs, standards for accepting referrals, and recording outcomes (e.g., how quickly a provider should accept a referral, the meaning of "resolved," how many times a provider should attempt to contact a client).

Data about community needs and referral network performance. Most referral networks generate some data about the network. The data generated in part depends on the design features described above. It also depends on leaders carefully considering the type of evaluation they want to conduct and why. Good network evaluation can help network leaders manage performance issues in their network. It can help to detect misalignments between supply and demand for certain types of services. And it can help networks demonstrate their efficacy and social impact to funders and policymakers.

A key question for policymakers and practitioners is about the relative efficacy of these interventions. Is the network they invested in or are running performing well? What are the key performance indicators for these interventions?

This measurement and evaluation playbook aims to provide leaders with the tools they need to answer these questions and more. In 2022, the Network for Nonprofit and Social Impact at Northwestern University helped lead a team that explored how new data systems supporting these interventions created opportunities for data-driven management. Our report, *Collaborative Networks: The Next Frontier in Data-Driven Management*, published by the IBM Center for the Business of Government, began the discussion of how policymakers and practitioners can use data analytics to evaluate and improve health and human service referral networks. The *Measurement and Evaluation Playbook* takes this work a step further, describing the data infrastructure required for this evaluation and how to calculate the key performance indicators in six critical areas. These areas are ordered by the amount of data necessary to perform the evaluation, starting with the simplest network evaluation questions and progressing to the most labor-intensive.

Navigation Quality Control

- Do the human resource navigators, social workers, community resource advocates, community health workers, and/or coordination center employees do their jobs well?
- Which staff members are not meeting quality targets?

Demand for Services

- What are the needs that are most often requested?
- How does demand vary by zip code, demographics, and season?
- What needs are more likely to co-occur?

Supply of Services

- What services are available?
- How do these vary by neighborhood and eligibility criteria?
- Which services are requested but unavailable due to provider capacity constraints?

Provider Engagement

- How many providers actively participate in the referral system?
- Do those providers send referrals, receive referrals, or both?

Network Referral Processes

- What percentage of the time do referral requests result in the client receiving services?
- How long does it take for clients to be contacted by providers after a referral is made?

Client Outcomes

- Does the client's well-being improve as a result of referrals?
- What are the financial and operational impacts of referrals?

Intended Audience

This playbook is designed for network funders, implementers, evaluators, and consultants working with a health and human service referral network and seeking an introduction, guidance, standards, or solutions for evaluating the system. It lists the detailed data elements and structures needed, along with step-by-step instructions for calculation and takeaways, to support data-driven consulting and evaluations. Funders and implementers may find this playbook more technical than their daily work requires. Still, they can benefit from it by understanding how data reflects network performance and where investments or support are most needed. Gaining this perspective enables better strategic decision-making and more substantial alignment with network-wide goals.

Referral Network Designs

There are four common health and human network designs: centralized coordination (hub-and-spoke), human navigation (high-touch), peer-to-peer closed loop, and self-referral/helpline. Understanding how these different types of networks operate is relevant for identifying the types of evaluation possible.

Centralized Coordination (Hub-and-Spoke)

A central entity acts like a clearinghouse. All clients are routed through the hub before going to an agency. A referral typically progresses through four interdependent phases: intake, triage, assignment to an agency, and resolution. After intake, there is limited interaction between the hub and client. Instead, most staff interaction involves working with the agencies to provide services and updates. A technology system may facilitate resolution and assignment to keep track of these statuses.

NCServes made North Carolina the Nation's first interconnected state for Veterans and families in 2017, using a social integrated care platform and utilizing a centralized coordination model. The North Carolina Department of Health and Human Services funds the network. These programs are designed to offer intensive outreach for Veterans and civilians. The network includes over 5,000 in-network provider agencies (both local and national service resources). NCServes works both within the ecosystem of care and across the delta of the community to find the appropriate service and organization that will meet the client's needs. It operates two coordination centers that serve as hubs for the networks. The coordination centers are responsible for intake and serve as air traffic control for referrals, ensuring that clients' requests land at an agency that can help them. Drawing on its extensive database of service providers and resources, NCServes can connect veterans to resources promptly, with a resolution time of less than 5 days and an 84% positive case resolution rate.

Human Navigation (High-Touch)

This model relies on specific staff members (e.g., social workers, community health workers, navigators) to guide clients through the process, often overcoming barriers related to trust, literacy, or technology. A case typically progresses through four stages: assessment and goal setting, barrier removal, connection to resources, and client follow-up. The interaction is centered on the relationship between the staff and client, with little direct interaction with any of the referral agencies.

The **Pathways Community HUB (PCH)** model transforms care coordination by shifting from paying for activities to paying for confirmed outcomes. Unlike standard referrals, a "Pathway" is a tracked intervention led by Community Health Workers that persists until a specific risk — such as housing or employment — is definitively resolved. Unresolved cases are tracked as "finished incomplete," generating critical data on systemic barriers to care. This evidence-based model is particularly effective in maternal health, where research demonstrates significant reductions in low birth weight and preterm births.

Peer-to-Peer (Closed Loop)

In this model, technology systems facilitate a direct handoff between a referring entity and the service provider, with a focus on data tracking. In this case, the workflow initiates with any provider in the network. The provider sends a referral directly to the peer organization, and the peer organization then updates the status of the referral. Referrals can be rejected or accepted. If a referral is accepted, agencies may then enter a case resolution status after services are provided to the client, and the sending agency can see the referral's status updates via the technology, often a community resource referral system.

NCCARE360 operates on a decentralized, peer-to-peer model, allowing providers to send direct referrals via a shared platform rather than utilizing a centralized coordination center. While this technology facilitates direct connections, the absence of tied funding creates significant barriers to closure.

Research indicates that without reimbursement for community-based organizations to support the extra workload, service resolution rates stagnate at approximately 30%.

Self-Referral (Helpline)

The Self-Service Directory or Helpline Model focuses on providing clients with information so they can act on it themselves. This model places the onus on the client to access the directory and follow the instructions to seek services. The self-service directories utilize smart filters or algorithms to provide clients with a list of recommendations.

The public-searchable 2-1-1 websites are examples of self-service directories. Individuals can search for the services that they need and filter the results. Most research on the platform shows that over 85% of the services are appropriately indexed, suggesting the directory is a reliable source of information. However, evaluation of the directory is limited to what users search for, and the outcomes of referrals are unknown. This limitation stems from the service not collecting data beyond traditional web analytics.

Many 2-1-1 helplines are similarly designed, as clients must self-navigate to a provider after a resource navigator provides information. Research suggests that the vast majority of clients try to reach human service providers, but about 35% receive services. However, most 2-1-1s cannot answer questions about service resolution because they do not collect systematic data beyond the call.

Design & Evaluation

- Centralized Coordination (Hub-and-Spoke) operational design enables evaluation of networks in each of the six critical areas described on page 7.
- Peer-to-Peer (Closed Loop) systems can be evaluated using all of the areas, except for navigation quality control.
- Human Navigation (High-Touch) often offers the ability to measure navigation quality control, demand for service, and service resolution. However, they typically cannot measure service supply, provider engagement, or network referral processes (beyond pathway resolution).
- Self Referral network designs offer the most limited evaluation operations; they are limited to navigation quality control and demand for service.

What data do I need?

Network evaluation requires high-quality data. Not every health and human services referral system has all the data needed to conduct the assessments outlined in this playbook. For instance, if your network wants to conduct evaluations on provider engagement or referral processes, then you'll need both the data (e.g., closed-loop referral data) and the data architecture to support those evaluations.

Data Architecture

Data architecture defines the structure and organization of data within a database (e.g., a CRM system). Data are organized into tables that are related to one another. Data from different tables can be joined together for analysis. In this section, we describe eight kinds of data tables:

- Client data
- Organization data
- Location data
- Service/program data
- User data
- User activity log
- Referral data
- Case data

A sample data dictionary for these tables is included in the Appendix.

Persistent IDs

Each data table is connected using persistent identifiers, or numbers consistently used across all the data tables. Excellent data infrastructure keeps separate keys, or a list of numbers and names that consistently identify the following in each of these data tables:

- **Client ID:** A unique identifier for a client, regardless of any changes to their name, address, or contact information.
- **Linked client ID:** A unique identifier that is used in external systems (e.g., HMIS, Veterans Health Administration).
- **Organization ID:** A unique identifier for each provider and coordination center/community hub.
- **Location ID:** A unique identifier for each location that providers operate.
- **Service/program ID:** A unique identifier for each service/program offered by providers in the network.
- **User ID:** A unique identifier for each person who uses the system.
- **Referral ID:** A unique identifier for each referral made on behalf of clients.
- **Case ID:** A unique identifier for each accepted referral.

Any time one of these persistent IDs is used across any of the tables below, it refers to the same entity. For example, the same client ID is used across the client, referral, and case data tables. Persistent IDs enable evaluators to use data from multiple tables to answer key questions, such as whether client demographics are related to referral outcomes.

A unique client ID enables networks to share de-identified data with partners, consultants, and researchers for business or research purposes, as needed. Networks can gain system-level insights while protecting clients' privacy.

More advanced referral networks may create shared client IDs that link multiple systems. These IDs link referral records with health outcome data recorded in health information exchanges, housing outcomes in systems like HMIS, or benefits data in state or federal systems. These linked IDs increase the power of referral networks to evaluate outcomes not typically captured in their systems.

Essential Data Tables

Client Data

Information about individuals who request or receive services through the network.

- Client ID (linked to other systems or not)
- Demographics
- Location

Organization Data

Information about organizations that participate in the network.

- Organization ID
- Name
- AKA (also known as)
- Organization type (provider or coordination center/ community hub)
- Legal status
- Federal Employer Identifier Number (EIN/FEIN)
- Licenses or accreditation
- Addresses
- Mailing address
- Phone number
- Website
- Social media
- E-mail
- Contact name
- Description
- Days/hours of operation

Location Data

Information about service/program locations for providers in the network.

- Location ID
- Organization ID
- Location name
- Address
- Phone number
- E-mail
- Contact name
- Description
- Days/hours of operation
- Last updated
- Record status (active/inactive)

Service/Program Data

Information about services/programs offered by providers in the network.

- Service/program ID
- Service/program name
- Organization ID
- Location ID
- Description
- Days/hours of operation
- Phone number
- E-mail
- Contact name
- Eligibility
- Reported monthly capacity
- Geographic areas served
- Documents required
- Application/intake process
- Fees/payment options
- Taxonomy term for services
- Languages available
- Last updated
- Record status (active/inactive)

User Data

Information about individuals who use the system as coordinators or provider employees.

- User ID
- Name
- User type: coordinator or provider employees
- Organization ID
- Role
- E-mail
- Phone
- User create date (e.g., when a user was added)
- Access (e.g., what activities can they perform in the system)

User Activity Log

- User ID
- Activity time stamp
- Type of activity (e.g., login, case creation, referral)

A unique **user ID** is essential in a network to accurately track and manage the activities of individuals operating within the system. It allows networks to measure performance at the individual level, monitor the quantity and quality of navigation, and ensure accountability for referrals and case management.

Referral Data

Information about each referral made within the network.

- Referral ID
- Referral type: coordinator, self-referral, etc.
- User ID (i.e., the person who made the referral)
- Client ID (i.e., the person for whom the referral is made)
- Service/program ID (i.e., the requested service/program)
- Timestamps of referral actions: creation, acceptance, rejection, recall, etc.
- Referral status: accepted, rejected, recalled, forwarded, out-of-network, etc.
- Referral rejection/recalled/held-in-review reason

The **referral ID** is a unique identifier for the referral record. It allows networks to track a single referral from creation to closure (e.g., acceptance, rejection) across providers.

Similar to client ID, referral ID links referral and case data. Each referral is linked to a single case, while a case can be linked to multiple referrals, as it can take numerous attempts for clients to be successfully referred to a provider.

Case Data

Information about cases created after the acceptance of referrals.

- Case ID
- Referral ID
- User ID
- Service/program ID
- Timestamps of case actions: creation, update, closure, etc.
- Case status
- Resolution status: resolved, unresolved, closed
- Outcome description

Case ID is the unique identifier for the case record. Case ID distinguishes between separate episodes for the same client, enables outcomes to be measured at the case level, and allows evaluation of the coordinator's performance and identification of effective multi-referral pathways.

Worksheet 1: What data does my network have?

