

# **CONNECTing**

*Children and Families to Care*



## **Behavioral Health Network Analysis Qualitative Data Summary: All Regions Facilitators, Barriers, and Community Needs**

**September 2017**

**Prepared by Yale CONNECT Evaluation Team**

Yale University School of Medicine, Division of Prevention and Community Research

Funding provided by the Substance Abuse and Mental Health Services Administration (SAMHSA)  
through a grant awarded to the Connecticut Department of Children and Families

The **C**onnecticut **N**etwork of **C**are **T**ransformation (**CONNECT**) is a statewide system of care expansion that integrates efforts across child-serving sectors, including early childhood, child welfare, mental health, juvenile justice, substance abuse, and education. The Connecticut Department of Children and Families (DCF) leads the implementation of CONNECT and has four primary goals: 1) Implement and sustain the youth and family driven local, regional, and statewide infrastructure for the integrated Network of Care; 2) Implement and sustain a youth-guided, family-driven, and culturally responsive approach to statewide network of care (NOC) expansion and implementation with youth and families as full partners; 3) Implementation of the services and activities of the integrated Connecticut NOC; and 4) Enhance comprehensive statewide data system to promote integration and quality.

CONNECT has a Network Analysis Workgroup that seeks to gather information to increase understanding of the NOC with the goal of continuing to enhance and strengthen the network. This Workgroup supports the implementation of network analyses from the perspective of four stakeholder groups: 1) caregivers and youth receiving services in the NOC; 2) behavioral health service providers; 3) pediatric primary care providers; and, 4) school personnel.

As part of the NOC assessment conducted with behavioral health providers across of six regions, providers were asked to respond to three open ended questions: 1) what facilitates collaboration in your region; 2) what are the barriers to collaboration in your region; and 3) what else is needed in your region to support children with behavioral health difficulties and their families in your region. While the results of these data have been provided at the regional level, this report provides a summary of the results of the content analysis that was conducted on the responses to these open-ended questions *across* the six regions.

## Facilitators of Collaboration

Behavioral health providers were asked to identify the factors that facilitate collaboration within their region. What follows are the themes that emerged from the analysis of this data across the six regions.

***Strong Relationships.*** Survey respondents indicate that strong relationships with other providers are key to facilitating collaboration. When these relationships include open and effective communication, mutual respect, cooperation, and true partnership, collaboration between agency providers at the system and at the family level is most effective. Providers report that these relationships are built through agency staff attending interagency meetings or trainings held at the local, regional or statewide levels where staff have the opportunity to meet and work with other providers.

***Shared Approach to the Work.*** Respondents expressed that system of care and wrap-around trainings that have occurred statewide have provided a shared vision and approach to working with families which has enhanced collaboration at the local, regional and state-wide levels.

***Knowledge of Resources.*** Staff report that having knowledge of other agencies and a good understanding of the services they offer is essential for collaboration. This information is shared through local, regional and state-wide network of care meetings, resources fairs, interagency service teams, presentations at other agencies, and listservs which give providers and families opportunities to learn about the services available within their communities. Respondents report that obtaining information about other agencies including services offered, enrollment criteria, service openings, and contact information for a point person within each program can facilitate referrals, accelerate response times between providers, identify duplication or gaps in services and help streamline efforts within the network of care. Staff also report that it is important that information on services remain ongoing and up to date.

## Barriers to Collaboration

Behavioral health providers were also asked to identify barriers to collaboration within their regions. What follows are the themes that emerged from the analysis of this data across the six regions.

***Funding Limitations.*** When asked about barriers to collaboration, the frequent response was funding limitations. Providers report that when resources are more limited, caseloads are high and waitlists are long thus limiting the time that staff have to attend NOC meetings where they can network, build relationships with other providers and learn about services offered in their area. In addition, limited time makes it more difficult to collaborate with other providers who are also providing care to families. When funding is limited agencies may be less willing to refer clients out as they fear giving business away and focusing inward impedes collaboration. Finally, staff report that times of limited funding promote an environment which encourages competition instead of collaboration.

***Communication.*** Survey respondents report that limited communication is a barrier to collaboration. This includes providers not returning phone calls or emails and time-lags between receiving a referral for services and receiving documentation that supports the referral.

***Lack of Information about Available Resources.*** Agency staff report that a lack of knowledge about other agencies and the services they provide greatly impacts collaboration. Survey respondents report that education regarding services available in their region including eligibility criteria and the process for families to access these services is needed. Without this information staff are less likely to refer families for services which limits service options for families and decreases opportunities for providers to collaborate. In addition, providers report that if families are not aware of the services in their community, this lack of awareness may make them feel less comfortable to enroll in services at a given agency.

***Systems and Agency-Level Policies.*** Staff reported that some system and agency-level policies impact their ability to work collaboratively either through impacting their time or their ability to collaborate with other providers. The following barriers to collaboration were reported:

- Contractual issues and system policies that require services for families to end when another program (e.g., IICAPS) open a family. This not only causes a lack of continuity of care for families but also limits opportunities for providers to work collaboratively;
- Complicated referral procedures can impact opportunities to collaborate. Some respondents reported that agency policies requiring multiple steps to accept a referral or to have a referral approved not only impacts access to services for families but is also a barrier to collaboration;
- While protective, policies regarding confidentiality (e.g., HIPAA) limit the ability of providers to share information or cause delays in sharing information which can restrict opportunities to collaborate.

***Providers who do not Embrace SOC Values.*** Some respondents report that there are providers who do not prioritize the need to understand the perspective of the family when developing service plans and that they find it difficult to collaborate with these providers.

***Logistical Issues:*** Across the state providers report that there are logistical issues that impact family access to services and therefore the opportunity to collaborate with other providers. Location of services and transportation are reported to be issues in each region. In the urban areas of the state, providers report that transportation options can limit access to services while in the more rural areas the location of some service providers make accessing services difficult and for some families impossible. In addition, the times that appointments are available may make it impossible for working parents to get their children to appointments. Finally, there is a need for some agencies to adopt a more family friendly approach to scheduling services with the goal of reducing the number of times per week that families have to travel to receive care.

## Community Needs

Survey respondents were asked what else is needed in their community to support children with emotional and behavioral difficulties and their families. What follows are the themes that emerged from the analysis of this data across the six regions.

***Additional Services in the Continuum of Care.*** Survey respondents indicated that what is most needed to support children and families is more services. The most frequent response had to do with expanding the continuum of care across the state. Respondents indicated that families need access to all levels of care and that currently, not all are available. Service recommendations made include, but are not limited to:

- assistance obtaining basic needs such as access to safe housing, food and reliable transportation;
- improved capacity to integrate care and to provide wrap-around services;
- increased access to medication management;
- improved access to in-home programs including the provision of these services for families with commercial insurance and a re-evaluation of the policies that dictate strict time-limits;
- improved access to therapy;
- early identification and universal screening need to be more readily available;
- providers trained in infant mental health;
- providers who are trained to work with older youth and staff who can assist youth as they transition to adult services;
- providers trained to work with youth who have high levels of acuity and greater access to residential programs for youth who need that level of care;
- support for families as youth transition between levels of care;
- substance use treatment programs including smoking cessation;
- services that offer intermediate levels of care such as intensive outpatient programs (IOP), partial hospital programs, and more intensive in-home services and supports;
- recreational programs, mentoring programs, respite programs, before and after-school care, educational supports, outreach to gang involved youth; and,
- specialty care including autism support and support for families impacted by domestic violence.

***Need for More Culturally Responsive and Linguistically Competent Providers.*** Across the state there is a need for an increased number of providers who are culturally responsive and linguistically competent to provide services across the full continuum of care.

***Increased Access to Peer to Peer Support.*** Providers report that families need increased access to peer to peer support including more advocates to assist families as they transition between levels of care. In addition, respondents indicate the need to support families as they increase their engagement with natural supports both in their communities and in the service planning process.

***Community-level Education to Reduce Stigma.*** Providers spoke of the need for community-level educational campaigns to provide education about behavioral health with the goal of reducing stigma.

***Need for Increased Family Engagement.*** Providers suggest that engaging with natural supports in the neighborhoods as a potential method to engage with families. They also report the need to provide outreach to families in community locations such as schools, community centers, libraries and churches with the goal of engaging families in the settings that they choose. They also suggest promoting programs that enhance caregiver skills in advocating for their families, teach families how to navigate the system of care, and increase awareness of the resources available in the community.

***Road Map of the Behavioral Health Network.*** Survey respondents suggest creating a road map of the behavioral health network that provides up to date information on the services available and explains to families how they can transition between levels of care. This road map would help families and staff to better understand the service array.

***Review of Policies that Impede Access to Services.*** Across the state staff report that restrictions imposed by Medicaid impact access to care. Staff noted the following policies: the inability to bill for tele-psychiatry services; the restriction on APRNs signing off on diagnoses or assessments; and, lack of third-party reimbursement for mentoring.

***Work Towards Uniform Policies and Procedures.*** Some suggested that working toward more uniform policies and procedures across agencies would enable more integration for family level service planning and would make it easier to share information between agencies. These uniform policies and procedures could include: universal releases of information; universal intake process; and shared electronic medical records. These resources would enhance collaboration and reduce the burden on families to tell their story multiple times.

***Review Structures that Impact Access to Services.*** Providers advocate for increased flexibility in the days, hours, and locations of services to increase access for families. In addition, staff recommend consideration of a single point of entry for families where staff from multiple agencies are co-located allowing families to access a broad array of services and providers to work collaboratively in providing care to families.

***Increase Accountability for Agencies Delivering Services.*** Providers report that there is a need for increased accountability for the agencies delivering services and for the community collaboratives. Some recommend evaluating outcomes data to differentiate those programs that are most effective and making this information available to families to inform their choice of provider.

***Cross-Agency Training.*** Staff recommend the provision of cross-agency trainings with the goal of increasing the diversity and availability of training opportunities. These trainings would also provide additional opportunities for providers to build relationships across agencies which would result in increased collaboration and knowledge of the services provided across the network.

***Formalize Collaboration Strategies.*** Providers recommend that relationships between agencies be formalized (e.g., MOUs or formal contracts) with the goal of prioritizing collaboration. It is also recommended that agencies policies be adjusted to provide staff with dedicated time to network. Finally, it is suggested that the Regional NOCs work to develop mechanisms through which agencies can share information about the services and supports offered.

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## **Behavioral Health Network of Care Collaboration Report: Southwest Region**

**March 2017**

**Prepared by Yale CONNECT Evaluation Team**

Yale University School of Medicine, Division of Prevention and Community Research

Funding provided by the Substance Abuse and Mental Health Services Administration (SAMHSA)  
through a grant awarded to the Connecticut Department of Children and Families

## INTRODUCTION

The **Connecticut Network of Care Transformation (CONNECT)** is a statewide system of care expansion that integrates efforts across child-serving sectors, including early childhood, child welfare, mental health, juvenile justice, substance abuse, and education. The Connecticut Department of Children and Families (DCF) leads the implementation of CONNECT and has four primary goals: 1) Implement and sustain the youth and family driven local, regional, and statewide infrastructure for the integrated Network of Care; 2) Implement and sustain a youth-guided, family-driven, and culturally responsive approach to statewide network of care (NOC) expansion and implementation with youth and families as full partners; 3) Implementation of the services and activities of the integrated Connecticut NOC; and 4) Enhance comprehensive statewide data system to promote integration and quality.

CONNECT has a Network Analysis Workgroup that seeks to gather information to increase understanding of the NOC with the goal of continuing to enhance and strengthen the network. This Workgroup supports the implementation of network analyses from the perspective of four stakeholder groups: 1) caregivers and youth receiving services in the NOC; 2) behavioral health service providers; 3) pediatric primary care providers; and, 4) school personnel. This report provides a regional-level analysis of collaboration between government and private behavioral health agencies, and community-based service organizations in Connecticut. In support of continuing to inform the comprehensive statewide plan for improved capacity and integrated care for children and families; DCF and CONNECT leadership have asked the Evaluation Team from the Yale Consultation Center to conduct an analysis to explore system-level collaborations within each regional NOC.

In collaboration with regional NOC leadership, CONNECT Network of Care Managers and Family System Managers in each of the six regions identified local agencies and organizations to participate in a web-based survey regarding the levels and types of collaboration that exist between agencies.

Starting in May 2016, the Network Analysis workgroup supported the successful planning and implementation of the collaboration survey for the Behavioral Cohort statewide (DCF regions 1-6). Multiple information sources were utilized to support the identification of potential survey participants in the Southwest region including a list provided by United Way/211 of child serving agencies in the region. In addition, the regional DCF Systems Development Director was asked to provide a list of DCF Region 1 contracted providers. Finally, a list was generated of organizations actively involved in local Systems of Care Activities (i.e. Community Collaboratives, Local Interagency Service Team, DCF Regional Advisory Council, etc.). Actively involved was defined by the Network Analysis workgroup as having participated within the previous 18 months. This list was obtained by reviewing meeting minutes for the last 18 months, utilizing email list serves, and reviewing meeting sign in sheets.

After cross checking and combining these information sources, one regional list was created, adhering to the established guidelines set forth by the Network Analysis workgroup, including selecting behavioral health providers actively involved in the system of care and limiting the list to 50 agencies or less per region.



Preliminary survey recipient lists were systematically refined through reviews by the Southwest Network of Care Manager, DCF Systems Development Director, and other regional stakeholders in collaboration with the Region 1 FAVOR FSM. Using criteria put forth by Statewide Network Analysis workgroup a master list of survey participants was approved and integrated into a survey for online dissemination.

The Southwest survey link was released on September 6, 2016 with a timeline for completion of 30 calendar days. Collective efforts of regional system partners yielded a 75% collaboration survey response rate for the Southwest Region.

Utilizing the results of this survey, Social Network Analysis (SNA) was employed to analyze the data and to create a visualization that collectively defines how each regional service network is currently structured and how agencies interact. Data was also collected that indicates potential areas for future enhancement of the regional NOC. By using SNA to understand current network patterns and to track future collaborations, CONNECT will gain insight as to the potential ways regional NOCs might grow and how they change over time. SNA analysis can also contribute to network planning regarding how to shape efficient service integration cross-regionally and to identify regional and statewide organizations to support and sustain an improved statewide network of care.

This report reflects findings from Connecticut's Southwest Regional Network.

## **The Levels of Collaboration Survey**

*The Levels of Collaboration Survey*<sup>1</sup> was administered in the Fall of 2016 to assess linkages within the network of behavioral health service stakeholders in each of the six regions of Connecticut. The administration of the survey conducted near the end of the second year of CONNECT implementation was intended to provide information on the status of collaboration between agencies working to support children with behavioral health challenges and their families. The survey will be administered again in the Spring of 2018 to allow for comparison over time. This report provides a summary of the baseline assessment.

Agencies in the network were invited to participate by the Network of Care Manager in their region who also sent them a link to the web-based survey. The web-based survey includes a series of questions regarding the respondent's role in their organization and their agency's collaborations within the network. The survey asked respondents to identify the network agencies they collaborate with, the extent of their agency's interactions with these agencies, and to identify which agencies they would like to collaborate with more in the future. It also included a series of questions that probe for more information regarding: agency referrals; facilitators and barriers to collaboration; and the services and supports needed within communities to more effectively support children with behavioral health challenges and their

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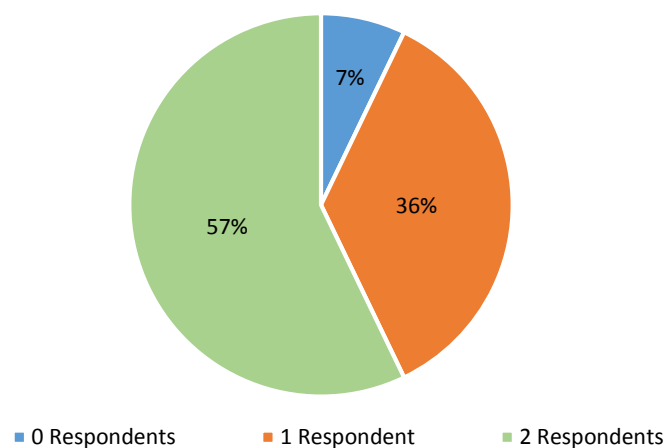
<sup>1</sup> Frey, B.B., Lohmeier, J.H., Lee, S.W., & Tollefson, S. (2006) Measuring Collaboration among Grant Partners, *American Journal of Evaluation*, 27 (3), 383-392.

families. Surveys were anonymous, could be taken at the respondent's convenience, and took about 15 minutes to complete.

Agencies were asked to identify two respondents to complete the survey including an individual in a leadership position and an individual within the agency who is familiar with how the organization collaborates with partners to facilitate work with children and families. From late August 2016 through early October 2016, 42 individuals from 28 agencies, (75% of possible respondents) in the Southwest region completed the survey.

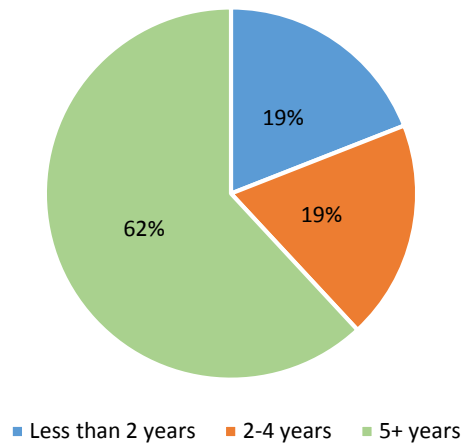
As is depicted in Figure 1, two of the 28 agencies (7%) that were invited did not respond to the survey, 10 agencies (36%) had one respondent, and 16 agencies (57%) had two respondents. In order to control for the differential response rate between agencies, the analyses were conducted on the average response from within each agency so that there is one score from each agency that responded to the survey included in the analyses.

**Figure 1. Number of Agencies By Respondent (N=28)**



With regard to length of employment within their agency, as is shown in Figure 2, 62% of those who completed the survey had been in their current position for more than 5 years, 19% had their position for 2 to 4 years, and 19% had been in their current position for less than 2 years. The overwhelming majority (83%) of all respondents reported that they serve in a leadership position within their organization.

**Figure 2. Length of Time at Agency - Southwest Region Respondents (N=42)**



### Agency Levels of Collaboration

For the purpose of this report collaboration refers to the relationship between two organizations that exchange information and/or services to link people to needed services. The degree of network linkage was measured using a scale developed by Frey and colleagues (2006)<sup>1</sup> containing five levels of interaction; **networking, cooperation, coordination, coalition, and collaboration** (see Table 1) regarding child and family services with collaboration seen as the highest level. Scores on the scale represent the level of collaboration between organizations at a specific point in time. The survey will be re-administered in the spring of 2018 and the scores from the two administrations will be compared to reflect change in linkage over time.

**Table 1. Levels of Interaction in Collaboration**

<b>Networking (1)</b>	<b>Cooperation (2)</b>	<b>Coordination (3)</b>	<b>Coalition (4)</b>	<b>Collaboration (5)</b>
<ul style="list-style-type: none"> <li>Aware of organization</li> <li>Loosely defined roles</li> <li>Little communication</li> <li>All decisions made independently</li> </ul>	<ul style="list-style-type: none"> <li>Provide information to each other</li> <li>Somewhat defined roles</li> <li>Formal communication</li> <li>All decisions made independently</li> </ul>	<ul style="list-style-type: none"> <li>Share information and resources</li> <li>Defined roles</li> <li>Frequent communication</li> <li>Some shared decision making</li> </ul>	<ul style="list-style-type: none"> <li>Share ideas</li> <li>Share resources</li> <li>Frequent and prioritized communication</li> <li>Advise each other on decision making</li> </ul>	<ul style="list-style-type: none"> <li>Belong to same provider system</li> <li>Frequent communication characterized by mutual trust</li> <li>Consensus is reached on all decisions</li> </ul>

## Social Network Analysis

Social network analysis (SNA) involves the mapping of a social environment, the relationships among social entities, and the expression of the patterns or regularities of the interactions that connect them<sup>2</sup> The CONNECT Evaluation team at Yale is utilizing SNA to provide both a mathematical and visual analysis of inter-agency relationships and the patterns of relationships within the Network of Care (NOC) in each of the six regions in the state.

A frequently used output of SNA is a visual depiction of relationships of social entities within a network of care. In the network map presented (see Figure 3) the circles represent an agency in the network and each line represents a collaborative relationship between two agencies. The size of the circles represents the number of relationships that particular agency has with other agencies in the network. Agencies with larger circles and darker colors have a higher number of *relationships* than those agencies with smaller circles and lighter colors. The thickness and the color of the lines that connect the circles in the network map tells us about the *characteristics* of the relationships such as the extent to which agencies work together. The thicker and the darker the lines, the stronger the relationships between two agencies.

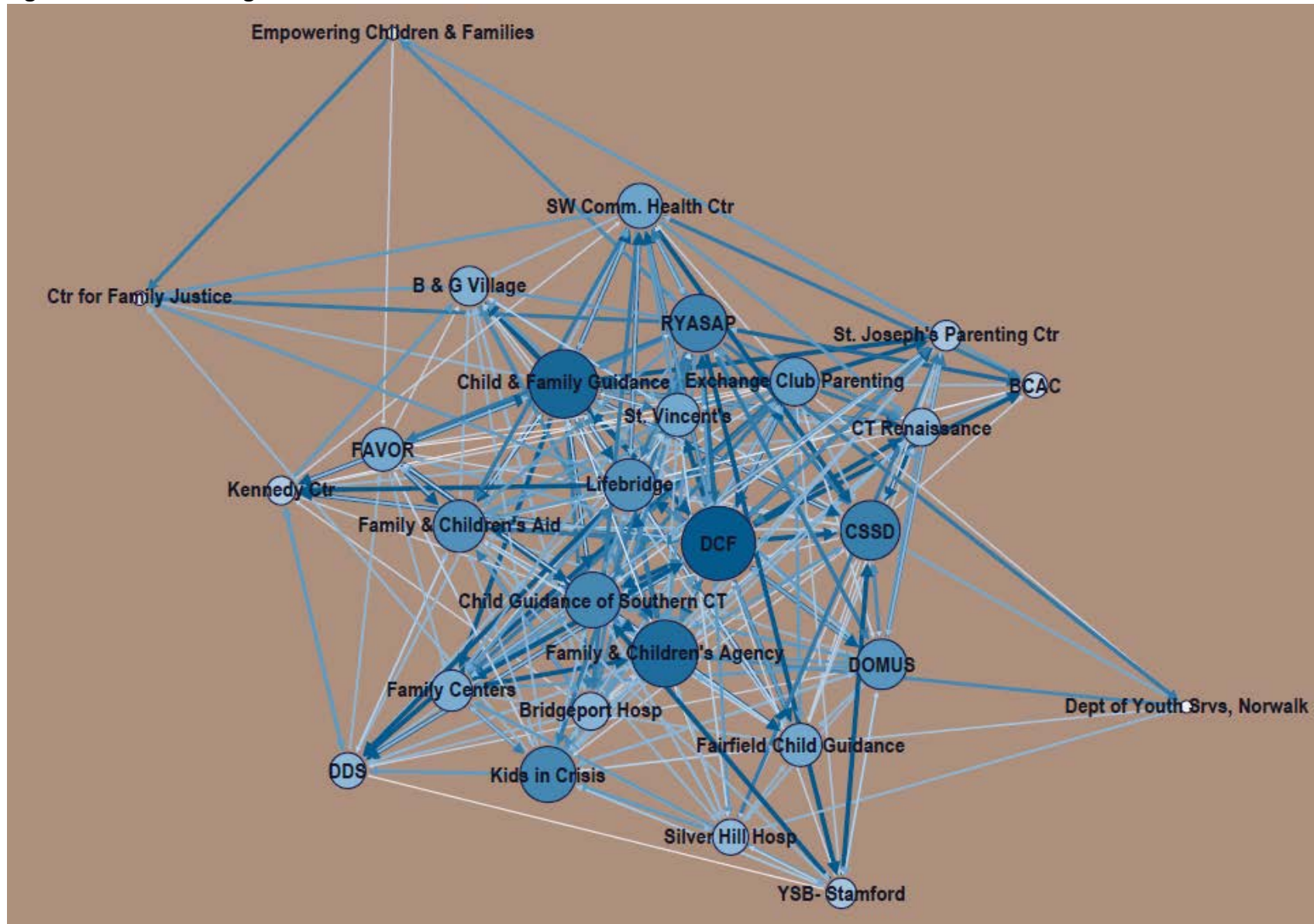
With regard to placement on the network map the agencies depicted by smaller and lighter colored circles have fewer relationships and these relationships tend to be characterized by a lower level of collaboration. These agencies are located on the periphery of the network map. On the other hand, agencies that have a higher number of relationships that have stronger connections are depicted as larger circles with darker color. These agencies are located closer to the center of a network map. Those agencies that are located on the network map between those in the center and those agencies on the periphery tend to fall in the middle of the continuum of those agencies with a higher number of more robust collaborations and those who have fewer collaborations that tend to be less developed.

When examining Figure 3 it is important to remember that not all agencies that comprise the Southwest Network of Care are included in these analyses as the inter-relationships between 28 specific agencies were assessed. In addition, it is important to note that the size and scope of services offered by agencies varies and those agencies that are larger and offer more services have more opportunities to collaborate.

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<sup>1</sup> Frey, B.B., Lohmeier, J.H., Lee, S.W., & Tollefson, S. (2006) Measuring Collaboration among Grant Partners, *American Journal of Evaluation*, 27 (3), 383-392.

Figure 3: Southwest Regional Network



## Network Density

One way to look at the level of collaboration within a network is to look at the *number* of agencies that are connected with one another, these are called “*active*” collaborations. As Figure 3 demonstrates, not every “possible” connection between agencies is active. SNA provides ways to examine a network statistically, one particular measure is called the *network density*. Network density depicts the *number* of active collaborations that exist at the time of the survey compared to the total *number* of possible active collaborations within the network. The density of a network is expressed as percentage, the closer to 100 percent the denser the network. At the time of the survey the selected agencies for the Southwest Region consisted of 756 possible relationships. Those surveyed reported that 319 agency relationships were active out of the possible 756 relationships indicating that the Southwest Region has a density of 42 percent. **Approximately 4 out of 10 possible connections in the Southwest Region were reported to be active when the survey was completed.**

## Directionality of Relationships in the Southwest Regional Network

In addition to line thickness (degree or extent of collaboration) the lines between the circles also demonstrate the direction of collaborations. As is depicted in Figure 3, some agency connections go in both directions as the lines have arrows on each end. If Agency A reports that it collaborates with Agency B the line has an arrow pointing toward Agency B. If Agency B indicates that they collaborate with Agency A, the line also has an arrow pointing to Agency A.



Existing relationships in the Southwest network can also be measured by whether two agencies report that they collaborate with each other. Collaborating in both directions or “reciprocal collaboration” is shown by a line that has an arrow with two points, one on each end. **Forty-six percent of the active collaborations in the Southwest network were reciprocal.**

## Outreach and Recognition within the Network

The network map also depicts pairs of agencies where the relationship is not reciprocal. These connections are characterized as either *outreach* to another agency or *recognition* by another agency. For example, if Agency A says it collaborates with Agency B but Agency B does not report collaborating with Agency A, then A is engaged in *outreach* to B.

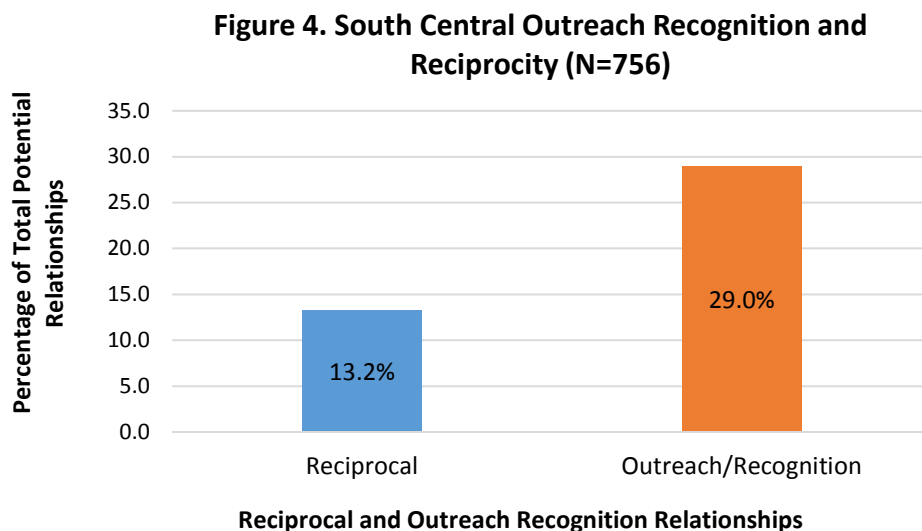


Similarly, if Agency B says it collaborates with Agency A but A does not report collaborating with B, then A is *recognized* by B as a collaborative partner.



SNA allows us to understand the extent to which one-way network activity is either through outreach or recognition both of which are important in a network of care with regard to how individual agencies interact with one another. In analyzing data at the network level outreach and recognition are viewed as uni-directional versus reciprocal interactions which are bi-directional.

Figure 4 compares the percentage of reciprocal relationships to outreach and recognition relationships in the Southwest NOC.



Out of the total potential relationships in the Southwest NOC, 13.2% are reciprocal, and 29% are outreach or recognition relationships. At this time there are a greater number of one-way relationships than bi-directional relationships. The follow-up survey to be conducted in the spring of 2018 will allow for comparison across time to see if this distribution changes and to see if the percentage of active collaborations within the network change.

## Relationships in the Southwest Regional Network

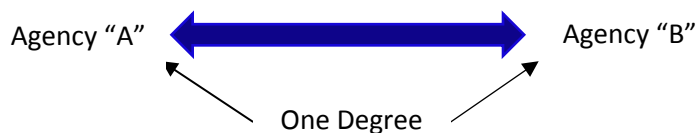
In SNA the structure of the network can be examined to determine how fully it is connected and to evaluate how diffuse it is. If a network is fully connected, then a message (e.g. referral request) that starts with any one agency can be traced throughout the network to eventually reach every other agency. This means that every agency is “reachable” either directly or indirectly.

However, this level of interconnectivity is not typical in a service delivery system.

