Development of Community-Based Health Navigation Services

2ci

MARCH 10, 2021

CARE COMPASS NETWORK
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Introduction

Care Compass Network is a Performing Provider System formed for the purpose of administering the Delivery System Reform Incentive Payment (DSRIP) program in a nine-county area of New York, including Broome, Chemung, Chenango, Cortland, Delaware, Schuyler, Steuben, Tioga, and Tompkins. CCN is a 501(c)(6) organization with five area health systems as corporate members. In addition, CCN has approximately 175 total partners, which include providers of medical care, mental health care, substance use disorder services, as well as a wide range of community-based organizations, whose services support underserved populations in the areas of food/nutrition, transportation, substance use, mental health, material support, health literacy, care navigation and coordination, housing, parenting and young children, etc. Through the course of the DSRIP program, CCN implemented eleven different projects with the objective of transforming the health care system into a value-driven network capable of providing high quality care and services to Medicaid members. System transformation, from the perspective of CCN and its partners, encompasses a wide range of changes, including the following:

- Greater collaboration and coordination between clinical and social care service providers
- Shift of services from inpatient and institutional settings to community and home
- A focus on addressing determinants of health, both social and clinical in nature
- Integration of services across domains, including mental/behavioral, physical, and social
- Promotion of self-management skills for both physical and mental needs
- Partner readiness for value-based contracts and development of key competencies

Now, at the conclusion of the DSRIP program, CCN is in a position to consider the lasting impacts that eleven DSRIP projects have had on Medicaid members, community members, and the health care eco-system at large. CCN's Population Health department, with input from many sources, has produced eleven project evaluation reports and score cards in order to best compare across projects, despite the differences in project objectives and reach. The findings of these report will inform CCN's next phase, including the use of CCN funding after September 2020, when the final phase of CCN partner contracts concludes.

Each project report reflects the findings from a mixed-methods evaluation. Qualitative information gathered from CCN staff, partners, Medicaid members, and community members contribute to the findings. In addition, the reports consider quantitative findings. Included in the report are findings on the scale and reach that CCN was able to achieve – the number of organizations engaged in the project and the number of Medicaid members engaged. CCN also considered the statistical relationship between project activities or services delivered to patient/clients and key patient outcomes from the DSRIP program including preventable emergency department visits, inpatient hospitalizations, and primary care engagement. Further, CCN considered the impact of the projects on several different quality indicators associated with project-specific DSRIP performance measures. All results are explained in detail throughout.

Data Sources

Information supporting this project evaluation comes from four primary sources. Each source of information contributes to the project scorecards, which allows for comparison across disparate projects.

To gather input from organizations intimately knowledgeable about the projects and their impact, we partnered with Research & Marketing Strategies to conduct structured in-depth interviews with partners who participated in the projects. In total, 21 in-depth interviews were completed. CCN Project Managers identified candidates from partner agencies for interviews based on their involvement in project implementation and their role in the project. Candidates were invited to participate and their organizations

were reimbursed a nominal payment to reflect the level of effort involved. Key themes assessed include patient outcomes, cost of care, lasting partnerships with other organizations, workforce development, and system transformation. Many interview questions were open-ended and allowed the respondent to comment freely, positively or negatively, about the effectiveness of the project. The questionnaire also used scale-based questions, which can easily be compared across respondents and projects.

CCN also gathered input on the same themes from partners at large through open dialogue at the four May 2020 Regional Performing Unit meetings (all held remotely via video conference call). In addition, a follow up survey using SurveyMonkey collected broader partner feedback on workforce development and system transformation using scale-based questions.

To gather information from Medicaid and community members, CCN leveraged the on-going, periodic electronic survey administered by RMS of a panel of Medicaid Members (self-identified) and community members. A brief survey tool was developed to gather high-level input on the activities that CCN and the DSRIP program at large promoted. Overall, the response rate was 14% (consistent with industry standards); 46 Medicaid members and 72 community members responded.

To gather input on the total CCN achievements for each project, we incorporated material from structured reports written by CCN Project Managers who are responsible for managing the project implementation, maintenance, milestone reporting to NY Department of Health, and payment to partners. Project Managers summarized project progress, noting major accomplishments, barriers, and options for sustainability.

Finally, to understand the impact of each project from a statistical perspective, CCN conducted a quantitative analysis to establish, at a person level, the link between project activities and patient outcomes, such as primary care engagement, emergency department visits, and inpatient discharges. Additionally, CCN considered project specific quality indicators and their link to the project activities. In each case, a cross-sectional analysis using data from July 2016 to June 2019 and the population of Medicaid members who were DSRIP attributed to CCN during Measurement Year 5 (July 2018 to June 2019). The data sources for these analyses included CCN project data, submitted to CCN by partners contracted for each project, and Medicaid Confidential Data pulled from the Salient Interactive Miner, a proprietary data mining tool made available to Performing Provider Systems like CCN for use under the DSRIP program.

Project Summary

For CCN, the primary objective of the 2ci Community Based Navigation Project was to standardize and expand community-based navigation services across the nine-county are that CCN serves. CCN engaged a total of 65 partners in the project, including hospital and community-based organizations (CBOs) to provide a variety of navigational services to Medicaid members. Through the life of this project, CCN has maintained an active project team and implemented a pilot program, CBO Transformation (CBOT), to support the creation of a targeted outreach and navigation service provided by partners; this service would potentially be provided in coordination with area health systems to jointly collaborate on population health initiatives.

Through the administration of this project and the facilitation of the project team, CCN and partners were able to make gains in the following areas:

- Identify and address the social determinants of health that prohibit Medicaid individuals from utilizing appropriate health services by facilitating systematic changes to care coordination services

- Build partnerships between CBOs and health systems to identify populations with gaps in care, such as high-utilizers of inpatient or emergency department or non-utilizers of primary care, in order to coordinate outreach and navigation services in the community.
- Develop a care coordination model for working longitudinally with clients using efficient, consistent, and evidence-based protocols to ensure client needs are addressed appropriately and navigated effectively.

CCN implemented the Community-based Navigation project by executing a series of strategies. To meet DSRIP engagement requirements, CCN supported direct navigation services provided to Medicaid members. Partners used a variety of screening tools to identify the needs of clients and navigated clients to the appropriate internal or external resources. These services initially differentiated between brief navigational interventions (so called Level 1 navigation) and longer, potentially episodic navigations (Level 2). Later, the distinction was dropped in favor of the Level 2 service. All along, navigation services focused on addressing various types of needs – logistical, cultural, financial, and health-related needs. Patient Activation Measurement surveys were used in the context of navigational service to help identify health behavior and needs. Community Navigators and Community Health Worker, a new job title created to provide navigational and other types of supportive services, use motivational interviewing and culturally competent engagement techniques to assist clients as well as improve self-efficacy in addressing their own health and wellness needs. The result of these techniques has been to develop strong relationships and trust with the client populations.

Community-based Navigation has been CCN's pioneer project for addressing social determinants of health in clinical and non-clinical settings. Partners in the project successfully integrated Community Navigators and/or Community Health Workers into various settings that include emergency departments, Primary Care, Inpatient Care, and local municipalities such as DSS or Jails. Integration enhanced the idea of meeting clients where they are at and utilizing other workforce than clinical to do the interventions. High-need clients are directed to care managers supported by the Medicaid Health Home program or other care coordination programs to enable more intense case management. This triage has allowed flexibility within community-based organizations to offset those caseloads and be more available for other clients.

Evaluation Results: Project Impact Scorecard

This table summarizes the evaluation results. In order to readily compare across projects, a scoring matrix was created and reflects each study component. The detailed scorecard can be found in the appendix.

Table 1: Project Impact Scorecard		
Evaluation Elements	**Possible Points**	**Points Received**
View from the Front Line: Partners		
In Depth Interviews with Partners	25	23.6
RPU Meeting input and Survey	10	7.03
Member Voice: CCN's Medicaid and Community Member Panels		
Panel Survey conducted by RMS	15	11
Community Accomplishments: CCN Project Managers		
Structured report by PMO, Follow up Interview	25	23.4
Performance Metric Impact: Population Health		
Project Impact on Performance Metric Results	15	2
Causal Effect	6	4
Cost Effectiveness Analysis	4	2.67
Overall	100	73.7

Refer to the appendix for detailed scoring criteria

The CCN Project Management Office provided valuable input and insight about each project's major achievements, obstacles, best practices, and overall value. Project Managers have a unique perspective as a result of their knowledge of DSRIP program objectives and requirements, regular tracking of project activities and services, relationships with participating organizations, and knowledge of how project activities have been rolled out or implemented across the PPS. Despite explicit criteria from the Department of Health for project requirements, there was relatively broad latitude in how the requirements could be implemented. A critical component of any evaluation are the insights of those who are most familiar with project management, provided that there is objectivity in the assessment.

a) Best Practices

The following are best practices that have resulted from the implementation of this project, as described by the Project Manager.