Persistent IDs

- ☐ Client ID
- ☐ Linked client ID (Linked to which systems? _____)
- ☐ Organization ID
- ☐ Location ID
- ☐ Service/program ID
- ☐ User ID
- ☐ Referral ID
- ☐ Case ID

Client Data

- ☐ Client ID (Linked to other systems or not)
- ☐ Demographics
  - ☐ Age
  - ☐ Gender
  - ☐ Race
  - ☐ Ethnicity
  - ☐ Household size
  - ☐ Household composition
  - ☐ Income
  - ☐ Current military status
  - ☐ Veteran discharge status
- ☐ Location
  - ☐ Address
  - ☐ Zip code

Organization Data

- ☐ Organization ID
- ☐ Name
- ☐ AKA (also known as)
- ☐ Organization type (provider or coordination center/ community hub)
- ☐ Legal status
- ☐ Federal Employer Identifier Number (EIN/FEIN)
- ☐ Licenses or accreditation
- ☐ Addresses
- ☐ Mailing address
- ☐ Phone number
- ☐ Website
- ☐ Social media
- ☐ E-mail
- ☐ Contact name
- ☐ Description
- ☐ Days/hours of operation

Location Data

- ☐ Location ID
- ☐ Organization ID
- ☐ Location name
- ☐ Address
- ☐ Phone number
- ☐ E-mail
- ☐ Contact name
- ☐ Description
- ☐ Days/hours of operation
- ☐ Last updated
- ☐ Record status (active/inactive)

Service/Program Data

- ☐ Service/program ID
- ☐ Service/program name
- ☐ Organization ID
- ☐ Location ID
- ☐ Description
- ☐ Days/hours of operation
- ☐ Phone number
- ☐ E-mail
- ☐ Contact name
- ☐ Eligibility
- ☐ Reported monthly capacity
- ☐ Geographic areas served
- ☐ Documents required
- ☐ Application/intake process
- ☐ Fees/payment options
- ☐ Taxonomy term for services
- ☐ Languages available
- ☐ Last updated
- ☐ Record status (active/inactive)

User Data

- ☐ User ID
- ☐ Name
- ☐ User type: coordinator or provider employees
- ☐ Organization ID
- ☐ Role
- ☐ E-mail
- ☐ Phone
- ☐ User create date
- ☐ Access (e.g., what activities can they perform in the system)

User Activity

- ☐ User's ID
- ☐ Activity time stamp
- ☐ Type of activity (e.g., login, case creation, referral)

Referral Data

- ☐ Referral ID
- ☐ Referral type: coordinator, self-referral, etc.
- ☐ User ID (i.e., the person who made the referral)
- ☐ Client ID (i.e., the person for whom the referral is made)
- ☐ Service/program ID (i.e., the requested service/program)
- ☐ Timestamps of referral actions: creation, acceptance, rejection, recall, etc.
- ☐ Referral status: accepted, rejected, recalled, forwarded, out-of-network, etc.
- ☐ Referral rejection/recalled/held-in-review reason

Case Data

- ☐ Case ID
- ☐ Referral ID
- ☐ User ID
- ☐ Service/program ID
- ☐ Timestamps of case actions: creation, update, closure, etc.
- ☐ Case status
- ☐ Resolution status: resolved, unresolved, closed
- ☐ Outcome description

Platforms for Analysis

Many platforms are available to support data analysis and visualization, each suited to different levels of technical skill and project complexity. Choosing the right platform depends on the type of data, analytical needs, and available resources. Below is an overview of several common data analytics platforms, including their key features, cost, and ease of use.

R is an open-source programming language built for statistical analysis and data visualization. It's popular among researchers and data scientists for complex analyses and modeling. R is free to use and supported by powerful libraries such as the *tidyverse* and *ggplot2*. Although it offers great flexibility and precision, it can be challenging for beginners unfamiliar with programming.

Python is a versatile, open-source language widely used for data analytics, automation, and machine learning. It has an extensive ecosystem of libraries — such as *pandas*, *NumPy*, and *scikit-learn* — that make it ideal for handling, analyzing, and visualizing data. The platform also requires some programming knowledge.

SQL and database systems, including Salesforce and proprietary systems like UniteUs and FindHelp, can manage and query structured data. Once configured, these systems offer dashboard visualizations and can automatically compute many metrics. However, there is often a cost associated with configuring the platforms to report the metrics described in this playbook.

Excel, while commonly used, is not recommended for advanced analytics. It's suitable for small datasets and quick summaries but struggles with large-scale analysis, automation, and data versioning. Although easy to use, Excel lacks the scalability and reproducibility offered by R, Python, or dedicated analytics platforms.

What personnel do I need?

Measurement and evaluation of a network requires both individuals with the expertise to accurately evaluate networks and leadership with the capacity to act on the findings.

Internal or External Evaluators

Evaluators are professionals capable of reviewing network designs and operations, collecting and analyzing data, and generating reports. They can be internal or external evaluators.

Internal evaluators are staff members for the member organization or the network being evaluated. Public health departments, education institutions, or businesses with highly trained evaluation professionals (e.g., Six Sigma) often have personnel with these skills. Networks with sufficient resources may hire an evaluator dedicated to improving the networks and their outcomes. These individuals frequently hold titles such as policy specialist, data analyst, or evaluation specialist.

External evaluators are from outside of the interested organization or network. They may be university researchers, think tanks, consulting firms, or independent consultants. External evaluators vary in their capacity for the types of evaluation described here. To be effective, they should have experience with complex data architecture, statistics, and network workflows.

Network Leader and Technical Assistance Staff

Measurement and evaluation alone will not improve health and human service referral networks. Leaders with the capacity and drive to improve the network must use evaluation data to advocate for necessary changes informed by the results. The types of changes they may advocate for depend on the performance gap identified, but may include: staff management, capacity building for member organizations, improving workflows and operations, and advocating for new services/programs in underserved areas. Some leaders find that technical assistance staff, whether internal to the network or external consultants, help structure these changes.

Key questions to ask when hiring an evaluator:

1. Can you describe a time you had to analyze program outcomes within the context of a broader "continuum of care" or multi-agency system? How did you account for external variables you couldn't control?
2. Walk us through your process of cleaning messy, real-world human services data.
3. Once the analysis is done, how do you translate technical findings into a format that non-technical program staff, policy leaders, and donors can actually use?

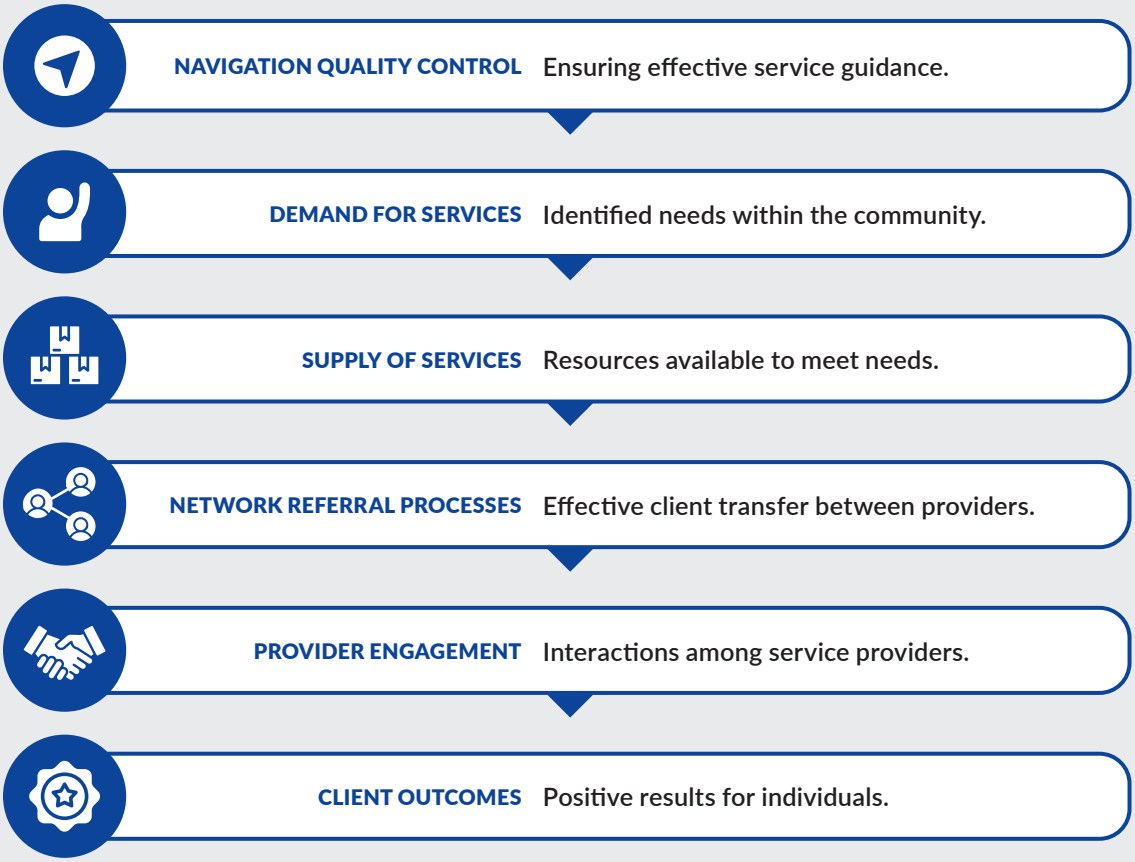
Evaluating Networks

A key question for any leader, funder, or policymaker supporting health and human service referral networks is whether they are meeting standards. In this section, we identify key performance indicators in six critical areas:

- Navigation quality control
- Demand for services
- Supply of services
- Network referral processes
- Provider engagement
- Client outcomes

In the following sections, we describe the best-in-practice metrics in each section and, perhaps more importantly, how to calculate them.

Network KPI Areas



Navigation Quality Control

Navigation quality control refers to the practices that monitor whether coordinators perform their jobs consistently and accurately. Coordinators are employees or volunteers who provide referral management or case management as a significant part of their duties. They may also be called community health workers (CHWs), social workers, resource navigators, or community resource advocates. These individuals are the frontline in health and human service networks, especially those that operate intake centers, hotlines, or coordination centers. Their performance has managerial implications for training, resource planning, and operations optimization.

GOAL

To evaluate coordinators' performance and improve it in the long run.

WHY IT MATTERS

Coordinators and coordination centers (also known as community hubs) are at the heart of client-provider communication. Even when services are available, the quality of navigation determines whether clients are matched with the right resources in a timely fashion. Quality control ensures that coordinators work within a shared framework, producing reliable, high-quality referrals that can be measured and improved over time.

HOW OFTEN SHOULD WE MEASURE?

Quarterly, as part of the performance review.

WHAT DATA ARE NEEDED FOR THE EVALUATION?

To evaluate the navigation quality, four data tables are needed: referral, case, user, and organization.

MEASURES AND INDICATORS

Navigation quality can be measured through the following indicators: Case and Referral Quantity, Client Quantity, and Referral Rejection.

APPROPRIATE FOR THESE MODELS

Centralized Coordination, Human Navigation, and Self-Referral models.

Navigation Quality Control: Data Requirements

Data table	Field name	Definition	Example
Referral	Client ID	Unique identifier for the client record.	G7K9T2B4QW1M
	Referral ID	Unique identifier for the referral record.	R4M2X9Q7T1LB
	User ID	Unique identifier for the coordinator who created the referral.	C8W1V5N3K2ZH
	Referral creation time	Date and time when the referral was created.	2025-03-14 16:27:53
	Referral status	Current status of the referral, chosen from a drop-down menu.	Accepted, forwarded, recalled, in review, rejected, out of network, etc.
	Referral action timestamp	Date and time of the action taken on referral.	2025-03-14 16:27:53
	Referral rejected reason	The reason the referral was rejected, chosen from a drop-down menu.	We do not provide the requested services; the client is not eligible for our services; we do not have the capacity to serve the client; duplicate; we were unable to contact the client; other, etc.
Case	User ID	Unique identifier for the coordinator who created the case.	C8W1V5N3K2ZH
	Client ID	Unique identifier for the client record.	G7K9T2B4QW1M
	Case ID	Unique identifier for the case record.	L1D7R3Y8F5QC
	Case creation time	Date and time of the creation of the case record.	2025-03-14 16:27:53
User	User ID	Unique identifier for the coordinator who created the case.	C8W1V5N3K2ZH
	User type	Indicators of whether the user is a coordinator or provider.	Coordinator, provider.
	Organization ID	Indicates the organization where the user works.	J6P4S8B2Q9TM
Organization	Organization ID	Unique identifier of the coordination center or hub associated with the coordinator.	J6P4S8B2Q9TM
	Organization type	An indicator of whether the organization is a provider or a coordination center/community hub.	Provider, coordination center/ community hub.

CASE AND REFERRAL QUANTITY

Why choose this indicator: Understanding the relative volume of clients helps leaders identify differences in how coordinators screen clients, identify root causes, and make referrals. Differences may indicate a need for greater training.