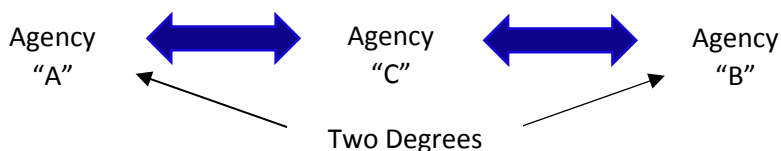
One way to determine how close the relationships are within a given network is to look at how direct the links are between agencies or how many “degrees of separation” exist between agencies (see Figure 6). The lower

the degrees of separation in a network the closer and more direct the relationship is between any two agencies. Within SNA, these “degrees of separation” are called geodesic distance which can range from 0 (not at all connected) to 1.0 (fully connected). **The geodesic distance in the Southwest NOC at the time of the survey was 0.477.** It will be important to see how this metric changes overtime.

**Figure 5.** Collaboration of *ONE DEGREE* between ‘A’ and ‘B’



Collaboration of *TWO DEGREES* between ‘A’



Collaboration of *THREE DEGREES* between

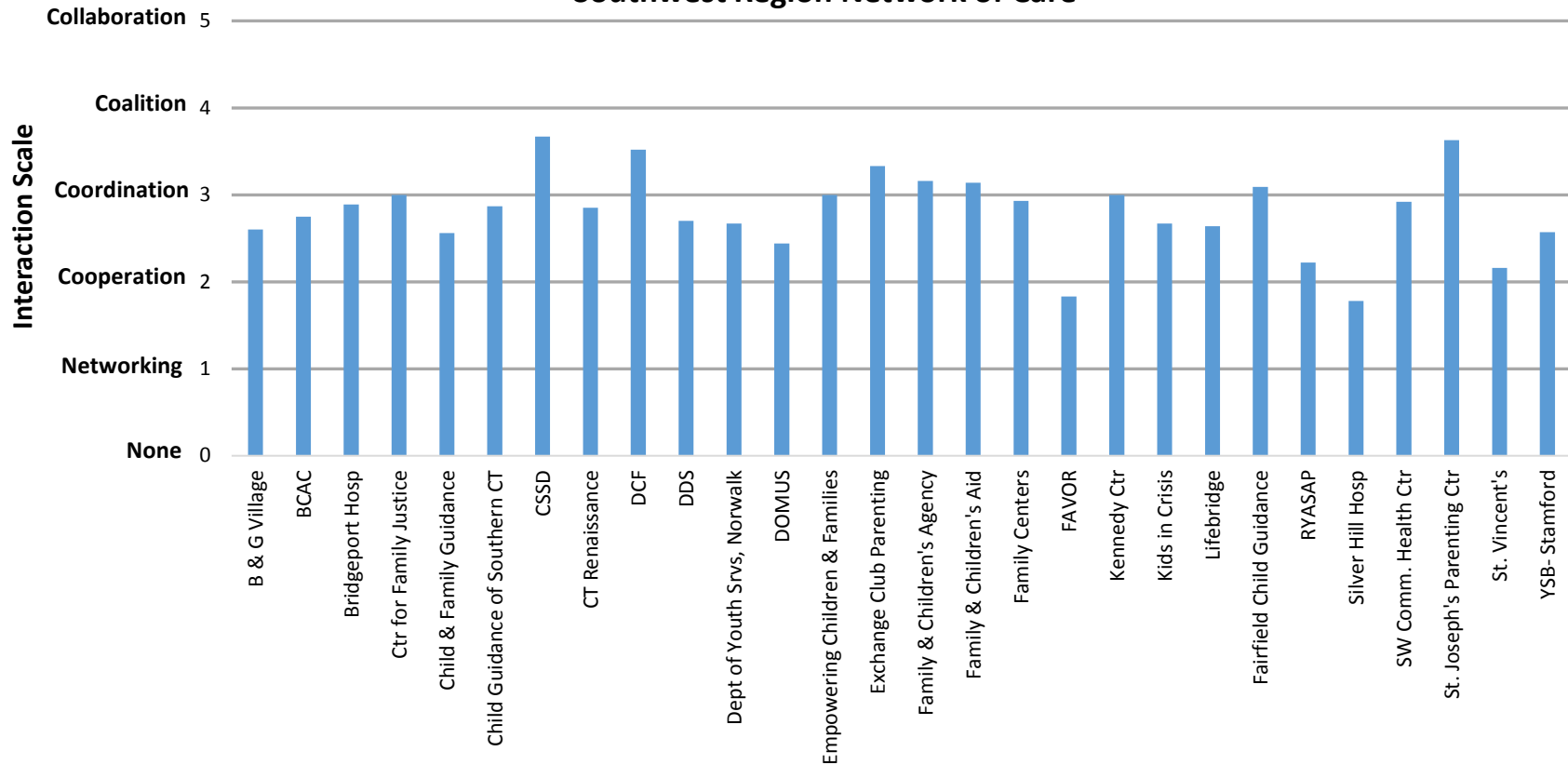


## Level of Collaboration -- Agency Level Results

While examination of the SNA results at the network level are informative, individual agency results can provide feedback that can be mobilized for change. Figure 6 depicts how staff from each agency rate their level of collaboration with other agencies using the scale from the *Levels of Collaboration Survey* where 0 indicates no collaboration. If collaboration is reported, it is rated on an interaction scale from 1 up to 5 where “5” depicts full collaboration. The bar for each agency represents how respondents from *other* agencies rate their collaboration with that agency.



**Figure 6. Mean Interaction Strength for Agencies Participating in the Southwest Region Network of Care**



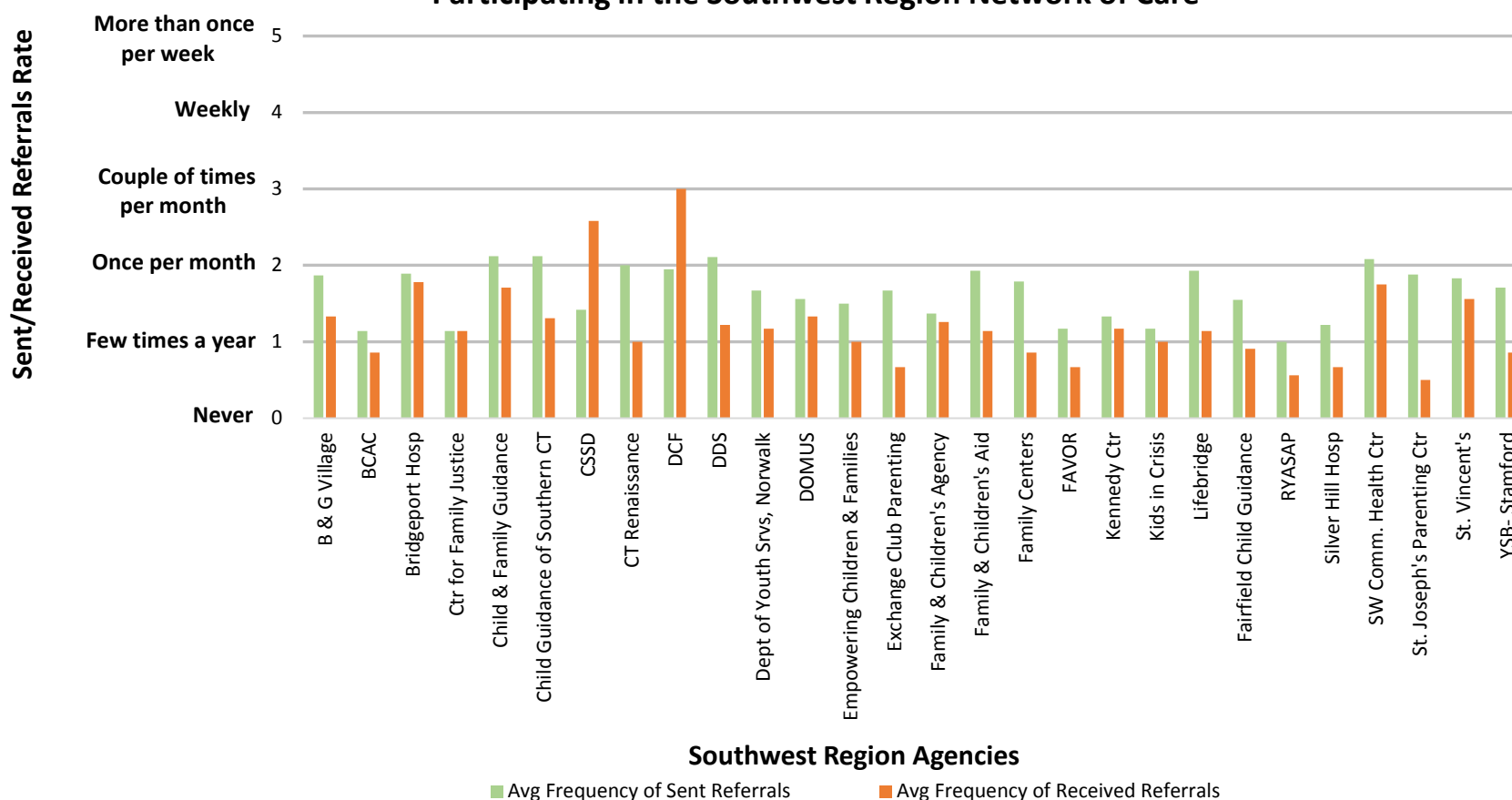
**Southwest Region Agencies**

None	Networking	Cooperation	Coordination	Coalition	Collaboration
<ul style="list-style-type: none"> <li>▶ No interaction at all</li> </ul>	<ul style="list-style-type: none"> <li>▶ Aware of organization</li> <li>▶ Loosely defined roles</li> <li>▶ Little communication</li> <li>▶ All decisions made independently</li> </ul>	<ul style="list-style-type: none"> <li>▶ Provide information to each other</li> <li>▶ Somewhat defined roles</li> <li>▶ Formal communication</li> <li>▶ All decisions are made independently</li> </ul>	<ul style="list-style-type: none"> <li>▶ Share information and resources</li> <li>▶ Defined roles</li> <li>▶ Frequent communication</li> <li>▶ Some shared decision making</li> </ul>	<ul style="list-style-type: none"> <li>▶ Share ideas</li> <li>▶ Share resources</li> <li>▶ Frequent and prioritized communication</li> <li>▶ Advise each other on decision making</li> </ul>	<ul style="list-style-type: none"> <li>▶ Belong to same provider system</li> <li>▶ Frequent communication characterized by mutual trust</li> <li>▶ Consensus is reached on all decisions</li> </ul>

## Referrals between Agencies in the Southwest Network: Agency Level Results

Figure 7 depicts the average number of times that other agencies within the network report receiving referrals *from* a specific agency (in orange) and the average number of times that other agencies report referring families *to* a specific agency (in green). This information can assist individual agencies in understanding if additional outreach to other organizations within the NOC may help increase their interactions within the NOC.

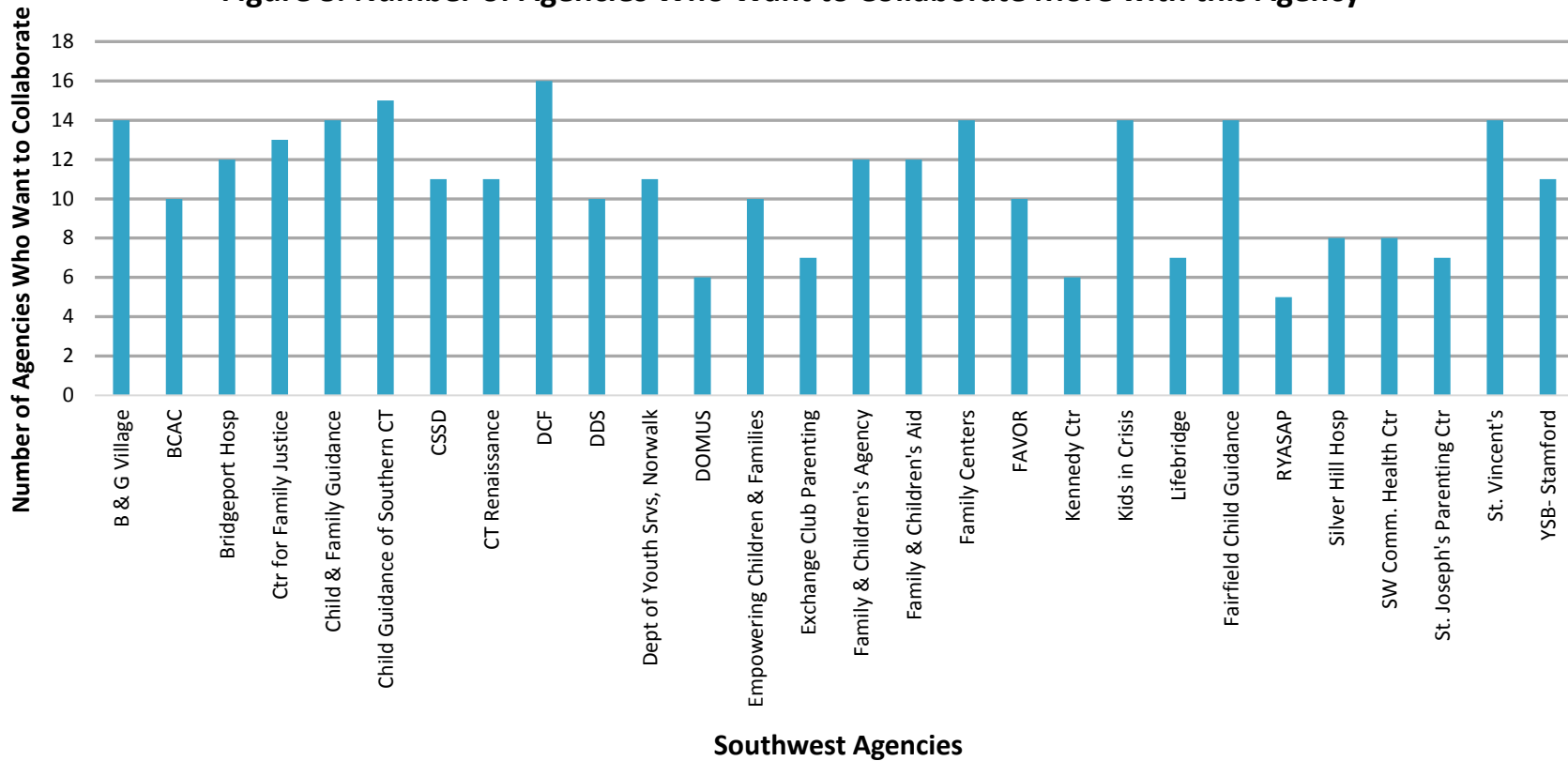
**Figure 7. Average Frequency of Sent and Received Referrals Between Agencies Participating in the Southwest Region Network of Care**



### Future Collaborations: Agency Level Results

Survey respondents were asked to indicate which agencies they wished to collaborate with more in the future, this information is provided in Figure 8 where the bar indicates the number of agencies that which to collaborate more with each listed agency. The Southwest NOC can use this data to identify those agencies that others are interested in learning more about and to develop mechanisms to where these agencies can inform others about their work and the services offered to families within the NOC. This may provide the NOC with the opportunity to assist agencies in expansion efforts, thus, preparing for and implementing strategies for enhancing collaboration in the Southwest Region.

**Figure 8. Number of Agencies Who Want to Collaborate More with this Agency**



## Southwest Region Perceptions Regarding Collaboration and Needs

Survey respondents were asked to share their perceptions of those factors that facilitate and those that may impede collaboration with other agencies. They were also asked what is needed in their community to more effectively support children with behavioral health challenges and their families. The responses to these questions were coded and analyzed, the results are summarized below.

### Factors that Facilitate Collaboration

Respondents indicate that strong relationships with other professionals are key to facilitating collaboration and linkages between agencies in the Southwest Region. Inherent to strong

“It works well when personal relationships and trust develop between providers at all levels of the organizations.”

relationships respondents reported that building trust and working together were essential when coordinating care. Agency staff report that these relationships have developed through attending: system level meetings with both contracted and community providers present; community forums; LIST meetings; and engaging in family level service planning

where providers collaboratively develop service plans. At the systems level, several respondents report that strong relationships increase the ability to collaborate in working on behalf of children and families and that client-centered approaches that include family perspectives, such as care coordination, facilitate more comprehensive service plans. Through such relationships and opportunities, professionals are reminded of the value of collaboration in guiding the work toward system goals

Staff also report that having increased knowledge about agencies in the region and a better understanding of the services they offer as facilitating collaboration. Some felt that routine networking through meetings that are geographically accessible and include key stakeholders would provide ongoing opportunities to update providers about available and/or new

“Networking is the key factor to facilitate collaboration. Learning what other agencies provide within their community that can service that population.”

services which would facilitate collaboration in the region. Survey respondents noted that program policies that provide clear criteria for services, together with a commitment to responsive communication between agencies, supports mutual decision making and facilitates collaboration across the continuum of care. When service options are clear and communication consistent, opportunities for faster response times between providers with the goal of assisting a family, or agency-level interactions in service provision, or a systems level interaction (e.g., group email) can serve to inform providers more efficiently and effectively.

Finally, a few providers noted that systems policies could facilitate collaboration, specifically those policies that ease the referral process. In addition, some noted that sharing resources and funding that is directed toward specialization of care would also facilitate collaboration between agencies.

### Barriers to Collaboration

When asked about barriers to collaboration respondents indicate that limited financial resources are a significant barrier as this leads to competition for state and federal monies. They indicate that this competitive environment not only prohibits collaboration but also can lead to duplication of services in the region.

Agency staff also report that funding limitations often lead to large caseloads and waiting lists for services resulting in families not receiving needed services. This limited service availability leads to fewer opportunities for professionals to collaborate with staff at other agencies as staff have limited time to respond to calls or emails and this lack of response is a barrier for collaboration. The limited time that staff have available also make it difficult for them to attend system level meetings where they could learn about other programs and services and develop relationships with staff from other agencies. It was suggested that agencies should leverage opportunities for information sharing and networking between providers as a way to foster professional development and provide opportunities to collaborate.

“lack of financial resources, lack of staffing, lack of ability for various existing resources to except Medicaid clients, and lack of overall resources to collaborate with”.

In addition to funding, respondents report that there are a number of systems issues in the region that impact collaboration. Some report that policies regarding confidentiality limit the ability of providers to share information or cause delays in sharing allowable information. Others report that there are not enough bilingual providers in the region and that there is a need for more culturally competent services. Many providers report that transportation is a significant issue in the region which impacts collaboration as families are unable to utilize services due to their inability to access them. Some respondents suggest that providers may not prioritize the need to understand the family perspective in their work and that parent engagement in services may be limited by this perspective. Finally, a number of providers spoke about duplication of services within the region with regard to the services available within the region and a lack of clarification regarding what duplication of services means at the family level.

“One main factor is having the parents on board with the collaboration. Many of them are overwhelmed with multiple agencies in the home.”

Respondents also report that there is a need for education regarding what services are provided by the agencies within the region and the criteria for families to enroll in these

“Not knowing what the resources are in the community. The cost of the services to our clients. Lack of behavioral health services.”

services. Agency staff report that not knowing about available services is a barrier to collaboration. In addition, some report that families are not aware of the services in their community and that this lack of awareness may make them feel less comfortable to enroll in services at a given agency.

## Community Needs

Survey respondents were also asked what is needed in their community to support children with behavioral health needs and their families. The most frequent response had to do with expanding the continuum of care in the region. Respondents indicated that families need access to all levels of care and that currently, not all are available. Some indicated the need for recreational services including safe places to play and opportunities to explore movement and art. Others report the need for therapeutic afterschool where children can socialize in a safe environment and get assistance with homework. There is also an expressed need for additional services that offer intermediate level of care such as intensive outpatient programs (IOP), partial hospital programs and more intensive in-home services and supports. It was also reported that there is a need for additional services such as increased access to medication management (e.g., psychiatrists or APRNs), mentoring programs, outreach to gang involved youth, substance abused treatment, and educational supports. Importantly service staff also report the need for additional bilingual staff who can provide services in Spanish and/or Creole. Finally, providers indicate the need for enhanced transportation and for more services offered in the communities that surround Bridgeport (e.g., Stamford, Norwalk, Stratford).

“More preventive services such as parenting classes, establishing community based support and recreational programs, less medication based interventions, establishing safe play zones, more community policing, free afterschool programs with homework and tutoring support”.

Respondents also indicated the need for additional family engagement in the region. Staff report that increased outreach to families would be beneficial as families would learn more about the system and have opportunities for peer-to-peer support. They also report that it is important to provide opportunities for families to learn about the services offered in the

“more education on variety of services in order to ensure individuals can make educated decisions about their services”.

community and to learn more about mental health so that they can make the best choices for their children. Some advocated for “one stop shopping” where services and supports are co-located so as to increase access to services for families and to increase collaboration for providers.

There were also a number of suggestions at the practice and policy levels. A number of respondents indicated the need for increased accountability for agencies delivering services and for the community collaboratives. Some

recommend evaluating outcomes data to differentiate those programs that are effective and making this information available to families to inform their choices. A number indicated the need for more open dialogue as increased communication would help to facilitate continued development of the network of care. Some suggest that providers in the region re-commit to delivering services from a strengths-based perspective.

“Collaboratives that are accountable by ...members and by action steps”

Others report the need for education for parents and providers. Education for parents to be delivered through community outreach that bring information about available services to parents instead of relying on parents to come out to events. This approach may help to increase community knowledge of services and increase comfort in seeking care. Some report that providers need additional information about the services that are available in their community. It was suggested that collaborative meetings seek to involve additional providers and agencies as an opportunity to increase understanding of the services that are available to support children with behavioral health challenges and their families.

## **Conclusion**

Translating survey information in a meaningful way involves integrating feedback from everyone. In this baseline evaluation of collaboration within the Southwest region, it is clear that agencies in the NOC recognize the importance of collaboration in order to increase service capacity and to develop client and family-centered services that provide for a continuum of care that expands their outreach and partnerships in the community

Evaluating collaboration through social network analysis (SNA) provides useful information on many levels. As a whole, it is based on the importance of *relationships* among interacting agencies<sup>2</sup>. SNA provides information that demonstrates how agencies within the NOC are linked to each other and provides structural and relational information that can increase understanding of current service patterns through the perspective of reported levels of collaboration.

The open-ended questions in the survey give an anonymous voice to providers who share observations, suggestions and solutions that help to contextualize the quantitative results of the social network analysis.

CONNECT's baseline assessment of the Southwest NOC examines the current levels of interaction and types of collaborative relationships within the NOC. This information provides the NOC information that can help to inform activities that may facilitate the continued development of connections between network providers with the goal of enhanced service coordination for the children and families who receive services within the region. This analysis will be replicated in the spring of 2018 in order to assess any changes in collaboration within the Southwest region and to provide up to date information to inform the continued development of the network of care.

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<sup>2</sup> Wasserman, S., and Faust, K., (1994) Social Network Analysis: Methods and Applications. ENG and New York: Cambridge University Press.

# **CONNECTing**

*Children and Families to Care*



## **Behavioral Health Network of Care Collaboration Report: South Central Region**

**February 2017**

**Prepared by Yale CONNECT Evaluation Team**

Yale University School of Medicine, Division of Prevention and Community Research

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through a grant awarded to the Connecticut Department of Children and Families



## INTRODUCTION

The **Connecticut Network of Care Transformation (CONNECT)** is a statewide system of care expansion that integrates efforts across child-serving sectors, including early childhood, child welfare, mental health, juvenile justice, substance abuse, and education. The Connecticut Department of Children and Families (DCF) leads the implementation of CONNECT and has four primary goals: 1) Implement and sustain the youth and family driven local, regional, and statewide infrastructure for the integrated Network of Care; 2) Implement and sustain a youth-guided, family-driven, and culturally responsive approach to statewide network of care (NOC) expansion and implementation with youth and families as full partners; 3) Implementation of the services and activities of the integrated Connecticut NOC; and 4) Enhance comprehensive statewide data system to promote integration and quality.

CONNECT has a Network Analysis Workgroup that seeks to gather information to increase understanding of the NOC with the goal of continuing to enhance and strengthen the network. This Workgroup supports the implementation of network analyses from the perspective of four stakeholder groups: 1) caregivers and youth receiving services in the NOC; 2) behavioral health service providers; 3) pediatric primary care providers; and, 4) school personnel. This report provides a regional-level analysis of collaboration between government and private behavioral health agencies, and community-based service organizations in Connecticut. In support of continuing to inform the comprehensive statewide plan for improved capacity and integrated care for children and families; DCF and CONNECT leadership have asked the Evaluation Team from the Yale Consultation Center to conduct an analysis to explore system-level collaborations within each regional NOC.

In collaboration with regional NOC leadership, CONNECT Network of Care Managers and Family System Managers in each of the six regions identified local agencies and organizations to participate in a web-based survey regarding the levels and types of collaboration that exist between agencies.

Starting in May 2016, the Network Analysis workgroup supported the successful planning and implementation of the collaboration survey for the Behavioral Cohort statewide (DCF regions 1-6). Multiple information sources were utilized to support the identification of potential survey participants in the South Central region beginning with a list from United Way/211 of child serving agencies in the region. In addition, the regional DCF Systems Development Director provided a list of DCF Region 2 contracted providers. Finally, a list was generated of organizations actively involved in local Systems of Care Activities (i.e. Community Collaboratives, Local Interagency Service Team, DCF Regional Advisory Council, etc.). Actively involved was defined by the Network Analysis workgroup as having participated within the previous 18 months. This list was obtained by reviewing meeting minutes for the last 18 months, utilizing email list serves, and reviewing meeting sign in sheets.

After cross checking and combining these information sources, one regional list was created, adhering to the established guidelines set forth by the Network Analysis workgroup, including selecting behavioral health providers actively involved in the system of care and limiting the list to 50 agencies or less per region.

Preliminary survey recipient lists were systematically refined through reviews by the South Central Network of Care Manager, DCF Systems Development Director, and other regional stakeholders in collaboration with the Region 2 FAVOR FSM. Using criteria put forth by Statewide Network Analysis workgroup a master list of survey participants was approved and integrated into a survey for online dissemination.

The South Central survey link was released on August 29, 2016 with a timeline for completion of 30 calendar days. Collective efforts of regional system partners yielded a 72% collaboration survey response rate for the South Central Region.

Utilizing the results of this survey, Social Network Analysis (SNA) was employed to analyze the data and to create a visualization that collectively defines how each regional service network is currently structured and how agencies interact. Data was also collected that indicates potential areas for future enhancement of the regional NOC. By using SNA to understand current network patterns and to track future collaborations, CONNECT will gain insight as to the potential ways regional NOCs might grow and how they change over time. SNA analysis can also contribute to network planning regarding how to shape efficient service integration cross-regionally and to identify regional and statewide organizations to support and sustain an improved statewide network of care.

This report reflects findings from Connecticut's South Central Regional Network.

### **The Levels of Collaboration Survey**

*The Levels of Collaboration Survey*<sup>1</sup> was administered in the Fall of 2016 to assess linkages within the network of behavioral health service stakeholders in each of the six regions of Connecticut. The administration of the survey conducted near the end of the second year of CONNECT implementation was intended to provide information on the current status of collaboration between agencies working to support children with behavioral health challenges and their families. The survey will be administered again in the Spring of 2018 to allow for comparison over time. This report provides a summary of the baseline assessment.

Agencies in the network were invited to participate by the Network of Care Manager in their region who also sent them a link to the web-based survey. The web-based survey includes a series of questions regarding the respondent's role in their organization and their agency's collaborations within the network. The survey asked respondents to identify the network agencies they collaborate with, the extent of their agency's interactions with these agencies, and to identify which agencies they would like to collaborate with more in the future. It also included a series of questions that probe for more information regarding: agency referrals;

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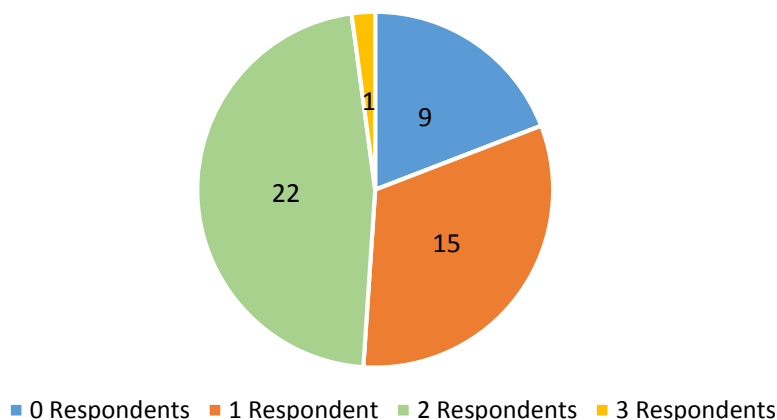
<sup>1</sup> Frey, B.B., Lohmeier, J.H., Lee, S.W., & Tollefson, S. (2006) Measuring Collaboration among Grant Partners, *American Journal of Evaluation*, 27 (3), 383-392.

facilitators and barriers to collaboration; and the services and supports needed within communities to more effectively support children with behavioral health challenges and their families. Surveys were anonymous, could be taken at the respondent's convenience, and took about 15 minutes to complete.

Agencies were asked to identify two respondents to complete the survey including an individual in a leadership position and an individual within the agency who is familiar with how the organization collaborates with partners to facilitate work with children and families. From late August 2016 through early October 2016, 62 individuals from 38 agencies (72% of possible respondents) in the South Central region completed the survey.

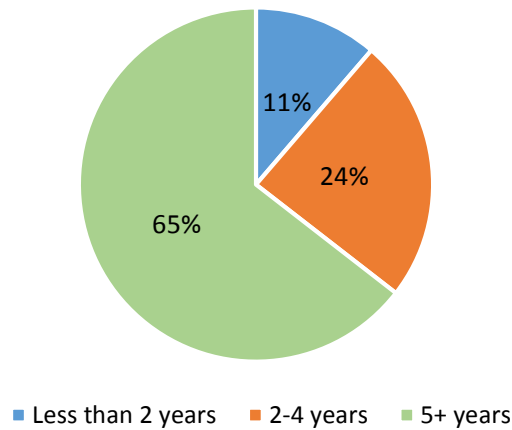
As is depicted in Figure 1, nine of the 47 agencies (19%) that were invited did not respond to the survey, 15 agencies (32%) had one respondent, 22 agencies (47%) had two respondents, and one agency (2%) had three respondents. In order to control for the differential response rate between agencies, the analyses were conducted on the average response from within each agency so that there is one score from each agency that responded to the survey included in the analyses.

**Figure 1. Number of Agencies By Respondent  
(N = 47)**



With regard to length of employment within their agency, as is shown in Figure 2, 64.5% of those who completed the survey had been in their current position for more than 5 years, 24.2% had their position for 2 to 4 years, and 11.3% had been in their current position for less than 2 years. The overwhelming majority (86%) of all respondents reported that they serve in a leadership position within their organization.