1) Reporting and data management- the project gave partners a standardized approach to report and manage data. This has allowed partners to share report success stories with their Board of Directors, grant writing and innovation funds.

2) Flexibility- The Community Based Navigation project is categorized as an on-boarding project. Meaning, clients who are counted are usually in the beginning stages of their health navigation services. This project helped set the stage for continuation of care via warm-handoffs to more clinically focused projects. Example; client comes in to the community-based organization and is screened through an intake form. A high need that is identified for the client is a mental health referral for increased depression due to high-risk social factors. Client receives a warm-handoff to an integrated behavioral health site (3ai) for screening and consistent appointments with a social worker. Community-Based Organization continues to work with client to ensure other needs are met and follow-up appropriately.

3) Relationship and trust building with partners- The Community Based Navigation project had to be flexible enough to allow many diverse partners to participate but structured enough to achieve State milestones. This had to be accomplished with listening to the many voices of the partners to help meet their needs and build their trust so that if changes are made, they were on board. While this may not result necessarily in increased metric performance, I believe it is essential to project success.

4) Increased Partnership with Health Systems- Prior to the Community Navigation project, health systems had very little knowledge of the impact community health, and utilizing social care providers has on patient care. CCN as an entire organization has shed light on how care can be delivered innovatively. This has been a direct result in roles such as the Community Health Worker (CHW) model to be the forefront that health systems can partner with, to ensure the continuum of care is being delivered outside the walls of traditional clinical care.

b) Key Quotes

Project Manager, Emily Jones, stated that through Community-Based Navigation Services "Clients have a clearer sense of trust and understanding of their health and social determinant needs through the relationship of community-based organizations helping them navigate through the many and complicated barriers they are experiencing."

Our Partner organization interviewed by RMS stated that "It makes us look at the patients differently by the providers being able to evaluate the paperwork that we are giving to the patient."

Table 2: Total Project Engagement and Total CCN Spending

CCN engaged 65 unique organizations, 103,768 unique members, provided 219,641 total services, including 219,562 successful encounters, 41,312 warm hand offs to PCPs and distributed $6.9 million DSRIP dollars for this project. The following tables display partner engagement, service provision, and CCN funds distributed from DSRIP Year 2 through Year 5, which ended March 31, 2020.

Table 2a: Community-based Navigation Partner Engagement by Organization Type

	DSRIP Year				
	DY2	**DY3**	**DY4**	**DY5**	**Grand Total**
Health Systems	3	4	4	4	4
Non-Health System Partners	23	42	56	49	61
Grand Total	**26**	**46**	**60**	**53**	**65**
Source: CCN Team analysis using Navigation Project Data, 2016-2020.					

Table 2b: Community-based Navigation Volume of Services by Organization Type

	DSRIP Year				
	DY2	**DY3**	**DY4**	**DY5**	**Grand Total**
Health Systems					
A – Navigation	24,394	43,256	42,204	35,863	145,717
Non-Health System Partners					
A - Navigation	3,540	18,821	24,470	23,040	69,871
A - Outreached			1,623	1,690	3,313
B - Outreached and Navigated			343	59	402

C - Outreached and Engaged			134	125	259
D - Refused			35	44	79
Grand Total	**27,934**	**62,077**	**68,809**	**60,821**	**219,641**
Source: CCN Team analysis using Navigation Project Data, 2016-2020.					

Table 2c: Community-Based Navigation Expenditure by Project Activity

	DSRIP Year				
	DY2	**DY3**	**DY4**	**DY5**	**Grand Total**
2ci Community-Based Navigation Services					
CHA Training		$18,000	$58,000	$32,000	$108,000
CHA Training (People)	$6,000				$6,000
Collaboration Payment		$0	$40,660	$44,192	$84,852
Navigation Report		$107,135	$109,306	$100,474	$316,914
Navigation Type I	$92,820				$92,820
Navigation Type II	$1,342,350				$1,342,350
Navigations		$1,207,800	$1,724,000	$1,452,000	$4,383,800
Retro Disruptive Payment		$99,344			$99,344
Sign-On Bonus		$397,199	$69,280	$0	$466,479
		$510,000	$614,832	$519,279	1,644,111
Grand Total	**$1,441,170**	**$2,339,478**	**$2,616,078**	**$2,147,945**	**$8,544,670**
Source: CCN Team analysis using Navigation Project Data and CCN financial reports, 2016-2020.					

Quantitative Findings

Section 1: Cross Section and Trend Analysis

This section presents a quantitative regression analysis to establish a statistical relationship between the project activities and proxy measures for the DSRIP performance metrics. Performance metrics featured prominently in the DSRIP program, driving a significant portion of funding. The underlying question assessed in this section is: did the project make an impact on CCN's performance metric results? This is an important question as CCN considers areas of future investment and the overall return of participating in the DSRIP project.

For Community Navigation, we considered the impact of the navigation services on the likelihood that individuals incurred potentially preventable ED services (total and among those with a behavioral health diagnosis), inpatient hospital care, and primary care. These measures are proxies for key DSRIP performance metrics, including Potentially Preventable ED Visits (total), Potentially Preventable ED Visits among members with previous Behavior Health diagnoses, Preventive or Ambulatory Care visits, and Prevention Quality Indicator (Composite), which captures potentially avoidable hospital care. These metrics were chosen for analysis based on a CCN Project Team analysis in 2016, which identified a probable impact of the project activities on the performance metrics.

The table below describes each Performance Metric and proxy measure as well as the study hypotheses. Through navigation services, it is possible to identify the social determinants of health and address associated needs in order to support an appropriate use of health services. By engaging a broad set of partners, both clinical and non-clinical partners, CCN sought to facilitate systematic changes and standardization of navigation, care coordination, and community health worker services. Thus, we

hypothesize that the Community-based Navigation program reduced the need for emergency services that may be better addressed elsewhere (i.e. potentially preventable) as well as the need for inpatient hospital care. Similarly, we hypothesize that navigation services are effective in connecting individuals to primary care services. Thus, we hypothesize that the Community-based Navigation program increased use of primary care services among actively engaged Medicaid members.

Table 3: Performance Metrics and Proxy Measures

Metric Name / Proxy	Proxy Metric Description	Study Hypothesis
Potentially Preventable ED Visits, per 100 Members Proxy measure: Having one or more Potentially Preventable ED visits	The number of potentially preventable ED visits (based on CPT codes reported on claims) among Medicaid Members, as defined by the NYU metric definition[2], per 100 members.	Navigation services provided to individuals can help address underlying needs and direct individuals to services, thereby alleviating urgent needs which drive them to seek care in the ED. We hypothesize a decline in the likelihood that an individual has any ED visits after receiving navigational services.
Potentially Preventable ED Visits – Behavioral Health, per 100 Members Proxy measure: Having one or more Potentially Preventable ED visits, among members with a Behavioral Health diagnosis	The number of potentially preventable ED visits (based on CPT codes reported on claims) among Medicaid Members, as defined by the NYU metric definition. The analysis population is limited to members with a behavioral health diagnosis	Same as above. We hypothesize that individuals with behavioral health diagnoses (mental health and substance use disorder) will be more likely to seek care and services in other settings following navigation services.
Prevention Quality Indicator – Overall Composite (#90) Proxy measure: Having one or more inpatient hospitalizations	The number of inpatient discharges, defined by revenue codes reported on claims.	Navigation services provided to individuals can help address underlying needs and direct individuals to services, thereby alleviating urgent needs. We hypothesize that individuals will be less likely to require inpatient care following a navigation.
Adult Access to Preventive and Ambulatory Care Proxy measure: Having one or more primary care visits	The percentage of members with one or more ambulatory and preventive care visits (defined by E&M Codes reported on the claim).	Navigation services provided to individuals can help address underlying needs and direct individuals to services, including primary care. We hypothesize that individuals will be more likely to use primary care services following navigation services.