Data needed: referral ID, case ID, user ID, organization ID, referral creation time, case creation time, user type, organization type.

Sample questions and directions:

Q1: How many referrals or cases were created by a *coordinator* during a given time period?

Q2: How did each coordinator's performance compare to the average performance of their peers?

1. Filter by user ID to include only records created by a coordinator.
2. Count the number of referrals or cases created by a coordinator in a given time window.
3. Average the numbers of referrals and cases created by coordinators, then compare each coordinator's performance to that average.

Q3: How many referrals or cases were created by a *coordination center or hub* during a given time period?

Q4: How did each coordination center or hub perform compared to the average performance of other centers or hubs?

1. Filter by organization ID to include only records created by the coordination center or community hubs.
2. Count the number of referrals or cases created by a coordination center or community hub in a given time window.
3. Average the numbers of referrals and cases created by centers or hubs, then compare individual center or hub performance to the average.

Example: Case and Referral Quantity Calculation

Below is an example of two coordination centers, each with two coordinators managing referrals and cases.

- Average number of referrals/cases created by a coordinator = (100+150+20+110)/4 = 95
- Average number of referrals/cases created by a center or hub = (100+150+20+110)/2 = 190

Based on the data, coordinator 3 and coordination center B are underperforming, while coordinator 2 and coordination center A exceed the average level of performance.

Coordination center/ community hub	Coordinator	# of referral/case	Coordinator average	Center/hub average
A	1	100	95	190
A	2	150		
B	3	20		
B	4	110		

CLIENT QUANTITY

Why choose this indicator: Understanding the relative volume of clients helps leaders manage resources and personnel.

Data needed: client ID, user ID, organization ID, referral creation time, case creation time, user type, organization type.

Sample questions and directions:

Q1: How many clients did a *coordinator* interact with (either referred or created cases) during a given time period?

Q2: How did it compare to the average performance of their peers?

1. Filter by user ID to include only records created by a coordinator.
2. Count the number of clients whose referrals or cases were created by a coordinator in a given time window.
3. Average the number of clients coordinators interacted with. Then compare it to the individual coordinators' performance.

Q3: How many clients did a *coordination center or hub* interact with during a given time period?

Q4: How did it compare to the average performance of other centers or hubs?

1. Filter by organization ID to include only records created by the coordination center or community hubs.
2. Count the number of clients that a coordination center or hub interacted with in a given time window.
3. Average the number of clients that coordination centers or hubs interacted with. Then compare it to the individual center or hub performance.

Example: Client Quantity Calculation

Below is an example of two coordination centers, each with two coordinators managing referrals and cases.

- Average number of client a coordinator interacted with = (25+10+45+30)/4 = 27.5
- Average number of referrals/cases created by a center or hub = (25+10+45+30)/2 = 55

In this case, coordinator 2 and coordination center A are interacting with far fewer clients, while coordinator 3 and coordination center B outperform the average.

Coordination center/ community hub	Coordinator	# of clients interacted with	Coordinator average	Center/hub average
A	1	25	27.5	55
A	2	10		
B	3	45		
B	4	30		

REFERRAL REJECTION

Why choose this indicator: Referral rejection reveals where and why the navigation process breaks down. Tracking this metric helps identify barriers to effective navigation and guides continuous improvement.

Data needed: referral ID, case ID, user ID, organization ID, referral status, referral action timestamp, referral rejected reason, user type, organization type.

Sample questions and directions:

Q1: For each coordinator or coordination center, how many referrals were rejected due to ineligibility or inaccuracy within a time period?

Q2: What was the referral rejection rate (due to ineligibility and inaccuracy)?

Q3: How did coordinators or coordination centers compare to the average performance of their peers or other centers?

1. Filter by user ID to include only records created by a coordinator.
2. Count the number of referrals that a specific coordinator or coordination center rejected due to ineligibility or inaccuracy in a given time window. Ineligibility means the client is not eligible for the service. Inaccuracy means the provider does not provide such a service.
3. Divide the result from #2 by the total number of referrals created by a coordinator or coordination center in the same time window.
4. Average the rejection rates of coordinators or coordination centers by adding them up and dividing the sum by the number of coordinators or coordination centers. Compare it to the coordinator or coordination center performance.

Example: Referral Rejection Calculation

Below is an example of two coordination centers, each with two coordinators managing referrals and cases.

- Coordinator 1 rejection rate = 10/20 = 50%
- Coordinator 2 rejection rate = 5/30 = 16.7%
- Coordinator 3 rejection rate = 2/15 = 13.3%
- Coordinator 4 rejection rate = 6/20 = 30%
- Average coordinator rejection rate = (50%+16.7%+13.3%+30%)/4 = 27.5%
- Coordination center A rejection rate = (10+5)/(20+30) = 30%
- Coordination center B rejection rate = (2+6)/(15+20) = 22.9%
- Average center/hub rejection rate = (30%+22.9%)/2 = 26.4%

Coordinators 2 and 3 have better performance than the average, with lower rejection rates due to ineligibility or inaccuracy, while coordinator 1 has the poorest performance. In terms of coordination centers or community hubs, center B is outperforming both center A and the average, with a lower rejection rate due to ineligibility or inaccuracy.

Center/ hub	Coordinator	# of rejected referrals* created	Total # of referrals created	Coordinator rejection* rate	Average coordinator rejection* rate	Center/hub rejection* rate	Average center/hub rejection* rate
A	1	10	20	50%	27.5%	30%	26.4%
A	2	5	30	16.7%			
B	3	2	15	13.3%		22.9%	
B	4	6	20	30%			

* Only rejections due to ineligibility or inaccuracy are included

Worksheet 2: Navigation Quality Control

Answer the following questions before evaluating your network's navigation quality.

1 **What questions do I need to answer about the navigation quality? List them for each staff member in the process.**

2 **Do we have the required data to answer these questions?**

- Referral data table
  - ☐ Client ID
  - ☐ Referral ID
  - ☐ User ID
  - ☐ Referral creation time
  - ☐ Referral status
  - ☐ Referral action timestamp
  - ☐ Referral rejected reason
- Case data table
  - ☐ User ID
  - ☐ Client ID
  - ☐ Case ID
  - ☐ Case creation time
- User data table
  - ☐ User ID
  - ☐ User type
  - ☐ Organization ID
- Organization data table
  - ☐ Organization ID
  - ☐ Organization type (provider or coordination center/community hub)

3 **What management actions would we take to address poor performance? What are our benchmarks to trigger these actions?**

Demand for Services

Demand for services refers to the need for resources, programs, or interventions within the referral network. It captures the number and type of services requested by clients, regardless of whether those needs were ultimately met.

GOAL

To understand the demand for different types of services across demographics and regions.

WHY IT MATTERS

Understanding the demand for services helps the network to quantify the level of community need and identify emerging trends. High demand for certain services, such as temporary housing, food, or behavioral health care, signals where communities are under pressure. Fluctuations in demand over time can reveal seasonal trends or responses to external shocks. Identifying co-requested services provides crucial insights into service relationships, thereby increasing referral accuracy and efficiency.

HOW OFTEN SHOULD WE MEASURE?

At least quarterly, preferably monthly.

WHAT DATA ARE NEEDED FOR THE EVALUATION?

To evaluate the demand for services, three sets of data are needed: client, case, and service.

MEASURES AND INDICATORS

Demand can be measured through the following indicators: Overall Client Demand, Service-Level Demand, and Co-occurring Needs.

APPROPRIATE FOR THESE MODELS

All models.

Demand for Services: Data Requirements

Data table	Field name	Definition	Examples
Client	Client ID	Unique identifier for the client record.	G7K9T2B4QW1M
	Current address zip code	Five-digit zip code of client's current address.	12345
	Date of birth	Client's date of birth.	1978-05-31
	Gender	Client's gender, chosen from a drop-down menu.	Female, male, non-binary, trans-woman, other, undisclosed.
	Race	Client's race, chosen from a drop-down menu.	White, African-American, Asian, other, undisclosed, American-Indian-Alaska-Native, Native-Hawaiian-Pacific-Islanders.
	Ethnicity	Client's ethnicity, chosen from a drop-down menu.	Hispanic, non-Hispanic, undisclosed.
	Gross household income	Client's annual gross household income in US dollars.	Integers larger than or equal to 0.
	Household size	Number of people in the client's household, including the client.	Integers larger than or equal to 1.
	Current military status (if client is active military)	Client's current military status, chosen from a drop-down menu — a key indicator of program/service eligibility for some organizations.	Veteran, national guard, retiree, active duty, reserve, never served, prefer not to disclose.
	Discharge status (if client is a veteran)	If the client is a veteran, the client's discharge status is chosen from a drop-down menu — a key indicator of program/service eligibility for some organizations.	Honorable, other than honorable, general, dishonorable, bad conduct, other, prefer not to disclose.
Case	Case ID	Unique identifier for the case record.	L1D7R3Y8F5QC
	Client ID	Unique identifier for the client record.	G7K9T2B4QW1M
	Case created at	Date and time of the creation of the case record.	2025-03-14 16:27:53
	Service/program ID	This code indicates which service or program was requested.	678
Service	Service/program ID	This code indicates which service or program was requested.	678
	Taxonomy term for service	This code indicates the service type and subtype. There are several taxonomies available, including the AIRS/ INFO Line Taxonomy and the ICD-10 Z codes for the Social Determinants of Health.	BR-300.725 (Rental Deposit Assistance)

OVERALL CLIENT DEMAND

Why choose this indicator: Measuring client-level demand by location, demographic characteristics, and season provides guidance about required resource allocation.

Data needed: client ID, case ID, case created at, current address zip code, demographics.

Sample questions and directions:

Q1: How many unique clients requested services within a specific time period?

Q2: Were there certain times when clients requested more than at other times of the year?

Q3: How are they distributed by zip code and demographic characteristics?

1. Count the number of clients who have at least one case created within a given time window.
2. Compare the number of clients who have at least one case created by month or season. Tables or plots can be designed to show results.
3. Aggregate counts by zip code and demographic characteristics. Tables or plots can be created to show the result.

Example: Client Demand Calculation

Below is an example of clients who have at least one case created in 2025.

For simplicity, we only include zip code, date of birth, race, and household size in this example.

Case ID	Client ID	Case created at	Zip code	Date of birth	Race	Household size
1	1	2025-01-01 12:00:00	60601	1960-06-01	Black or African American	1
2	1	2025-10-09 14:07:01	60601	1960-06-01	Black or African American	1
3	2	2025-04-01 18:00:00	60208	1999-08-12	Asian	3
4	3	2025-04-07 09:00:01	60211	1954-07-04	White	1
5	4	2025-08-09 12:00:00	60208	1977-01-01	White	1
6	5	2025-01-01 14:00:00	60208	1978-01-01	Other	2

Let's say the time window is the year 2025, from January 1 to December 31.

There are five clients with at least one case created in 2025.

Number of clients by zip code:

Zip code	# of clients
60208	3
60211	1
60601	1

Number of clients by demographic characteristics:

Demographic	Categories	# of clients
Age (as of December 31, 2025)*	20–30	1
	30–40	0
	40–50	2
	50–64	0
	65 and above	2
Race	White	2
	Black or African American	1
	American Indian or Alaska Native	0
	Native Hawaiian or Pacific Islander	0
	Asian	1
	Other	1
Household size**	1	3
	Above 1	2

* When analyzing continuous demographics such as age and income, they can be converted into groups for easier analysis. 65 is an essential threshold since people aged 65 and above are eligible for Medicare.

** Depending on the precision of analysis, networks can decide their own demographic groupings.

Number of clients by month and season

	Categories	# of clients
Month	January	2
	February	0
	March	0
	April	2
	May	0
	June	0
	July	0
	August	1
	September	0
	October	1*
	November	0
	December	0
Season	Spring (March – May)	2
	Summer (June – August)	1
	Fall (September – November)	1*
	Winter (December – February)	2

* When clients have multiple cases created in different months or seasons, they should be counted once per category. Therefore, client 1 is counted in both January and October, and both winter and fall.

In real data, a network may serve thousands of clients, enabling analyses of trends by location, demographics, and time.

SERVICE-LEVEL DEMAND

Why choose this indicator: Different services can exhibit contrasting trends across locations, demographics, and times. Understanding demand at the service level supports more effective resource allocation.

Data needed: case ID, service/program ID, case created at, taxonomy term for service, current address zip code, demographics.

Sample questions and directions:

Q1: For each taxonomy term for service, how many service requests were made in a specific time period?

Q2: Were certain services more likely to be requested at certain times of the year?

Q3: How are they distributed by zip code and demographic characteristics?