**Figure 2. Length of Time at Agency - South Central Region Respondents (N=62)**



### Agency Levels of Collaboration

For the purpose of this report collaboration refers to the relationship between two organizations that exchange information and/or services to link people to needed services. The degree of network linkage was measured using a scale developed by Frey and colleagues (2006)<sup>1</sup> containing five levels of interaction; **networking, cooperation, coordination, coalition, and collaboration** (see Table 1) regarding child and family services with collaboration seen as the highest level. Scores on the scale represent the level of collaboration between organizations at a specific point in time. The survey will be re-administered in the spring of 2018 and the scores from the two administrations will be compared to reflect change in linkage over time.

Table 1. Levels of Interaction in Collaboration				
Networking (1)	Cooperation (2)	Coordination (3)	Coalition (4)	Collaboration (5)
<ul style="list-style-type: none"> <li>Aware of organization</li> <li>Loosely defined roles</li> <li>Little communication</li> <li>All decisions made independently</li> </ul>	<ul style="list-style-type: none"> <li>Provide information to each other</li> <li>Somewhat defined roles</li> <li>Formal communication</li> <li>All decisions made independently</li> </ul>	<ul style="list-style-type: none"> <li>Share information and resources</li> <li>Defined roles</li> <li>Frequent communication</li> <li>Some shared decision making</li> </ul>	<ul style="list-style-type: none"> <li>Share ideas</li> <li>Share resources</li> <li>Frequent and prioritized communication</li> <li>Advise each other on decision making</li> </ul>	<ul style="list-style-type: none"> <li>Belong to same provider system</li> <li>Frequent communication characterized by mutual trust</li> <li>Consensus is reached on all decisions</li> </ul>

## Social Network Analysis

Social network analysis (SNA) involves the mapping of a social environment, the relationships among social entities, and the expression of the patterns or regularities of the interactions that connect them<sup>2</sup> The CONNECT Evaluation team at Yale is utilizing SNA to provide both a mathematical and visual analysis of inter-agency relationships and the patterns of relationships within the Network of Care (NOC) in each of the six regions in the state.

A frequently used output of SNA is a visual depiction of relationships of social entities within a network of care. In the network map presented (see Figure 3) the circles represent an agency in the network and each line represents a collaborative relationship between two agencies. The size of the circles represents the number of relationships that particular agency has with other agencies in the network. Agencies with larger circles and darker colors have a higher number of *relationships* than those agencies with smaller circles and lighter colors. The thickness and the color of the lines that connect the circles in the network map tells us about the *characteristics* of the relationships such as the extent to which agencies work together. The thicker and the darker the lines, the stronger the relationships between two agencies.

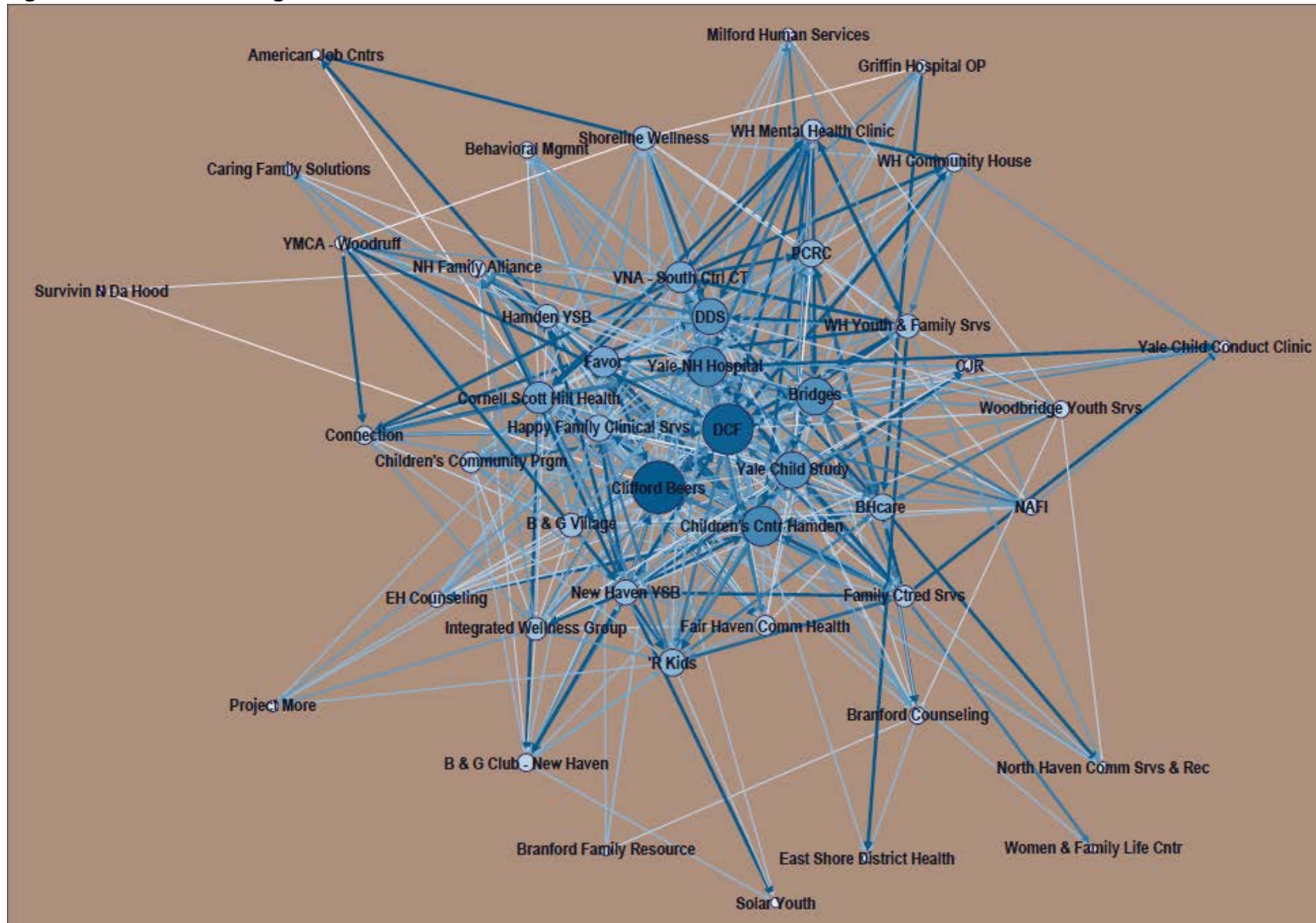
With regard to placement on the network map the agencies depicted by smaller and lighter colored circles have fewer relationships and these relationships tend to be characterized by a lower level of collaboration. These agencies are located on the periphery of the network map. On the other hand, agencies that have a higher number of relationships that have stronger connections are depicted as larger circles with darker color. These agencies are located closer to the center of a network map. Those agencies that are located on the network map between those in the center and those agencies on the periphery tend to fall in the middle of the continuum of those agencies with a higher number of more robust collaborations and those who have fewer collaborations that tend to be less developed.

When examining Figure 3 it is important to remember that not all agencies that comprise the South Central Network of Care are included in these analyses as the inter-relationships between 47 specific agencies were assessed. In addition, it is important to note that the size and scope of services offered by agencies varies and those agencies that are larger and offer more services have more opportunities to collaborate.

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<sup>1</sup> Frey, B.B., Lohmeier, J.H., Lee, S.W., & Tollefson, S. (2006) Measuring Collaboration among Grant Partners, *American Journal of Evaluation*, 27 (3), 383-392.

Figure 3: South Central Regional Network



## Network Density

One way to look at the level of collaboration within a network is to look at the *number* of agencies that are connected with one another, these are called “*active*” collaborations. As Figure 3 demonstrates, not every “possible” connection between agencies is active. SNA provides ways to examine a network statistically, one particular measure is called the *network density*. Network density depicts the *number* of active collaborations that exist at the time of the survey compared to the total *number* of possible active collaborations within the network. The density of a network is expressed as percentage, the closer to 100 percent the denser the network. At the time of the survey the selected agencies for the South Central Region consisted of 2,161 possible relationships. Those surveyed reported that 536 agency relationships were active out of the possible 2,161 relationships indicating that the South Central Region has a density of 25 percent. Approximately **1 out of 4 possible connections in the South Central Region** were reported to be active when the survey was completed.

## Directionality of Relationships in the South Central Regional Network

In addition to line thickness (degree or extent of collaboration) the lines between the circles also demonstrate the direction of collaborations. As is depicted in Figure 3, some agency connections go in both directions as the lines have arrows on each end. If Agency A reports that it collaborates with Agency B the line has an arrow pointing toward Agency B. If Agency B indicates that they collaborate with Agency A, the line also has an arrow pointing to Agency A.



Existing relationships in the South Central network can also be measured by whether two agencies report that they collaborate with each other. Collaborating in both directions or “reciprocal collaboration” is shown by a line that has an arrow with two points, one on each end. **Forty-one percent of the active collaborations in the South Central network were reciprocal.**

## Outreach and Recognition within the Network

The network map also depicts pairs of agencies where the relationship is not reciprocal. These connections are characterized as either *outreach* to another agency or *recognition* by another agency. For example, if Agency A says it collaborates with Agency B but Agency B does not report collaborating with Agency A, then A is engaged in *outreach* to B.

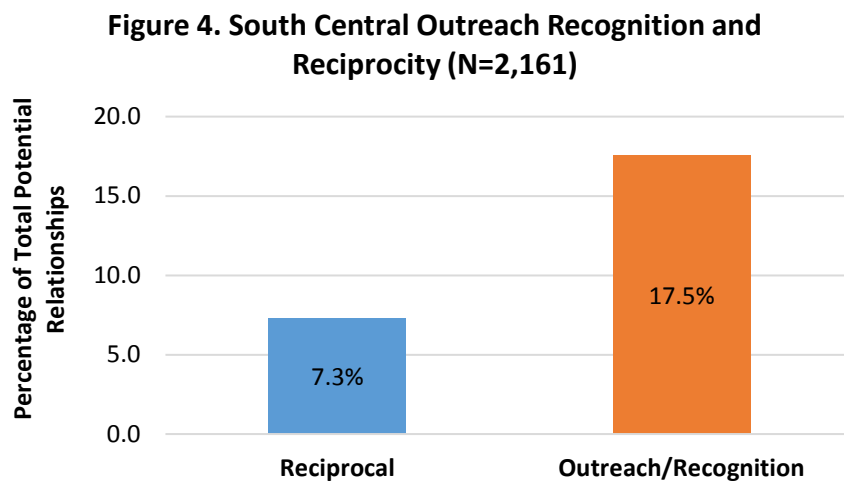


Similarly, if Agency B says it collaborates with Agency A but A does not report collaborating with B, then A is *recognized* by B as a collaborative partner.



SNA allows us to understand the extent to which one-way network activity is either through outreach or recognition both of which are important in a network of care with regard to how individual agencies interact with one another. In analyzing data at the network level outreach and recognition are viewed as uni-directional versus reciprocal interactions which are bi-directional.

Figure 4 compares the percentage of reciprocal relationships to outreach and recognition relationships in the South Central NOC.



Out of the total potential relationships in the South Central NOC, 7.3% are reciprocal, and 17.5% are outreach or recognition relationships. At this time there are a greater number of one-way relationships than bi-directional relationships. The follow-up survey to be conducted in the spring of 2018 will allow for comparison across time to see if this distribution changes and to see if the percentage of active collaborations within the network change.



## Relationships in the South Central Regional Network

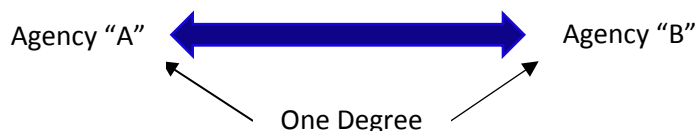
In SNA the structure of the network can be examined to determine how fully it is connected and to evaluate how diffuse it is. If a network is fully connected, then a message (e.g. referral request) that starts with any one agency can be traced throughout the network to eventually reach every other agency. This means that every agency is “reachable” either directly or indirectly.

However, this level of interconnectivity is not typical in a service delivery system.

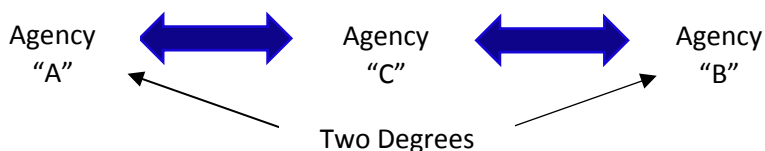
One way to determine how close the relationships are within a given network is to look at how direct the links are between agencies or how many “degrees of separation” exist between agencies (see Figure 6). The lower

the degrees of separation in a network the closer and more direct the relationship is between any two agencies. Within SNA, these “degrees of separation” are called geodesic distance which can range from 0 (not at all connected) to 1.0 (fully connected). **The geodesic distance in the South Central NOC at the time of the survey was 0.488.** It will be important to see how this metric changes overtime.

**Figure 5.** Collaboration of *ONE DEGREE* between ‘A’ and ‘B’



Collaboration of *TWO DEGREES* between ‘A’



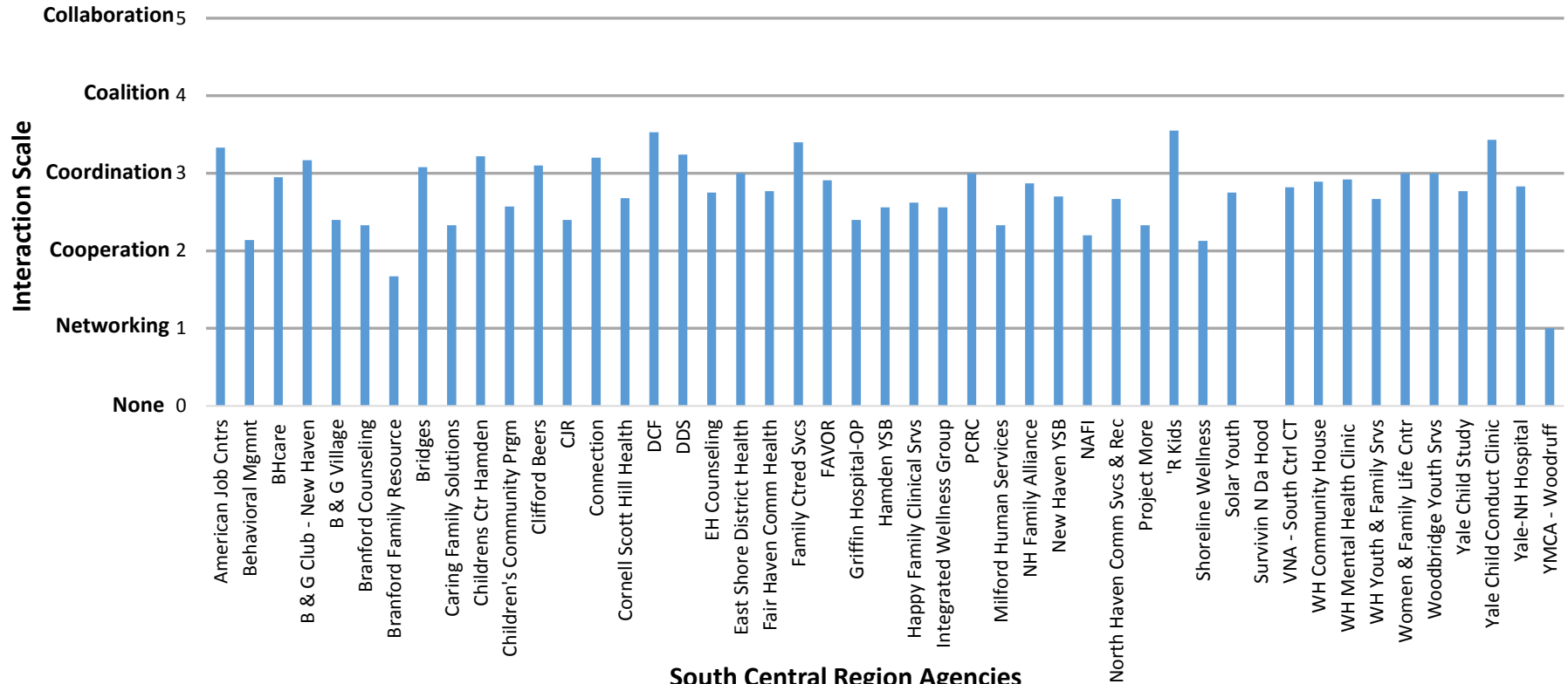
Collaboration of *THREE DEGREES*



## Level of Collaboration -- Agency Level Results

While examination of the SNA results at the network level are informative, individual agency results can provide feedback that can be mobilized for change. Figure 6 depicts how staff from each agency rate their level of collaboration with other agencies using the scale from the *Levels of Collaboration Survey* where 0 indicates no collaboration. If collaboration is reported, it is rated on an interaction scale from 1 up to 5 where “5” depicts full collaboration. The bar for each agency represents how respondents from *other* agencies rate their collaboration with that agency.

**Figure 6. Mean Collaboration Rating Given by Agencies Participating in the South Central Network of Care**



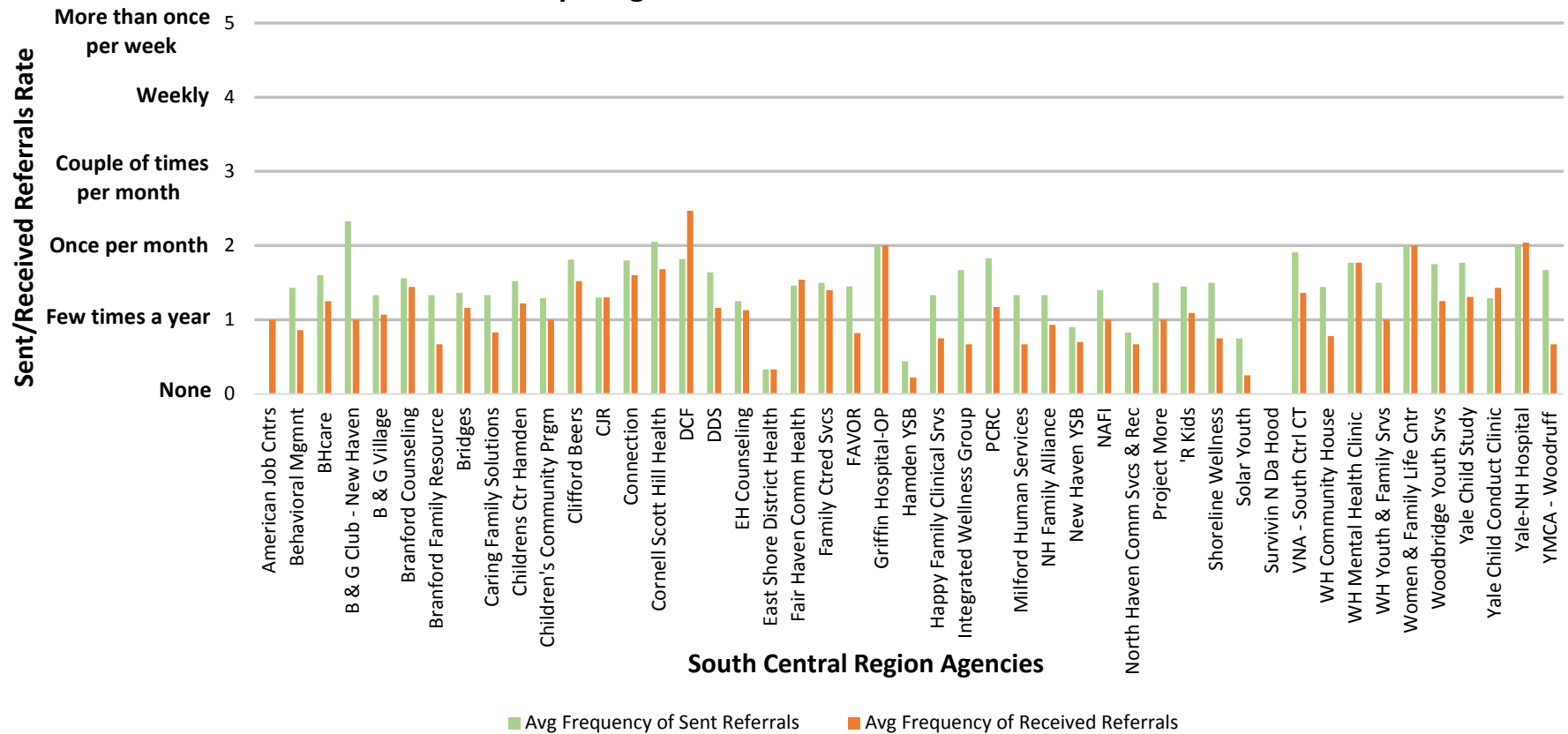
**South Central Region Agencies**

None	Networking	Cooperation	Coordination	Coalition	Collaboration
<ul style="list-style-type: none"> <li>▶ No interaction at all</li> </ul>	<ul style="list-style-type: none"> <li>▶ Aware of organization</li> <li>▶ Loosely defined roles</li> <li>▶ Little communication</li> <li>▶ All decisions made independently</li> </ul>	<ul style="list-style-type: none"> <li>▶ Provide information to each other</li> <li>▶ Somewhat defined roles</li> <li>▶ Formal communication</li> <li>▶ All decisions are made independently</li> </ul>	<ul style="list-style-type: none"> <li>▶ Share information and resources</li> <li>▶ Defined roles</li> <li>▶ Frequent communication</li> <li>▶ Some shared decision making</li> </ul>	<ul style="list-style-type: none"> <li>▶ Share ideas</li> <li>▶ Share resources</li> <li>▶ Frequent and prioritized communication</li> <li>▶ Advise each other on decision making</li> </ul>	<ul style="list-style-type: none"> <li>▶ Belong to same provider system</li> <li>▶ Frequent communication characterized by mutual trust</li> <li>▶ Consensus is reached on all decisions</li> </ul>

## Referrals between Agencies in the South Central Network: Agency Level Results

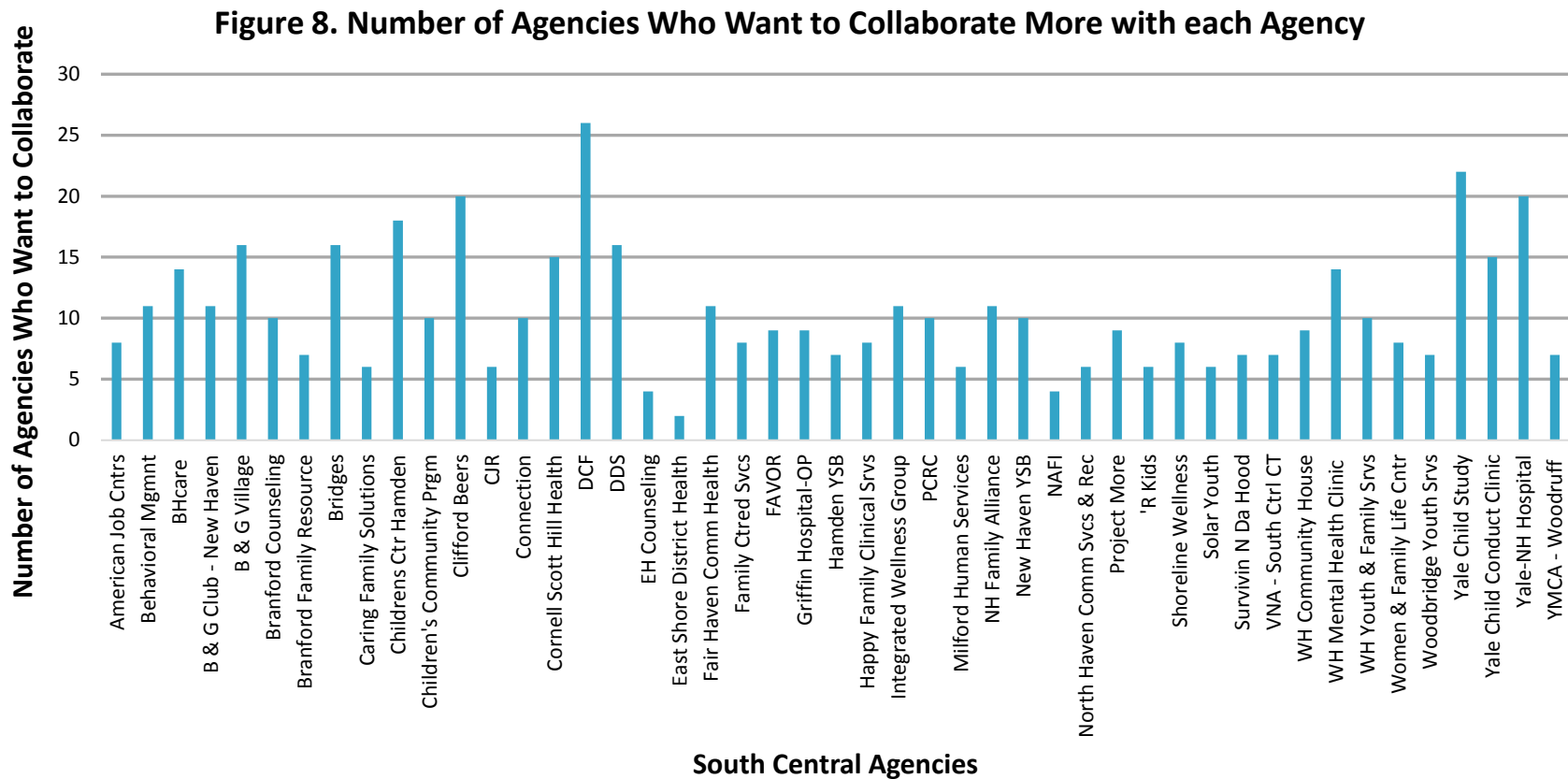
Figure 7 depicts the average number of times that other agencies within the network report receiving referrals *from* a specific agency (in orange) and the average number of times that other agencies report referring families *to* a specific agency (in green). This information can assist individual agencies in understanding if additional outreach to other organizations within the NOC may help increase their interactions within the NOC.

**Figure 7. Average Frequency of Sent and Received Referrals Between Agencies Participating in the South Central Network of Care**



## Future Collaborations: Agency Level Results

Survey respondents were asked to indicate which agencies they wished to collaborate with more in the future, this information is provided in Figure 8 where the bar indicates the number of agencies that wish to collaborate more with each listed agency. The South Central NOC can use this data to identify those agencies that others are interested in learning more about and to develop mechanisms to where these agencies can inform others about their work and the services offered to families within the NOC. This may provide the NOC with the opportunity to assist agencies in expansion efforts, thus, preparing for and implementing strategies for enhancing collaboration in the South Central Region.



## South Central Region Perceptions Regarding Collaboration and Needs

Survey respondents were asked to share their perceptions of those factors that facilitate and those that may impede collaboration with other agencies. They were also asked what is needed in their community to more effectively support children with behavioral health challenges and their families. The responses to these questions were coded and analyzed, the results are summarized below.

### Factors that Facilitate Collaboration

Respondents indicate that strong relationships with other professionals are key to facilitating collaboration and linkages between agencies in the South Central Region. Agency staff report that these relationships have developed through attending multi-agency trainings, experience working together or attending system level meetings. Providers report that when families receive services through multiple agencies the service planning meetings (e.g., Child and Family Team meetings) have enabled the staff working with a family to develop relationships which has facilitated further collaboration. At the systems level a number of respondents report that the collaborative meetings where professionals from across the region are brought together for a common purpose such as working toward system goals facilitate collaboration.

“Collaboration is facilitated when various agencies are brought around the table for a common purpose.”

that these relationships have developed through attending multi-agency trainings, experience working together or attending system level meetings. Providers report that when families receive services through multiple agencies the service planning meetings (e.g., Child and Family Team meetings) have enabled the

Staff also report that having knowledge of other agencies and a good understanding of the services they offer facilitates collaboration. Some felt that having a resource fair or other venues where agencies could present information about their agency and services would be an important activity to increase collaboration in the region. Survey respondents noted that clear and consistent communication between agencies was important in facilitating collaboration. This communication may be between two providers with the goal of assisting a family or could be at a systems level (e.g., group email) and serve to inform other providers of events or other information.

“Good understanding and knowledge of the existing available services.”

Finally, a few providers noted that program or agency policies could facilitate collaboration. Specifically, those policies that ease the referral process enabling families to begin new services in a timely manner facilitate collaboration.

### Barriers to Collaboration

When asked about barriers to collaboration; the most frequent response was lack of information about other agencies including the services they provide. Respondents felt this lack of knowledge was due to not having professional relationships with providers at other agencies and the fact that agencies often operate in silos only collaborating with a few other agencies.

“Many providers lack knowledge of who provides which services.”

Respondents also report that issues related to funding limitations and the limited time available for staff and agency policies also negatively impact collaboration. The current funding climate limits the service capacity of existing programs resulting in waiting lists and also limits the availability of some needed services within the region. This limited service availability leads to fewer opportunities for professionals to collaborate with staff at other agencies. In addition, agency staff have limited time to respond to calls or emails and this lack of response is a barrier for collaboration. In addition, the limited time that staff have available make it difficult for them to attend system level meetings where they could learn about other programs and services and develop relationships with staff from other agencies. Some respondents suggested that agency policies and procedures can restrict collaboration. Policies that limit information sharing between providers or complicated referral procedures can impact the opportunities to collaborate.

“Lack of universal release forms”.

In addition, some families have limited transportation options and at times cannot accept a referral to another agency. This inability to access services while limiting service options

“Agencies working within siloes. At times it seems we are placed in a competitive position as opposed to a collaborative one”.

available to families also is a barrier to staff working collaboratively to best meet the needs of the family. Finally, some suggest that the climate needs to change so that agencies do not feel that they have to compete with each other, but instead can work to support the efforts of other agencies and the network of care.

### Community Needs

Survey respondents were also asked what is needed in their community to support children with behavioral health needs and their families. The most frequent response was more services. Some respondents indicated that existing services require increased capacity to serve all of those seeking care. Others reported the lack of specific services for children and youth in the region including: substance abuse screening and treatment; screening for younger children so that services can be started earlier; and, more services offered in Spanish is an unmet need in the community. Respondents acknowledge that many of these concerns are tied to funding limitations including the recent reduction in State support for services.

“We need more access to appropriate resources that are easy for parents to access and fit into their schedule”.

“More education around behavioral health, mental health for parents”.

Others report the need for education for parents and caregivers. This education includes outreach and training in the community so the level of stigma is reduced and families are more comfortable seeking care. Some respondents felt that families would benefit

from more information about the services and supports available. Similarly, some suggested that a resource fair for providers that would allow opportunities to learn about the services offered by other agencies and to network with other professionals would be a valued activity.