Source: CCN Team Analysis based on input from CCN Project Teams and NY DOH DSRIP Project Toolkits.[1]

Data is pooled from a few sources: 1) project data submitted by partners over the course of the project, 2) Medicaid claims data received by DOH and maintained by CCN, and 3) data pulled from Salient Interactive Miner data system, which reflects Medicaid claims and administrative information. Our quantitative analysis is limited to Medicaid members who were attributed to CCN in Measurement Year 5 and who elected to enable downstream data sharing through the NY DOH opt out process. Out of total 86849 CCN Attributed Medicaid Members, 38379 (44%) members received navigations between July 2016 and May 2019. Out of these 38379 members, 21039 (54.8%) members received navigations that were followed at least one PPV,

[1]NY DOH DSRIP Toolkits available at here: https://www.health.ny.gov/health_care/medicaid/redesign/docs/dsrip_project_toolkit.pdf (Accessed October 15, 2020).

4174(10.8%) were followed by one or more hospitalizations, and 36977 (96.3%) were followed by at least one primary care encounter during the total analysis period (July 2016 through May 2019). Table 4 below describes the study population.

The regression analysis excludes a number of Medicaid members who received navigation services under the project due to unavailable outcomes data. Out of the total 103,768 total members engaged, 66,764 were not attributed to CCN in the final measurement year (MY5). Because this population is not attributed to CCN, CCN cannot access PHI level data on ED visits, hospitalizations, or primary care visits. Attribution changes month to month based on a number of factors including Medicaid program enrollment and patterns in utilization. Once a member becomes unattributed, access to detailed information ceases. For this reason, we focused on the population attributed to CCN in the final measurement year. In addition, it should be noted that data on medical encounters with a primary diagnosis related to substance use disorders are excluded from the data available to CCN due to privacy reasons.

Table 4: Analysis Sample Size and Service Volume for Selected Health Care Services

	No Navigation	Received Navigation
Total CCN Attributed Medicaid Members	48,470	38,379
Medicaid Members with 1+PPV	20,269 (41.8%)	21,039 (54.8%)
Medicaid Members with 1+ PPV (Behavioral Health)*	2,953 (20.5%)	4,545 (31.6%)
Medicaid Members 1+ Inpatient Admission	4,340 (8.9%)	4,174(10.8%)
Medicaid Members 1+ Primary Care	45,968 (94.8%)	36,977 (96.3%)

Source: CCN Team analysis using CCN project data, Salient Interactive Miner, and Medicaid Claims data from the MY5 Attributed population, July 2016 to June 2019. *PPVs (Behavioral Health) refers to PPVs among members with one or more behavioral health diagnosis. Total members with one or more behavioral health diagnosis are not shown on the table.

In the following sections, we consider the statistical relationship between navigation services and important health outcomes that the 2ci project is designed to impact: Potentially Preventable ED Visits, hospitalizations, and care engagement (primary care and other measures). For navigation services to have a probable causal impact on PPVs and hospitalizations, we would expect to see a negative association: PPVs and hospitalizations should be less frequent following navigation services as patient needs are addressed in other settings, either by the community health navigators or by the appropriate medical care providers. Similarly, if navigation services improve care engagement, we would expect a positive association with primary care utilization and other forms of care engagement. Care engagement should be more frequent following the navigation services, if the navigation services effectively promote follow up care and patient education. To test these associations, we consider utilization before and after the provision of navigation services. A cross sectional analysis allows us to control for person-level characteristics that may also impact utilization. The cross-sectional analysis tests for an overall association between project engagement and our health outcomes.

For the cross-sectional analysis, we used logistic regression models to statistically relate the performance metric proxy variables to the project activities – navigation services. In this analysis, the data from July 2016 through June 2019 were pooled for cross-sectional analysis. We tested whether Medicaid members who received navigational services were less likely to also have one or more Potentially Preventable ED visits than their non-navigated counterparts, less likely to have any type of hospital admission, and/or more likely to have at least one primary care visit. The logistic model yields an Odds Ratio, which is a measure of

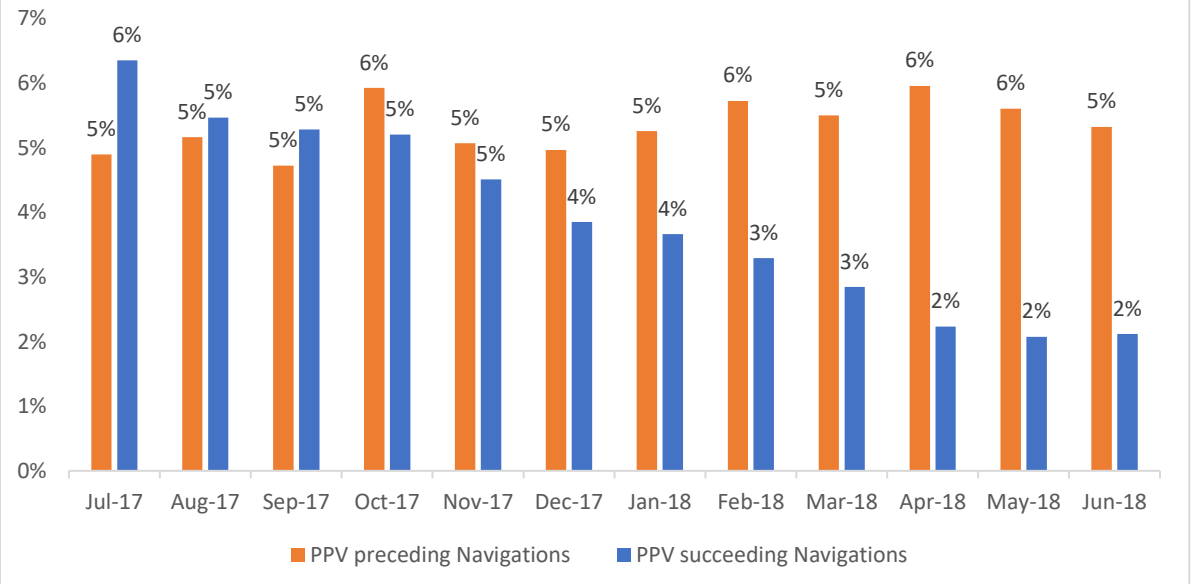
association between an "exposure" and an "outcome". In this analysis, we consider receiving a navigation service under the DSRIP project to be the "exposure", while having a Potentially Preventable ED visits, hospital admission, and/or a primary care visit serves as the "outcome"[2]. In this example, the Odds Ratio represents the odds that a Medicaid member will experience a PPV given the member also received a navigation service, compared to the odds of experiencing a PPV in the absence of any navigation services.

Potentially Preventable ED Visits

Pre/Post Analysis among Attributed Members who Received Navigation Services

In Figure 1, we present monthly proportions of attributed Navigations that had a PPV in the year following their navigations. In total, there were 72,002 navigations between July 2017 and June 2018. Cumulatively, there were 3886(5.4%) navigation services that preceding by PPV in a 12-month timeframe and 2,678 (3.72%) navigation services that were succeeded by a PPV in the year following their navigation services; PPVs had to occur within 365 days of the navigation. The proportion varies month to month, with some outliers. The trend is downwards. The declining trend indicates that the PPVs were less likely following a navigation over time. The rate differentials in most months and differing trend lines suggest that navigation services can impact potentially unnecessary or avoidable use of the Emergency Room. While these differences are not regression adjusted to control for factors which may affect the PPV rate other than the project services, the rates and trends are statistically different at the 5% level. At this level of significance, we can reject the implicit null hypothesis that the two rates and their trends are the same with 95% confidence.

Figure 1: Potentially Preventable ED Visits, before and after Navigation Services



[2] Szumilas, M. (2010). Explaining odds ratios. Journal of the Canadian Academy of Child and Adolescent, 19(3), 227–229.