1. Count the number of cases that were created in a given time window by taxonomy term for service. You can choose to use different levels of categorization if your taxonomy is hierarchical. For example, codes can refer to Temporary Financial Aid or the more nuanced category of Housing Payment Assistance.
2. For each taxonomy term for service, aggregate the number of cases that were created in each month or season. Tables or plots can be designed to show the result.
3. Aggregate number of cases that were created in a given time window for each taxonomy term for service by zip code and demographics. Tables or plots can be designed to show the result.

Example: Service-Level Demand Calculation

Below is an example of cases created in 2025.

For simplicity, we select cases that requested emergency food services (BD-1800) and include only zip code, date of birth, and race in this example.

Case ID	Case created at	Taxonomy term for service	Zip code	Date of birth	Race
1	2025-01-01 12:00:00	BD-1800.1000	60601	1960-06-01	Black or African American
2	2025-10-09 14:07:01	BD-1800.2000	60601	1960-06-01	Black or African American
3	2025-04-01 18:00:00	BD-1800.2250	60208	1999-08-12	Asian
4	2025-04-07 09:00:01	BD-1800.2000	60211	1954-07-04	White
5	2025-08-09 12:00:00	BD-1800.5000	60208	1977-01-01	White
6	2025-01-01 14:00:00	BD-1800.2000	60208	1978-01-01	Other

In this case, we are looking at the same time window, January 1, 2025, to December 31, 2025.

Six cases requesting emergency food services were created in 2025.

Number of cases by zip code

Zip code	# of cases
60208	3
60211	1
60601	2

Number of cases by demographic characteristics:

Demographic	Categories	# of clients
Age (as of December 31, 2025)*	20–30	1
	30–40	0
	40–50	2
	50–64	0
	65 and above	3
Race	White	2
	Black or African American	2
	American Indian or Alaska Native	0
	Native Hawaiian or Pacific Islander	0
	Asian	1
	Other	1

Number of cases created by month and season

	Categories	# of cases
Month	January	2
	February	0
	March	0
	April	2
	May	0
	June	0
	July	0
	August	1
	September	0
	October	1
	November	0
	December	0
Season	Spring (March – May)	2
	Summer (June – August)	1
	Fall (September – November)	1
	Winter (December – February)	2

In practice, a network may generate thousands of cases each year, allowing for analyses of trends across locations, demographic groups, and time periods.

CO-OCCURRING NEEDS

Why choose this indicator: Co-occurring needs are common in real-life practices. It allows us to identify clients' likely needs before they are reported. Moreover, identifying these needs enables networks to concentrate on deeper case coordination among providers who offer services that frequently co-occur.

Data needed: client ID, case created at, service/program ID, taxonomy term for service, service episode (see callout box).

Sample question and directions:

Q: What services are co-requested?

1. Create service episode windows (see callout box)
2. Calculate how many services were requested in a service episode.
3. For a service episode with greater than 1 service request, identify the services that were concurrently requested.

Service Episode

For each client, cases created within X days of the previous case are considered part of the same service episode. Networks can set their own value of X, but in our evaluations, we use 7 days. Services requested in the same service episode are considered as co-occurring needs.

Example 1				
Cases	Jan 1	Jan 3	Jan 9	Feb 14
Services	Food	Housing	Utilities	Food
Service episode	1			2
Example 2				
Cases	July 4	July 11	July 30	Aug 3
Services	Food	Housing	Utilities	Food
Service episode	1		2	

Example: Co-occurring Needs Calculation

Below is an example of three clients and their cases.

Here, BD-1800 (Emergency Food) and BD-3800 (Housing Expense Assistance) are co-occurring needs; both were requested in two service episodes.

Client ID	Case created at	Taxonomy term for service	Service episode
A	2025-01-01 13:00:00	BD-1800	A1
A	2025-01-03 12:00:00	BH-3800	A1
A	2025-01-09 10:00:00	BD-1800	A1
B	2025-07-01 09:00:00	BD-1800	B1
B	2025-07-15 10:00:00	BV-8900	B2
C	2025-10-01 12:00:00	BH-3800	C1
C	2025-10-05 12:00:00	BD-1800	C1
C	2025-10-12 17:00:00	BV-8900	C2*

* This case was created 7 days and 5 hours after the last case on October 5, making it a separate service episode from the first one.

Worksheet 3: Demand for Services

Answer the following questions before evaluating the demand for services in your network.

1 What questions do I need to answer about…

…the demand for services?

…differences in demand across demographic categories or locations?

…demand across time?

…co-occurring requests?

2 Do we have the required data to answer these questions?

- Client data table
  - ☐ Client ID
  - ☐ Current address zip code
  - ☐ Date of birth
  - ☐ Gender
  - ☐ Race
  - ☐ Ethnicity
  - ☐ Gross household income
  - ☐ Household size
  - ☐ Current military status
  - ☐ Discharge status
- Case data table
  - ☐ Case ID
  - ☐ Client ID
  - ☐ Case created at
  - ☐ Service/program ID
- Service data table
  - ☐ Service/program ID
  - ☐ Taxonomy term for service

3 What organizations or leaders could act based on these answers?

4 What are some of the possible actions they might take?

Supply of Services

The supply of services reflects providers' ability to meet demand. It refers to the availability, capacity, and responsiveness of providers within the referral network to deliver the requested resources, programs, and interventions.

GOAL

To understand providers' capacity for providing particular types of services.

WHY IT MATTERS

Tracking service supply provides the basis for evaluating providers' capacity. An undersupply of services leads to unmet needs, client frustration, and erosion of trust in the network. Conversely, excess supply with low demand indicates underutilization of resources or misalignment between what is available and what clients are asking for. Regular evaluation of supply supports strategic planning and resource allocation.

HOW OFTEN SHOULD WE MEASURE?

At least quarterly, preferably monthly.

WHAT DATA ARE NEEDED FOR THE EVALUATION?

To evaluate service supply, three data tables are needed: referral, case, and service/program.

MEASURES AND INDICATORS

Supply can be monitored through the following indicators: Provider Capacity and Lack of Provider Capacity.

APPROPRIATE FOR THESE MODELS

Centralized Coordination and Peer-to-Peer models.

Supply of Services: Data Requirements

Data table	Field name	Definition	Examples
Referral	Referral ID	Unique identifier for the referral record.	R4M2X9Q7T1LB
	Client ID	Unique identifier for the client record.	G7K9T2B4QW1M
	Case ID	Unique identifier for the case record.	L1D7R3Y8F5QC
	Service/program ID	Unique identifier for the service/program.	678
	Referral action timestamp	Date and time of the action taken on referral.	2025-03-14 16:27:53
	Referral status	Current status of the referral, chosen from a drop-down menu.	Accepted, forwarded, recalled, in review, rejected, out of network, etc.
	Referral rejected reason	The reason the referral was rejected, chosen from a drop-down menu.	We do not provide the requested/ needed services; the client is not eligible for our services; we do not have the capacity to serve the client; duplicate; we were unable to contact the client; other, etc.
Case	Case ID	Unique identifier for the case record.	L1D7R3Y8F5QC
	Case created at	Date and time of the creation of the case record.	2025-03-14 16:27:53
	Case closed at	Date and time when the case was closed.	2025-03-14 16:27:53
	Case status	Current status of the case, chosen from a drop-down menu.	Active, closed, etc.
	Resolution status	Resolution status of the case, chosen from a drop-down menu.	Resolved, unresolved, etc.
Service/ program	Service/program ID	Unique identifier for the service/program.	678
	Organization ID	Unique identifier of the provider where the service/ program is offered.	J6P4S8B2Q9TM
	Taxonomy term for service	This code indicates the service type and subtype. There are several taxonomies available, including the AIRS/ INFO Line Taxonomy and the ICD-10 Z codes for the Social Determinants of Health.	BR-300.725 (Rental Deposit Assistance)
	Reported monthly capacity	The number of referrals of this type that the organization estimates it can provide in a given month through its program.	20

PROVIDER CAPACITY

Why choose this indicator: Provider engagement is key to a successful health and human service network. Tracking changes in provider capacity is a leading indicator of engagement issues that require attention.

Data needed: organization ID, case ID, service/program ID, taxonomy term for service, case created at, case closed at, case status.

Questions and directions:

Q1: What services were successfully provided (closed and resolved) by each provider?

Q2: How do these services change over time? What actions can be taken to accommodate the change?

1. For each provider, count the number of cases that were closed and successfully resolved for each service within a given time window. Compare this number to the reported monthly capacity.
2. Replicate this calculation for each month and season. Identify trends of capacity shortages or excess capacity. Determine why it happened, and then consider possible measures to accommodate the change.

Example: Provider Capacity Calculation

Below is an example of Provider A and related cases in January 2025.

Organization ID	Case ID	Case closed at	Service/program ID	Case status	Resolution status
A	1	2025-01-01 09:00:00	30	Closed	Unresolved
	2	2025-01-02 09:00:00	35	Closed	Resolved
	3	2025-01-06 12:00:00	35	Closed	Resolved
	4		30	Active	
	5	2025-01-28 09:00:00	35	Closed	Resolved
	6		41	Active	

Here is the list of services available at Provider A in January 2025:

Service/program ID	Number of cases closed and resolved
35	3

Cases 1, 4, and 6 do not count as they are either unresolved or still open. In this example, provider A has reported that it has the capacity to address 20 emergency food referrals per month through its program (#35). In this case, the provider has significantly more capacity than the referrals, suggesting that it could accommodate more referrals in the future.

LACK OF PROVIDER CAPACITY

Why choose this indicator: Similar to provider capacity, tracking rejections due to capacity constraints enables successful partner engagement and may indicate an opportunity for technical assistance. In addition, if a provider rejects referrals due to capacity constraints before their reported monthly capacity is exceeded, the estimate for the number of referrals this provider can handle may need to be adjusted.

Data needed: organization ID, referral ID, service/program ID, taxonomy term for service, referral action timestamp, referral status, referral rejected reason, reported monthly capacity.

Questions and directions:

Q1: What services were most often rejected by a provider due to a lack of capacity? Does the number of rejections for lack of capacity make sense given their reported monthly capacity for the service?

Q2: Are there any trends in the number of rejections due to a lack of capacity?

1. For each service ID, count the number of referrals that were rejected due to a lack of capacity within a given time window.
2. Refer to the provider capacity calculation (see page 31).
3. Compare the number of accepted referrals for a program to the reported monthly capacity. If the provider is accepting the expected number of referrals, then the number of rejected referrals due to capacity constraints suggests the network is over-referring to this provider. If the provider is accepting fewer referrals than expected and rejecting them due to capacity constraints, it indicates a need for provider engagement to determine whether they can no longer meet their reported monthly capacity or if technical assistance is required.
4. These metrics can be compared over time to identify trends and consider how referrals may need to be managed differently.

Example: Lack of Provider Capacity Calculation

Below is an example of Provider A and related referrals in January 2025.

Organization ID	Referral ID	Referral action timestamp	Service/program ID	Referral status	Referral rejected reason
A	1	2025-01-01 09:00:00	30	Rejected	Client ineligible
	2	2025-01-02 09:00:00	35	Referred	
	3	2025-01-06 12:00:00	35	Referred	
	4	2025-01-15 10:00:00	30	Rejected	Lack of capacity
	5	2025-01-28 09:00:00	35	Referred	
	6	2025-01-30 16:00:00	41	Rejected	Unable to contact

Here is the list of services that Provider A was not able to provide in January 2025 due to a lack of capacity:

Service/program ID	Rejected due to lack of capacity
30	1

In this case, the provider rejected all of the housing expense assistance requests referred to program 30. If the provider indicated that it has the monthly capacity to address these requests, technical assistance or up-to-date program information may be needed.

Worksheet 4: Supply of Services

Answer the following questions before evaluating the supply of services in your network.

1 What questions do I need to answer about provider capacity?

2 Do we have the required data to answer these questions?

- Referral data table
  - ☐ Referral ID
  - ☐ Client ID
  - ☐ Service/program ID
  - ☐ Referral status
  - ☐ Referral action timestamp
  - ☐ Referral rejected reason
- Case data table
  - ☐ Case ID
  - ☐ Referral ID
  - ☐ Case created at
  - ☐ Case closed at
  - ☐ Case status
  - ☐ Resolution status
- Service/program data table
  - ☐ Service/program ID
  - ☐ Organization ID
  - ☐ Taxonomy term for service
  - ☐ Reported monthly capacity

3 What organizations or leaders could address gaps in the supply of programs or services?

4 What are some possible actions they might take?

Providers' Engagement

Providers' engagement refers to the extent to which service organizations participate in and contribute to the referral network. When organizations are listed in a resource directory, they often remain passive and use their normal intake process when referred clients reach out. In contrast, membership in a referral network requires providers to actively respond to referrals, document outcomes, and collaborate with partners to ensure clients receive timely and appropriate services.