Some suggested that working toward more uniform policies and procedures across agencies would enable more integration for family level service planning and would make it easier to share information (e.g., records) between agencies both of which would increase collaboration. Finally, respondents suggest that increased flexibility in the days, hours, and location of services would increase access for families and may decrease the transportation issues that impact some.

## **Conclusion**

Translating survey information in a meaningful way involves integrating feedback from everyone. In this baseline evaluation of collaboration within the South Central region, it is clear that agencies in the NOC recognize the importance of collaboration in order to increase service capacity and to develop client and family-centered services that provide for a continuum of care that expands their outreach and partnerships in the community

Evaluating collaboration through social network analysis (SNA) provides useful information on many levels. As a whole, it is based on the importance of *relationships* among interacting agencies<sup>2</sup>. SNA provides information that demonstrates how agencies within the NOC are linked to each other and provides structural and relational information that can increase understanding of current service patterns through the perspective of reported levels of collaboration.

The open-ended questions in the survey give an anonymous voice to providers who share observations, suggestions and solutions that help to contextualize the quantitative results of the social network analysis.

CONNECT's baseline assessment of the South Central NOC examines the current levels of interaction and types of collaborative relationships within the NOC. This information provides the NOC information that can help to inform activities that may facilitate the continued development of connections between network providers with the goal of enhanced service coordination for the children and families who receive services within the region. This analysis will be replicated in the spring of 2018 in order to assess any changes in collaboration within the South Central region and to provide up to date information to inform the continued development of the network of care.

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<sup>2</sup> Wasserman, S., and Faust, K., (1994) Social Network Analysis: Methods and Applications. ENG and New York: Cambridge University Press.

# **CONNECTing**

*Children and Families to Care*



## **Behavioral Health Network of Care Collaboration Report: Eastern Region**

**March 2017**

**Prepared by Yale CONNECT Evaluation Team**

Yale University School of Medicine, Division of Prevention and Community Research

Funding provided by the Substance Abuse and Mental Health Services Administration (SAMHSA) through a grant awarded to the Connecticut Department of Children and Families



## INTRODUCTION

The **Connecticut Network of Care Transformation (CONNECT)** is a statewide system of care expansion that integrates efforts across child-serving sectors, including early childhood, child welfare, mental health, juvenile justice, substance abuse, and education. The Connecticut Department of Children and Families (DCF) leads the implementation of CONNECT and has four primary goals: 1) Implement and sustain the youth and family driven local, regional, and statewide infrastructure for the integrated Network of Care; 2) Implement and sustain a youth-guided, family-driven, and culturally responsive approach to statewide network of care (NOC) expansion and implementation with youth and families as full partners; 3) Implementation of the services and activities of the integrated Connecticut NOC; and 4) Enhance comprehensive statewide data system to promote integration and quality.

CONNECT has a Network Analysis Workgroup that seeks to gather information to increase understanding of the NOC with the goal of continuing to enhance and strengthen the network. This Workgroup supports the implementation of network analyses from the perspective of four stakeholder groups: 1) caregivers and youth receiving services in the NOC; 2) behavioral health service providers; 3) pediatric primary care providers; and, 4) school personnel. This report provides a regional-level analysis of collaboration between government and private behavioral health agencies, and community-based service organizations in Connecticut. In support of continuing to inform the comprehensive statewide plan for improved capacity and integrated care for children and families; DCF and CONNECT leadership have asked the Evaluation Team from the Yale Consultation Center to conduct an analysis to explore system-level collaborations within each regional NOC.

In collaboration with regional NOC leadership, CONNECT Network of Care Managers and FAVOR Family System Managers (FSMs) in each of the six regions identified local agencies and organizations to participate in a web-based survey regarding the levels and types of collaboration that exist between agencies.

Starting in May 2016, the Network Analysis workgroup supported the successful planning and implementation of the collaboration survey for the Behavioral Cohort statewide (DCF regions 1-6). Multiple information sources were utilized to support the identification of potential survey participants in the Eastern region beginning with a list from United Way/211 of child serving agencies in the region. In addition, the regional DCF Systems Development Director provided a list of DCF Region 3 contracted providers. Finally, a list was generated of organizations actively involved in local Systems of Care Activities (i.e. Community Collaboratives, Local Interagency Service Team, DCF Regional Advisory Council, etc.). Actively involved was defined by the Network Analysis workgroup as having participated within the previous 18 months. This list was obtained by reviewing meeting minutes for the last 18 months, utilizing email list serves, and reviewing meeting sign in sheets.

After cross checking and combining these information sources, one regional list was created, adhering to the established guidelines set forth by the Network Analysis workgroup, including

selecting behavioral health providers actively involved in the system of care and limiting the list to 50 agencies or less per region.

Preliminary survey recipient lists were systematically refined through reviews by the Eastern Network of Care Manager, DCF Systems Development Director, and other regional stakeholders in collaboration with the Region 3 FAVOR FSM. Using criteria put forth by Statewide Network Analysis workgroup a master list of survey participants was approved and integrated into a survey for online dissemination.

The Eastern survey link was released on September 19, 2016 with a timeline for completion of 30 calendar days. Collective efforts of regional system partners yielded a 62% collaboration survey response rate for the Eastern Region.

Utilizing the results of this survey, Social Network Analysis (SNA) was employed to analyze the data and to create a visualization that collectively defines how each regional service network is currently structured and how agencies interact. Data was also collected that indicates potential areas for future enhancement of the regional NOC. By using SNA to understand current network patterns and to track future collaborations, CONNECT will gain insight as to the potential ways regional NOCs might grow and how they change over time. SNA analysis can also contribute to network planning regarding how to shape efficient service integration cross-regionally and to identify regional and statewide organizations to support and sustain an improved statewide network of care.

This report reflects findings from Connecticut's Eastern Regional Network.

## **The Levels of Collaboration Survey**

*The Levels of Collaboration Survey*<sup>1</sup> was administered in the Fall of 2016 to assess linkages within the network of behavioral health service stakeholders in each of the six regions of Connecticut. The administration of the survey conducted near the end of the second year of CONNECT implementation was intended to provide information on the current status of collaboration between agencies working to support children with behavioral health challenges and their families. The survey will be administered again in the Spring of 2018 to allow for comparison over time. This report provides a summary of the baseline assessment.

Agencies in the network were invited to participate by the Network of Care Manager in their region who also sent them a link to the web-based survey. The web-based survey includes a series of questions regarding the respondent's role in their organization and their agency's collaborations within the network. The survey asked respondents to identify the network agencies they collaborate with, the extent of their agency's interactions with these agencies, and to identify which agencies they would like to collaborate with more in the future. It also

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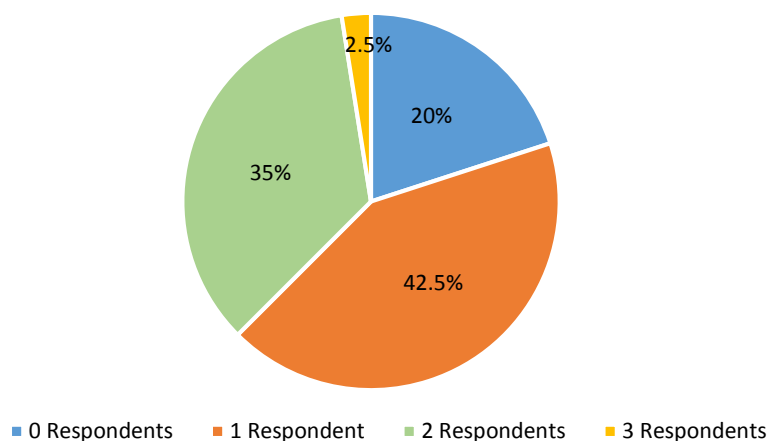
<sup>1</sup> Frey, B.B., Lohmeier, J.H., Lee, S.W., & Tollefson, S. (2006) Measuring Collaboration among Grant Partners, *American Journal of Evaluation*, 27 (3), 383-392.

included a series of questions that probe for more information regarding: agency referrals; facilitators and barriers to collaboration; and the services and supports needed within communities to more effectively support children with behavioral health challenges and their families. Surveys were anonymous, could be taken at the respondent's convenience, and took about 15 minutes to complete.

Agencies were asked to identify two respondents to complete the survey including an individual in a leadership position and an individual within the agency who is familiar with how the organization collaborates with partners to facilitate work with children and families. From late August 2016 through early October 2016, 48 individuals from 32 agencies (63% of possible respondents) in the Eastern region completed the survey.

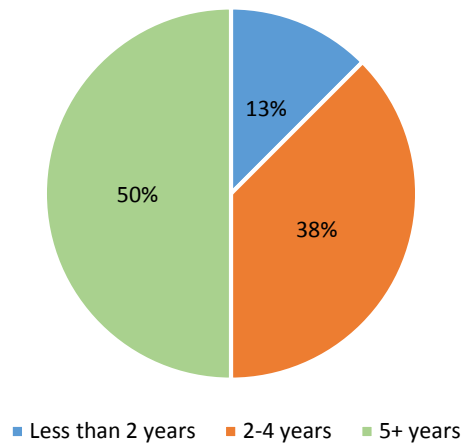
As is depicted in Figure 1, eight of the 40 agencies (20%) that were invited did not respond to the survey, 17 agencies (42.5%) had one respondent, 14 agencies (35%) had two respondents, and 1 agency (2.5%) had three respondents. In order to control for the differential response rate between agencies, the analyses were conducted on the average response from within each agency so that there is one score from each agency that responded to the survey included in the analyses.

**Figure 1. Number of Agencies By Respondent (N=40)**



With regard to length of employment within their agency, as is shown in Figure 2, 50% of those who completed the survey had been in their current position for more than 5 years, 38% had their position for 2 to 4 years, and 13% had been in their current position for less than 2 years. The overwhelming majority (75%) of all respondents reported that they serve in a leadership position within their organization.

**Figure 2. Percentage of Time in Job Role of Eastern Agency Respondents (N=48)**



### Agency Levels of Collaboration

For the purpose of this report collaboration refers to the relationship between two organizations that exchange information and/or services to link people to needed services. The degree of network linkage was measured using a scale developed by Frey and colleagues (2006)<sup>1</sup> containing five levels of interaction; **networking, cooperation, coordination, coalition, and collaboration** (see Table 1) regarding child and family services with collaboration seen as the highest level. Scores on the scale represent the level of collaboration between organizations at a specific point in time. The survey will be re-administered in the spring of 2018 and the scores from the two administrations will be compared to reflect change in linkage over time.

Table 1. Levels of Interaction in Collaboration				
Networking (1)	Cooperation (2)	Coordination (3)	Coalition (4)	Collaboration (5)
<ul style="list-style-type: none"> <li>Aware of organization</li> <li>Loosely defined roles</li> <li>Little communication</li> <li>All decisions made independently</li> </ul>	<ul style="list-style-type: none"> <li>Provide information to each other</li> <li>Somewhat defined roles</li> <li>Formal communication</li> <li>All decisions made independently</li> </ul>	<ul style="list-style-type: none"> <li>Share information and resources</li> <li>Defined roles</li> <li>Frequent communication</li> <li>Some shared decision making</li> </ul>	<ul style="list-style-type: none"> <li>Share ideas</li> <li>Share resources</li> <li>Frequent and prioritized communication</li> <li>Advise each other on decision making</li> </ul>	<ul style="list-style-type: none"> <li>Belong to same provider system</li> <li>Frequent communication characterized by mutual trust</li> <li>Consensus is reached on all decisions</li> </ul>

## Social Network Analysis

Social network analysis (SNA) involves the mapping of a social environment, the relationships among social entities, and the expression of the patterns or regularities of the interactions that connect them<sup>2</sup> The CONNECT Evaluation team at Yale is utilizing SNA to provide both a mathematical and visual analysis of inter-agency relationships and the patterns of relationships within the Network of Care (NOC) in each of the six regions in the state.

A frequently used output of SNA is a visual depiction of relationships of social entities within a network of care. In the network map presented (see Figure 3) the circles represent an agency in the network and each line represents a collaborative relationship between two agencies. The size of the circles represents the number of relationships that particular agency has with other agencies in the network. Agencies with larger circles and darker colors have a higher number of *relationships* than those agencies with smaller circles and lighter colors. The thickness and the color of the lines that connect the circles in the network map tells us about the *characteristics* of the relationships such as the extent to which agencies work together. The thicker and the darker the lines, the stronger the relationships between two agencies.

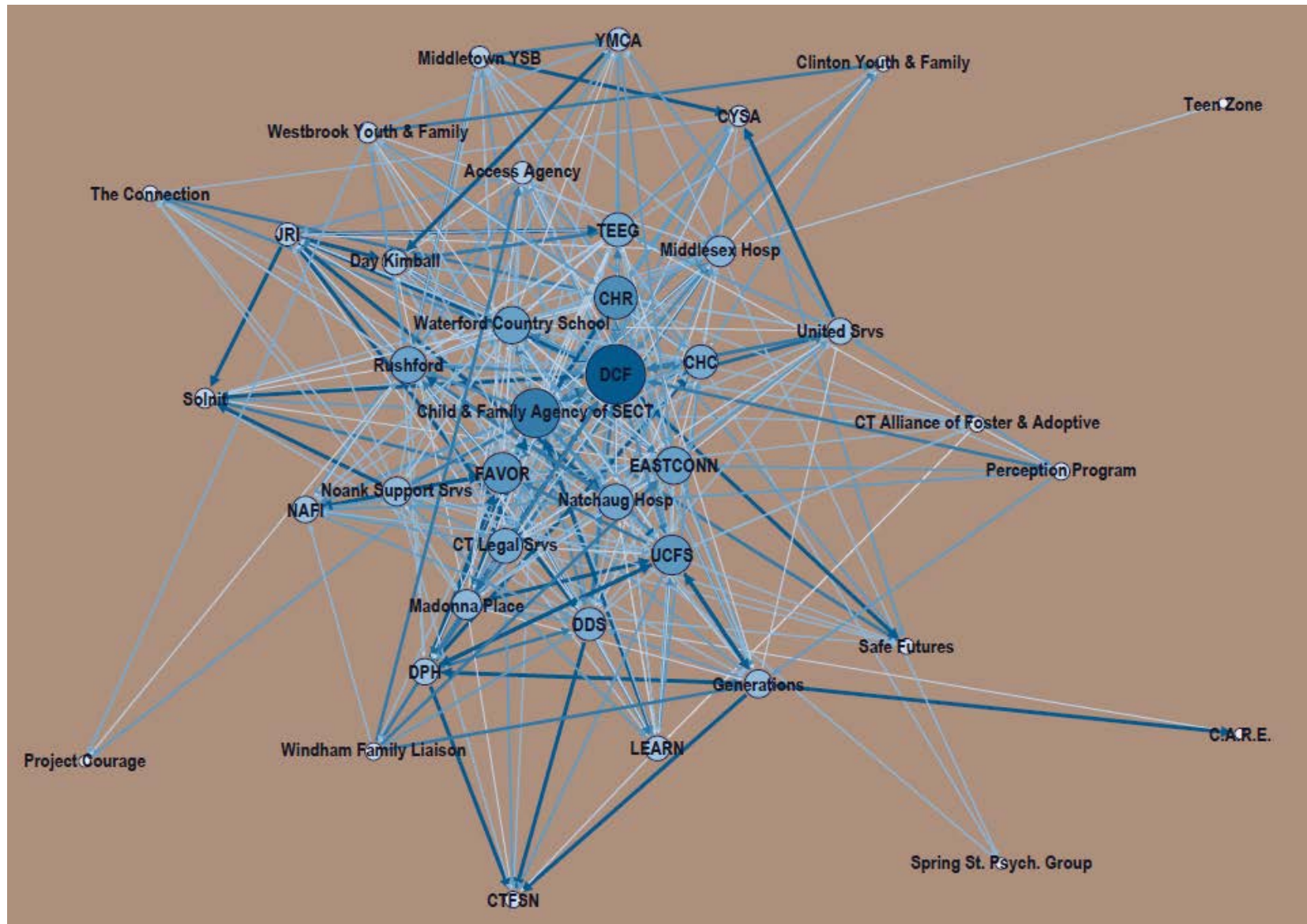
With regard to placement on the network map the agencies depicted by smaller and lighter colored circles have fewer relationships and these relationships tend to be characterized by a lower level of collaboration. These agencies are located on the periphery of the network map. On the other hand, agencies that have a higher number of relationships that have stronger connections are depicted as larger circles with darker color. These agencies are located closer to the center of a network map. Those agencies that are located on the network map between those in the center and those agencies on the periphery tend to fall in the middle of the continuum of those agencies with a higher number of more robust collaborations and those who have fewer collaborations that tend to be less developed.

When examining Figure 3 it is important to remember that not all agencies that comprise the Eastern Network of Care are included in these analyses as the inter-relationships between 40 specific agencies were assessed. In addition, it is important to note that the size and scope of services offered by agencies varies and those agencies that are larger and offer more services have more opportunities to collaborate.

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<sup>1</sup> Frey, B.B., Lohmeier, J.H., Lee, S.W., & Tollefson, S. (2006) Measuring Collaboration among Grant Partners, *American Journal of Evaluation*, 27 (3), 383-392.

Figure 3: Eastern Regional Network



## Network Density

One way to look at the level of collaboration within a network is to look at the *number* of agencies that are connected with one another, these are called “*active*” collaborations. As Figure 3 demonstrates, not every “possible” connection between agencies is active. SNA provides ways to examine a network statistically, one particular measure is called the *network density*. Network density depicts the *number* of active collaborations that exist at the time of the survey compared to the total *number* of possible active collaborations within the network. The density of a network is expressed as percentage, the closer to 100 percent the denser the network. At the time of the survey the selected agencies for the Eastern Region consisted of 1,558 possible relationships. Those surveyed reported that 427 agency relationships were active out of the possible 1,558 relationships indicating that the Eastern Region has a density of 27 percent. Approximately **1 out of 4 possible connections in the Eastern Region** were reported to be active when the survey was completed.

## Directionality of Relationships in the Eastern Regional Network

In addition to line thickness (degree or extent of collaboration) the lines between the circles also demonstrate the direction of collaborations. As is depicted in Figure 3, some agency connections go in both directions as the lines have arrows on each end. If Agency A reports that it collaborates with Agency B the line has an arrow pointing toward Agency B. If Agency B indicates that they collaborate with Agency A, the line also has an arrow pointing to Agency A.



Existing relationships in the Eastern network can also be measured by whether two agencies report that they collaborate with each other. Collaborating in both directions or “reciprocal collaboration” is shown by a line that has an arrow with two points, one on each end. **Forty percent of the active collaborations in the Eastern network were reciprocal.**

## Outreach and Recognition within the Network

The network map also depicts pairs of agencies where the relationship is not reciprocal. These connections are characterized as either *outreach* to another agency or *recognition* by another agency. For example, if Agency A says it collaborates with Agency B but Agency B does not report collaborating with Agency A, then A is engaged in *outreach* to B.

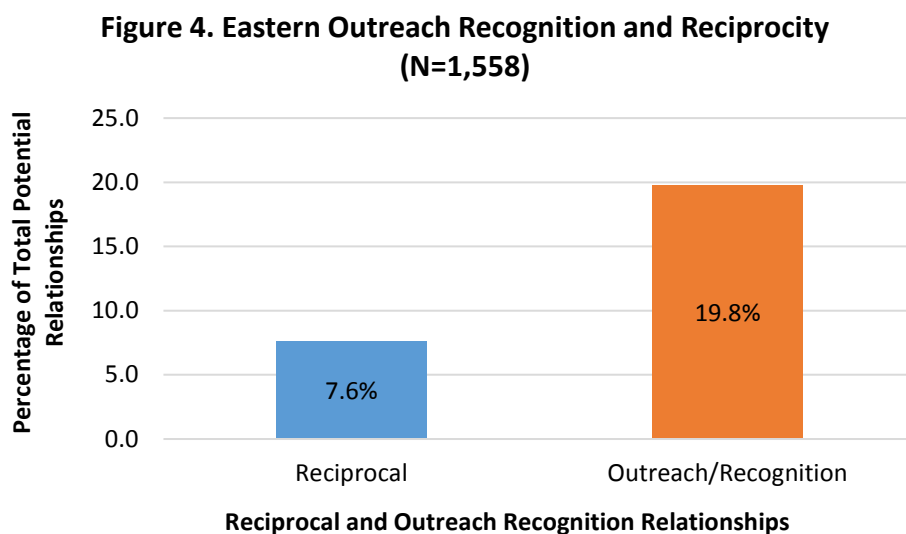


Similarly, if Agency B says it collaborates with Agency A but A does not report collaborating with B, then A is *recognized* by B as a collaborative partner.



SNA allows us to understand the extent to which one-way network activity is either through outreach or recognition both of which are important in a network of care with regard to how individual agencies interact with one another. In analyzing data at the network level outreach and recognition are viewed as uni-directional versus reciprocal interactions which are bi-directional.

Figure 4 compares the percentage of reciprocal relationships to outreach and recognition relationships in the Eastern NOC.



Out of the total potential relationships in the Eastern NOC, 7.6% are reciprocal, and 19.8% are outreach or recognition relationships. At this time there are a greater number of one-way relationships than bi-directional relationships. The follow-up survey to be conducted in the spring of 2018 will allow for comparison across time to see if this distribution changes and to see if the percentage of active collaborations within the network change.



## Relationships in the Eastern Regional Network

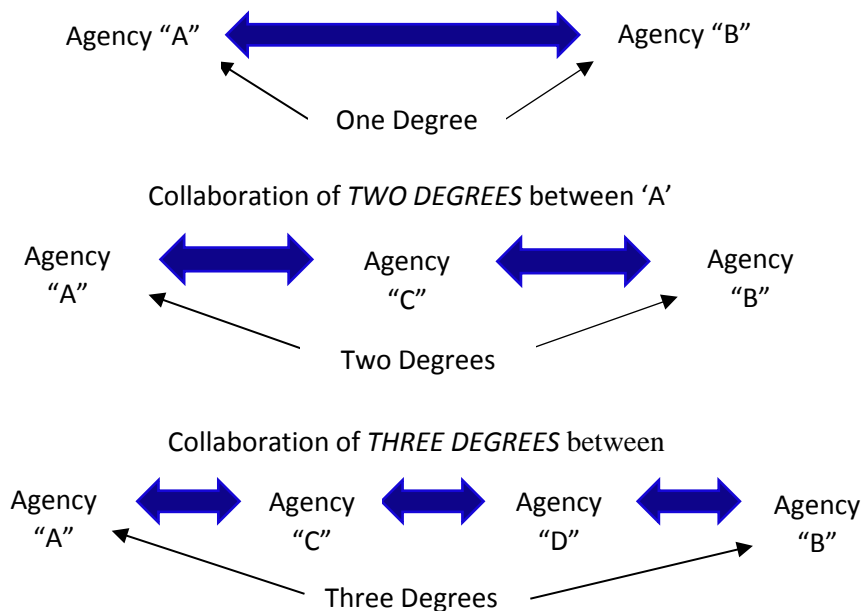
In SNA the structure of the network can be examined to determine how fully it is connected and to evaluate how diffuse it is. If a network is fully connected, then a message (e.g. referral request) that starts with any one agency can be traced throughout the network to eventually reach every other agency. This means that every agency is “reachable” either directly or indirectly.

However, this level of interconnectivity is not typical in a service delivery system.

One way to determine how close the relationships are within a given network is to look at how direct the links are between agencies or how many “degrees of separation” exist between agencies (see Figure 6). The lower

the degrees of separation in a network the closer and more direct the relationship is between any two agencies. Within SNA, these “degrees of separation” are called geodesic distance which can range from 0 (not at all connected) to 1.0 (fully connected). **The geodesic distance in the Eastern NOC at the time of the survey was 0.477.** It will be important to see how this metric changes overtime.

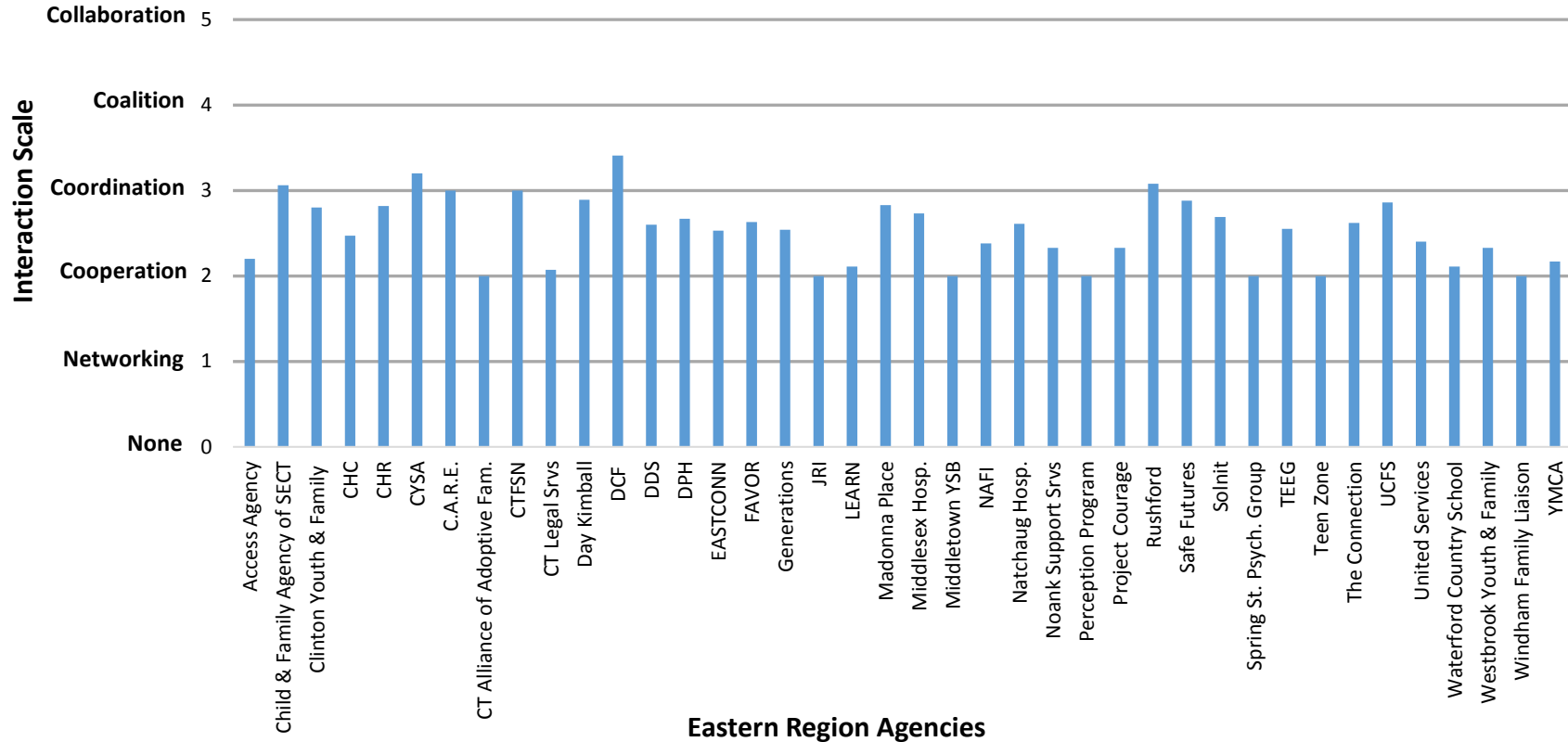
**Figure 5. Collaboration of *ONE DEGREE* between ‘A’ and ‘B’**



## Level of Collaboration -- Agency Level Results

While examination of the SNA results at the network level are informative, individual agency results can provide feedback that can be mobilized for change. Figure 6 depicts how staff from each agency rate their level of collaboration with other agencies using the scale from the *Levels of Collaboration Survey* where 0 indicates no collaboration. If collaboration is reported, it is rated on an interaction scale from 1 up to 5 where “5” depicts full collaboration. The bar for each agency represents how respondents from *other* agencies rate their collaboration with that agency.

**Figure 6. Mean Interaction Strength for Agencies Participating in the Eastern Network of Care**

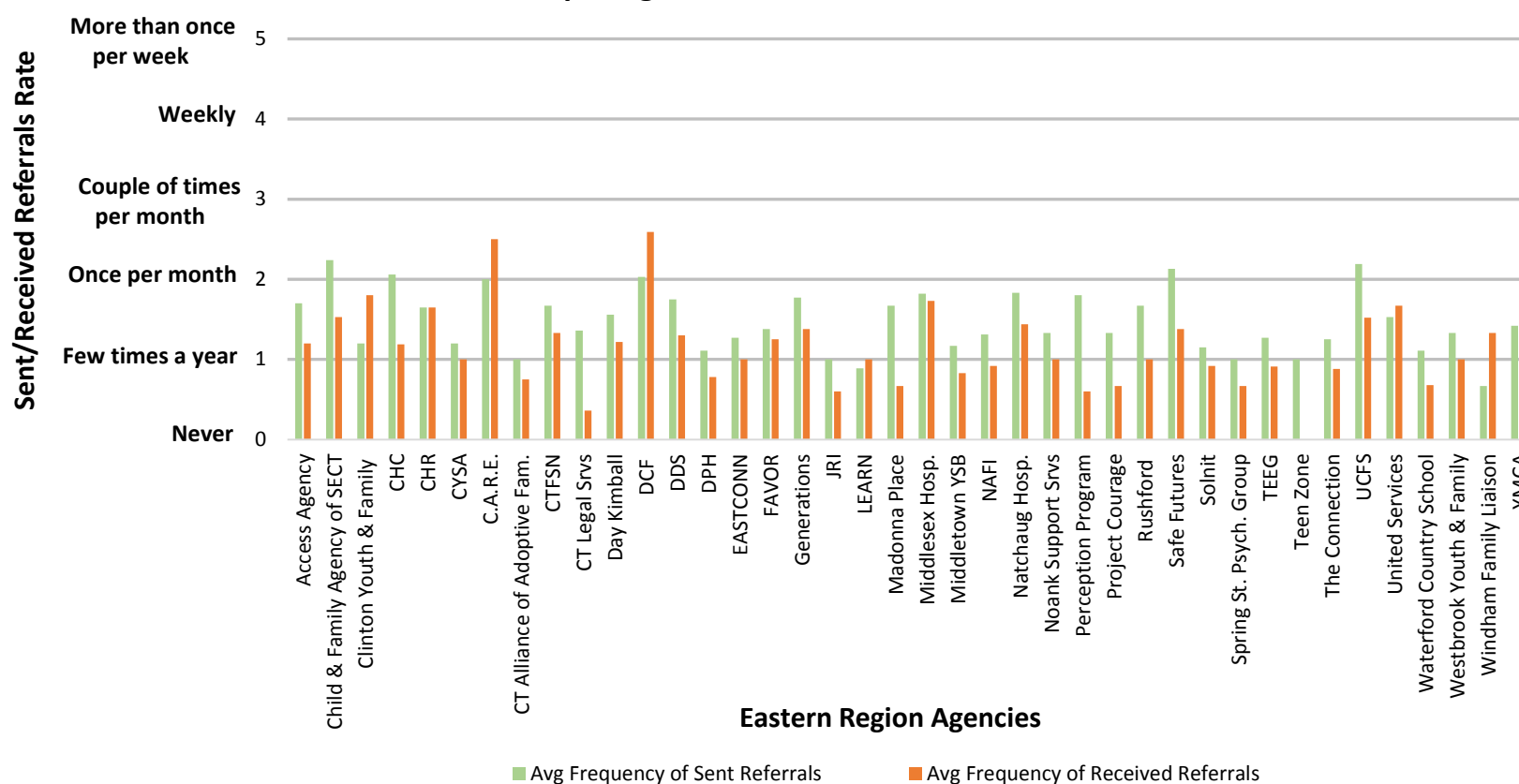


None	Networking	Cooperation	Coordination	Coalition	Collaboration
<ul style="list-style-type: none"> <li>▶ No interaction at all</li> </ul>	<ul style="list-style-type: none"> <li>▶ Aware of organization</li> <li>▶ Loosely defined roles</li> <li>▶ Little communication</li> <li>▶ All decisions made independently</li> </ul>	<ul style="list-style-type: none"> <li>▶ Provide information to each other</li> <li>▶ Somewhat defined roles</li> <li>▶ Formal communication</li> <li>▶ All decisions are made independently</li> </ul>	<ul style="list-style-type: none"> <li>▶ Share information and resources</li> <li>▶ Defined roles</li> <li>▶ Frequent communication</li> <li>▶ Some shared decision making</li> </ul>	<ul style="list-style-type: none"> <li>▶ Share ideas</li> <li>▶ Share resources</li> <li>▶ Frequent and prioritized communication</li> <li>▶ Advise each other on decision making</li> </ul>	<ul style="list-style-type: none"> <li>▶ Belong to same provider system</li> <li>▶ Frequent communication characterized by mutual trust</li> <li>▶ Consensus is reached on all decisions</li> </ul>

## Referrals between Agencies in the Eastern Network: Agency Level Results

Figure 7 depicts the average number of times that other agencies within the network report receiving referrals *from* a specific agency (in orange) and the average number of times that other agencies report referring families *to* a specific agency (in green). This information can assist individual agencies in understanding if additional outreach to other organizations within the NOC may help increase their interactions within the NOC.