Cross Sectional Analysis

A cross-sectional analysis was conducted to statistically test whether attributed Medicaid members who received navigation services under the 2ci program were less likely to have a PPV (and similarly, hospitalization or primary care visit (discussed below)) than other attributed members. The comparison is made to the larger attributed population and is not limited to a subgroup. Statistically significance is noted with * (10% significance (modest)), ** (5% (medium)), or *** (1% significance (high)). The cross-sectional results indicate that PPVs are more common among those engaged in the project, which is not the desirable effect. However, this may test may be too high of a bar – it does not take the timing of PPVs and navigation services into account. This test does not narrow in on the chance of PPV after having received navigation services, but looks at all times. Moreover, PPVs may be more common among anyone with a hospital admission than the general population.

With the comparison of PPVs preceding and succeeding navigation services and the cross-sectional results in mind, we conclude that there is good evidence that the navigation services have had a positive impact on health outcomes. While these services do not appear to have reduced the overall chance of PPV on net compared to the general population, among those engaged the likelihood of PPV following receipt of navigation services is lower than before receiving those services.

Table 5a: Cross Sectional Analysis - Potentially Preventable ED Visits

Outcome Measure	Odds Ratio	Interpretation	Score (15)
Indicator variable for 1+ Potentially Preventable ED visits	1.346***	Completing a navigation service is associated with 35% greater likelihood of having one or more potentially preventable ED visits.	0
Indicator variable for 1+ Potentially Preventable ED Visits – Behavioral Health	1.442***	Members with a BH diagnosis who complete a Navigation service are 44% more likely to have one or more potentially preventable ED visits.	0

Source: CCN Team analysis using CCN project data, Salient Interactive Miner, and Medicaid Claims data from the MY5 Attributed population, July 2016 to June 2019. (Refer to the appendix for detailed scoring criteria)

The above table presents the results from the statistical regression analysis. Each row represents a regression model, with the performance metric proxy as the dependent (outcome) variable and an indicator variable for having received a navigation service as the independent (exposure) variable. Regression modeling yields the Odds Ratio, as explained above. An Odds Ratio[3] greater than one indicates that having received at least one navigation is positively associated with the outcome variable. In the case of primary care visits, a positive association is desirable. In the cases of PPVs and hospital admissions, a negative association is desirable. However, in our analysis, we find positive associations between having received navigation services and all outcomes. Those who received a navigation service were 35% and 44% *more likely* than those who did not to have at least one PPV, and PPV (among the set with a behavioral health diagnosis), respectively.

[3] Refer to the appendix for details on regression analysis, model used and interpreting odds ratio

Hospitalizations

Pre/Post Analysis among Attributed Members who Received Navigation Services

In Figure 2, we present a similar graph, now considering inpatient admissions which occurred within a year of a navigation service. In total, there were 72,002 navigation services offered to CCN attributed members between July 2017 and June 2018. Cumulatively, there were 568 (0.8%) navigations preceding hospitalizations and 732 (1%) navigation services that were followed by hospitalization. Hospitalizations that occurred outside a 12-month window were excluded from the analysis. Over time, with the exception of a few months, the rate of hospitalization after having received the navigation service is lower than prior to the services. The rate differentials in most months suggest that navigation services can impact the need for inpatient care. While these differences are not regression adjusted to control for factors which may affect the admission rate other than the project services, the rates are statistically different at the 5% level. At this level of significance, we can reject the implicit null hypothesis that the two rates and their trends are the same with 95% confidence. Again, in the context of the positive association in the cross-sectional analysis as shown in the below section, navigated members may be more likely than others to experience hospitalizations at any time. However, the cross-sectional analysis does not account for the timing of navigations relative to the hospitalizations. Those who received a navigation service 27% more likely than those who did not to have at least one inpatient admission, respectively.

Figure 2: Hospitalizations, before and after Navigation Services

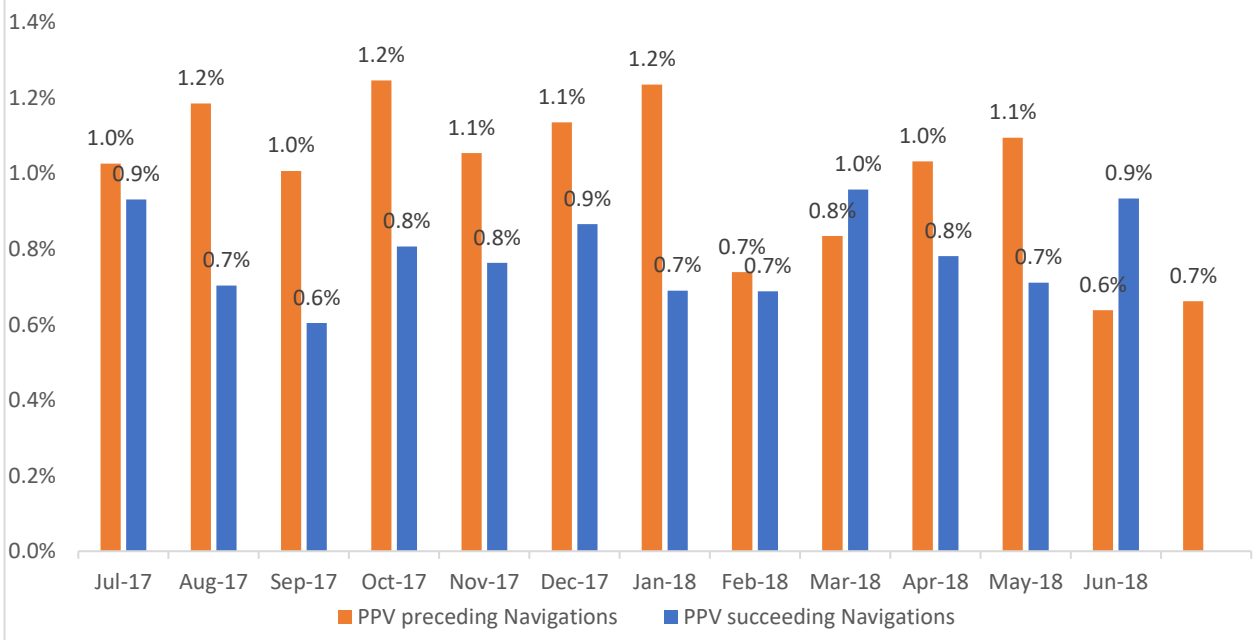
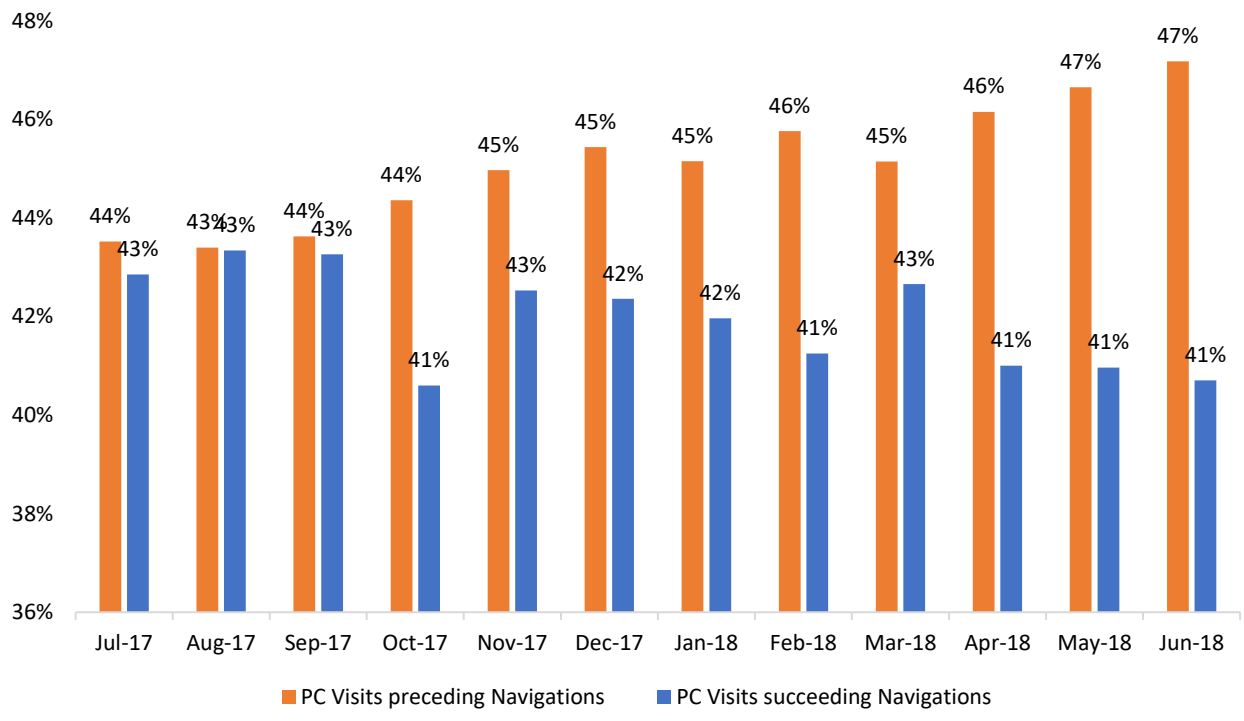