GOAL

To understand how providers interact through referrals in the network.

WHY IT MATTERS

A referral network is only as strong as providers' willingness to participate. Even with strong demand and solid supply, the system will not run smoothly if providers don't respond to or follow through on referrals. Measuring provider engagement ensures accountability and highlights where additional support or relationship-building is needed. High levels of engagement help increase accuracy and efficiency in referral processes.

HOW OFTEN SHOULD WE MEASURE?

At least quarterly, preferably monthly.

WHAT DATA ARE NEEDED FOR THE EVALUATION?

To evaluate providers' engagement, four data tables are needed: referral, users, user activity log, and service/program.

MEASURES AND INDICATORS

Providers' engagement can be evaluated based on the number of activities users perform, the number of referrals they send, and the number of referrals they accept. Each of these types of activities is a key outcome of partner engagement activities. These activities might include training, learning more about the provider, and engaging in a community of practice.

APPROPRIATE FOR THESE MODELS

Centralized Coordination and Peer-to-Peer models.

Providers' Engagement: Data Requirements

Data table	Field name	Definition	Example
Referral	Referral ID	Unique identifier for the referral record.	R4M2X9Q7T1LB
	Referral created at	Date and time when the referral was created.	2025-03-14 16:27:53
	User ID	Unique identifier for the user who made the referral. Users include the coordinator, case management, and the provider employee.	C8W1V5N3K2ZH
	Service/program ID	Unique identifier for the referred program.	678
User	User ID	Unique identifier of the user. User includes the coordinator, case manager, and provider employee.	C8W1V5N3K2ZH
	Organization ID	Unique identifier and name of the user's provider.	J6P4S8B2Q9TM
User activity log	User ID	Unique identifier of the user. User includes the coordinator, case manager, and provider employee.	C8W1V5N3K2ZH
	Type of activity	The activity performed by the user during the login.	Login, case creation, make a referral, accept a referral, reject a referral, contact a client, look up an organization, etc.
	Activity timestamp	Date and time when the user started the activity.	2025-03-14 16:27:53
Service/ program	Service/program ID	Unique identifier for the service/program.	678
	Organization ID	Unique identifier of the provider where the service/ program is offered.	J6P4S8B2Q9TM

ACTIVE PROVIDER

Why choose this indicator: Identifying active providers is a minimum measure of network involvement. Providers listed in a resource directory but do not perform any activities in the network are not network assets. Their listing can harm network performance, especially if referrals are sent to them, and they never log in to respond.

Data needed: user ID, organization ID, type of activity, activity timestamp.

Questions and directions:

Q1: How many organizations were active in the network during a period of time? What percentage of the total organizations in our listings are active?

1. Count the number of unique organization IDs in the user activity log during a period of time. This is the number of active organizations.
2. Divide the number of active organizations (#1) by the total number of organizations listed in the system.

Q2: What are the most common activities of providers?

1. Create counts of user activities in the user activity log over a period of time.

Q3: How often do providers perform activities in the system?

1. For a selected time window, identify the number of user IDs that appear exactly once. For example, how many users log in only once a month?
2. For the selected time window, identify the number of users who log in more than once. Use the number of logins to determine the average frequency of activity for these users.
3. For a more nuanced analysis, identify the patterns of user activity. Are users more likely to log in on Monday morning? At the end of the day? These patterns of engagement can indicate how different users have incorporated the system into their overall workflow.

Example: Active Provider Calculation

Below is an example of three providers and the number of each essential activity in January 2025. For simplicity, instead of including the details of users' activities, we count them and list the numbers in the table below.

User ID	Organization ID	Activity timestamp	Type of activity
U10234	A	2025-01-12 09:14:22	create case
U10234	A	2025-01-12 09:18:47	lookup organization
U55678	B	2025-01-12 10:05:11	lookup organization
U90123	C	2025-01-12 10:22:03	accept referral
U55678	B	2025-01-12 11:31:55	lookup organization
U33445	D	2025-01-12 12:04:18	make referral
U90123	C	2025-01-12 12:15:42	lookup organization
U33445	D	2025-01-12 12:29:08	accept referral

In this example, users from 4 unique organizations logged in during the month. The most frequent activity is organization lookup, which in this case is rarely followed by a referral. Users are primarily using the system as a resource directory and may be making referrals outside of the system. Finally, users are more likely to log in during the late morning or around lunch, suggesting that system use occurs after a traditional workday has gotten underway and some other tasks have been performed.

OUTBOUND REFERRALS

Why choose this indicator: Outbound referrals are a key indicator of provider trust in the network. Providers are more likely to send referrals when they trust that the client will receive services in a timely fashion.

Data needed: referral ID, user ID, organization ID, referral created at.

Questions and directions:

Q1: How many providers have sent referrals within a time period? What percentage of active providers does that represent?

Q2: What is the average number of outbound referrals per provider? Are there outliers?

1. In a given time window, count the number of providers who have sent at least one referral, using referral ID and organization ID.
2. Divide the number of providers who have made at least one referral by the total number of active providers (see page 35).
3. Create a frequency table for all active providers, listing the number of referrals they have made.
4. Calculate the average number of referrals made by providers.

Example: Outbound Referral Calculation

Below is an example of a network with five providers and the number of outbound referrals they made in January 2025.

Organization ID	# of outbound referrals	Average # of outbound referrals
A	0	35
B	60	
C	0	
D	70	
E	45	

In January 2025, all 3 of the five providers in this data snippet have sent referrals. Organizations A and C sent no referrals this month, suggesting an opportunity for relationship building.

Average number of outbound referrals = (0+60+0+70+45)/5 = 35

Compared with the other providers, provider D is an outlier, making twice the average number of referrals into the network. Such an organization may be a strong network champion, encouraging other organizations to make referrals.

INBOUND REFERRALS

Why choose this indicator: Inbound referrals are a key indicator of provider engagement and the demand for the provider's services.

Data needed: referral ID, service/program ID, organization ID, referral created at.

Questions and directions:

Q1: How many providers have received referrals within a time period? What percentage of active providers does that represent?

Q2: What is the average number of inbound referrals per provider? Are there outliers?

1. In a given time window, count the number of providers who have received at least one referral. This is the number of organization IDs that correspond to service/program IDs that appear in the referral table.
2. Divide the number of providers who have accepted at least one referral by the total number of active providers (see page 35).
3. Create a frequency table for all active providers, listing the number of referrals they received.
4. Calculate the average number of referrals accepted by providers.

Example: Inbound Referral Calculation

Below is an example of a network with five providers and the number of inbound referrals they received in January 2025.

Provider ID	# of inbound referrals	Average # of inbound referrals
A	0	31
B	40	
C	15	
D	70	
E	30	

In January 2025, four providers received referrals.

Average number of inbound referrals = (0+40+15+70+30)/5 = 31

In this example, provider A received no referrals, indicating that they are either not a trusted provider or their services may not be in demand. Network managers should investigate which of these explanations is supported by the historical data. Depending on the answer, the organization may need technical assistance to increase its reliability in accepting referrals, or it may be dropped from the network due to a lack of demand for services.

Worksheet 5: Providers' Engagement

Answer the following questions before evaluating the providers' engagement in your network.

1 What questions do I need to answer about providers' engagement?

2 Do we have the data needed to answer these questions?

- Referral data table
  - ☐ Referral ID
  - ☐ Referral created at
  - ☐ User ID
  - ☐ Service/program ID
- User data table
  - ☐ User ID
  - ☐ Organization ID
- User activity log
  - ☐ User ID
  - ☐ Type of activity
  - ☐ Activity timestamp
- Service/program data table
  - ☐ Service/program ID
  - ☐ Organization ID

3 Who is responsible for provider engagement in my network?

4 What are some possible actions that they might take to boost provider engagement?

Network Referral Process

The network referral process is the sequence of activities that occur once a referral is initiated within the network. It covers navigation, referral acceptance, service delivery, and case closure. Monitoring process metrics helps networks understand not only demand for services and supply, but also how well the referral network functions in practice.

GOAL

To evaluate how accurately, efficiently, and effectively clients are matched with services.

WHY IT MATTERS

Measurement of process metrics provides networks with a measure of effectiveness. By examining how referrals move through the system, networks can identify bottlenecks, standardize practices across organizations, and improve coordination among providers. Strong process management ensures rigorous, timely, and successful service delivery.

HOW OFTEN SHOULD WE MEASURE?

At least quarterly, preferably monthly.

WHAT DATA ARE NEEDED FOR THE EVALUATION?

To monitor the process, the following data tables are required: referral, case, and service/program.

MEASURES AND INDICATORS

Referral effectiveness can be evaluated by examining the network's accuracy, efficiency, and service resolution. Accuracy refers to a network sending the referral to the provider who offers the service and has the capacity to address the need. Efficiency denotes the delays between when a referral is made, accepted, and resolved. Service resolution describes how often a client's request for service is determined by service provision.

APPROPRIATE FOR THESE MODELS

Centralized Coordination and Peer-to-Peer models.

Network Referral Process: Data Requirements

Data table	Field name	Definition	Example
Referral	Client ID	Unique identifier for the client record.	G7K9T2B4QW1M
	Case ID	Unique Identifier for the case record.	L1D7R3Y8F5QC
	Referral ID	Unique identifier for the referral record.	R4M2X9Q7T1LB
	Referral created at	Date and time when the referral was created.	2025-03-14 16:27:53
	Service/program ID	Unique identifier for the service/program.	678
	Referral status	Status of the referral, chosen from a drop-down menu.	Accepted, forwarded, recalled, in review, rejected, out of network, etc.
	Referral action timestamp	Date and time when the action was taken.	2025-03-14 16:27:53
	Referral recalled reason	The reason the referral was recalled, chosen from a drop-down menu.	Client no longer requires services, recipient organization did not respond, other, etc.
	Referral rejected reason	The reason the referral was rejected, chosen from a drop-down menu.	We do not provide the requested/needed services; the client is not eligible for our services; we do not have the capacity to serve the client; duplicate; we were unable to contact the client; other, etc.
Case	Case ID	Unique Identifier for the case record.	L1D7R3Y8F5QC
	Case created at	Date and time of the creation of the case record.	2025-03-14 16:27:53
	Service/program ID	Unique identifier for the service/program.	678
	Case closed at	Date and time when the case was closed.	2025-03-14 16:27:53
	Case status	Current status of the case, chosen from a drop-down menu.	Active, closed, etc.
	Resolution status	Resolution status of the case, chosen from a drop-down menu.	Resolved, unresolved, etc.
	Outcome description	Further description of the outcome, chosen from a drop-down menu.	Service provided, client self-resolved, unable to contact the client, unable to obtain consent, no available services, not eligible for services, etc.
Service/ program	Service/program ID	Unique identifier for the service/program.	678
	Organization ID	Unique identifier of the provider where the service/program is offered.	J6P4S8B2Q9TM
	Taxonomy term for service	This code indicates the service type and subtype. There are several taxonomies available, including the AIRS/ INFO Line Taxonomy and the ICD-10 Z codes for the Social Determinants of Health.	BR-300.725 (Rental Deposit Assistance)

ACCURACY: FIRST CONTACT ACCEPTANCE

Why choose this indicator: A higher first referral resolution rate indicates that clients were accurately and effectively matched with the service they needed.

Data needed: case ID, referral ID, referral status, referral rejected reason, referral recalled reason, resolution status, outcome description.

Question and directions:

Q: What was the proportion of cases that were resolved at the first referral?

1. Filter out cases where the case outcomes description or the referral rejected reason were self-resolved, unable to obtain consent, or where the provider was unable to contact the client. Also, filter out cases where the referral recalled reason was that the client no longer requires services.
2. Filter out the cases where the referral status is in review or out of network.
3. For each remaining case ID, count the number of referral IDs.
4. Divide the number of case IDs where the number of referral IDs was 1 and referral status was accepted by the total number of case IDs.

Accuracy gives network leaders a measure of how well referring users know who does what.

Example: Accuracy Calculation

Below is an example of some cases and referrals in a network. In this example, instances in which case outcome descriptions or referral rejections were due to self-resolution, inability to obtain consent, or inability to contact the client have been removed. In addition, cases where the referral status was in review or out of network have already been filtered out.

Referral ID	Case ID	Referral status
1	201	Recalled
2	201	Accepted
3	301	Rejected
4	401	Accepted
5	501	Forwarded

Number of cases that were accepted at the first referral: 1

Total number of cases: 4

Proportion of cases accepted at the first referral: 1/4 = 25%. We consider a 25% accuracy rate to be low. In this case, training may be needed to make referrals more accurately. In addition, technical assistance may be required to understand the reason why some providers are not responding to, rejecting, and forwarding referrals.