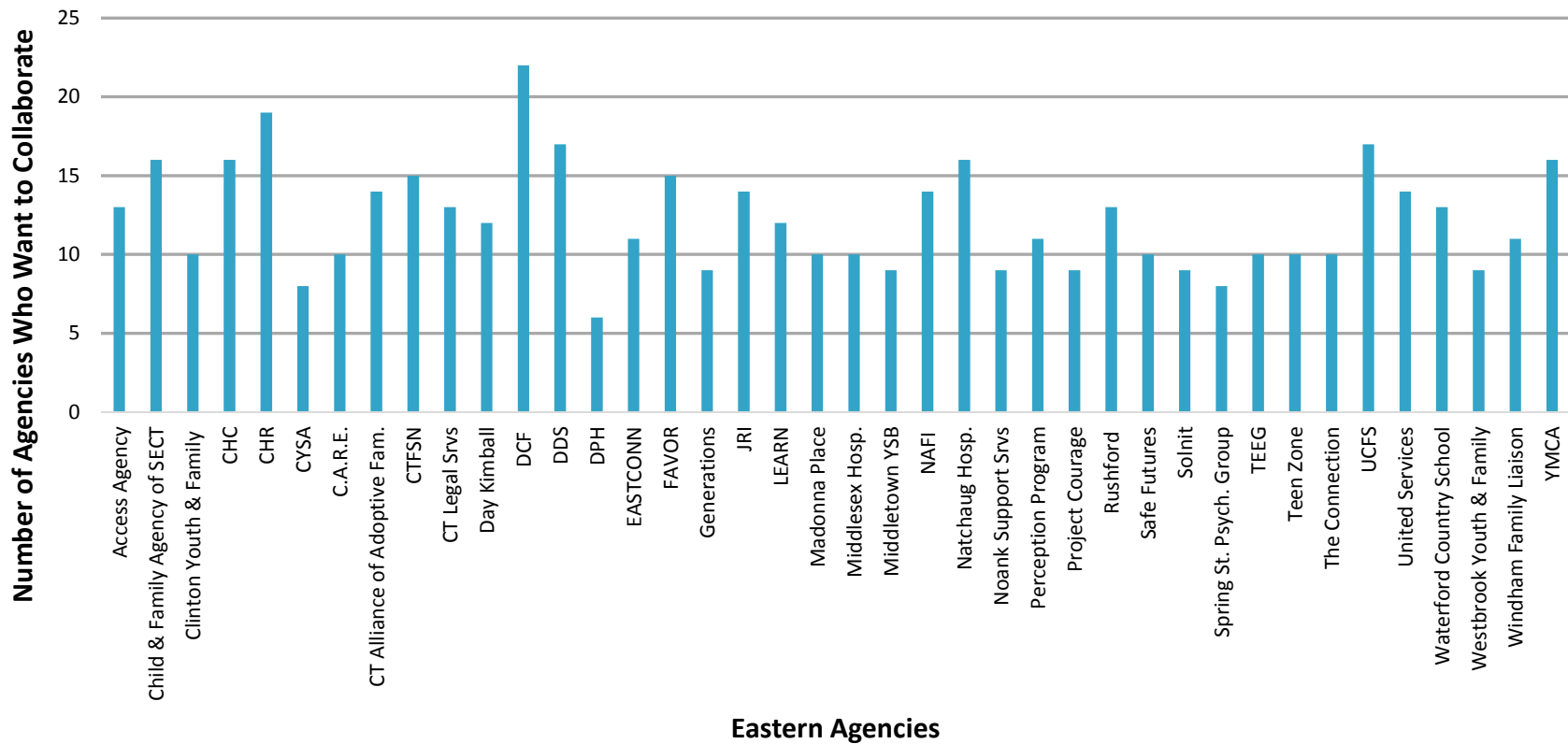
**Figure 7. Average Frequency of Sent and Received Referrals Between Agencies Participating in the Eastern Network of Care**



## Future Collaborations: Agency Level Results

Survey respondents were asked to indicate which agencies they wished to collaborate with more in the future, this information is provided in Figure 8 where the bar indicates the number of agencies that which to collaborate more with each listed agency. The Eastern NOC can use this data to identify those agencies that others are interested in learning more about and to develop mechanisms to where these agencies can inform others about their work and the services offered to families within the NOC. This may provide the NOC with the opportunity to assist agencies in expansion efforts, thus, preparing for and implementing strategies for enhancing collaboration in the Eastern Region.

**Figure 8. Number of Agencies Who Want to Collaborate More with this Agency**



## Eastern Region Perceptions Regarding Collaboration and Needs

Survey respondents were asked to share their perceptions of those factors that facilitate and those that may impede collaboration with other agencies. They were also asked what is needed in their community to more effectively support children with behavioral health challenges and their families. The responses to these questions were coded and analyzed, the results are summarized below.

### Factors that Facilitate Collaboration

Respondents indicate that networking with other professionals through meetings and events are key to facilitating collaboration and linkages between agencies in the Eastern Region. Agency staff report that these relationships have developed by attending team meetings and community coalitions where staff work together and connect with colleagues. Networking was reported to foster collaborations by enabling staff to make connections and identify potential referral resources.

“When people know where to call, and who to talk to, in addition the referral process, referrals happen more frequently and with greater ease.”

Respondents also reported that strong relationships with other providers and agencies coupled with effective communication facilitate referrals within the Eastern network of care and with those agencies outside of the region that provide services. Given the size and geographic diversity of the region, providers indicate that nurturing these relationships is key. Staff also report that agency policies can facilitate collaborations especially those policies that ease the referral process enabling families to begin new services in a timely manner. Eastern region respondents report that communication strategies such as email listserv exchanges, the Speakers Bureau, or personal contact over the phone help inform other providers of information or events that can offer opportunities for networking and enhanced collaboration.

Survey respondents also highlighted the bonds that are built through collaboratively working with families. Staff indicate that having a shared vision and commitment to the families in the region facilitates collaboration at the systems level but also when working with individual families. It is this shared commitment and knowledge of the strengths of each provider agency that most effectively facilitates collaboration.

“The mutual goal of wanting what is best for the child and family.”

Staff also report that funding for programs and services may be strengthened through creative solutions such as the collaborative effort of two or more agencies on a grant. These efforts not only generate financial support but also allow for more flexibility in funding service contracts than is allowed with state funds, and they enhance the collaboration between provider agencies.

“Resources are important in order to facilitate collaboration. Also understanding the points of intersection of services for different populations.”

“Agencies that are clear on the roles and availability of other area agencies are the best ways to be sure we are serving the families who need our help the most.”

Finally, some providers noted that having knowledge of other agencies and a good understanding of resources could facilitate service delivery for families in need. Others suggested that educating families and foster parents about resources could help streamline referral and placement processes, thus enabling

families to begin needed services in a timely manner and to facilitate collaboration.

### Barriers to Collaboration

When asked about the barriers to collaboration many responses were related to funding and available resources. Staff reported that the resources in the Eastern region are not sufficient to meet the need causing caseloads to be high and families to wait to receive needed services. These high caseloads are impacting the ability of staff to attend meetings where they could network and get to know about the services offered at other agencies. Staff are also feeling pressure from within their organizations to produce billable hours which sends a clear message to staff regarding how their time should be spent.

Respondents also reported that there is increased competition between agencies for limited funds. This competitive atmosphere impacts staff ability to work collaboratively with other agencies or

“Competition over funding versus being encouraged to work together for children and families.”

programs who may “competitors”. Finally, staff report that some of their funding necessitates their working in silos either through how the families are referred or the types of services that can be offered. These funding restrictions impact collaboration within the region.

Another significant issue raised by the respondents is access to care. The geographic size of the Eastern region makes it very difficult for services to be available to all areas and leaves some

“..the major barriers, especially in the Northeast, is that the area is very rural with a great lack of transportation and resources.”

parts of the region with very few resources. This coupled with the lack of reliable public transportation makes it very difficult for families to get to services, leaves many with limited choice in providers and creates barriers to families getting the right level of care. These access issues also impact staff

collaboration as they make it less likely that agencies are working together to support families.

Many respondents indicated that a lack of knowledge of other agencies and the services they provide greatly impacts collaboration. Others indicated that issues pertaining to communication can impact collaboration. Some respondents indicated the frustration they experience when their calls to other providers are not returned or when providers do not have direct lines causing long waits on hold to leave a message.

“We aren’t always informed about what every agency specializes in to ensure we are making an appropriate referral.”

## Community Needs

Survey respondents were also asked what is needed in their community to support children with behavioral health needs and their families. The most frequent response was more services. Some respondents indicated that existing services require increased capacity to serve all of those seeking care and that incentives to recruit providers from neighboring states may help address capacity and service availability. Many providers reported the

“improved transportation, more child psychiatrists, alternative, creative BH treatment models (e.g. activity based therapy), ongoing case management, more in-home support models”.

need for transportation so that families could get to needed services. Others reported the lack of specific services for children and youth in the region including medication management, in home care, transition services for older youth and the need for support for families as they transition between levels of care. A few providers spoke about the need for specific services such as respite, mentor programs, therapeutic recreational programs, helping families get assistance with basic needs, substance abuse treatment, autism support, and individual therapy for older youth. Respondents acknowledge that many of these needs are tied to funding limitations and note the need for increased advocacy to raise awareness and foster additional support.

Agency staff also pointed to policy issues that impact service delivery in the region. Some providers spoke of the limitations imposed by Medicaid including: the inability to bill for tele-psychiatry services; the restriction on APRNs signing off on diagnoses or assessments; and, no third-party reimbursement for mentoring. Others spoke of the lack of services in the region for families who have commercial insurance with some specifically mentioning in-home supports.

Respondents also spoke of the need for increased knowledge of the provider network in the Eastern region. Some suggested that creating a road map of the behavioral health network that provides up to date information on the services available and explains to families how they can transition between levels of care would be very helpful. Respondents thought this information would help families and staff to better understand the service array in the region. Some suggested that opportunities to participate in

“Mapping of behavioral health system. Open access to services. Campaigns addressing the stigma of getting help. Support for early intervention/diversion systems.”.

trainings with staff from other agencies would help to build relationships that would ease collaboration and would help increase knowledge of the services provided across the network. Finally, some agency staff noted that increased opportunities to work together are needed across the region to identify common goals, facilitate structures to increase communication between larger organizations and smaller local agencies, and to work together to advocate for the needs of the region.

## **Conclusion**

Translating survey information in a meaningful way involves integrating feedback from everyone. In this baseline evaluation of collaboration within the Eastern region, it is clear that agencies in the NOC recognize the importance of collaboration in order to increase service

capacity and to develop client and family-centered services that provide for a continuum of care that expands their outreach and partnerships in the community

Evaluating collaboration through social network analysis (SNA) provides useful information on many levels. As a whole, it is based on the importance of *relationships* among interacting agencies<sup>2</sup>. SNA provides information that demonstrates how agencies within the NOC are linked to each other and provides structural and relational information that can increase understanding of current service patterns through the perspective of reported levels of collaboration.

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<sup>2</sup> Wasserman, S., and Faust, K., (1994) Social Network Analysis: Methods and Applications. ENG and New York: Cambridge University Press.



# **CONNECTing**

*Children and Families to Care*



## **Behavioral Health Network of Care Collaboration Report: North Central Region**

**March 2017**

**Prepared by Yale CONNECT Evaluation Team**

Yale University School of Medicine, Division of Prevention and Community Research

Funding provided by the Substance Abuse and Mental Health Services Administration (SAMHSA) through a grant awarded to the Connecticut Department of Children and Families

## INTRODUCTION

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selecting behavioral health providers actively involved in the system of care and limiting the list to 50 agencies or less per region.

Preliminary survey recipient lists were systematically refined through reviews by the North Central Network of Care Manager, DCF Systems Development Director, and other regional stakeholders in collaboration with the Region 4 FAVOR FSM. Using criteria put forth by Statewide Network Analysis workgroup a master list of survey participants was approved and integrated into a survey for online dissemination.

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Utilizing the results of this survey, Social Network Analysis (SNA) was employed to analyze the data and to create a visualization that collectively defines how each regional service network is currently structured and how agencies interact. Data was also collected that indicates potential areas for future enhancement of the regional NOC. By using SNA to understand current network patterns and to track future collaborations, CONNECT will gain insight as to the potential ways regional NOCs might grow and how they change over time. SNA analysis can also contribute to network planning regarding how to shape efficient service integration cross-regionally and to identify regional and statewide organizations to support and sustain an improved statewide network of care.

This report reflects findings from Connecticut's North Central Regional Network.

## **The Levels of Collaboration Survey**

*The Levels of Collaboration Survey*<sup>1</sup> was administered in the Fall of 2016 to assess linkages within the network of behavioral health service stakeholders in each of the six regions of Connecticut. The administration of the survey conducted near the end of the second year of CONNECT implementation was intended to provide information on the current status of collaboration between agencies working to support children with behavioral health challenges and their families. The survey will be administered again in the Spring of 2018 to allow for comparison over time. This report provides a summary of the baseline assessment.

Agencies in the network were invited to participate by the Network of Care Manager in their region who also sent them a link to the web-based survey. The web-based survey includes a series of questions regarding the respondent's role in their organization and their agency's collaborations within the network. The survey asked respondents to identify the network agencies they collaborate with, the extent of their agency's interactions with these agencies,

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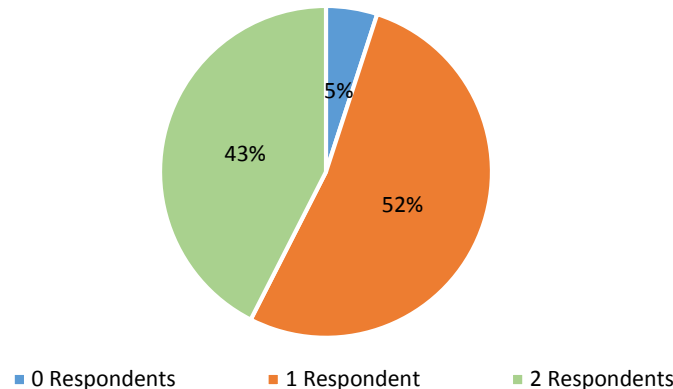
<sup>1</sup> Frey, B.B., Lohmeier, J.H., Lee, S.W., & Tollefson, S. (2006) Measuring Collaboration among Grant Partners, *American Journal of Evaluation*, 27 (3), 383-392.

and to identify which agencies they would like to collaborate with more in the future. It also included a series of questions that probe for more information regarding: agency referrals; facilitators and barriers to collaboration; and the services and supports needed within communities to more effectively support children with behavioral health challenges and their families. Surveys were anonymous, could be taken at the respondent's convenience, and took about 15 minutes to complete.

Agencies were asked to identify two respondents to complete the survey including an individual in a leadership position and an individual within the agency who is familiar with how the organization collaborates with partners to facilitate work with children and families. From late August 2016 through early October 2016, 59 individuals from 38 agencies (70% of possible respondents) in the North Central region completed the survey.

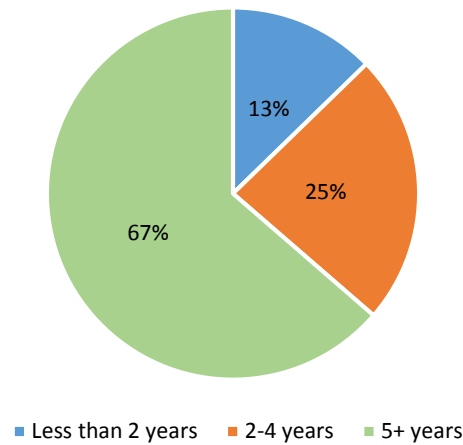
As is depicted in Figure 1, two of the 40 agencies (5%) that were invited did not respond to the survey, 21 agencies (52%) had one respondent, and 17 agencies (43%) had two respondents. In order to control for the differential response rate between agencies, the analyses were conducted on the average response from within each agency so that there is one score from each agency that responded to the survey included in the analyses.

**Figure 1. Number of Agencies By Respondent  
(N=40)**



With regard to length of employment within their agency, as is shown in Figure 2, 67% of those who completed the survey had been in their current position for more than 5 years, 25% had their position for 2 to 4 years, and 13% had been in their current position for less than 2 years. The overwhelming majority (89%) of all respondents reported that they serve in a leadership position within their organization.

**Figure 2. Length of Time at Agency - North Central Region Respondents (N=52)**



### Agency Levels of Collaboration

For the purpose of this report collaboration refers to the relationship between two organizations that exchange information and/or services to link people to needed services. The degree of network linkage was measured using a scale developed by Frey and colleagues (2006)<sup>1</sup> containing five levels of interaction; **networking, cooperation, coordination, coalition, and collaboration** (see Table 1) regarding child and family services with collaboration seen as the highest level. Scores on the scale represent the level of collaboration between organizations at a specific point in time. The survey will be re-administered in the spring of 2018 and the scores from the two administrations will be compared to reflect change in linkage over time.

Table 1. Levels of Interaction in Collaboration				
Networking (1)	Cooperation (2)	Coordination (3)	Coalition (4)	Collaboration (5)
<ul style="list-style-type: none"> <li>Aware of organization</li> <li>Loosely defined roles</li> <li>Little communication</li> <li>All decisions made independently</li> </ul>	<ul style="list-style-type: none"> <li>Provide information to each other</li> <li>Somewhat defined roles</li> <li>Formal communication</li> <li>All decisions made independently</li> </ul>	<ul style="list-style-type: none"> <li>Share information and resources</li> <li>Defined roles</li> <li>Frequent communication</li> <li>Some shared decision making</li> </ul>	<ul style="list-style-type: none"> <li>Share ideas</li> <li>Share resources</li> <li>Frequent and prioritized communication</li> <li>Advise each other on decision making</li> </ul>	<ul style="list-style-type: none"> <li>Belong to same provider system</li> <li>Frequent communication characterized by mutual trust</li> <li>Consensus is reached on all decisions</li> </ul>

## Social Network Analysis

Social network analysis (SNA) involves the mapping of a social environment, the relationships among social entities, and the expression of the patterns or regularities of the interactions that connect them<sup>2</sup> The CONNECT Evaluation team at Yale is utilizing SNA to provide both a mathematical and visual analysis of inter-agency relationships and the patterns of relationships within the Network of Care (NOC) in each of the six regions in the state.

A frequently used output of SNA is a visual depiction of relationships of social entities within a network of care. In the network map presented (see Figure 3) the circles represent an agency in the network and each line represents a collaborative relationship between two agencies. The size of the circles represents the number of relationships that particular agency has with other agencies in the network. Agencies with larger circles and darker colors have a higher number of *relationships* than those agencies with smaller circles and lighter colors. The thickness and the color of the lines that connect the circles in the network map tells us about the *characteristics* of the relationships such as the extent to which agencies work together. The thicker and the darker the lines, the stronger the relationships between two agencies.

With regard to placement on the network map the agencies depicted by smaller and lighter colored circles have fewer relationships and these relationships tend to be characterized by a lower level of collaboration. These agencies are located on the periphery of the network map. On the other hand, agencies that have a higher number of relationships that have stronger connections are depicted as larger circles with darker color. These agencies are located closer to the center of a network map. Those agencies that are located on the network map between those in the center and those agencies on the periphery tend to fall in the middle of the continuum of those agencies with a higher number of more robust collaborations and those who have fewer collaborations that tend to be less developed.

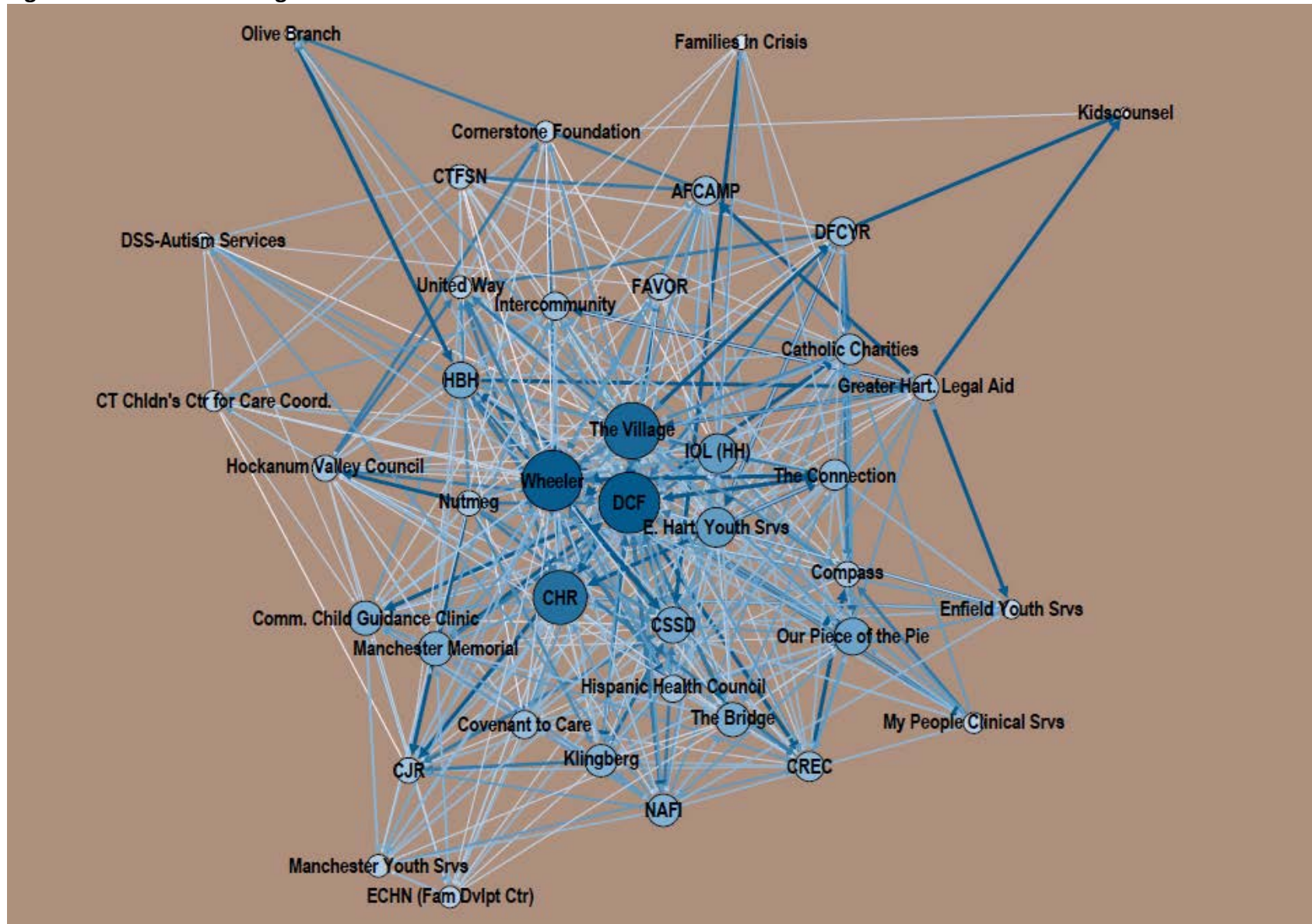
When examining Figure 3 it is important to remember that not all agencies that comprise the North Central Network of Care are included in these analyses as the inter-relationships between 40 specific agencies were assessed. In addition, it is important to note that the size and scope of services offered by agencies varies and those agencies that are larger and offer more services have more opportunities to collaborate.

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<sup>1</sup> Frey, B.B., Lohmeier, J.H., Lee, S.W., & Tollefson, S. (2006) Measuring Collaboration among Grant Partners, *American Journal of Evaluation*, 27 (3), 383-392.



Figure 3: North Central Regional Network



## Network Density

One way to look at the level of collaboration within a network is to look at the *number* of agencies that are connected with one another, these are called “*active*” collaborations. As Figure 3 demonstrates, not every “possible” connection between agencies is active. SNA provides ways to examine a network statistically, one particular measure is called the *network density*. Network density depicts the *number* of active collaborations that exist at the time of the survey compared to the total *number* of possible active collaborations within the network. The density of a network is expressed as percentage, the closer to 100 percent the denser the network. At the time of the survey the selected agencies for the North Central Region consisted of 1,559 possible relationships. Those surveyed reported that 505 agency relationships were active out of the possible 1,559 relationships indicating that the North Central Region has a density of 32 percent. Approximately **1 out of 3 possible connections in the North Central Region** were reported to be active when the survey was completed.

## Directionality of Relationships in the North Central Regional Network

In addition to line thickness (degree or extent of collaboration) the lines between the circles also demonstrate the direction of collaborations. As is depicted in Figure 3, some agency connections go in both directions as the lines have arrows on each end. If Agency A reports that it collaborates with Agency B the line has an arrow pointing toward Agency B. If Agency B indicates that they collaborate with Agency A, the line also has an arrow pointing to Agency A.



Existing relationships in the North Central network can also be measured by whether two agencies report that they collaborate with each other. Collaborating in both directions or “reciprocal collaboration” is shown by a line that has an arrow with two points, one on each end. **Forty percent of the active collaborations in the North Central network were reciprocal.**

## Outreach and Recognition within the Network

The network map also depicts pairs of agencies where the relationship is not reciprocal. These connections are characterized as either *outreach* to another agency or *recognition* by another agency. For example, if Agency A says it collaborates with Agency B but Agency B does not report collaborating with Agency A, then A is engaged in *outreach* to B.



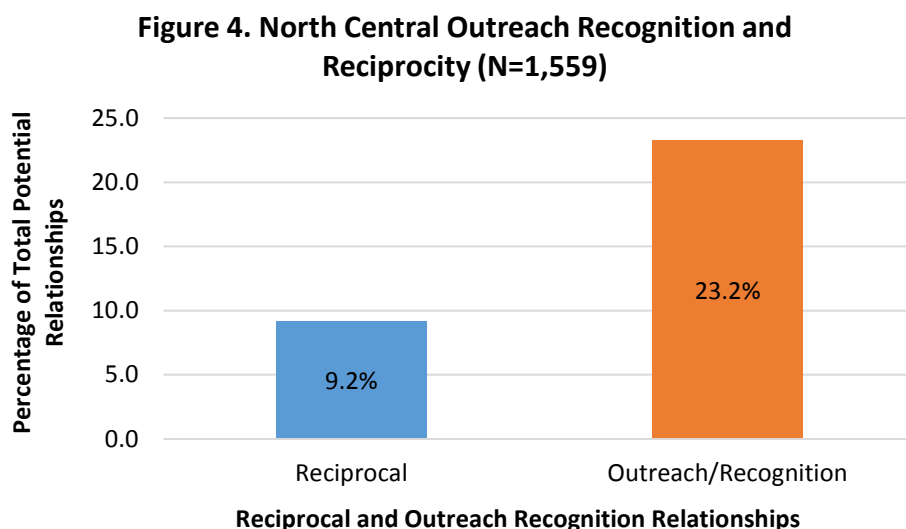


Similarly, if Agency B says it collaborates with Agency A but A does not report collaborating with B, then A is *recognized* by B as a collaborative partner.



SNA allows us to understand the extent to which one-way network activity is either through outreach or recognition both of which are important in a network of care with regard to how individual agencies interact with one another. In analyzing data at the network level outreach and recognition are viewed as uni-directional versus reciprocal interactions which are bi-directional.

Figure 4 compares the percentage of reciprocal relationships to outreach and recognition relationships in the North Central NOC.



Out of the total potential relationships in the North Central NOC, 9.2% are reciprocal, and 23.2% are outreach or recognition relationships. These percentages reflect how the network density of 32% breaks down. At this time there are more than twice as many one-way relationships than bi-directional relationships. The follow-up survey to be conducted in the spring of 2018 will allow for comparison across time to see if this distribution changes and to see if the percentage of active collaborations within the network change.