Table 5b: Cross Sectional Analysis - Potentially Preventable ED Visits			
Outcome Measure	**Odds Ratio**	**Interpretation**	**Score Card Points (15)**
Indicator variable for 1+ Inpatient Discharges	1.272***	Completing a Navigation service is associated with 27% greater likelihood of an Inpatient Discharge.	0
Source: CCN Team analysis using CCN project data, Salient Interactive Miner, and Medicaid Claims data from the MY5 Attributed population, July 2016 to June 2019. (Refer to the appendix for detailed scoring criteria)			

Primary Care Visits

Finally, in Figure 3, we present the trend in the proportion of navigated members who had a primary care visit in the year after their navigation service. In total, there were 72,002 navigational services provided between July 2017 and June 2018. Overall, there were 30,124 (42%), were preceded by a primary care encounter, while 45% (32,579) were followed by a primary care encounter. As observable the Figure 3, the difference in the trends month to month is smaller and less consistent than with PPVs and hospitalizations. However, overall, the trends do statistically differ at the 1% significance level. Thus, the implicit null hypothesis that the two trends are indistinguishable can be rejected with 99% confidence.

Figure 3: Primary Care Visits, before and after Navigation Services



Given that the decline in primary care follow up after being offered navigation services occurs at the same time as the declines in PPVs and hospitalizations, it appears that navigated Medicaid members are not increasing their primary care as a substitute care setting to the emergency room.

Cross Sectional Analysis

A cross-sectional analysis was conducted to statistically test whether attributed Medicaid members who received navigation services were more likely to engage in primary care services. The cross-sectional results indicate that these forms of care engagement are more common among those engaged in the project, which is the intended effect. However, the cross-sectional results do not account for the timing of when navigation services occurred relative to the care engagement indicators. Those who received a navigational service were 44% *more likely* than those who did not receive navigational services to have at least one primary care visit. Table 5c presents the results from these regression models and provides a brief interpretation of the results.

Table 5c: Cross Sectional Analysis - Potentially Preventable ED Visits

Outcome Measure	Odds Ratio	Interpretation	Score Card Points (15)
Indicator variable for 1+ Primary Care visits	1.443***	Completing a Navigation service is associated with a 44% greater likelihood of completing a primary care visit.	8

Source: CCN Team analysis using CCN project data, Salient Interactive Miner, and Medicaid Claims data from the MY5 Attributed population, July 2016 to June 2019. (Refer to the appendix for detailed scoring criteria)

Summarizing the relationship between navigation and the three outcomes of interest, this analysis suggests that navigation may be effective in encouraging clients to seek care in settings other than the emergency rooms and encouraging seeking care in primary care settings. The effect of navigation is not strong enough to see in a cross-sectional analysis of PPVs or Hospitalizations (which is understandable); the trend analysis suggests the desired impact for periods of time but not necessarily across the board. The score card below assigns causal effect and cross-sectional analysis points based on the results.

Table 6: Cross Section and Causal Effect Score Card

	Cross Section (15)	Causal Effect (6)
Potentially Preventable ED Visits	0	2
Inpatient Hospitalizations	0	2
Primary Care Engagement	8	0
Total Points Assigned to Score Card	**2**	**4**

Section 2: Cost-Effectiveness Analysis

Cost effectiveness is a measure of the value of an initiative, project, or program stated in terms of its anticipated benefits. For the DSRIP projects in general, CCN sought to improve patient outcomes among those engaged in the project. Patient outcomes are measured in terms of the reduction in unnecessary use of the emergency room, a reduction in hospitalizations, and increases in primary care engagement. Therefore, cost effectiveness of the projects is defined in these terms.

The cost-effectiveness analysis builds off the pre/post analysis presented above. Total Savings reflects the value of avoided utilization of emergency room care, inpatient hospital care, and primary care due to the project. This measure is an estimate of the value of the project, comparing utilization before and after project engagement.

Total Savings is calculated by comparing utilization before and after project engagement. Total Savings is a one-year estimate of savings accruing to the health care system at large, attributed to the project activities.

The estimates presented in Table 7 are on figures from DSRIP Year 4, including pre- and post-utilization among MY5 attributed Medicaid members engaged in the project between July 2017 and June 2018 and published cost estimates for ED visits, inpatient care, and primary care encounters (which reflect charges).[4, 5,6] For 2ci project, navigation services are associated with a reduction in the use of hospital Emergency Departments, a reduction in hospital admissions, and an increase in primary care engagement. For each utilization type, savings is estimated based on the change in utilization and the cost factor. Total Estimated Savings is a summation across the three measures; the reduction in ED and inpatient care is partially offset by the increase in expenditures for primary care services. Total Estimated Net Savings is calculated by subtracting the variable costs associated with operating the 2ci project in DSRIP Year 4. Net Estimated Savings per Project $ is a measure of the cost effectiveness or return on investment per dollar spent on the project. Although, there are savings associated with ED visits and hospital admissions after receiving navigation services, there is no increase in expenses associated with primary care visits. As calculated, CCN estimates that for every dollar spent on the navigations project in DSRIP Year 4, $0.57 in net savings accrued to the health care system at large in the form of avoided use of services.

Table 7: Avoided Utilization and Net Savings Associated with Navigation Services (July 2017-June 2018)

	Avoided ED Visits	Avoided Hospital Admissions	Increased Primary Care Visits	Total Estimated Savings due to Avoided Utilization	Project Variable Costs	Total Estimated Net Savings	Net Estimated Savings, per Project $
Navigation services	785	92	(1385)	$ 2,203,886	$ 1,833,306	$ 370,581	$ 0.20

Source: CCN Team analysis

Table 8: Cost Effectiveness Score Card Points

	Score Card (4)
Potentially Preventable ED Visits	1.33
Inpatient Hospitalizations	1.33
Primary Care Engagement	0
Total Points Assigned to Score Card	**2.67**

Source: CCN Team analysis

To conclude the quantitative analysis, evidence suggests promising results in the areas of reduced emergency room visits and hospitalizations. While the cross-sectional analysis did not yield the desired results, the trend analysis suggests that over time it became less common to experience a PPV or hospitalization after having been navigated. These are promising results. Regarding primary care engagement, on net there was a positive association between receiving navigation services and primary care services. In the first half of DSRIP, there was moderate growth in follow up with primary care after receiving a navigation service; the trend was however declining in the latter half of DSRIP Period.