EFFICIENCY: TIME TO MATCH

Why choose this indicator: Time to match is often a better indicator for efficiency in networks with varied service types, since it only measures the time between referral and when a provider begins working on it. In contrast, time to close (below) refers to the time between referral and when a service is rendered. Time to close varies significantly based on service complexity. For example, the emergency food service time to close is generally shorter than that of employment assistance.

Data needed: case ID, referral ID, referral created at, referral action timestamp.

Question and directions:

Q: How long did it take for providers to accept clients' referrals?

1. Select all case IDs where the last referral status (based on referral action timestamp) was accepted.
2. Calculate the difference between the first referral creation time for the case ID and the referral acceptance time.
3. Average the difference scores across cases for the chosen time window.

Example: Time to Match Calculation

Below is an example of referrals in a network. In this example, instances where cases are in progress have been filtered out. In most cases in this example, the first referral led to acceptance. However, in case 3, two referrals were required.

Case ID	Referral ID	Referral created at	Referral action timestamp	Time to match (in days)	Average time to match
1	1	2025-01-01 09:00:00	2025-01-02 09:00:00	1	5.2
2	2	2025-01-11 12:00:00	2025-01-15 00:00:00	3.5	
3	3	2025-01-12 10:00:00		11.2	
3	4	2025-01-20 15:00:00	2025-01-23 15:00:00		

Average time to match = (1+3.5+11.2)/3 = 5.2 days

Five days to match may be appropriate for the network, depending on the types of services offered and the severity of the client's need.

EFFICIENCY: TIME TO CLOSE

Why choose this indicator: Time to close indicates how long a client had to wait to receive services. It is a key performance indicator for a referral network, and includes both the referral and assistance stages of helping. As such, performance includes the work of providers in the network. Service type must be taken into account when calculating this metric, since more complex services take longer to render.

Data needed: case ID, referral created at, case closed at, taxonomy term for service, resolution status, outcome description.

Question and directions:

Q: How long did it take to close the case by service type?

1. Select cases where the case resolution status is resolved and the case outcome description is service provided.
2. Average the duration of time between referral creation and case closure by taxonomy term for service.

Example: Time to Close Calculation

Below is an example of resolved cases in a network where service was provided.

Case ID	Referral created at	Case closed at	Taxonomy term for service	Time to close (in days)	Average time to close
1	2025-01-01 09:00:00	2025-01-02 09:00:00	BD-1800	1	2.3
2	2025-01-11 12:00:00	2025-01-15 00:00:00	BD-1800	3.5	
3	2025-01-12 10:00:00	2025-01-30 16:00:00	BH-3800	18.25	11.6
4	2025-01-20 15:00:00	2025-01-25 15:00:00	BD-3800	5	

Average time to close for BD-1800 (emergency food assistance) cases = (1+3.5)/2 = 2.3 days

Average time to close for BH-3800 (housing expense assistance) cases = (18.25 + 5)/4 = 11.6 days

SERVICE RESOLUTION

Why choose this indicator: Service resolution indicates whether a client received services, the immediate goal of referrals. Differences in resolution rates can indicate a need for capacity-building around a service.

Data needed: case ID, referral ID, referral status, taxonomy term for service, referral created at, status, case resolution status.

Question and directions:

Q: What was the case resolution rate in general and by service type?

1. Filter out cases where the last referral status (by date) is in review, forwarded, or out of network.
2. Filter out cases where the case status is active.
3. Filter out cases where the case outcome description is client self-resolved, unable to contact the client, or unable to obtain consent.
4. Total the cases where the last referral status (by date) is recalled or rejected. These referrals may not have entries in the case data table.
5. Add the number of cases from step #3 to the number of cases from the case data table where the case resolution status is unresolved.
6. Next, total the number of cases from step #4 and the number of resolved cases. This number is the total cases where services could have been resolved.
7. Finally, divide the number of resolved cases by the total number of cases (step #5). This number represents the percentage of referrals that were successfully resolved.

Example: Service Resolution Rate Calculation

To calculate the service resolution rate, we will use this formula:

resolution rate =resolved cases/ total cases

The total number of cases refers to both those unresolved at the referral stage and those closed after acceptance by a provider.

To find the number of unresolved cases at the referral stage, refer to the referral data table. Here's an example:

Case ID	Referral ID	Referral created at	Referral status	Taxonomy term for service
1	1	2025-01-01 09:00:00	Rejected	BH-3800
2	2	2025-01-11 12:00:00	Out of network	BD-1800
3	3	2025-01-12 10:00:00	In Review	BH-3800
4	4	2025-01-20 15:00:00	Accepted	BD-1800

In these referral records, case 1 would be included in the denominator because it was a referral that did not progress to a provider. It stopped at the referral stage. It would be added to the total number of cases in the time window, as per the case data table.

Below is an example of a case data table snippet.

Case ID	Taxonomy term for service	Case status	Resolution status	Outcome description
6	BD-1800	Closed	Resolved	Client self-resolved
7	BH-3800	Closed	Resolved	Services provided
8	BH-3800	Closed	Unresolved	Not eligible for services
9	BH-3800	Closed	Unresolved	Not eligible for services
10	BD-1800	Closed	Resolved	Services provided
11	BD-1800	Active		

The total number of cases = 6, because case 11 is still active. The number of resolved cases refers to closed cases with a resolved status, and the case outcomes description indicates that services were provided. In this data snippet, two cases were resolved (7, 10).

In this example, the service resolution rate = 2/6 or 33%. This resolution rate would be an average resolution rate for many referral networks without care coordinators who actively manage referrals. In networks with active navigators who manage referrals, typical resolution rates are above 60%.

As with time to close, service resolution rates should be broken down by taxonomy term for service to compare across networks. Less complex services (e.g., emergency food) generally have higher service resolution rates than more complex services (e.g., legal assistance). Networks that handle higher volumes of more complex services generally have lower resolution rates than networks that handle higher volumes of simpler services.

EFFECTIVENESS: CLIENT REFERRAL DROP-OFF

Why choose this indicator: While the resolution rate indicates how successfully the network addressed referral requests, it excludes cases in which clients decided to disengage from the referral process. Referral drop-off describes how well a network keeps clients engaged throughout the referral process by examining the frequency with which clients become unable to contact or refuse to consent to service.

Data needed: client ID, case ID, referral ID, referral status, referral recalled reason, referral rejected reason, case ID, resolution status, outcome description.

Disengagement does not necessarily mean that clients received services elsewhere. Many clients disengage because of survival fatigue or poor experiences with the referral process.

Question and directions:

Q: What percentage of clients' referrals failed to persist from referral to receiving services?

1. Exclude referrals that are in review or out of network and cases that are active.
2. Count the number of referrals where the referral rejected reason was that the referrer was unable to contact the client.
3. Count the number of cases where the case outcome description was unable to contact the client or unable to obtain consent.
4. Total the number of cases and referrals from steps #2 and #3. This number is the number of clients' referrals who did not persist.
5. Divide the number of clients' referrals (step #4) by the total number of referrals and cases.

Example: Client Referral Drop-Off Calculation

Below is an example of three cases from a network. Note that the table below is a merged data snippet from the case and referral data tables.

Client ID	Referral ID	Referral status	Referral recalled reason	Referral rejected reason	Case ID	Case resolution status	Case outcome description
A	1	Accepted			101	Resolved	The client received service
A	2	Accepted			201	Unresolved	Unable to contact
B	3	Rejected		Unable to contact	301		

Referral IDs 2 and 3 are both cases where clients failed to persist. Referral ID 2, they failed to continue after the organization accepted the referral and began working with the client. Referral ID 3, in contrast, failed to persist after the initial referral. In this case, the provider was never able to contact the client.

Worksheet 6: Network Referral Process

Answer the following questions before evaluating the referral process in your network.

1 **Do we have the required data to calculate these metrics?**

- Referral data table
  - ☐ Client ID
  - ☐ Case ID
  - ☐ Referral ID
  - ☐ Referral created at
  - ☐ Service/program ID
  - ☐ Referral status
  - ☐ Referral action timestamp
  - ☐ Referral recalled reason
  - ☐ Referral rejected reason
- Case data table
  - ☐ Case ID
  - ☐ Case created at
  - ☐ Service/program ID
  - ☐ Case closed at
  - ☐ Case status
  - ☐ Resolution status
  - ☐ Outcome description
- Service/program data table
  - ☐ Service/program ID
  - ☐ Organization ID
  - ☐ Taxonomy term for service

2 **What benchmarks for referral accuracy, efficiency, and service resolution would indicate that my referral network is doing well?**

_____% Accuracy: 1st contact acceptance

_____ % Service resolution

_____ days Efficiency: Time to match

_____ % Client referral drop-off

3 **What service categories should we examine separately for their time to close and service resolution?**

4 **Who is responsible for ensuring optimal levels of performance?**

5 **What are some possible actions they might take if the network is functioning suboptimally?**

Clients' Outcomes

Clients' outcomes refer to their long-term well-being after engaging with the referral network. It measures whether clients actually benefited from the services to which they were referred. Networks should identify their own goals, analyze the data, and determine the metrics and data structure needed accordingly.

GOAL

To evaluate clients' well-being in the long run.

WHY IT MATTERS

Current practices and literature in evaluating service networks have emphasized system-level metrics, such as supply, demand, process, and the engagement of coordination centers and providers, while overlooking the importance of how well clients perform after referrals. By monitoring changes in clients' outcomes and analyzing their relation to these system factors, networks can strengthen overall performance while simultaneously improving client outcomes.

WHAT DATA ARE NEEDED FOR THE EVALUATION?

To evaluate providers' engagement, we need the following data tables: case and client.

MEASURES AND INDICATORS

To measure the outcomes of referrals for clients, referral networks generally have to either collect data that are not part of the typical referral process or connect to other systems that routinely collect such data. Ultimately, if networks want to demonstrate their financial or social impact, they must adopt a strategy to connect their referral outcomes with client well-being and reduced service utilization.

APPROPRIATE MODEL

Centralized Coordination, Human Navigation, and Peer-to-Peer models.

Clients' Outcomes: Data Requirements

Data table	Field name	Definition	Example
Case	Client ID	Unique identifier for the client record.	G7K9T2B4QW1M
	Case ID	Unique identifier for the case record.	L1D7R3Y8F5QC
	User ID	Unique identifier for the coordinator who created the case.	C8W1V5N3K2ZH
	Case created at	Date and time of the creation of the case record.	2025-03-14 16:27:53
	Service/program ID	Unique identifier for the service/program.	678
	Case closed at	Date and time when the case was closed.	2025-03-14 16:27:53
	Case status	Current status of the case, chosen from a drop-down menu.	Active, closed, etc.
	Resolution status	Resolution status of the case, chosen from a drop-down menu.	Resolved, unresolved, etc.
	Outcome description	Further description of the outcome, chosen from a drop-down menu.	Service provided, client self-resolved, unable to contact the client, unable to obtain consent, no available services, not eligible for services, etc.
Client	Client ID	Unique identifier for the client record.	G7K9T2B4QW1M
	Linked Client ID	Identifier that links client information to other data systems, such as health information exchange, VA benefits, HMIS data, or state benefits data.	L-G7K9T2B4QW1M
	Current address code	Five-digit zip code of client's current address.	12345
	Date of birth	Client's date of birth.	1978-05-31

OPTION 1: CLIENT ASSESSMENTS

Some networks may opt to collect original data about client outcomes. There are several possibilities, depending on the client outcomes that are of most interest. For example, some veteran or mental health-focused networks may want to measure client depression or suicidality. For other networks focused on economic mobility, the outcome measure might focus on employment outcomes such as securing a job, completing a training program, or income. Still other networks may be interested in reducing material hardship or adverse social needs. These networks might use a health-related social needs screener and ask former clients to complete the screener some time after their case was closed and resolved.

To make these assessments easy to use for assessment, the same persistent client ID should be used in survey data tables. A persistent ID allows the analyst to easily associate the newly connected data with all referral network activity, outputs, and previously collected client demographic data.

Examples of Survey Instruments of Potential Interest

Outcome	Measure	URL
Well-being	WHO Well-Being Index	https://www.who.int/publications/m/item/WHO-UCN-MSD-MHE-2024.01
Suicidality	Columbia-Suicide Severity Rating Scale	https://cssrs.columbia.edu/wp-content/uploads/C-SSRS_Pediatric-SLC_11.14.16.pdf
Health-related social needs screener	Assessing Circumstances & Offering Resources for Needs (ACORN) Screening Tool	https://www.va.gov/HEALTHEQUITY/docs/ACORN_Screening_Tool.pdf
Employment status	Questions from the American Community Survey	https://www.census.gov/programs-surveys/acs/about/forms-and-instructions.html
Food security	USDA Food Security Household Module	https://ers.usda.gov/sites/default/files/_laserfiche/DataFiles/50764/26621_hh2012.pdf

OPTION 2: OTHER SYSTEM DATA

Administrative data, such as housing stability, employment, educational outcomes, income, and emergency room use, can also be used to assess referral network outcomes. There are two obstacles to using these data: a) data use agreements with the appropriate agency, and b) matching data across systems.