## Relationships in the North Central Regional Network

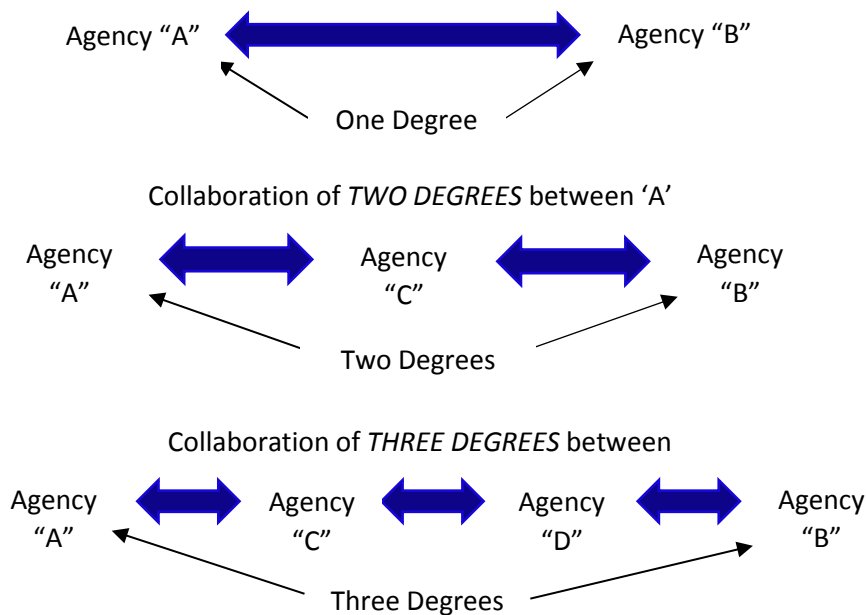
In SNA the structure of the network can be examined to determine how fully it is connected and to evaluate how diffuse it is. If a network is fully connected, then a message (e.g. referral request) that starts with any one agency can be traced throughout the network to eventually reach every other agency. This means that every agency is “reachable” either directly or indirectly.

However, this level of interconnectivity is not typical in a service delivery system.

One way to determine how close the relationships are within a given network is to look at how direct the links are between agencies or how many “degrees of separation” exist between agencies (see Figure 6). The lower

the degrees of separation in a network the closer and more direct the relationship is between any two agencies. Within SNA, these “degrees of separation” are called geodesic distance which can range from 0 (not at all connected) to 1.0 (fully connected). **The geodesic distance in the North Central NOC at the time of the survey was 0.567.** It will be important to see how this metric changes overtime.

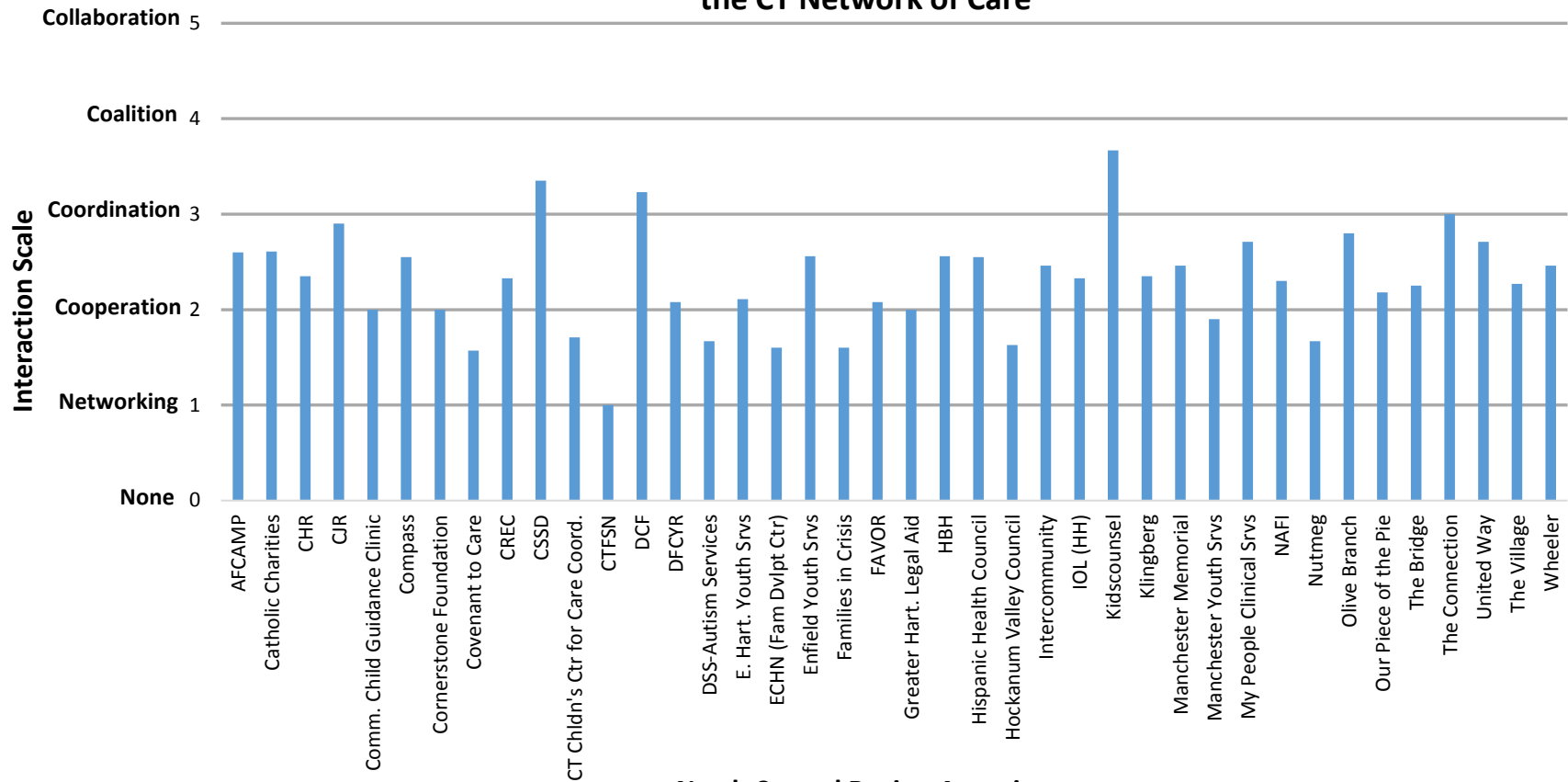
**Figure 5.** Collaboration of *ONE DEGREE* between ‘A’ and ‘B’



## Level of Collaboration -- Agency Level Results

While examination of the SNA results at the network level are informative, individual agency results can provide feedback that can be mobilized for change. Figure 6 depicts how staff from each agency rate their level of collaboration with other agencies using the scale from the *Levels of Collaboration Survey* where 0 indicates no collaboration. If collaboration is reported, it is rated on an interaction scale from 1 up to 5 where “5” depicts full collaboration. The bar for each agency represents how respondents from *other* agencies rate their collaboration with that agency.

**Figure 6. Mean Interaction Strength for North Central Region Agencies Participating in the CT Network of Care**



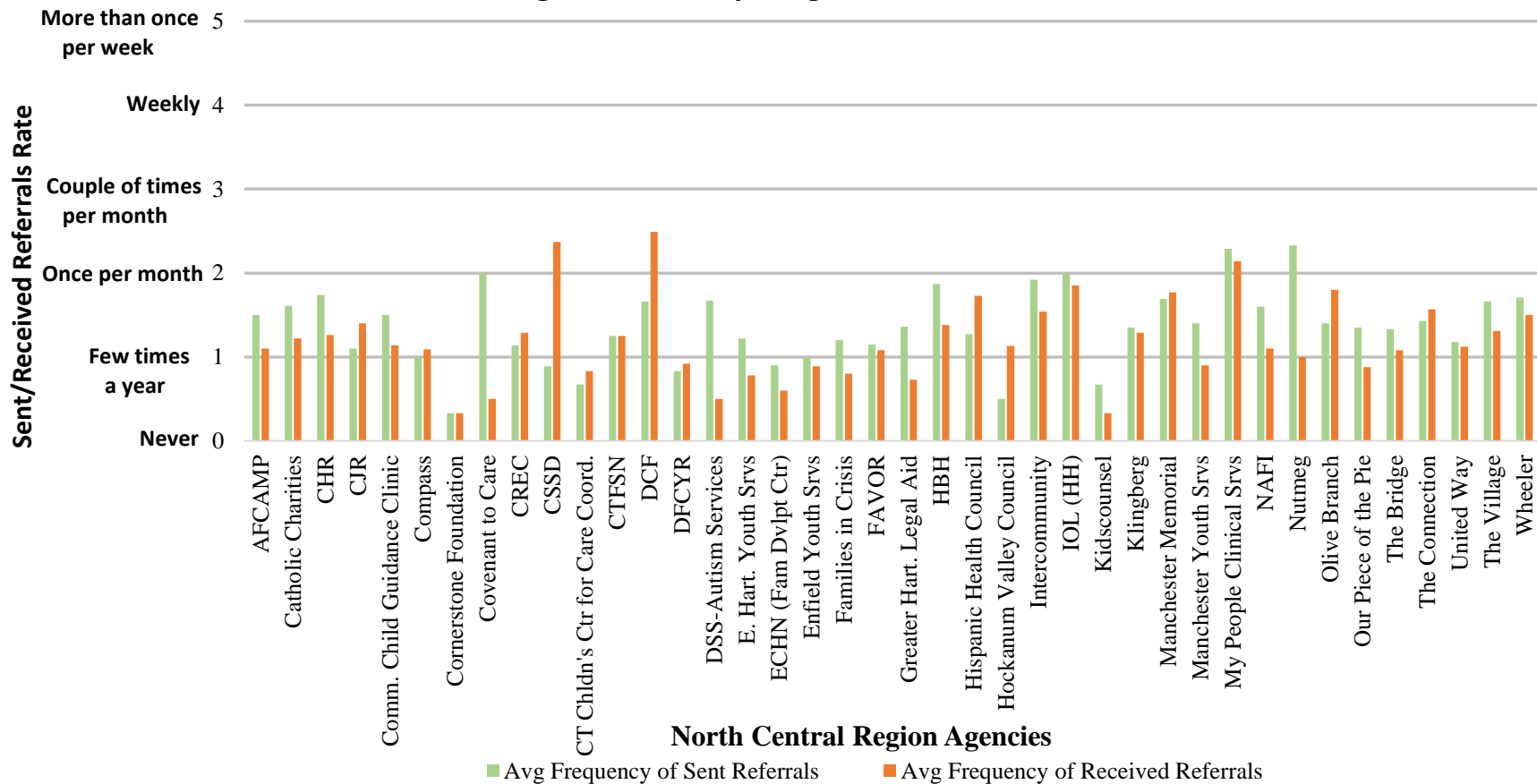
**North Central Region Agencies**

None	Networking	Cooperation	Coordination	Coalition	Collaboration
<ul style="list-style-type: none"> <li>▶ No interaction at all</li> </ul>	<ul style="list-style-type: none"> <li>▶ Aware of organization</li> <li>▶ Loosely defined roles</li> <li>▶ Little communication</li> <li>▶ All decisions made independently</li> </ul>	<ul style="list-style-type: none"> <li>▶ Provide information to each other</li> <li>▶ Somewhat defined roles</li> <li>▶ Formal communication</li> <li>▶ All decisions are made independently</li> </ul>	<ul style="list-style-type: none"> <li>▶ Share information and resources</li> <li>▶ Defined roles</li> <li>▶ Frequent communication</li> <li>▶ Some shared decision making</li> </ul>	<ul style="list-style-type: none"> <li>▶ Share ideas</li> <li>▶ Share resources</li> <li>▶ Frequent and prioritized communication</li> <li>▶ Advise each other on decision making</li> </ul>	<ul style="list-style-type: none"> <li>▶ Belong to same provider system</li> <li>▶ Frequent communication characterized by mutual trust</li> <li>▶ Consensus is reached on all decisions</li> </ul>

## Referrals between Agencies in the North Central Network: Agency Level Results

Figure 7 depicts the average number of times that other agencies within the network report receiving referrals *from* a specific agency (in orange) and the average number of times that other agencies report referring families *to* a specific agency (in green). This information can assist individual agencies in understanding if additional outreach to other organizations within the NOC may help increase their interactions within the NOC.

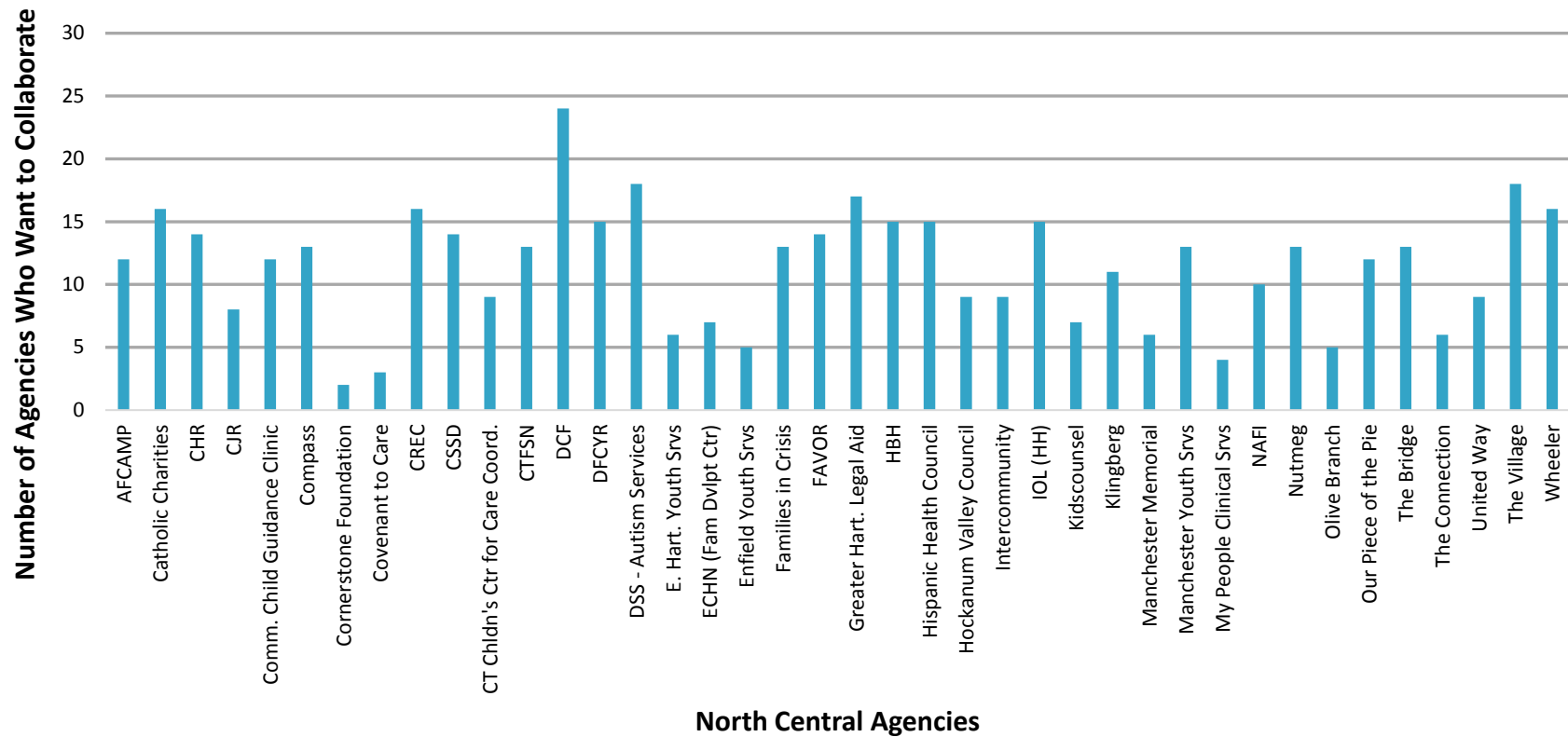
**Figure 7. Average Frequency of Sent and Received Referrals Between North Central Region Agencies Participating in the CT Network of Care**



## Future Collaborations: Agency Level Results

Survey respondents were asked to indicate which agencies they wished to collaborate with more in the future, this information is provided in Figure 8 where the bar indicates the number of agencies that which to collaborate more with each listed agency. The North Central NOC can use this data to identify those agencies that others are interested in learning more about and to develop mechanisms to where these agencies can inform others about their work and the services offered to families within the NOC. This may provide the NOC with the opportunity to assist agencies in expansion efforts, thus, preparing for and implementing strategies for enhancing collaboration in the North Central Region.

**Figure 8. Number of Agencies Who Want to Collaborate More with this Agency**



## North Central Region Perceptions Regarding Collaboration and Needs

Survey respondents were asked to share their perceptions of those factors that facilitate and those that may impede collaboration with other agencies. They were also asked what is needed in their community to more effectively support children with behavioral health challenges and their families. The responses to these questions were coded and analyzed, the results are summarized below.

### Factors that Facilitate Collaboration

Respondents indicate that strong relationships and responsive communication with other professionals facilitates collaboration between agencies in the North Central Region. Agency staff also report that trust and mutual respect are key to effective collaborative partnerships as

“A willingness to collaborate and a true commitment to support families and mutual respect for community partners.”

they enable information sharing and mutual problem solving both at the systems and at the family level. Some report that timely referral and follow-up processes are also essential in enhancing collaboration between provider agencies.

Providers report that networking is key to establishing collaboration with colleagues at other agencies. They report that networking opportunities are available through interagency meetings, community events, and statewide meetings such as system of care or regional network of care meetings and through attending trainings. Many reported that networking also occurs as providers collaborate in their work with families. They indicate that when providers put politics aside, engage in joint problem solving and work to assist a family to meet their goals professional relationships are enhanced and future collaborations are more likely. Survey respondents noted that shared goals either at the systems level or in work with individual families greatly enhances collaboration.

At the systems level respondents report that care coordination which allow families to enter services through multiple or shared points and services that are offered in settings where staff are co-located offer a broader array of services for families and facilitate collaboration between providers working with a family. In addition, these service delivery models can provide the opportunity to engage natural supports in collaborative service planning for families which in turn could facilitate enhanced linkage to services.

Staff also report that having knowledge of other agencies and a good understanding of the services they offer is essential for collaboration. In addition to attending common meetings, some felt that a resource fair or opportunities where providers could present information about the services

“Open lines of communication, understanding of services provided by agencies, and availability.”

offered by their agency would be an important activity to increase collaboration in the region as increased knowledge about other providers would facilitate referrals.

Finally, a few providers noted that program or agency policies could facilitate collaboration. Specifically, those policies that ease the referral process enabling families to begin new services

in a timely manner that may be impacted by insurance coverage, transportation, or location, facilitate collaboration.

### Barriers to Collaboration

When asked about barriers to collaboration the most common were funding limitations, system policies and time. Respondents report that the competition for funding can impact collaborative efforts and sharing resources. In this funding climate agencies may be less willing to refer clients out as they fear giving business away. Respondents report that this focusing inward impedes collaboration.

“Collaboration is difficult among organizations that often are in competitive funding positions as their missions are aligned.”

Respondents also report that lack of time due to high client caseloads and need make it difficult to attend meetings thus reducing opportunities for networking. In addition, limited time leads

“Accessible openings, knowledge of services and transportation for clients”.

to decreased opportunities to learn about other agencies and the services they offer and lack of knowledge in this area also limits collaboration. Respondents also indicate that some families lack knowledge of the services available in their

community, which may limit their willingness to engage with new agencies. Some providers report simply not knowing how or where to get services for clients who require transportation, translation, or have limited or no insurance.

Some report that while protective, confidentiality laws for juveniles and HIPAA can increase barriers to collaboration due to restrictions in information-sharing. In addition, issues such as waiting lists, administrative “red tape” and lack of shared records were also reported as barriers to collaboration. Some advocate for universal releases of information to enhance collaboration in service provision.

### Community Needs

Survey respondents were also asked what is needed in their community to support children with behavioral health needs and their families. The most frequent response was more services. Some respondents indicated the need for specialty clinical care, culturally competent care, more flexible ways to access care, home-based care and the removal of time-limits for some service delivery models. Others reported the need for more specific services for

“More qualified professionals accepting Medicaid or Private Insurance. Also the availability of such services throughout CT as many areas of CT do not have any services”.

children and youth in the region including: safe housing, substance use treatment, smoking cessation, autism support, support for families impacted by domestic violence, before and after school programs, peer support programs, networking with schools, and universal screening (e.g., at school) to identify younger children in need of services and support. Early identification can facilitate more comprehensive services that include family or other supports. Respondents acknowledge that many of these concerns are tied to funding limitations and insurance barriers.

Some providers spoke of the need to provide services outside of the office setting to more fully understand a family's service needs. Others spoke of strategies such as engaging with natural supports in neighborhoods and in providing outreach to families in community locations such as schools, community centers, libraries and churches so as to engage families in the settings that they choose. Engagement suggestions include promoting programs that teach caregivers how to advocate for their family, teach families how to navigate the system of care and educating children and families about behavioral health to help reduce stigma were suggested to broaden community and family engagement.

"Promote agencies supporting the development of confidence and competencies with their families and youth in the area of advocacy so they can strengthen their voices while receiving services for their mental health and addiction related challenges".

Also reported was the need for improved access to care including: increased transportation to care, increased availability of more intensive clinical programs, enhanced care clinics, and immediate access to mental health services.

Some suggested that working toward more uniform policies and procedures across agencies would enable centralized resources such as universal releases of information and electronic medical records to facilitate review of ongoing depth and scope of need. Electronic access would increase collaboration by providing more fully integrated family level service planning and the sharing of information with different provider specialists independent of the point of entry in the continuum of care.

## Conclusion

Translating survey information in a meaningful way involves integrating feedback from everyone. In this baseline evaluation of collaboration within the North Central region, it is clear that agencies in the NOC recognize the importance of collaboration in order to increase service capacity and to develop client and family-centered services that provide for a continuum of care that expands their outreach and partnerships in the community

Evaluating collaboration through social network analysis (SNA) provides useful information on many levels. As a whole, it is based on the importance of *relationships* among interacting agencies<sup>2</sup>. SNA provides information that demonstrates how agencies within the NOC are linked to each other and provides structural and relational information that can increase understanding of current service patterns through the perspective of reported levels of collaboration.

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<sup>2</sup> Wasserman, S., and Faust, K., (1994) Social Network Analysis: Methods and Applications. ENG and New York: Cambridge University Press.



The open-ended questions in the survey give an anonymous voice to providers who share observations, suggestions and solutions that help to contextualize the quantitative results of the social network analysis.

CONNECT's baseline assessment of the North Central NOC examines the current levels of interaction and types of collaborative relationships within the NOC. This information provides the NOC information that can help to inform activities that may facilitate the continued development of connections between network providers with the goal of enhanced service coordination for the children and families who receive services within the region. This analysis will be replicated in the spring of 2018 in order to assess any changes in collaboration within the North Central region and to provide up to date information to inform the continued development of the network of care.

# **CONNECTing**

*Children and Families to Care*



## **Behavioral Health Network of Care Collaboration Report: Western Region**

**March 2017**

**Prepared by Yale CONNECT Evaluation Team**

Yale University School of Medicine, Division of Prevention and Community Research

Funding provided by the Substance Abuse and Mental Health Services Administration (SAMHSA)  
through a grant awarded to the Connecticut Department of Children and Families

## INTRODUCTION

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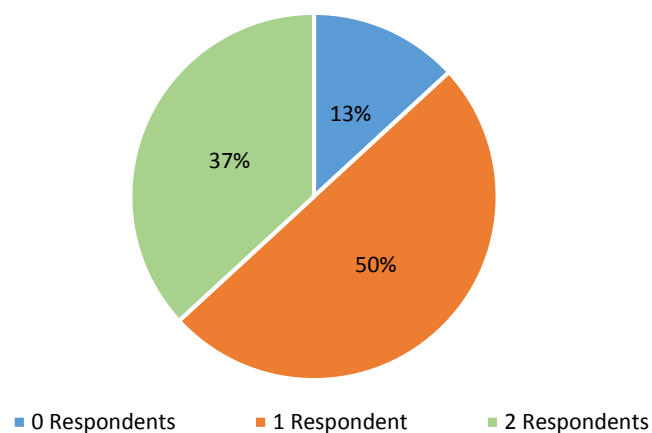
<sup>1</sup> Frey, B.B., Lohmeier, J.H., Lee, S.W., & Tollefson, S. (2006) Measuring Collaboration among Grant Partners, *American Journal of Evaluation*, 27 (3), 383-392.

and to identify which agencies they would like to collaborate with more in the future. It also included a series of questions that probe for more information regarding: agency referrals; facilitators and barriers to collaboration; and the services and supports needed within communities to more effectively support children with behavioral health challenges and their families. Surveys were anonymous, could be taken at the respondent's convenience, and took about 15 minutes to complete.

Agencies were asked to identify two respondents to complete the survey including an individual in a leadership position and an individual within the agency who is familiar with how the organization collaborates with partners to facilitate work with children and families. From late August 2016 through early October 2016, 47 individuals from 33 agencies (66% of possible respondents) in the Western region completed the survey.

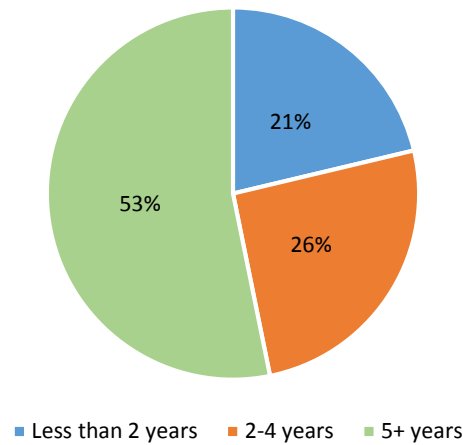
As is depicted in Figure 1, five of the 38 agencies (13%) that were invited did not respond to the survey, 19 agencies (50%) had one respondent, and 14 agencies (37%) had two respondents. In order to control for the differential response rate between agencies, the analyses were conducted on the average response from within each agency so that there is one score from each agency that responded to the survey included in the analyses.

**Figure 1. Number of Agencies By Respondent (N=38)**



With regard to length of employment within their agency, as is shown in Figure 2, 53% of those who completed the survey had been in their current position for more than 5 years, 26% had their position for 2 to 4 years, and 21% had been in their current position for less than 2 years. The overwhelming majority (85%) of all respondents reported that they serve in a leadership position within their organization.

**Figure 2. Length of Time at Agency - Western Region Respondents (N=47)**



### Agency Levels of Collaboration

For the purpose of this report collaboration refers to the relationship between two organizations that exchange information and/or services to link people to needed services. The degree of network linkage was measured using a scale developed by Frey and colleagues (2006)<sup>1</sup> containing five levels of interaction; **networking, cooperation, coordination, coalition, and collaboration** (see Table 1) regarding child and family services with collaboration seen as the highest level. Scores on the scale represent the level of collaboration between organizations at a specific point in time. The survey will be re-administered in the spring of 2018 and the scores from the two administrations will be compared to reflect change in linkage over time.

Table 1. Levels of Interaction in Collaboration				
Networking (1)	Cooperation (2)	Coordination (3)	Coalition (4)	Collaboration (5)
<ul style="list-style-type: none"> <li>Aware of organization</li> <li>Loosely defined roles</li> <li>Little communication</li> <li>All decisions made independently</li> </ul>	<ul style="list-style-type: none"> <li>Provide information to each other</li> <li>Somewhat defined roles</li> <li>Formal communication</li> <li>All decisions made independently</li> </ul>	<ul style="list-style-type: none"> <li>Share information and resources</li> <li>Defined roles</li> <li>Frequent communication</li> <li>Some shared decision making</li> </ul>	<ul style="list-style-type: none"> <li>Share ideas</li> <li>Share resources</li> <li>Frequent and prioritized communication</li> <li>Advise each other on decision making</li> </ul>	<ul style="list-style-type: none"> <li>Belong to same provider system</li> <li>Frequent communication characterized by mutual trust</li> <li>Consensus is reached on all decisions</li> </ul>

## Social Network Analysis

Social network analysis (SNA) involves the mapping of a social environment, the relationships among social entities, and the expression of the patterns or regularities of the interactions that connect them<sup>2</sup> The CONNECT Evaluation team at Yale is utilizing SNA to provide both a mathematical and visual analysis of inter-agency relationships and the patterns of relationships within the Network of Care (NOC) in each of the six regions in the state.

A frequently used output of SNA is a visual depiction of relationships of social entities within a network of care. In the network map presented (see Figure 3) the circles represent an agency in the network and each line represents a collaborative relationship between two agencies. The size of the circles represents the number of relationships that particular agency has with other agencies in the network. Agencies with larger circles and darker colors have a higher number of *relationships* than those agencies with smaller circles and lighter colors. The thickness and the color of the lines that connect the circles in the network map tells us about the *characteristics* of the relationships such as the extent to which agencies work together. The thicker and the darker the lines, the stronger the relationships between two agencies.

With regard to placement on the network map the agencies depicted by smaller and lighter colored circles have fewer relationships and these relationships tend to be characterized by a lower level of collaboration. These agencies are located on the periphery of the network map. On the other hand, agencies that have a higher number of relationships that have stronger connections are depicted as larger circles with darker color. These agencies are located closer to the center of a network map. Those agencies that are located on the network map between those in the center and those agencies on the periphery tend to fall in the middle of the continuum of those agencies with a higher number of more robust collaborations and those who have fewer collaborations that tend to be less developed.

When examining Figure 3 it is important to remember that not all agencies that comprise the Western Network of Care are included in these analyses as the inter-relationships between 38 specific agencies were assessed. In addition, it is important to note that the size and scope of services offered by agencies varies and those agencies that are larger and offer more services have more opportunities to collaborate.

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<sup>1</sup> Frey, B.B., Lohmeier, J.H., Lee, S.W., & Tollefson, S. (2006) Measuring Collaboration among Grant Partners, *American Journal of Evaluation*, 27 (3), 383-392.





## Network Density

One way to look at the level of collaboration within a network is to look at the *number* of agencies that are connected with one another, these are called “*active*” collaborations. As Figure 3 demonstrates, not every “possible” connection between agencies is active. SNA provides ways to examine a network statistically, one particular measure is called the *network density*. Network density depicts the *number* of active collaborations that exist at the time of the survey compared to the total *number* of possible active collaborations within the network. The density of a network is expressed as percentage, the closer to 100 percent the denser the network. At the time of the survey the selected agencies for the Western Region consisted of 1,404 possible relationships. Those surveyed reported that 438 agency relationships were active out of the possible 1,404 relationships indicating that the Western Region has a density of 31 percent. Approximately **1 out of 3 possible connections in the Western Region** were reported to be active when the survey was completed.