[4] Health Care Cost Institute (2019). The average emergency room visit cost $1389 in 2017. Available from: Average Cost of ER Visit (2017)

[5]2018 Hospital Adjusted Expenses per Inpatient day: Kaiser Family Foundation / State Health Facts Available from: Hospital Adjusted Expenses per Inpatient Day(2018). Data from 1999 - 2018 AHA Annual Survey, Copyright 2019 by Health Forum, LLC, an affiliate of the American Hospital Association. Note: Average length of stay in NY (2016) was 4.6 days. https://www.aha.org/system/files/2018-07/2018-aha-chartbook.pdf

[6]Health Care Cost Institute (2016-2017); Binghamton, NY Average (Office Visit – Primary Doctor – Established Patient – Moderate Complexity. Range is $69-$87. We used $78 as a point estimate. Available from: Average Cost of PC Visit in Binghamton

Qualitative Findings

I. Project Specific Feedback from Partners

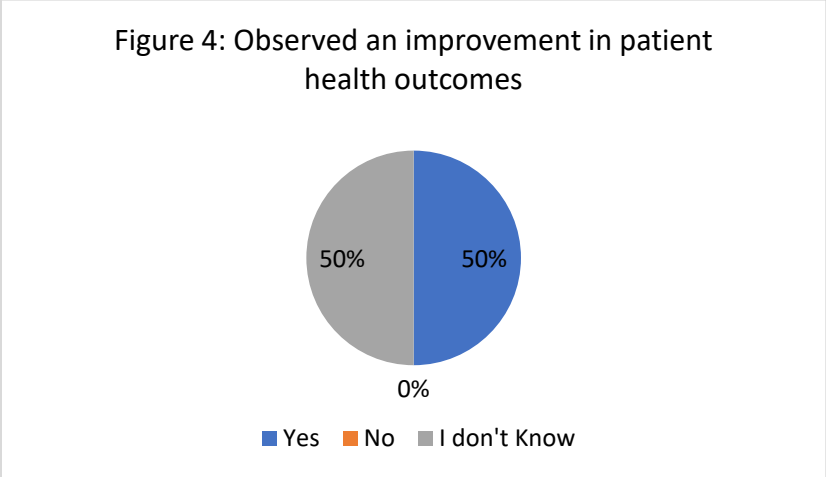
In-depth interviews were conducted with select partners who were involved in project 2ci. A primary care partner and a mental health partner participated in this interview.

a) Patient Outcomes

Table 9: Patient Outcomes			
Interview Question	**Rating**	**Feedback**	**Score**
Extent project has made a positive impact on patients/clients	★★★★½	It has an impact on patients, because we are referring them to the services/ resources and referrals they need in the community. It helps in patients being looked at more thoroughly by the providers to evaluate the paperwork for every patient.	5
Extent project activities make a positive long-term impact on patients/clients	★★★★½		5
Average			5

Figure 1: Observed an improvement in patient health outcomes

One of the respondents said yes and other respondent said they don't know.



b) Cost of Care

Table 10: Cost of Care			
Interview Question	**Rating**	**Feedback**	**Score**
Extent project activities reduction in cost of care long term	★★★★½	By staying on top of our patient's health, we hope that we are able to decrease ER visits and hence save cost.	5

c) Lasting Partnerships

Figure 5: Partnerships

Both the partners interviewed said that project 2ci didn't provide them with opportunities to partner with others. One of the partners stated that although they do not have partnerships, but they have a large

outreach and outside resources that they do use. Other partner said that they their partnerships existed before DSRIP began, but this project strengthened them.

Figure 5: Lasting Partnerships

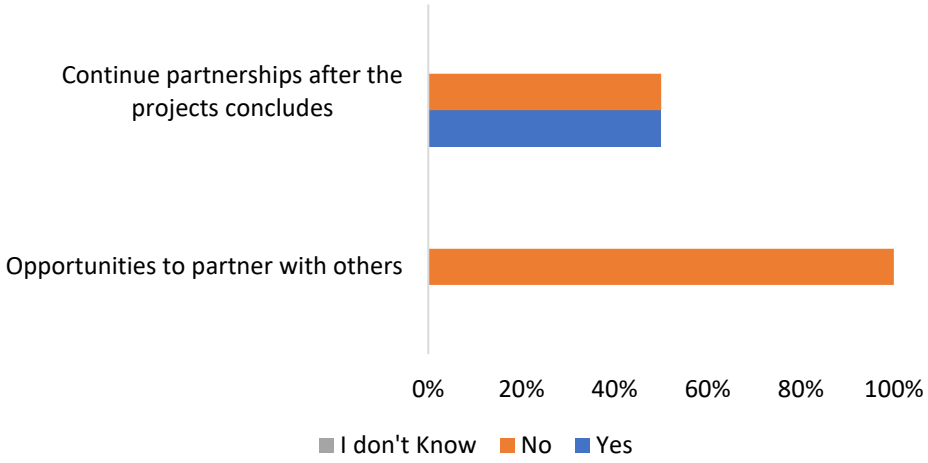
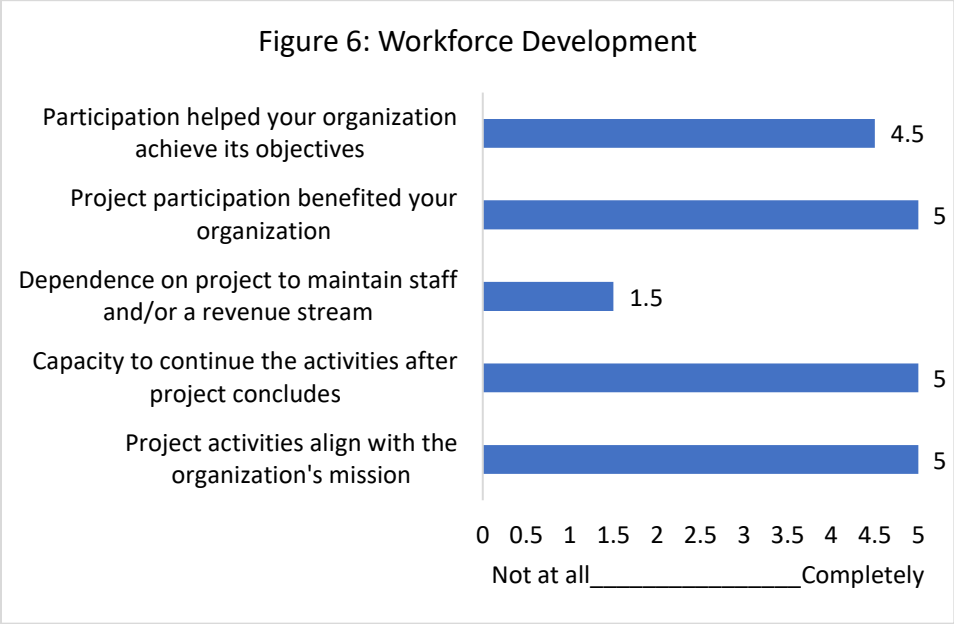


Table 11: Lasting Partnerships			
Interview Question	**Rating**	**Feedback**	**Score**
Extent the project activities have improved coordination of patient care	★★★★½	That's one of the things that our clinical staff always needs to keep in mind. To make referrals, outreach, primary care resources, physical health, financial health etc. for our patients. Additionally, we encourage our clinicians to think outside and really look at the overall health of an individual.	5

d) Workforce Development

When asked about how many positions were involved in this project. One partner said 7 to 8 positions and the project activities consume minimal amount of their time and another said 35 positions and the project activities consume less than half of their time. The graph below highlights the rating that respondents gave on a scale of 1 to 5 with 1 being “Not at all” and 5 being “Completely”

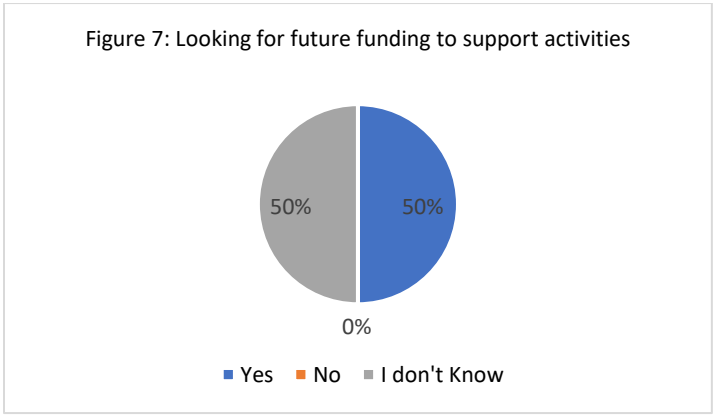
Figure 6: Workforce Development



When asked about whether the extent to which project activities align with the organizations mission, respondents gave it a rating of 5. Both partners said that they have the capacity to continue activities after the project concludes and gave it a rating of 5. One of the partners pointed out that 2ci services are embedded into their system and they will continue with these activities. When asked about the extent to which the organization depends on the project to maintain staff and/or revenue stream, the partners gave it a rating of 1.5. This is a good indication as partners have the funding and the capacity to continue after DSRIP concludes.

When asked about whether the project benefitted their organization, both partners indicated that the contribution is significant and gave it a rating of 5. When asked whether participation helped their organization achieve its objectives, they gave it a rating of 4.5.

Figure 7: Organization is Looking for Future Source of Funding



When asked about whether the partners engaged with 2ci are looking for future sources of funding, one partner said yes, however the other partner said that they didn't know. As a follow up question, when asked if their staff will be downsized or redeployed if the project is discontinued, one partner said they would redeploy and one partner said they don't know.