The first obstacle is building the right relationships with agencies that hold other administrative data. Many of these agencies are public and, with the right persistence and assurances, will share data. However, appropriate measures are needed to ensure both data security and client privacy. The Department of Health and Human Services offers a template that may be helpful to consider, though many state agencies and healthcare organizations have their own templates: https://www.hhs.gov/web/governance/digital-strategy/it-policy-archive/hhs-policy-common-data-use-agreement-structure-repository.html

The second obstacle is connecting data systems. Throughout this playbook, we've emphasized the importance of persistent IDs to connect different data tables. A persistent ID for clients that connects different data systems is essential to associate the data from referral systems with administrative datasets. It is possible to match clients based on IDs, such as Social Security numbers or military ID records. But a referral network must already have these IDs to use them. Some algorithms can use client data to make probable matches, but they are neither foolproof nor easy to use.

Examples of Data Systems of Interest

Domain	System that stores this data	Example agency that hosts the system
Housing	Homeless Management Information System (HMIS)	Local Continuum of Care (CoC), e.g., Chicago CoC (All Chicago)
Health system utilization	Health Information Exchange (HIE)	State Health Information Exchange, e.g., Illinois Health Information Exchange (ILHIE)
Child welfare outcomes	Statewide Automated Child Welfare Information System (SACWIS)	State Department of Children & Family Services (DCFS) — e.g., Illinois DCFS
Veteran benefit utilization	Veterans Benefits Management System (VBMS)	U.S. Department of Veterans Affairs (VA)
Higher-education outcomes	National Student Clearinghouse (NSC) StudentTracker	National Student Clearinghouse

Worksheet 7: Clients' Outcomes

Answer the following questions before evaluating the clients' long-term outcomes.

1a What client outcomes align with our network's goals?

1b What client outcomes are our funders most interested in?

- ☐ Reduction of healthcare costs
- ☐ Reduction of cost due to harm prevention
- ☐ Reduction in material hardship
- ☐ Reduction in benefits utilization
- ☐ Harm prevention
- ☐ Client psychological well-being
- ☐ Client chronic disease control
- ☐ Client economic stability
- ☐ Client housing stability
- ☐ Client treatment completion
- ☐ Client training completion
- ☐ Client employment outcomes
- ☐ Other: _____

2 What data is available to capture these outcomes already? Who has the data?

3 What data would we need to collect because it is not available? Who could we seek advice from about a reliable measure?

Related Readings

Below is a list of readings on network evaluation if you would like to learn more. Based on the aspect of networks that they primarily address, the readings can be grouped into four categories:

Conceptual and Programmatic Framework

Armstrong, N. J., Cantor, G. S., Chapman, B., & McDonough, Jr., J. D. (2018). Adapting the collective impact model to veteran services: The case of AmericaServes. Bulletproofing the Psyche, 209–227. https://doi.org/10.5040/9798400622243.ch-018

Armstrong, N. J., McDonough, J. D., & Savage, D. (2015). Driving Community Impact: The Case for Local, Evidence-Based Coordination in Veteran and Military Family Service and the AmericaServes Initiative. Retrieved 2025, from https://surface.syr.edu/ivmf/118.

Chagin, K., Choate, F., Cook, K., Fuehrer, S., Misak, J. E., & Sehgal, A. R. (2021). A Framework for Evaluating Social Determinants of Health Screening and Referrals for Assistance. *Journal of Primary Care & Community Health*, *12*, 21501327211052204. https://doi.org/10.1177/21501327211052204

Gurewich, D., Garg, A., & Kressin, N. R. (2020). Addressing Social Determinants of Health Within Healthcare Delivery Systems: A Framework to Ground and Inform Health Outcomes. *Journal of General Internal Medicine*, *35*(5), 1571–1575. https://doi.org/10.1007/s11606-020-05720-6

Uncommon Solutions. (n.d.). *National Strategic Measure Set for Community Care Hubs*. https://uncommon-solutionsinc.com/wp-content/uploads/2024/07/HUB-Framework.pdf

Referral and Process Metrics Evaluation

Black, E. B., Fedyszyn, I. E., Mildred, H., Perkin, R., Lough, R., Brann, P., & Ritter, C. (2018). Homeless youth: Barriers and facilitators for service referrals. *Evaluation and Program Planning*, *68*, 7–12. https://doi.org/10.1016/j.evalprogplan.2018.02.009

Fitzpatrick, S. L., Banegas, M. P., Mosen, D. M., Voelkel, J. L., Keast, E. M., Betcher, A., & Potter, C. (2024). Establishing a Regional Health System and Community-Based Organization Social Care Coordination Network: An Application of Geospatial Analysis. *The Permanente Journal*, *28*(3), 157–162. https://doi.org/10.7812/TPP/24.052

Gibson, Z., Escallon-Barrios, M., Miles, J.-P., Annis, C., Carboni, J., Smilowitz, K., Cantor, G., Armstrong, N., & Shumate, M. (2022). *Beyond Network Effectiveness: The Case for Network Efficiency and Accuracy*. IPR Working Paper (WP-22-17).

Johnson, F. S., McPeek Hinz, E. R., Regan, D., Nohria, R., Moon, G., & Spratt, S. E. (2024). Measures of Referral vs Receipt of Social Services Among Patients With Health-Related Social Needs. *JAMA Network Open*, *7*(4), e247021. https://doi.org/10.1001/jamanetworkopen.2024.7021

Network Effectiveness and Outcomes

Boyum, S., Kreuter, M. W., McQueen, A., Thompson, T., & Greer, R. (2016). Getting Help from 2-1-1: A Statewide Study of Referral Outcomes. *Journal of Social Service Research*, *42*(3), 402–411. https://doi.org/10.1080/01488376.2015.1109576

Gibbons, J. (1991). Children in Need and their Families: Outcomes of Referral to Social Services. *The British Journal of Social Work*, *21*(3), 217–227. https://doi.org/10.1093/oxfordjournals.bjsw.a055754

Lorant, V., Grard, A., Van Audenhove, C., Leys, M., & Nicaise, P. (2019). Effectiveness of health and social service networks for severely mentally ill patients' outcomes: A case-control study. *Administration and Policy in Mental Health and Mental Health Services Research*, *46*(3), 288–297. https://doi.org/10.1007/s10488-018-0910-x

Thompson, T., Kreuter, M. W., & Boyum, S. (2016). Promoting Health by Addressing Basic Needs: Effect of Problem Resolution on Contacting Health Referrals. *Health Education & Behavior*, *43*(2), 201–207. https://doi.org/10.1177/1090198115599396

Methodology

Burgess, J., Nelson, R. H., & Wallhaus, R. (1974). Network analysis as a method for the evaluation of service delivery systems. *Community Mental Health Journal*, *10*(3), 337–344. https://doi.org/10.1007/BF01410780

Milward, H. B., & Provan, K. G. (1998). Measuring Network Structure. *Public Administration*, *76*(2), 387–407. https://doi.org/10.1111/1467-9299.00106

Kelly, L., Harlock, J., Peters, M., Fitzpatrick, R., & Crocker, H. (2020). Measures for the integration of health and social care services for long-term health conditions: A systematic review of reviews. *BMC Health Services Research*, *20*(1), 358. https://doi.org/10.1186/s12913-020-05206-5

Tahboub, M., Zhang, Q., & Shumate, M. (2025, February). *Trajectories of care and associated patterns*. SIREN National Research Meeting, San Diego, CA.

Appendix: Sample Data Dictionary

Client Table

Field name	Definition	Field type	Data format	Drop-down choices	Example	Used in playbook
Client ID	Unique identifier for the client record	System-generated ID	Text		2JF3458RW9G0002852	Yes
Linked Client ID for X System	Identifier that links client information to other data systems	System-generated ID	Text		L-2JF3458RW9G0002852	Yes
Client created at	Date and time of the client record was created	System timestamp	Date time		2025-05-01 10:00:00	
User ID	User ID of the employee that created the client's record	System-generated ID	Text		2JF3458RW9G0002855	
User name	Name of the user that created the client's record	System lookup	Text		John Smith	
Client consent status	Indicator of client's response to the authorization for release of information	Single-select	Text	accepted, declined, revoked	accepted	
Client consented at	Date and time when the consent was made	System timestamp	Date time		2025-05-02 10:00:00	
First name	Client's first name	Free-text entry	Text		Benjamin	
Middle name	Client's middle name (if any)	Free-text entry	Text			
Last name	Client's last name	Free-text entry	Text		Franklin	
Suffix	Client's suffix	Single-select	Text	Jr., Sr., III, IV	.	
Title	Client's title	Single-select	Text	Mr., Mrs., Ms., Miss, Dr.	Mr.	
Date of birth	Client's date of birth	Date picker	Date		1960-01-01	Yes
Gender	Client's gender	Single-select	Text	female, male, undisclosed, non-binary, trans-man, trans-woman, other, etc.	male	Yes

Field name	Definition	Field type	Data format	Drop-down choices	Example	Used in playbook
Race	Client's race	Single-select	Text	white, black-african-american, american-indian-alaska-native, asian, native-hawaiian-or-pacific-islander, other, etc.	white	Yes
Ethnicity	Client's ethnicity	Single-select	Text	hispanic-or-latino, non-hispanic-or-latino, undisclosed	non-hispanic-or-latino	Yes
Marital status	Client's marital status	Single-select	Text	married-civil-union, single/never-married, divorced, widowed, separated, domestic partner, undisclosed	married-civil-union	
Citizenship	Client's citizenship	Single-select	Text	us-citizen, us-national, lawful-permanent-resident, other	us-citizen	
Gross household income	Client's gross annual household income in US dollar	Numeric entry	Numeric		50000	Yes
Household size	Number of people in client's household, including the client	Numeric entry	Numeric		3	Yes
Adults in household	Number of adults in client's household	Numeric entry	Numeric		2	
Children in household	Number of children in client's household	Numeric entry	Numeric		1	
Current military status	Client's current military status	Single-select	Text	veteran, national_guard, retiree, active_duty, reserve, never_served, prefer_not_to_disclose	never-served	Yes
Discharge type (if the client is a veteran)	Client's military discharge status, this should only be answered by veterans	Single-select	Text	honorable, other_than_honorable, general, dishonorable, bad_conduct, other, prefer_not_to_disclose	honorable	Yes
Phone	Client's phone number	Free-text entry (10 digits)	Text		(XXX)XXX-XXXX	
Email	Client's email address	Free-text entry (email)	Text		XXXX@xxxx.com	

Field name	Definition	Field type	Data format	Drop-down choices	Example	Used in playbook
Preferred communication method	Preferred communication method for client outreach	Single-select	Text	phone call, email, sms, no preference	phone call	
Preferred communication time	Preferred time of day to reach the client	Single-select	Text	any time, morning, afternoon, evening	evening	
Current address type	The type of this address	Single-select	Text	home, work, mailing, etc.	work	
Current address line 1	Address line 1	Free-text entry	Text		100 N Michigan Ave	
Current address line 2	Address line 2	Free-text entry	Text		Unit 101	
Current address city	City	Free-text entry	Text		Chicago	
Current address county	County	Free-text entry	Text		Cook	
Current address state	State	Single-select	Text	AL, AK, AS, AZ, AR, CA, CO, CT, DE, DC, FM, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, MP, OH, OK, OR, PW, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY	IL	
Current address zip code	Five-digit zip code of client's current address	Free-text entry (5 digits)	Text		60611	Yes
Current address created at	Date and time the client's address was created	Time stamp	Date time		2025-05-02 10:00:00	
Current address updated at	Date and time the client address was last updated	Time stamp	Date time		2025-05-03 10:00:00	
Current address is mailing address	Indicator of whether this current address is the mailing address	Single-select	Text	Yes, No	Yes	