## Directionality of Relationships in the Western Regional Network

In addition to line thickness (degree or extent of collaboration) the lines between the circles also demonstrate the direction of collaborations. As is depicted in Figure 3, some agency connections go in both directions as the lines have arrows on each end. If Agency A reports that it collaborates with Agency B the line has an arrow pointing toward Agency B. If Agency B indicates that they collaborate with Agency A, the line also has an arrow pointing to Agency A.



Existing relationships in the Western network can also be measured by whether two agencies report that they collaborate with each other. Collaborating in both directions or “reciprocal collaboration” is shown by a line that has an arrow with two points, one on each end. **Forty-one percent of the active collaborations in the Western network were reciprocal.**

## Outreach and Recognition within the Network

The network map also depicts pairs of agencies where the relationship is not reciprocal. These connections are characterized as either *outreach* to another agency or *recognition* by another agency. For example, if Agency A says it collaborates with Agency B but Agency B does not report collaborating with Agency A, then A is engaged in *outreach* to B.

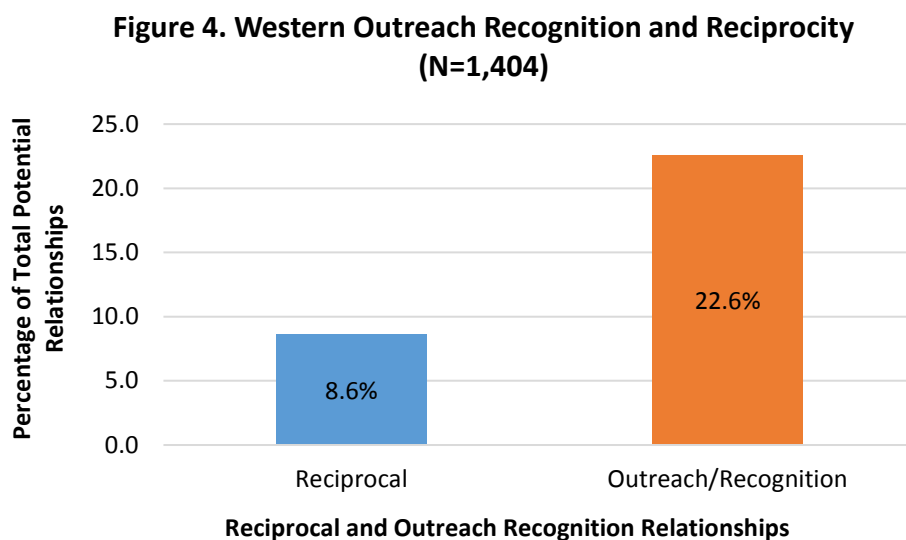


Similarly, if Agency B says it collaborates with Agency A but A does not report collaborating with B, then A is *recognized* by B as a collaborative partner.



SNA allows us to understand the extent to which one-way network activity is either through outreach or recognition both of which are important in a network of care with regard to how individual agencies interact with one another. In analyzing data at the network level outreach and recognition are viewed as uni-directional versus reciprocal interactions which are bi-directional.

Figure 4 compares the percentage of reciprocal relationships to outreach and recognition relationships in the Western NOC.



Out of the total potential relationships in the Western NOC, 8.6% are reciprocal, and 22.6% are outreach or recognition relationships. At this time there are a greater number of one-way relationships than bi-directional relationships. The follow-up survey to be conducted in the spring of 2018 will allow for comparison across time to see if this distribution changes and to see if the percentage of active collaborations within the network change.

## Relationships in the Western Regional Network

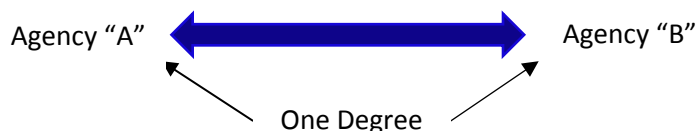
In SNA the structure of the network can be examined to determine how fully it is connected and to evaluate how diffuse it is. If a network is fully connected, then a message (e.g. referral request) that starts with any one agency can be traced throughout the network to eventually reach every other agency. This means that every agency is “reachable” either directly or indirectly.

However, this level of interconnectivity is not typical in a service delivery system.

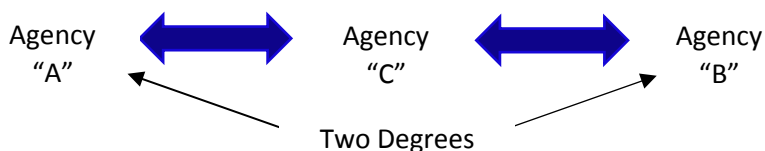
One way to determine how close the relationships are within a given network is to look at how direct the links are between agencies or how many “degrees of separation” exist between agencies (see Figure 6). The lower

the degrees of separation in a network the closer and more direct the relationship is between any two agencies. Within SNA, these “degrees of separation” are called geodesic distance which can range from 0 (not at all connected) to 1.0 (fully connected). **The geodesic distance in the Western NOC at the time of the survey was 0.527.** It will be important to see how this metric changes overtime.

**Figure 5.** Collaboration of *ONE DEGREE* between ‘A’ and ‘B’



Collaboration of *TWO DEGREES* between ‘A’



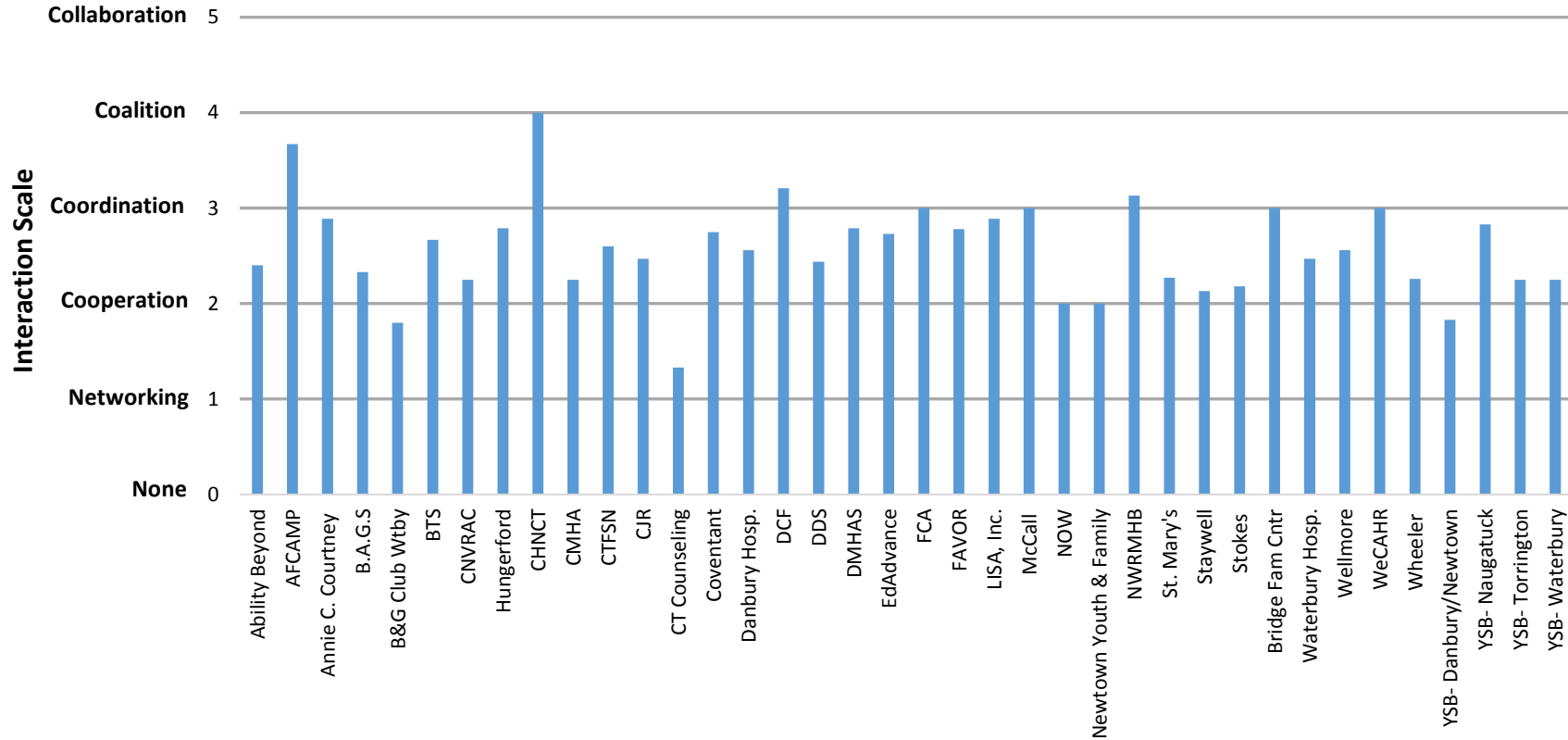
Collaboration of *THREE DEGREES*



## Level of Collaboration -- Agency Level Results

While examination of the SNA results at the network level are informative, individual agency results can provide feedback that can be mobilized for change. Figure 6 depicts how staff from each agency rate their level of collaboration with other agencies using the scale from the *Levels of Collaboration Survey* where 0 indicates no collaboration. If collaboration is reported, it is rated on an interaction scale from 1 up to 5 where “5” depicts full collaboration. The bar for each agency represents how respondents from *other* agencies rate their collaboration with that agency.

**Figure 6. Mean Interaction Strength for Agencies Participating in the Western Network of Care**



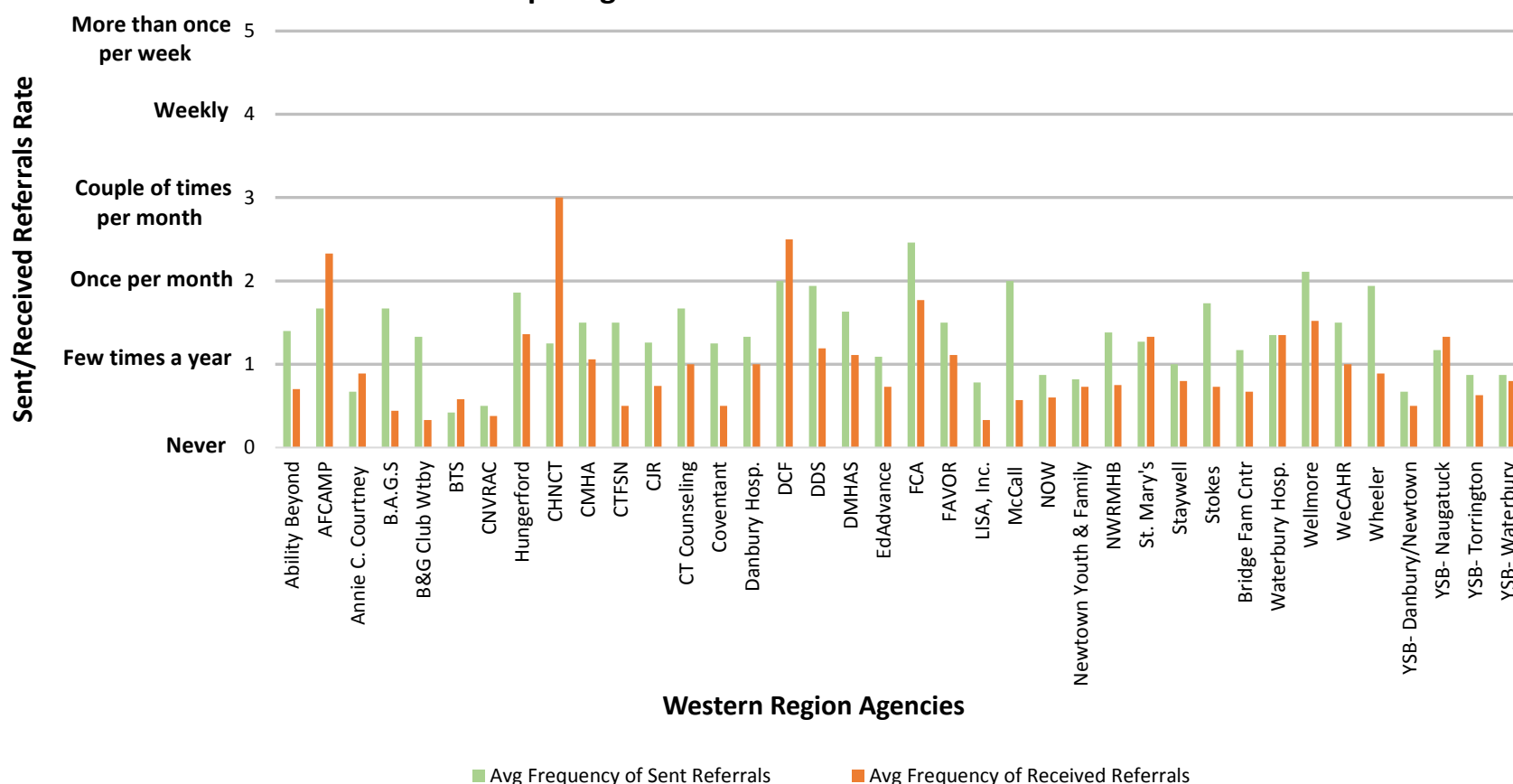
**Western Region Agencies**

None	Networking	Cooperation	Coordination	Coalition	Collaboration
<ul style="list-style-type: none"> <li>▶ No interaction at all</li> </ul>	<ul style="list-style-type: none"> <li>▶ Aware of organization</li> <li>▶ Loosely defined roles</li> <li>▶ Little communication</li> <li>▶ All decisions made independently</li> </ul>	<ul style="list-style-type: none"> <li>▶ Provide information to each other</li> <li>▶ Somewhat defined roles</li> <li>▶ Formal communication</li> <li>▶ All decisions are made independently</li> </ul>	<ul style="list-style-type: none"> <li>▶ Share information and resources</li> <li>▶ Defined roles</li> <li>▶ Frequent communication</li> <li>▶ Some shared decision making</li> </ul>	<ul style="list-style-type: none"> <li>▶ Share ideas</li> <li>▶ Share resources</li> <li>▶ Frequent and prioritized communication</li> <li>▶ Advise each other on decision making</li> </ul>	<ul style="list-style-type: none"> <li>▶ Belong to same provider system</li> <li>▶ Frequent communication characterized by mutual trust</li> <li>▶ Consensus is reached on all decisions</li> </ul>

## Referrals between Agencies in the Western Network: Agency Level Results

Figure 7 depicts the average number of times that other agencies within the network report receiving referrals *from* a specific agency (in orange) and the average number of times that other agencies report referring families *to* a specific agency (in green). This information can assist individual agencies in understanding if additional outreach to other organizations within the NOC may help increase their interactions within the NOC.

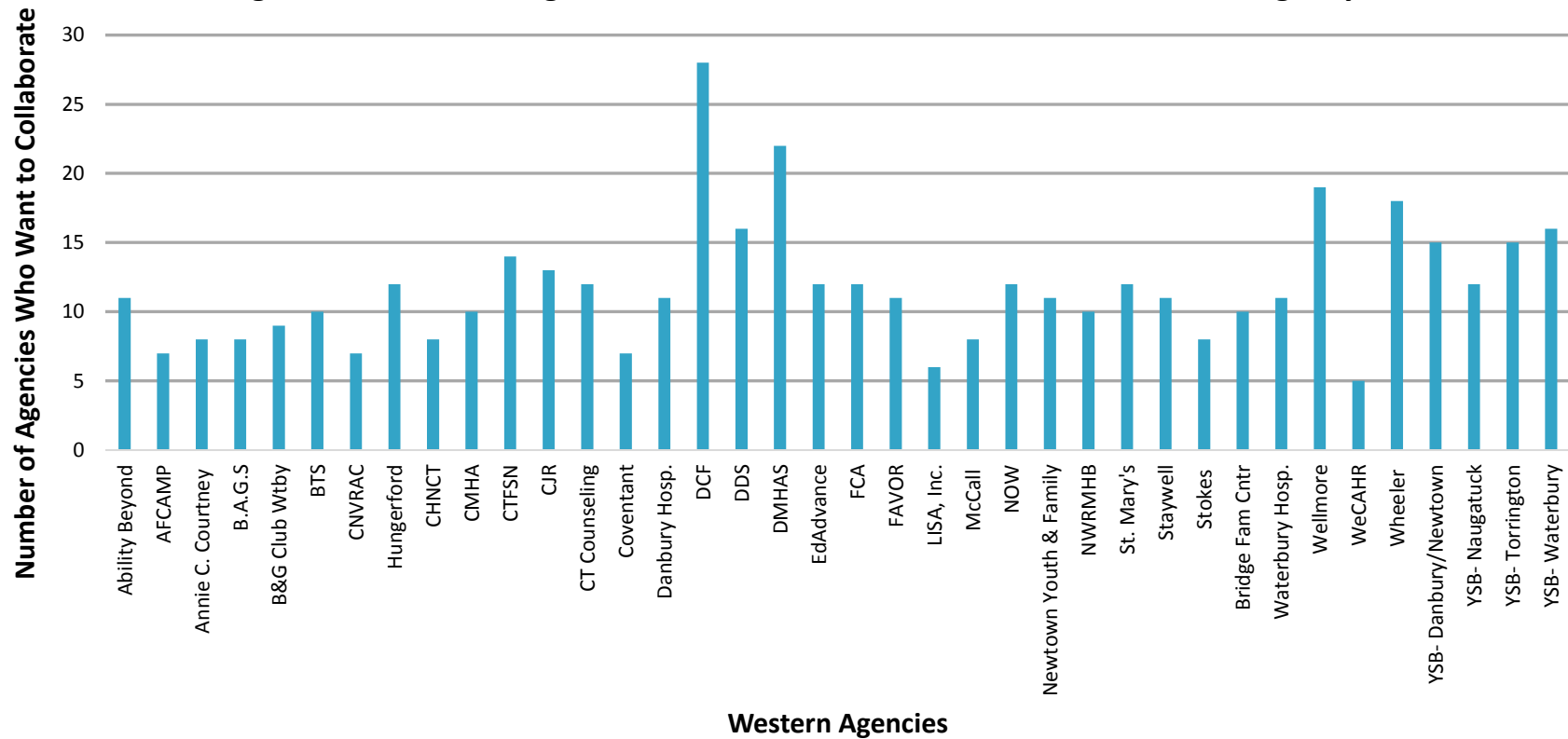
**Figure 7. Average Frequency of Sent and Received Referrals Between Agencies Participating in the Western Network of Care**



### Future Collaborations: Agency Level Results

Survey respondents were asked to indicate which agencies they wished to collaborate with more in the future, this information is provided in Figure 8 where the bar indicates the number of agencies that which to collaborate more with each listed agency. The Western NOC can use this data to identify those agencies that others are interested in learning more about and to develop mechanisms to where these agencies can inform others about their work and the services offered to families within the NOC. This may provide the NOC with the opportunity to assist agencies in expansion efforts, thus, preparing for and implementing strategies for enhancing collaboration in the Western Region.

**Figure 8. Number of Agencies Who Want to Collaborate More with this Agency**



## Western Region Perceptions Regarding Collaboration and Needs

Survey respondents were asked to share their perceptions of those factors that facilitate and those that may impede collaboration with other agencies. They were also asked what is needed in their community to more effectively support children with behavioral health challenges and their families. The responses to these questions were coded and analyzed, the results are summarized below.

### Factors that Facilitate Collaboration

Respondents indicate that networking with other professionals is an essential component to facilitate collaboration and linkages between agencies in the Western Region. Agency staff

“Opportunities to meet professionals from other agencies and network as well as to hear about what programs they offer and how they are looking to collaborate with other organizations.”

report that attending various collaborative/network of care meetings and experience working together have fostered opportunities to collaborate. Some respondents report the benefit of established ongoing connections to other agencies whether it be through formal contracts or MOUs, necessity (e.g. coming together to work on very complex cases) or meetings that provide formal networking opportunities – these

opportunities have helped to establish relationships with other providers that can help streamline the referral process and facilitate collaboration.

Another frequent facilitator reported was the role that strong relationships with other providers play in collaboration. Themes of mutual respect, cooperation and partnership were mentioned as important factors to collaboration at the family level where the development of a service plan and planning for discharge each benefit from a team of professionals working together. On a community level, it was noted that the presence of strong provider relationships at community collaborative meetings helps to foster connections and willingness to come together and work toward common goals.

“Respect, positive working relationship, availability, partnership...”

Respondents also spoke of the importance of shared sense of purpose as an essential feature of collaboration. Described as a “common mission” or as having “shared goals” or “shared interest and investment in outcomes” the underlying importance of providers sharing a vision in how to work to support families was regarded as a necessary characteristic of collaboration.

Finally, a few providers noted that communication with providers and knowledge of what resources are available through other agency and community supports facilitate collaboration. Additionally, program policies that support collaboration on shared cases, cooperative approaches, or help with negotiating care for one client with multiple needs were reported as important components to effective collaboration.

### Barriers to Collaboration

When asked about barriers to collaboration, two in five respondents mentioned funding as a barrier to collaboration. Responses such as not having the financial resources to cover sufficient staff, gaps in insurance coverage or no funding to support the need for additional services were each reported as barriers to collaboration. Respondents also report that the current funding climate limits the service capacity of existing programs resulting in high caseloads and waiting lists. These time constraints lead to fewer opportunities for professionals to return emails or phone calls, to collaborate with staff at other agencies or to attend system level meetings where they could learn about other programs and services and develop relationships with staff from other agencies.

“Budgetary cuts have made the sense of collaboration quite strained over the past year.”

Another barrier identified by respondents is that limited funding has fostered a culture of competition in the area. At the client level, staff are encouraged to enroll families into services so that the agency can meet their contracted capacity which can result in some reluctance to collaborate for fear of losing a family to another agency. At the agency level, as resources grow more scarce, there is competition for grants and contracts, which impacts collaboration with other agencies.

Some respondents suggested that agency policies can restrict collaboration. Policies that limit information sharing between providers or complicated referral procedures can impact the opportunities to collaborate. A few respondents report that agency policies requiring multiple steps to accept a referral or to have a referral approved not only impacts access to services for

“Competing interests for service provision and limited funding streams...are barriers to collaboration.”

families but is also a barrier to collaboration. Respondents report that these barriers could be addressed through improved channels of communication and providing supports to the lead agency responsible for service provision.

In addition, some respondents report the lack of understanding of existing community resources, including the services that agencies provide in the region, is a barrier to collaboration as staff are less likely to refer clients to another agency if they do not know about the services provided.

### Community Needs

Survey respondents were also asked what is needed in their community to support children with behavioral health needs and their families. The most frequent response was more services. Some indicated that existing services need increased capacity, more clinicians, and more specialty services for children.

“Better access to information on the services provided by other organizations, expanded services for this population”.



“More agencies willing to provide collaborative supports, increase in psychiatrists willing to treat these children with both counseling and medication, increase in behaviorist who can work with children and their families.”.

Others reported the lack of specific services for children and youth in the region including more after school and weekend programs for adolescents, more extended day treatment programs, intensive out-patient services, services for children with autism, recreational programs that have support the integration of youth with emotional or behavioral difficulties, providers trained to work with adolescents, and improved transportation

services for families to access services. While some respondents acknowledge that many of these needs in the community are related to funding cutbacks, they clearly identify the need for additional supports to extend services including licensed clinicians, more psychiatrists, behaviorist practitioners, counselors and therapists.

Others report the need for educating parents about services in the community including EMPS. Some staff indicated the need to raise awareness of peer-to-peer support services including for those parents who have children just entering services.

“More education around behavioral health, mental health for parents”.

Some indicated the need for more training for staff on the services and supports that are available in the community, how to facilitate effective referrals and

how to work with parents as partners in the treatment process. A number of respondents indicated the need to map the service system so that all would know what services are available, they reported the need to keep this listing up to date.

Finally, some suggested that supporting children and their families with behavioral health needs requires collaboration from the community on many levels. Some indicated that agencies need to be *willing* to collaborate and to coordinate care especially in this funding climate. A few suggested the need for a shared intake process so that families would only need to tell their story one time before being referred for services. Others spoke of the need to educate the community at large with the goal of reducing the stigma associated with recognizing behavioral health issues.

“Wrap around community support that works with higher action players (i.e. mayor, legislators) to create service gaps. United community support and voice to advocate for services.”

## Conclusion

Translating survey information in a meaningful way involves integrating feedback from everyone. In this baseline evaluation of collaboration within the Western region, it is clear that agencies in the NOC recognize the importance of collaboration in order to increase service capacity and to develop client and family-centered services that provide for a continuum of care that expands their outreach and partnerships in the community

Evaluating collaboration through social network analysis (SNA) provides useful information on many levels. As a whole, it is based on the importance of *relationships* among interacting agencies<sup>2</sup>. SNA provides information that demonstrates how agencies within the NOC are linked to each other and provides structural and relational information that can increase understanding of current service patterns through the perspective of reported levels of collaboration.

The open-ended questions in the survey give an anonymous voice to providers who share observations, suggestions and solutions that help to contextualize the quantitative results of the social network analysis.

CONNECT's baseline assessment of the Western NOC examines the current levels of interaction and types of collaborative relationships within the NOC. This information provides the NOC information that can help to inform activities that may facilitate the continued development of connections between network providers with the goal of enhanced service coordination for the children and families who receive services within the region. This analysis will be replicated in the spring of 2018 in order to assess any changes in collaboration within the Western region and to provide up to date information to inform the continued development of the network of care.

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<sup>2</sup> Wasserman, S., and Faust, K., (1994) Social Network Analysis: Methods and Applications. ENG and New York: Cambridge University Press.

# **CONNECTing**

*Children and Families to Care*



## **Behavioral Health Network of Care Collaboration Report: Central Region**

**March 2017**

**Prepared by Yale CONNECT Evaluation Team**

Yale University School of Medicine, Division of Prevention and Community Research

Funding provided by the Substance Abuse and Mental Health Services Administration (SAMHSA) through a grant awarded to the Connecticut Department of Children and Families

## INTRODUCTION

The **Connecticut Network of Care Transformation (CONNECT)** is a statewide system of care expansion that integrates efforts across child-serving sectors, including early childhood, child welfare, mental health, juvenile justice, substance abuse, and education. The Connecticut Department of Children and Families (DCF) leads the implementation of CONNECT and has four primary goals: 1) Implement and sustain the youth and family driven local, regional, and statewide infrastructure for the integrated Network of Care; 2) Implement and sustain a youth-guided, family-driven, and culturally responsive approach to statewide network of care (NOC) expansion and implementation with youth and families as full partners; 3) Implementation of the services and activities of the integrated Connecticut NOC; and 4) Enhance comprehensive statewide data system to promote integration and quality.

CONNECT has a Network Analysis Workgroup that seeks to gather information to increase understanding of the NOC with the goal of continuing to enhance and strengthen the network. This Workgroup supports the implementation of network analyses from the perspective of four stakeholder groups: 1) caregivers and youth receiving services in the NOC; 2) behavioral health service providers; 3) pediatric primary care providers; and, 4) school personnel. This report provides a regional-level analysis of collaboration between government and private behavioral health agencies, and community-based service organizations in Connecticut. In support of continuing to inform the comprehensive statewide plan for improved capacity and integrated care for children and families; DCF and CONNECT leadership have asked the Evaluation Team from the Yale Consultation Center to conduct an analysis to explore system-level collaborations within each regional NOC.

In collaboration with regional NOC leadership, CONNECT Network of Care Managers and Family System Managers in each of the six regions identified local agencies and organizations to participate in a web-based survey regarding the levels and types of collaboration that exist between agencies.

Starting in May 2016, the Network Analysis workgroup supported the successful planning and implementation of the collaboration survey for the Behavioral Cohort statewide (DCF regions 1-6). Multiple information sources were utilized to support the identification of potential survey participants in the Eastern region beginning with a list from United Way/211 of child serving agencies in the region. In addition, the regional DCF Systems Development Director provided a list of DCF Region 6 contracted providers. Finally, a list was generated of organizations actively involved in local Systems of Care Activities (i.e. Community Collaboratives, Local Interagency Service Team, DCF Regional Advisory Council, etc.). Actively involved was defined by the Network Analysis workgroup as having participated within the previous 18 months. This list was obtained by reviewing meeting minutes for the last 18 months, utilizing email list serves, and reviewing meeting sign in sheets.

After cross checking and combining these information sources, one regional list was created, adhering to the established guidelines set forth by the Network Analysis workgroup, including

selecting behavioral health providers actively involved in the system of care and limiting the list to 50 agencies or less per region.

Preliminary survey recipient lists were systematically refined through reviews by the Central Network of Care Manager, DCF Systems Development Director, and other regional stakeholders in collaboration with the Region 6 FAVOR FSM. Using criteria put forth by Statewide Network Analysis workgroup a master list of survey participants was approved and integrated into a survey for online dissemination.

The Central survey link was released on September 16, 2016 with a timeline for completion of 30 calendar days. Collective efforts of regional system partners yielded a 58% collaboration survey response rate for the Central Regional Network.

Utilizing the results of this survey, Social Network Analysis (SNA) was employed to analyze the data and to create a visualization that collectively defines how each regional service network is currently structured and how agencies interact. Data was also collected that indicates potential areas for future enhancement of the regional NOC. By using SNA to understand current network patterns and to track future collaborations, CONNECT will gain insight as to the potential ways regional NOCs might grow and how they change over time. SNA analysis can also contribute to network planning regarding how to shape efficient service integration cross-regionally and to identify regional and statewide organizations to support and sustain an improved statewide network of care.

This report reflects findings from Connecticut's Central Regional Network.

## **The Levels of Collaboration Survey**

*The Levels of Collaboration Survey*<sup>1</sup> was administered in the Fall of 2016 to assess linkages within the network of behavioral health service stakeholders in each of the six regions of Connecticut. The administration of the survey conducted near the end of the second year of CONNECT implementation was intended to provide information on the current status of collaboration between agencies working to support children with behavioral health challenges and their families. The survey will be administered again in the Spring of 2018 to allow for comparison over time. This report provides a summary of the baseline assessment.

Agencies in the network were invited to participate by the Network of Care Manager in their region who also sent them a link to the web-based survey. The web-based survey includes a series of questions regarding the respondent's role in their organization and their agency's collaborations within the network. The survey asked respondents to identify the network agencies they collaborate with, the extent of their agency's interactions with these agencies,

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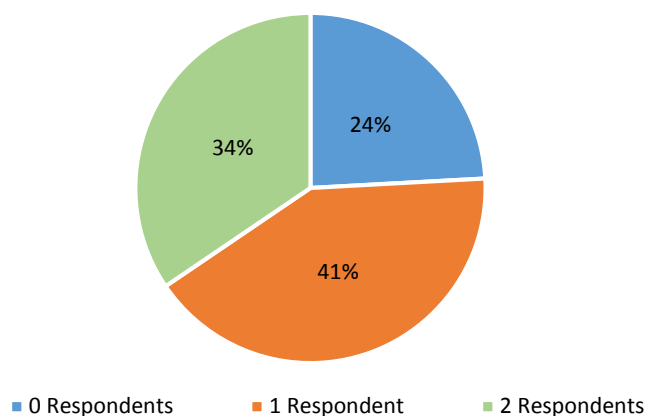
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and to identify which agencies they would like to collaborate with more in the future. It also included a series of questions that probe for more information regarding: agency referrals; facilitators and barriers to collaboration; and the services and supports needed within communities to more effectively support children with behavioral health challenges and their families. Surveys were anonymous, could be taken at the respondent's convenience, and took about 15 minutes to complete.