Figure 8: New skills/competencies derived from project participation

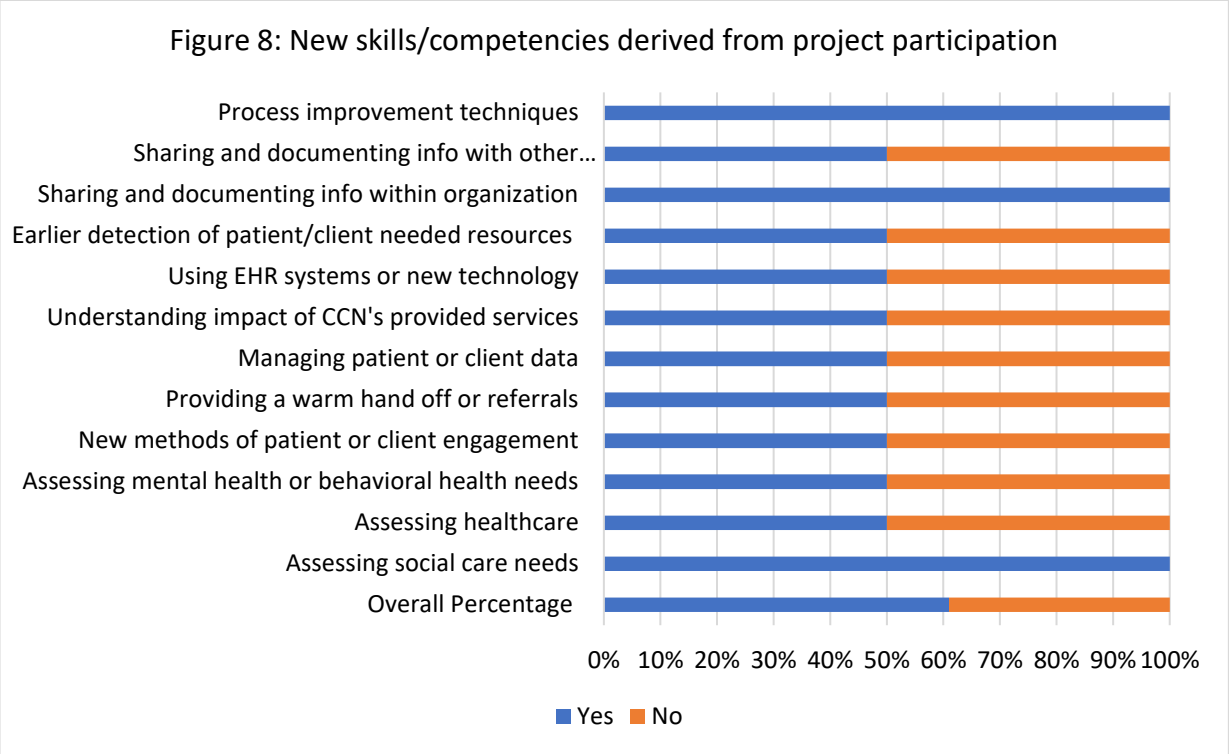


Figure 8: 61% of the respondents said that they developed new competencies and skills as a result of this DSRIP Project. However, 39% said they didn't. In particular, one of the partners said that they are not sharing and documenting information with other organizations, not using EHR system or new technology, don't understand the impact of CCN's provided services, not managing patient or client data, not providing warm handoffs or referrals, don't use new methods of patient or client engagement, not accessing mental or behavioral health needs. These are the skills that can be focused on if funding is continued for project 2ci post September 2020.

Both the partners said that they have developed process improvement techniques and accessing social care needs of the population they cater to.

Figure 9: Extent to which participation benefited our partner organizations

Figure 9: When asked to what extent participation in the project benefitted our partner organizations, the overall ranking ranged between 4 and 5 on a scale of 1 to 5 where 1 being "Not at all" and 5 being "Significant", except for creating new job titles and roles that is ranked at 1.5. In terms of ability to track and report on services/outcomes, both the partners interviewed rated it a 4 out 5. Regarding the quality and of services provided, partners ranked it at 4.5. Standardization of services provided; Integrated comprehensive care planning; Ability to address urgency of services; and promotion of expanded care team is rated as being "Significant".

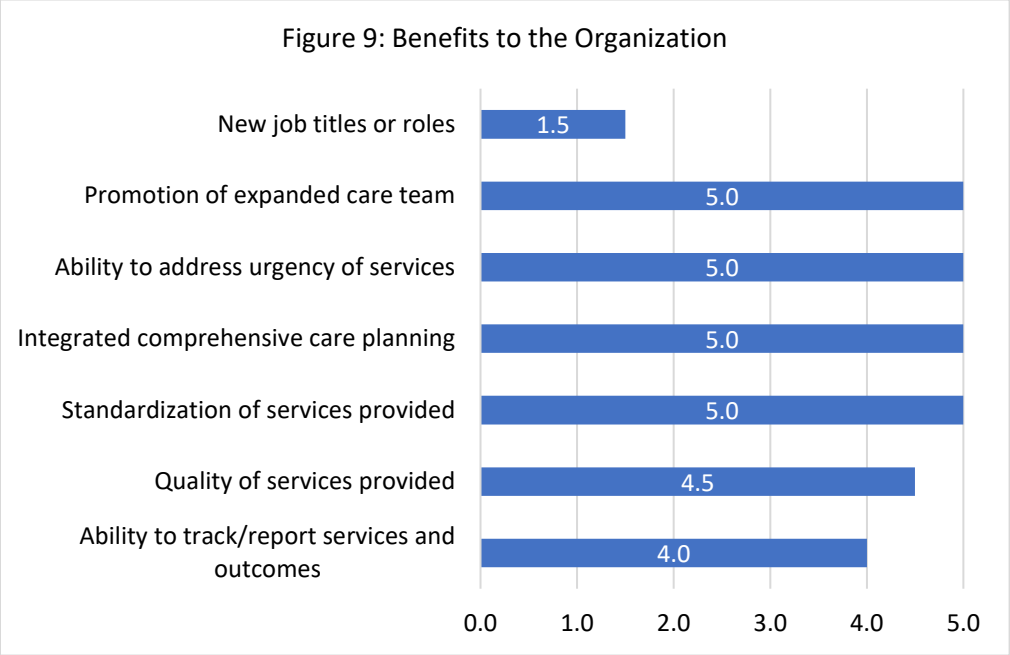


Table 12: Scoring of Workforce Development Questions		
Questions	**Rating**	**Score**
Project activities align with the organization's mission	★★★★★	5
Capacity to continue the activities after project concludes	★★★★★	5
Project participation benefited your organization	★★★★★	5
Participation helped your organization achieve its objectives	★★★★½	2
Ability to track/report services and outcomes	★★★★☆	5
Quality of services provided	★★★★½	5
Standardization of services provided	★★★★★	5
Integrated comprehensive care planning	★★★★★	5
Ability to address urgency of services	★★★★★	5
Promotion of expanded care team	★★★★★	5
New job titles or roles	★½☆☆☆	1
Average		**4.63**

Finally, to conclude feedback on Workforce Development, we asked a few general questions and received a rating as highlighted in the table below. Rating of 1 is “Minimal” and 5 is “Significant”.