Organization Table

Field name	Definition	Field type	Data format	Drop-down choices	Example	Used in playbook
Organization ID	Unique identifier for each provider and coordination center/community hub	System-generated ID	Text		J6P4S8B2Q9TM	Yes
Organization name	Name of the organization	Free-text entry	Text		XX County Health Navigate	
AKA (also known as)	An alternative name of the organization	Free-text entry	Text		XX Navigate	
Organization type	An indicator of whether the organization is a provider or a coordination center/ community hub	Single-select	Text	provider, coordination center/community hub	coordination center/ community hub	Yes
Legal status	The official identity that determines the organization's rights, responsibilities, liabilities, and tax obligations under the law	Single-select	Text	corporation, LLC, partnership, nonprofit	nonprofit	
EIN/FEIN	Federal employer identifier number	Free-text entry	Text		XX-XXXXXXX	
Licenses or accreditation	The name of licenses or accreditation the organization has	Free-text entry	Text		CSL Exempt Organization	
Current address line 1	Address line 1	Free-text entry	Text		100 N Michigan Ave	
Current address line 2	Address line 2	Free-text entry	Text		Unit 101	
Current address city	City	Free-text entry	Text		Chicago	
Current address county	County	Free-text entry	Text		Cook	
Current address state	State	Single-select	Text	AL, AK, AS, AZ, AR, CA, CO, CT, DE, DC, FM, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, MP, OH, OK, OR, PW, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY	IL	
Current address zip code	Five-digit zip code of organization's current address	Free-text entry (5 digits)	Text		60611	

Field name	Definition	Field type	Data format	Drop-down choices	Example	Used in playbook
Current is mailing	An indicator of whether the current address is the mailing address	Single-select	Text	Yes, No	Yes	
Mailing address line 1	Address line 1	Free-text entry	Text		100 N Michigan Ave	
Mailing address line 2	Address line 2	Free-text entry	Text		Unit 101	
Mailing address city	City	Free-text entry	Text		Chicago	
Mailing address county	County	Free-text entry	Text		Cook	
Mailing address state	State	Single-select	Text	AL, AK, AS, AZ, AR, CA, CO, CT, DE, DC, FM, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, MP, OH, OK, OR, PW, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY	IL	
Mailing address zip code	Five-digit zip code of organization's mailing address	Free-text entry (5 digits)	Text		60611	
Phone	Phone number of the organization	Free-text entry (10 digits)	Text		(XXX)XXX-XXXX	
Website	Website URL of the organization	Free-text entry	Text		www.XXXX.com	
Social media	Social media accounts	Free-text entry	Text		IG: XXXX, Facebook: XXXX, TikTok: XXXX, X: XXXX	
Email	Email address of the organization	Free-text entry (email)	Text		XXXX@xxxx.org	
Contact name	Name of the primary contact of the organization	Free-text entry	Text		John Smith	
Description	A short introduction of the organization	Free-text entry	Text		XX County Health Navigate is a coordination center based in Cook county.	
Days/hours of operation	Organization's operation time	Free-text entry	Text		Mon 9AM-5PM, Tue 9AM-5PM, Wed 9AM-5PM, Thu 9AM-5PM, Fri 9AM-12PM	
Last updated	Date and time the organization information was last updated	Time stamp	Date time		2025-05-03 10:00:00	

Location Table

Field name	Definition	Field type	Data format	Drop-down choices	Example	Used in playbook
Location ID	Unique identifier for each location that providers operate	System-generated ID	Text		J6P4S8B2Q9TM-1	
Organization ID	Unique identifier for the provider	System-generated ID	Text		J6P4S8B2Q9TM	Yes
Location name	Name of the location	Free-text entry	Text		XX County Navigate - Downtown	
Address line 1	Address line 1	Free-text entry	Text		100 N Michigan Ave	
Address line 2	Address line 2	Free-text entry	Text		Unit 101	
Address city	City	Free-text entry	Text		Chicago	
Address county	County	Free-text entry	Text		Cook	
Address zip code	Five-digit zip code of organization's current address	Free-text entry (5 digits)	Text		60611	
Address state	State	Single-select	Text	AL, AK, AS, AZ, AR, CA, CO, CT, DE, DC, FM, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, MP, OH, OK, OR, PW, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY	IL	
Phone	Phone number of the location	Free-text entry (10 digits)	Text		(XXX)XXX-XXXX	
Email	Email address of the location	Free-text entry (email)	Text		XXXX@xxxx.org	
Contact name	Name of the primary contact of the location	Free-text entry	Text		John Smith	
Description	A short introduction of the location	Free-text entry	Text		This location is the flagship site of the XX Navigate.	
Days/hours of operation	Location's operation time	Free-text entry	Text		Mon 9AM-5PM, Tue 9AM-5PM, Wed 9AM-5PM, Thu 9AM-5PM, Fri 9AM-12PM	
Last updated at	Date and time of the last update	System timestamp	Date time		2025-05-03 10:00:00	
Record status	Current status of the record	Single-select	Text	active, inactive	active	

Service/Program Data Table

Field name	Definition	Field type	Data format	Drop-down choices	Example	Used in playbook
Service/ program ID	Unique identifier for each service/program offered by providers in the network	System-generated ID	Text		678	Yes
Service/ program name	Name of the service/ program	Free-text entry	Text		House For All	
Organization ID	Unique identifier for the provider that offered the service/program	System-generated ID	Text		J6P4S8B2Q9TM	Yes
Location ID	Unique identifier for the location that providers operate. If multiple locations, create a new service entry for each location.	System-generated ID	Text		J6P4S8B2Q9TM-1	
Description	A short introduction of the service/program offered by the provider	Free-text entry	Text		House For All is a housing assistance program that provides community members with rental deposit assistances.	
Days/hours of operation	Service/program's operation time	Free-text entry	Text		Mon 9AM-5PM, Tue 9AM-5PM, Wed 9AM-5PM, Thu 9AM-5PM, Fri 9AM-12PM	
Phone	Phone number of the service/program	Free-text entry (10 digits)	Text		(XXX)XXX-XXXX	
Email	Email address of the service/program	Free-text entry (email)	Text		XXXX@xxxx.org	
Contact name	Name of the primary contact of the service/ program	Free-text entry	Text		Sally Jones	
Eligibility	Eligibility criteria for the service/program	Free-text entry	Text		Eligible clients should be currently renting a house, with an annual household income below $30,000.	
Reported monthly capacity	The number of referrals of this type that the organization estimates it can provide in a given month through its program	Numeric entry	Numeric		20	Yes
Geographic areas served	A detailed description of geographic areas where service/program is available. It can be street boundaries, neighborhoods, zip codes, cities, counties, or states	Free-text entry	Text		Cook County	

Field name	Definition	Field type	Data format	Drop-down choices	Example	Used in playbook
Documents required	Documents required to apply for the service/ program	Free-text entry	Text		Government issued ID, financial statements (pay stubs, tax forms, bank statements), leasing contract, application form	
Application/ intake process	Application or intake process of the service/ program	Free-text entry	Text		Clients should first receive the intake interview by program staff via phone call, online meeting, or questionnaire. Once the client is considered to be eligible for the program, client should provide required documents to the service/program provider for application.	
Fees/payment options	Available fee/payment options	Multi-select	Text	e.g., cash, debit/ credit cards, bank transfers, digital/ mobile wallets, etc.	cash, bank transfers	
Taxonomy term for service	This code indicates the service type and subtype. There are several taxonomies available, including the AIRS/ INFO Line Taxonomy and the ICD-10 Z codes for the Social Determinants of Health.	System lookup	Text		BR-300.725 (Rental Deposit Assistance)	Yes
Languages available	Available languages	Multi-select	Text	e.g., English, Spanish, Arabic, Mandarin, French, etc.	English, Spanish	
Last updated	Date and time of the last update	System timestamp	Date time		2025-05-03 10:00:00	
Record status	Current status of the record	Single-select	Text	active, inactive	active	

User Table

Field name	Definition	Field type	Data format	Drop-down choices	Example	Used in playbook
User ID	Unique identifier for the user	System-generated ID	Text		C8W1V5N3K2ZH	Yes
User name	User's name	Free-text entry	Text		John Smith	
User created at	Date and time when user was created	System timestamp	Date time		2025-05-03 10:00:00	
Phone	Phone number of the user	Free-text entry (10 digits)	Text		(XXX)XXX-XXXX	
Email	Email address of the user	Free-text entry (email)	Text		XXXX@xxxx.org	
Organization ID	Unique identifier of the organization to which the user belong	System-generated ID	Text		J6P4S8B2Q9TM	Yes
User type	Type of the user	Single-select	Text	coordinator, provider	coordinator	Yes
User role	User's role at their organization	Free-text entry	Text		referral admin, case manager, org admin, etc.	
Access	User's access limitation in the system. It specifies what activities can they perform.	Multi-select	Text	referral related, case related, client related, etc.	referral related, client related	

User Activity Log Table

Field name	Definition	Field type	Data format	Drop-down choices	Example	Used in playbook
User ID	Unique identifier for the user	System-generated ID	Text		C8W1V5N3K2ZH	Yes
Type of activity	The activity performed by the user	Single-select	Text	log in, make a referral, create a case, accept a referral, reject a referral, contact a client, look up an organization, log out, etc.	log in	Yes
Activity time stamp	Date and time when the user performed the activity	System timestamp	Date time		2025-05-03 10:00:00	Yes

Referral Table

Field name	Definition	Field type	Data format	Drop-down choices	Examples	Used in playbook
Client ID	Unique identifier for the client record	System-generated ID	Text		2JF3458RW9G0002852	Yes
Referral ID	Unique identifier for the referral record	System-generated ID	Text		2JF3458RW9G0002853	Yes
Case ID	Unique identifier for the case record that is related to the referral	System-generated ID	Text		2JF3458RW9G0002854	Yes
Referral type	Type of the referral	Single-select	Text	self-referral, coordinator, etc.	Self-referral	
User ID	User ID of the employee who created the referral	System-generated ID	Text		C8W1V5N3K2ZH	Yes
User name	Name of the user who created the referral	System lookup	Text		John Smith	
Referral action timestamp	Date and time when the action was taken	System timestamp	Date time		2025-10-03 10:00:00	Yes
Service/ program ID	Unique identifier for the requested service/ program	System-generated ID	Text		678	Yes
Requested service/ program name	Name of the requested service/program	System lookup	Text		House For All	Yes
Referral status	Current status of the referral	Single-select	Text	accepted, forwarded, recalled, in-review, rejected, out-of-network, etc.	accepted	Yes
Referral rejected reason	Reason the referral was rejected	Single-select	Text	We do not provide the services requested/ needed, Client is not eligible for our services, We do not have capacity to serve client, Duplicate, case already exists in the system, We were unable to contact the client, Other, etc.	Client is not eligible for our services	Yes
Referral recalled reason	Reason the referral was recalled	Single-select	Text	Client no longer requires services, recipient organization did not respond, other, etc.	Client no longer requires services	Yes
Referral held-in-review reason	Reason the referral was held-in-review	Single-select	Text	Conducting additional screening/follow-up, Waiting to receive documents, Scheduling an appointment with client, Sensitive referral, creating a new referral for this need, etc.	Conducting additional screening/follow-up	

Case Table

Field name	Definition	Field type	Data format	Drop-down choices	Example	Used in playbook
Client ID	Unique identifier for the client record	System-generated ID	Text		2JF3458RW9G0002852	Yes
Case ID	Unique identifier for the case record	System-generated ID	Text		2JF3458RW9G0002853	Yes
User ID	Unique identifier of the user who created the case record	System-generated ID	Text		C8W1V5N3K2ZH	Yes
User name	Name of the user who created the case record	System lookup	Text		John Smith	
Case created at	Date and time of the creation of the case record	System timestamp	Date time		2025-05-03 10:00:00	Yes
Case updated at	Date and time of the client case was last updated	System timestamp	Date time		2025-05-03 10:00:00	
Case closed at	Date and time when the case was closed	System timestamp	Date time		2025-05-03 10:00:00	Yes
Case action timestamp	Date and time of any case action	System timestamp	Date time		2025-10-03 10:00:00	
Case closed note	The free text note added by a user when closing a case, explaining how the case was closed	Free-text entry	Text		Client received emergency assistance	
Service/ program ID	Unique identifier of the program	System-generated ID	Text		678	Yes
Service/ program name	Program's name	System lookup	Text		House For All	
Primary worker ID	Unique identifier for the primary worker currently assigned to the case. Primary worker is the main point of contact from a provider organization for a specific case	System-generated ID	Text		8A2303Y90GNK290027	
Primary worker name	Primary worker's name	Free-text entry	Text		Amy Clark	
Case status	Current status of the case	Single-select	Text	referred, managed, recalled, declined, closed, etc.	referred	Yes
Resolution status	Resolution status of the case	Single-select	Text	resolved, unresolved, open	open	Yes
Outcome description	Further description of the outcome	Single-select	Text	Service provided, client self-resolved, unable to contact the client, unable to obtain consent, no available services, not eligible for services, etc.	Service provided	Yes