Agencies were asked to identify two respondents to complete the survey including an individual in a leadership position and an individual within the agency who is familiar with how the organization collaborates with partners to facilitate work with children and families. From late August 2016 through early October 2016, 32 individuals from 22 agencies (58% of possible respondents) in the Central region completed the survey.

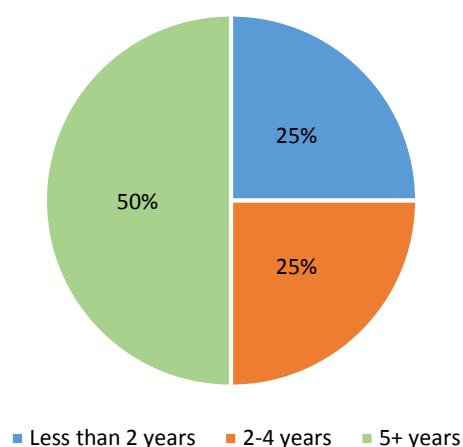
As is depicted in Figure 1, seven of the 29 agencies (24%) that were invited did not respond to the survey, 12 agencies (41%) had one respondent, and 10 agencies (34%) had two respondents. In order to control for the differential response rate between agencies, the analyses were conducted on the average response from within each agency so that there is one score from each agency that responded to the survey included in the analyses.

**Figure 1. Number of Agencies By Respondent (N=29)**



With regard to length of employment within their agency, as is shown in Figure 2, 50% of those who completed the survey had been in their current position for more than 5 years, 25% had their position for 2 to 4 years, and 25% had been in their current position for less than 2 years. The overwhelming majority (78%) of all respondents reported that they serve in a leadership position within their organization.

**Figure 2. Length of Time at Agency - Central Region Respondents (N=32)**



### Agency Levels of Collaboration

For the purpose of this report collaboration refers to the relationship between two organizations that exchange information and/or services to link people to needed services. The degree of network linkage was measured using a scale developed by Frey and colleagues (2006)<sup>1</sup> containing five levels of interaction; **networking, cooperation, coordination, coalition, and collaboration** (see Table 1) regarding child and family services with collaboration seen as the highest level. Scores on the scale represent the level of collaboration between organizations at a specific point in time. The survey will be re-administered in the spring of 2018 and the scores from the two administrations will be compared to reflect change in linkage over time.

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Social network analysis (SNA) involves the mapping of a social environment, the relationships among social entities, and the expression of the patterns or regularities of the interactions that connect them<sup>2</sup> The CONNECT Evaluation team at Yale is utilizing SNA to provide both a mathematical and visual analysis of inter-agency relationships and the patterns of relationships within the Network of Care (NOC) in each of the six regions in the state.

A frequently used output of SNA is a visual depiction of relationships of social entities within a network of care. In the network map presented (see Figure 3) the circles represent an agency in the network and each line represents a collaborative relationship between two agencies. The size of the circles represents the number of relationships that particular agency has with other agencies in the network. Agencies with larger circles and darker colors have a higher number of *relationships* than those agencies with smaller circles and lighter colors. The thickness and the color of the lines that connect the circles in the network map tells us about the *characteristics* of the relationships such as the extent to which agencies work together. The thicker and the darker the lines, the stronger the relationships between two agencies.

With regard to placement on the network map the agencies depicted by smaller and lighter colored circles have fewer relationships and these relationships tend to be characterized by a lower level of collaboration. These agencies are located on the periphery of the network map. On the other hand, agencies that have a higher number of relationships that have stronger connections are depicted as larger circles with darker color. These agencies are located closer to the center of a network map. Those agencies that are located on the network map between those in the center and those agencies on the periphery tend to fall in the middle of the continuum of those agencies with a higher number of more robust collaborations and those who have fewer collaborations that tend to be less developed.

When examining Figure 3 it is important to remember that not all agencies that comprise the Central Network of Care are included in these analyses as the inter-relationships between 29 specific agencies were assessed. In addition, it is important to note that the size and scope of services offered by agencies varies and those agencies that are larger and offer more services have more opportunities to collaborate.

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<sup>1</sup> Frey, B.B., Lohmeier, J.H., Lee, S.W., & Tollefson, S. (2006) Measuring Collaboration among Grant Partners, *American Journal of Evaluation*, 27 (3), 383-392.



[illegible]

## Network Density

One way to look at the level of collaboration within a network is to look at the *number* of agencies that are connected with one another, these are called “*active*” collaborations. As Figure 3 demonstrates, not every “possible” connection between agencies is active. SNA provides ways to examine a network statistically, one particular measure is called the *network density*. Network density depicts the *number* of active collaborations that exist at the time of the survey compared to the total *number* of possible active collaborations within the network. The density of a network is expressed as percentage, the closer to 100 percent the denser the network. At the time of the survey the selected agencies for the Central Region consisted of 811 possible relationships. Those surveyed reported that 198 agency relationships were active out of the possible 811 relationships indicating that the Central Region has a density of 24 percent. Approximately **1 out of 4 possible connections in the Central Region** were reported to be active when the survey was completed.

## Directionality of Relationships in the Central Regional Network

In addition to line thickness (degree or extent of collaboration) the lines between the circles also demonstrate the direction of collaborations. As is depicted in Figure 3, some agency connections go in both directions as the lines have arrows on each end. If Agency A reports that it collaborates with Agency B the line has an arrow pointing toward Agency B. If Agency B indicates that they collaborate with Agency A, the line also has an arrow pointing to Agency A.



Existing relationships in the Central network can also be measured by whether two agencies report that they collaborate with each other. Collaborating in both directions or “reciprocal collaboration” is shown by a line that has an arrow with two points, one on each end. **Forty-one percent of the active collaborations in the Central network were reciprocal.**

## Outreach and Recognition within the Network

The network map also depicts pairs of agencies where the relationship is not reciprocal. These connections are characterized as either *outreach* to another agency or *recognition* by another agency. For example, if Agency A says it collaborates with Agency B but Agency B does not report collaborating with Agency A, then A is engaged in *outreach* to B.

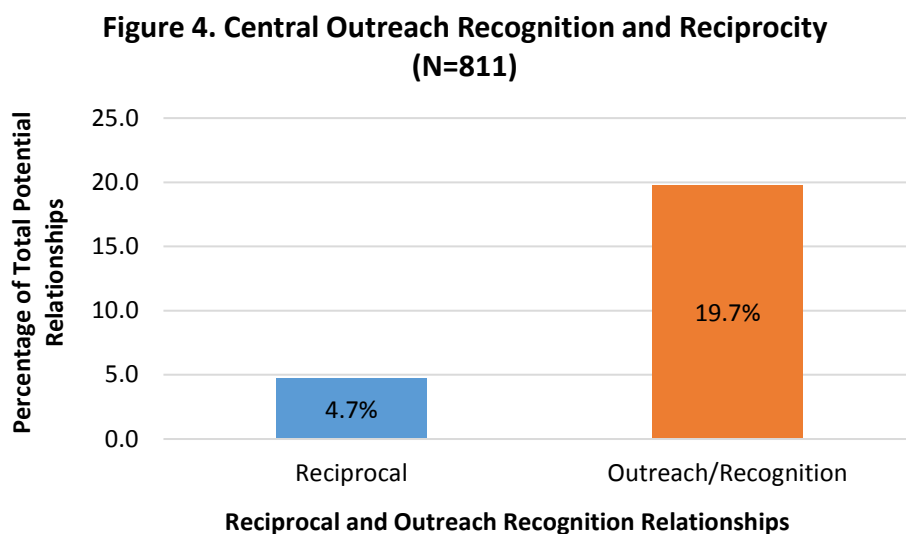


Similarly, if Agency B says it collaborates with Agency A but A does not report collaborating with B, then A is *recognized* by B as a collaborative partner.



SNA allows us to understand the extent to which one-way network activity is either through outreach or recognition both of which are important in a network of care with regard to how individual agencies interact with one another. In analyzing data at the network level outreach and recognition are viewed as uni-directional versus reciprocal interactions which are bi-directional.

Figure 4 compares the percentage of reciprocal relationships to outreach and recognition relationships in the Central NOC.



Out of the total potential relationships in the Central NOC, 4.7% are reciprocal, and 19.7% are outreach or recognition relationships. At this time there are a greater number of one-way relationships than bi-directional relationships. The follow-up survey to be conducted in the spring of 2018 will allow for comparison across time to see if this distribution changes and to see if the percentage of active collaborations within the network change.

## Relationships in the Central Regional Network

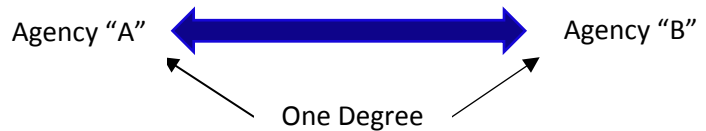
In SNA the structure of the network can be examined to determine how fully it is connected and to evaluate how diffuse it is. If a network is fully connected, then a message (e.g. referral request) that starts with any one agency can be traced throughout the network to eventually reach every other agency. This means that every agency is “reachable” either directly or indirectly.

However, this level of interconnectivity is not typical in a service delivery system.

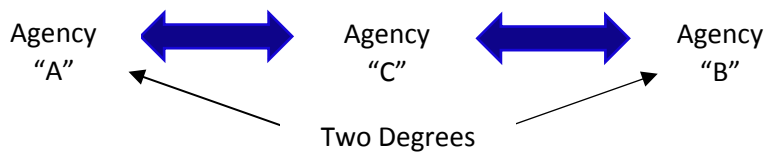
One way to determine how close the relationships are within a given network is to look at how direct the links are between agencies or how many “degrees of separation” exist between agencies (see Figure 6). The lower

the degrees of separation in a network the closer and more direct the relationship is between any two agencies. Within SNA, these “degrees of separation” are called geodesic distance which can range from 0 (not at all connected) to 1.0 (fully connected). **The geodesic distance in the Central NOC at the time of the survey was 0.458.** It will be important to see how this metric changes overtime.

**Figure 5.** Collaboration of *ONE DEGREE* between ‘A’ and ‘B’



Collaboration of *TWO DEGREES* between ‘A’



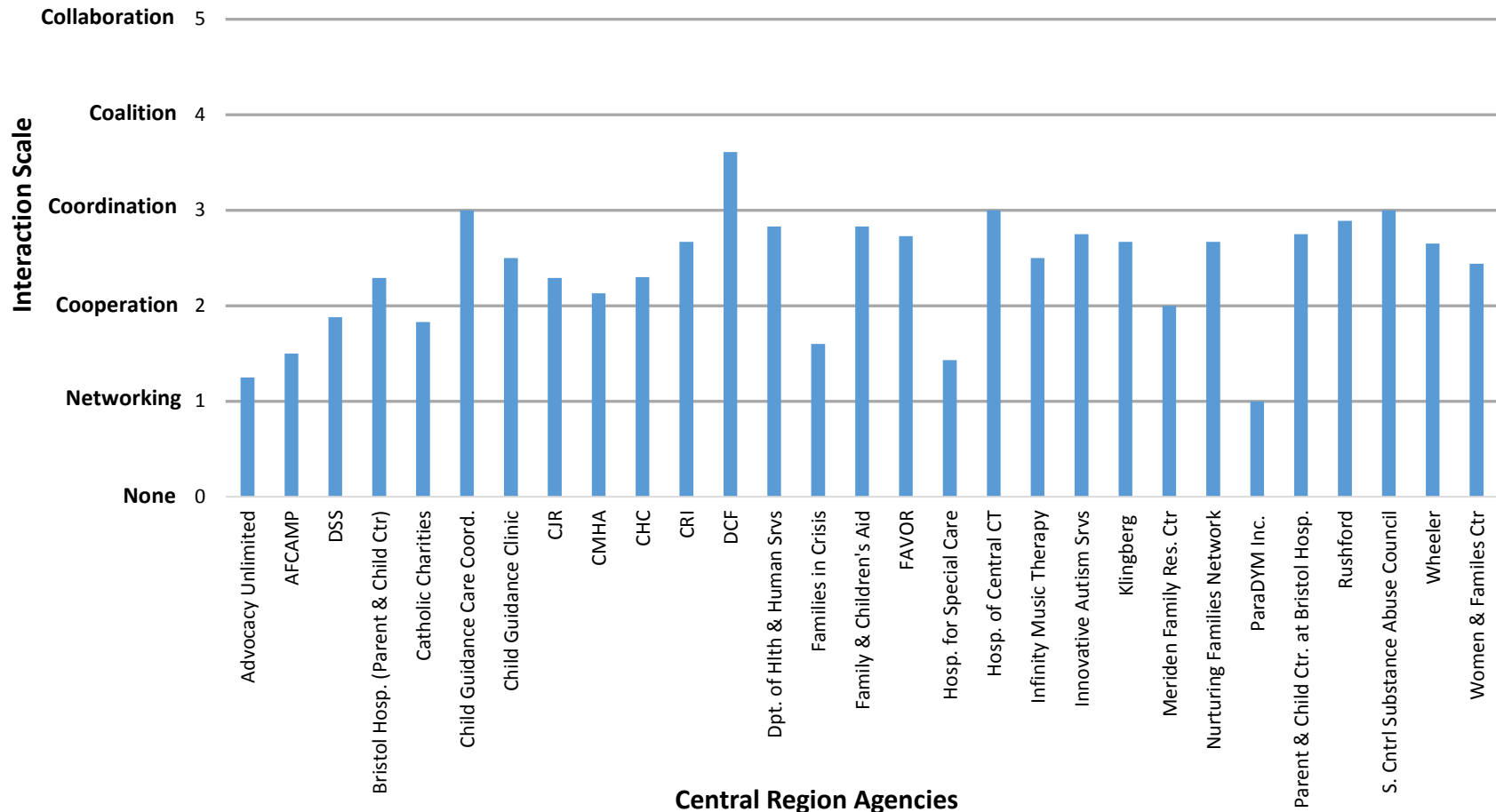
Collaboration of *THREE DEGREES*



## Level of Collaboration -- Agency Level Results

While examination of the SNA results at the network level are informative, individual agency results can provide feedback that can be mobilized for change. Figure 6 depicts how staff from each agency rate their level of collaboration with other agencies using the scale from the *Levels of Collaboration Survey* where 0 indicates no collaboration. If collaboration is reported, it is rated on an interaction scale from 1 up to 5 where “5” depicts full collaboration. The bar for each agency represents how respondents from *other* agencies rate their collaboration with that agency.

**Figure 6. Mean Interaction Strength for Agencies Participating in the Central Region Network of Care**



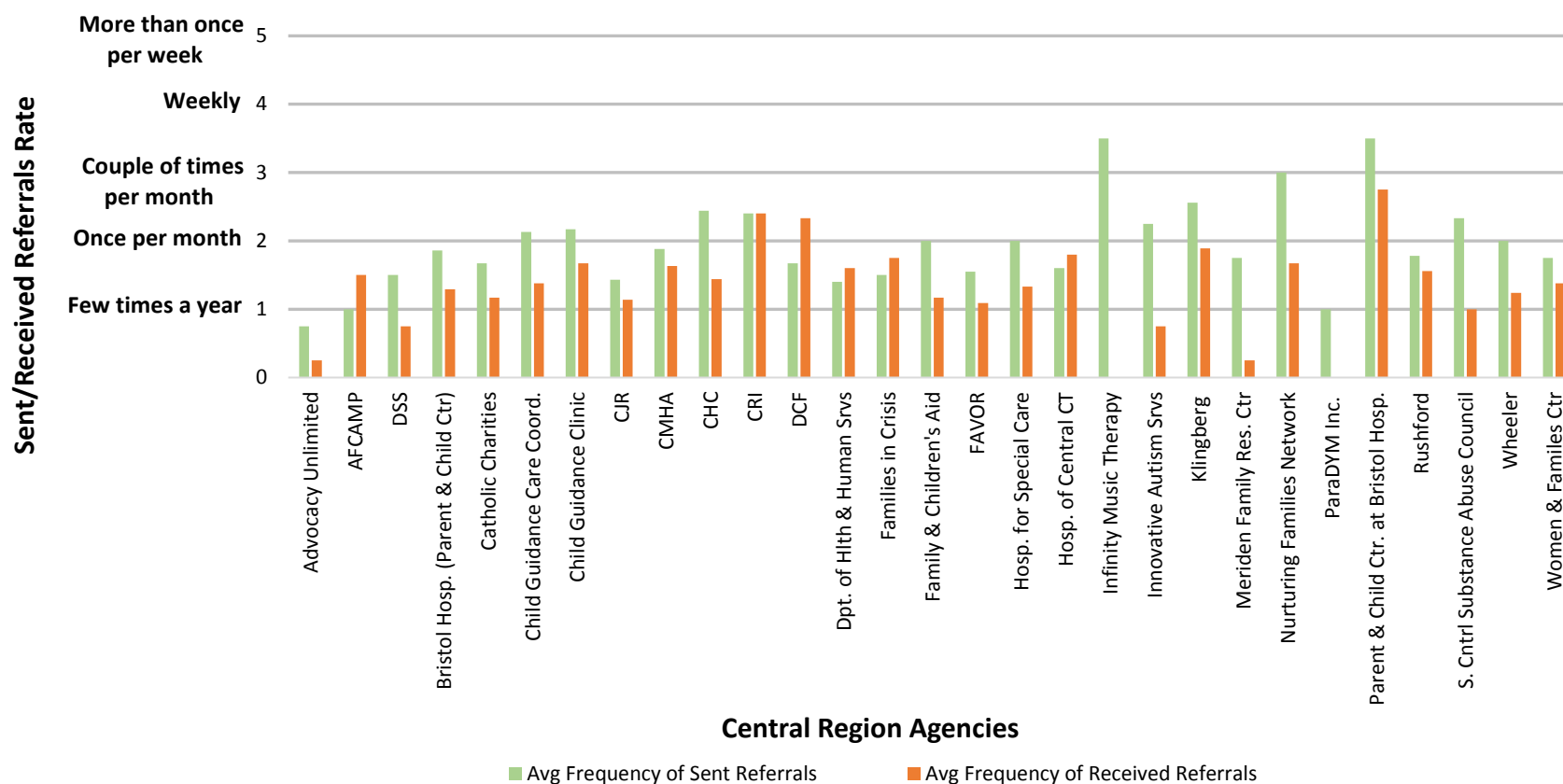
**Central Region Agencies**

None	Networking	Cooperation	Coordination	Coalition	Collaboration
<ul style="list-style-type: none"> <li>▶ No interaction at all</li> </ul>	<ul style="list-style-type: none"> <li>▶ Aware of organization</li> <li>▶ Loosely defined roles</li> <li>▶ Little communication</li> <li>▶ All decisions made independently</li> </ul>	<ul style="list-style-type: none"> <li>▶ Provide information to each other</li> <li>▶ Somewhat defined roles</li> <li>▶ Formal communication</li> <li>▶ All decisions are made independently</li> </ul>	<ul style="list-style-type: none"> <li>▶ Share information and resources</li> <li>▶ Defined roles</li> <li>▶ Frequent communication</li> <li>▶ Some shared decision making</li> </ul>	<ul style="list-style-type: none"> <li>▶ Share ideas</li> <li>▶ Share resources</li> <li>▶ Frequent and prioritized communication</li> <li>▶ Advise each other on decision making</li> </ul>	<ul style="list-style-type: none"> <li>▶ Belong to same provider system</li> <li>▶ Frequent communication characterized by mutual trust</li> <li>▶ Consensus is reached on all decisions</li> </ul>

## Referrals between Agencies in the Central Network: Agency Level Results

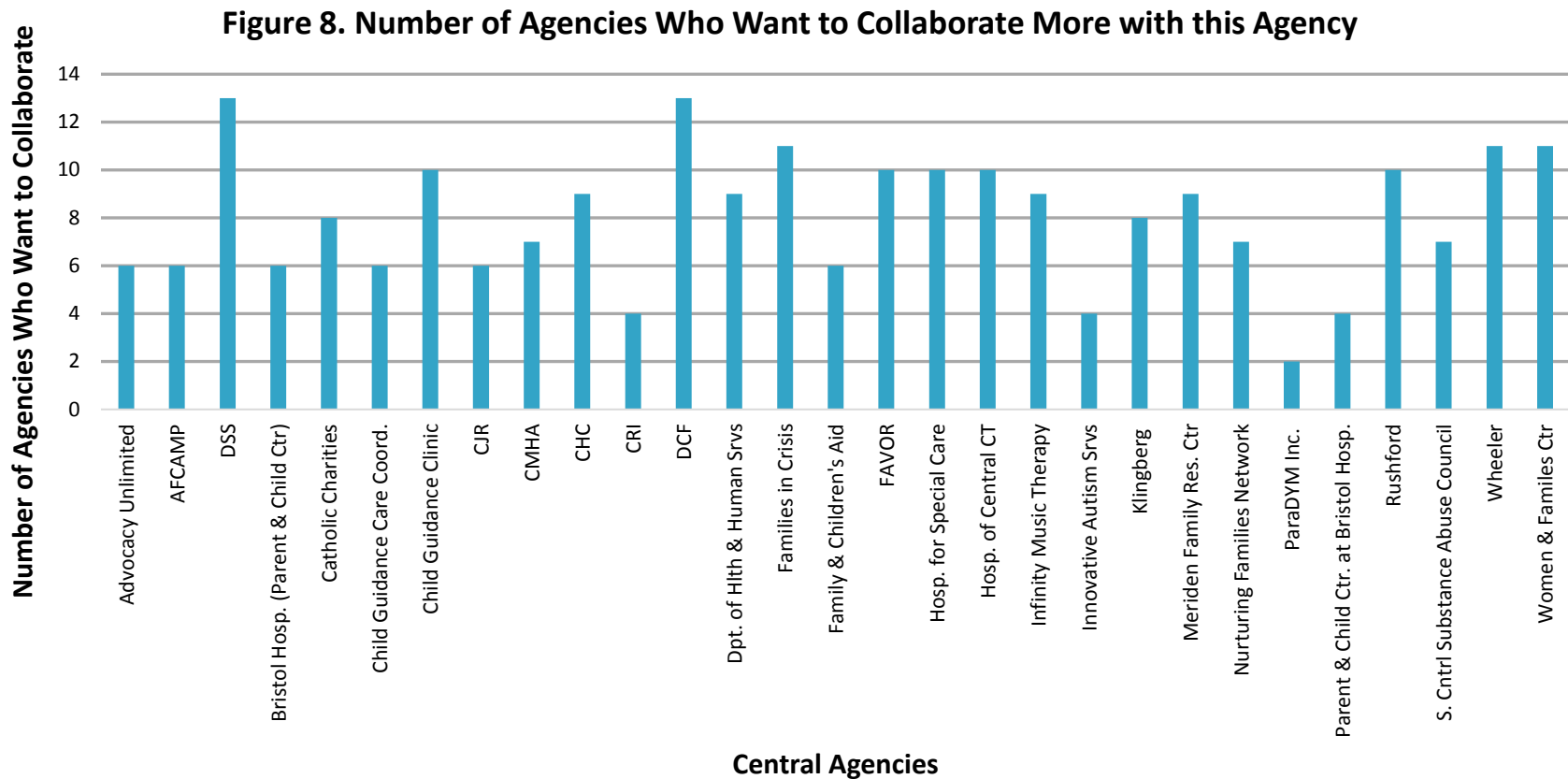
Figure 7 depicts the average number of times that other agencies within the network report receiving referrals *from* a specific agency (in orange) and the average number of times that other agencies report referring families *to* a specific agency (in green). This information can assist individual agencies in understanding if additional outreach to other organizations within the NOC may help increase their interactions within the NOC.

**Figure 7. Average Frequency of Sent and Received Referrals Between Agencies Participating in the Central Network of Care**



## Future Collaborations: Agency Level Results

Survey respondents were asked to indicate which agencies they wished to collaborate with more in the future, this information is provided in Figure 8 where the bar indicates the number of agencies that wish to collaborate more with each listed agency. The Central NOC can use this data to identify those agencies that others are interested in learning more about and to develop mechanisms to where these agencies can inform others about their work and the services offered to families within the NOC. This may provide the NOC with the opportunity to assist agencies in expansion efforts, thus, preparing for and implementing strategies for enhancing collaboration in the Central Region.



## Central Region Perceptions Regarding Collaboration and Needs

Survey respondents were asked to share their perceptions of those factors that facilitate and those that may impede collaboration with other agencies. They were also asked what is needed in their community to more effectively support children with behavioral health challenges and their families. The responses to these questions were coded and analyzed, the results are summarized below.

### Factors that Facilitate Collaboration

Respondents indicate that networking with other professionals is key to facilitating collaboration and linkages between agencies in the Central Region. Integral to networking are opportunities to openly communicate with other providers and foster strong relationships. Agency staff report that positive relationships have developed through attending system level meetings and meetings

“Regional opportunities to share information, resources, trends.”

related to individual families such as PPTs. Respondents report that networking allows providers to engage more readily in family level service planning where providers collaboratively develop service plans. At the systems level, several respondents report that strong relationships increase the ability to collaborate in working on behalf of children and families and that client-centered approaches that include family perspectives and rely on agencies working collaboratively e.g., care coordination), facilitate more comprehensive service plans.

Staff also report that systems policies can facilitate collaboration, specifically those policies that promote information sharing either through meetings, shared clients, or working toward mutual goals for clients. In addition, some noted that dedicated staff time is needed to allow for effective networking and that this fosters improved understanding of the work that other organizations do and the resources they offer.

“Shared client pools, collaborative meetings that allow us to share what we do with each other in a supportive format, time to meet together, monthly state-wide meetings to collaborate.”

Other respondents stressed how shared values and common goals facilitate effective collaboration. Themes such as sharing a similar mission regarding how to work with children and families and having mutual respect for each other’s skills were reported to help build positive working relationships.

### Barriers to Collaboration

When asked about barriers to collaboration respondents reported that there is a need for education regarding what services are provided by the agencies within the region and the

“Knowing exactly what organizations are in the community and knowing how to collaborate with them effectively”.

criteria for families to enroll in these services. Agency staff report that a lack of up-to-date information or not knowing about available services are barriers to collaboration. Providers not knowing which agencies can provide services such as transportation, in-home



visits, language translation and bicultural services, limits their ability to refer families for needed services or to collaborate with other providers.

Survey respondents also report that there is a need for enhanced communication in the region.

They report that there is a time-lag between getting a referral and receiving documentation from the referring agency. Some report that when they reach out to an agency that there is often a lack of follow-through including, but not limited to, not receiving a return call. Some report that there remain too many silos and that not enough information is shared between agencies or providers.

“There are too many silos and not enough information being shared. Families don't know what their options are and agencies don't know how to leverage their relationships to get the word out.”

Respondents also indicate that contractual issues and system policies can impact collaboration for example when some programs (e.g., IICAPS) open a family, this necessitates other service providers to discontinue working with the family, thus limiting the ability of the providers to collaboratively work with a family. In addition, some report that there is not a shared mission or vision between provider agencies which limits the desire to work collaboratively.

Providers indicate that a lack of funding impacts collaboration. Many providers report that given reduced staffing and increased caseloads they do not have the time to reach out to other providers or to attend system level meetings. The limited time that staff have available also makes it difficult for them to attend system level meetings where they could learn about other programs and services and develop relationships with staff from other agencies. Finally, some report that the current funding environment encourages competition versus collaboration.

### Community Needs

Survey respondents were also asked what is needed in their community to support children with behavioral health needs and their families. The most common response was more services as

respondents indicated that families need access to all levels of care and that currently, not all are available.

Staff report a need for more child psychiatrists to do medication management, but also therapy. Others

report the need for additional supports in the schools including afterschool services for students who have emotional and behavioral challenges. There is a reported need for more case management and wrap-around services for families with a focus on services that are strength-based. Providers also identified the need for more service providers who are bilingual. Finally, providers report the need for other services and supports such as better transportation options for families that will allow them to get to services, recreational programs, mentoring and services to help families transition after discharge for a high-end service.

“More resources for servicing bilingual families, children and adolescents with autism, and behavioral health issues.”

Respondents also indicated the need for additional family engagement in the region. Staff report that increased outreach to families would be beneficial as families would have more opportunities to learn more about the system. Respondents suggested trainings and workshops

for staff and families to enhance awareness of resources available in the community including resources that can help parents to advocate for their children.

There were also several suggestions at the practice and policy levels. Many respondents indicated the need for stronger interagency collaboration and communication. They suggest the use of more natural supports along with work to help strengthen families through education, thus providing guidance with resources and giving families choice in where they seek care. Some report that increased integration may also help reduce service duplication. Finally, it was reported that ongoing opportunities to meet and work with other providers would enhance collaboration.

“Greater integration of services, less duplication.”

## Conclusion

Translating survey information in a meaningful way involves integrating feedback from everyone. In this baseline evaluation of collaboration within the Central region, it is clear that agencies in the NOC recognize the importance of collaboration in order to increase service capacity and to develop client and family-centered services that provide for a continuum of care that expands their outreach and partnerships in the community

Evaluating collaboration through social network analysis (SNA) provides useful information on many levels. As a whole, it is based on the importance of *relationships* among interacting agencies<sup>2</sup>. SNA provides information that demonstrates how agencies within the NOC are linked to each other and provides structural and relational information that can increase understanding of current service patterns through the perspective of reported levels of collaboration.

The open-ended questions in the survey give an anonymous voice to providers who share observations, suggestions and solutions that help to contextualize the quantitative results of the social network analysis.

CONNECT’s baseline assessment of the Central NOC examines the current levels of interaction and types of collaborative relationships within the NOC. This information provides the NOC information that can help to inform activities that may facilitate the continued development of connections between network providers with the goal of enhanced service coordination for the children and families who receive services within the region. This analysis will be replicated in the spring of 2018 in order to assess any changes in collaboration within the Central region and to provide up to date information to inform the continued development of the network of care.

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<sup>2</sup> Wasserman, S., and Faust, K., (1994) Social Network Analysis: Methods and Applications. ENG and New York: Cambridge University Press.