Table 13: Workforce Development		
Questions	**Rating**	**Score**
a. This DSRIP project has helped your organization prepare in performance-based contracts with payers.	★★☆☆☆	1
b. This DSRIP project has helped your organization promote or develop our services.	★★★★½	5
c. This DSRIP project provided funding for activities that were otherwise unfunded.	★★★★★	5
d. This DSRIP project provided funding to train and/or expand your personnel in ways you would have not done ourselves.	★★★☆☆	3
e. This DSRIP project supported your organization to undertake activities that we see value in.	★★★★★	5
f. Your organization will continue the activities of this project after the DSRIP project completes.	★★★★★	5
g. This DSRIP project has given your organization a platform to share best practices.	★★★★½	5
Average		**4**

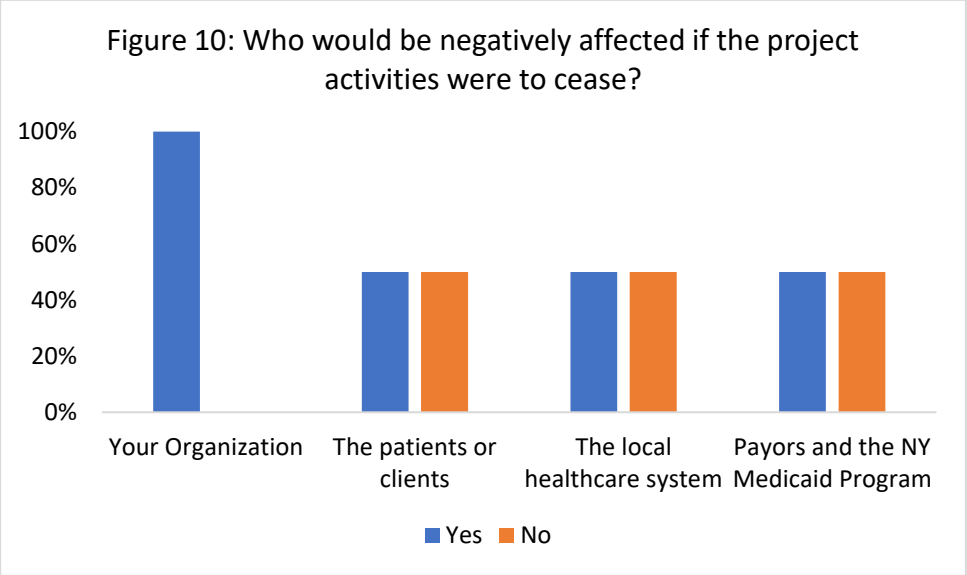
e) System Transformation

To assess system transformation, we asked the partners number of questions and got a rating as highlighted in the table below. Rating of 1 is "Not at all" and rating of 5 is "Completely". The respondents could reply "Don't know".

Table 14: System Transformation			
Questions	**Rating**	**Feedback**	**Score**
a. Better integration of services across settings or organizations	★★★★★	As a result of participating in the project, our partners have more diligently and intentionally focused on these activities, and that's been a real benefit for them.	5
b. Ability to share data in real time to improve patient or client care	★★★★☆	No Feedback	5
c. Promotion of community-based services (over institutional care)	★★★½☆	No Feedback	3.5
d. Promotion of team-based care (more coordinated care; cross-organizational teams)	★★★½☆	With the engagement of the clinincal staf, support staff, and care managers, there is more communication with outside organizations, especially medical.	3.5
e. More efficient services that reduce waste in the system	★★★★½	Home based services over visiting hospitals have helped.	5
f. Implementation of self-management goals	★★★★☆	No Feedback	5
g. Shift in staff mindset in addressing patient needs	★★★★½	No Feedback	5
h. New billable service development	★★★☆☆	The paperwork our partners fill out is billable now.	3
Average			**4.37**

Figure 10: Who would be negatively affected?

When asked who would be negatively affected if the DSRIP project was to cease – both the partners interviewed said their organization will be impacted and one of the partners said that their patients/clients, the local healthcare system, the payors and the NY Medicaid program would be impacted.



II. Project Specific Feedback from Project Managers

a) **Milestone Rating and Feedback:** Success on key milestones of this project have been evaluated by Project Manager at CCN in an in-depth interview:

Table 15: Milestone Rating and Feedback

Milestone	Rating (10)	Success Factors (1.5)	Gaps	Score (10)
1. The need for this program will be identified through a regional or service area needs assessment. Need may be based on identified language, cultural or health literacy barriers to understanding the health care delivery system, particularly as it transforms and old patterns of care are expected to change. Hot spots of service need may be identified.	★★★★★	1. By creating needs assessment of the community to identify hotspot services 2. Effective in mapping out the population they were serving	1. Understanding the bulk of services available for clients; so many in different pockets 2. Trying not to duplicate services and avoid creating silos	10
2. Where need is identified, a collaborating program oversight group of medical and behavioral health practitioners and providers and community nursing and social support	★★★☆☆	1. Brought a lot of CBOs together that haven't worked together collaboratively to support a system's	1. Non BH staffing involved, they were integrated in other projects 2. We did not look into collaborating	7

services will develop a community care resource guide to assist the community resource person and to ensure compliance with protocols. Training protocols will need to be developed and implemented.		support for community healthcare 2. First time that health care systems, CBOs, administrators came together to understand health navigation for Medicaid members	these teams enough and didn't anticipate what the state would incorporate later down the road 3. Didn't involve community nursing, that was through the INTERACT process 4. Struggled with training protocols: community navigation is so diverse that it was difficult to come up with universal training protocols	
3. Recruitment for the community navigators would ideally be done from the residents in the targeted area to ensure community familiarity. In addition, PPSs should not attempt to "recreate the wheel."	★★★★☆	1. Provided funding to CBOs for training that they normally don't get reimbursed for 2. Strategized with the CBO's to make sure their new hires were trained in multiple capacities (PHQ9, CDSMP…), prevented locking new hires into one specific capacity 3. Stipends were a success factor to the organization, but not to the FTE	1. Didn't officially create a recruitment strategy 2. Retention is difficult for this workforce; low pay and benefits, lots of turnover at beginning of implementing this project	10
4. Resourcing for the community navigators will need to be established and could include placement in an ED waiting area, community health center, community meeting center, etc. Telephonic and IT resources including a chat line will need additional resourcing to increase community access to the service.	★★★★☆	1. Able to partner with health systems to place community navigators in ER, DSS (multi-counties), food banks, soup kitchens, certain rural primary care agencies 2. Rural communities were open to partnering with CBOs and having them on site	1. CBOs did not have IT capabilities to chart information into the EMR; duplication of work 2. Warm hand-off of patient, but verbally had to communicate with nurse/other providers, still siloed to some capacity even though we were able to place 3. Follow-up to ensure work was done was difficult	10

			due to several EMR systems	
5. Community navigators will need access to non-clinical resources such as transportation and housing services to remove patient barriers to accessing medical and behavioral health care.	★★★★★	1. Allowed us to look with a new lens and identify new gaps in service (ex: a town with limited transportation services preventing patients from making visits) 2. Strategizing "no show" patient management	1. In collecting information, you realize how many gaps there are in the industry 2. Gap is that we weren't able to address these findings simultaneously 3. Extremely challenging to address "no-shows"	10
6. For community navigators who are following patients longitudinally, caseloads and discharge processes will need to be established to ensure efficiency in the system.	★★★☆☆	1. These patients didn't need a lot of casework, they responded to outreach 2. Success in mapping out what is appropriate or not for a CBO in case management	1. High need clients ultimately needed to be navigated to a health home 2. Community health navigators might experience burnout 3. Was not implemented PPS-wide	7
7. Wide marketing of the resource in the community will be done.	★★☆☆☆	Created marketing plan to help CBOs, but wasn't that successful.	Didn't have resources to implement a region/community-wide marketing plan	2
8. Utilization measures that will be based on the community assessment will need to be developed, collected and reported on to the program oversight committee to understand the effectiveness of the program and changes that are needed.	★★★★☆	1. CCN strategy was successful in collecting EMR data that they could (CBO friendly), collecting necessary community needs 2. Able to secure funding through CRFP funding grant, allowed for IT funding for CBOs that they desperately needed	1. Unable to share PHI, rules and regulations prevented looking at collected data 2. Staff resources limited; Population Health team was not yet fully developed 3. CCN has developed policies since to promote secure data sharing and providing incentives and explaining the potential benefits of data sharing	10
9. Consistent with the need in the community, the program	★★★★★	Utilized RMS to get the Medicaid, provider,	1. Now opening the door to hear	10

must demonstrate a clear cultural competence and willingness to engage Medicaid members in the design and implementation of system transformation including addressing issues of health disparities.		community member voices represented	different ways to hear the Medicaid voice, prior to this it was "cold-calling" or filling out surveys in-person with RMS 2. Project Managers didn't really know what to do with results; we know that patients don't feel comfortable seeing their providers, but what can we do about this?	
Average				**8.4**

b) Overall DSRIP Gaps in Care going forward

• Haven't been able to "crack the code" of developing a PPS-wide referral tool
• Achieving data sharing, will help us track patients, starting to achieve this with the Cohort program
• Not using a standardized, evidence-based tool to collect SDOH in a robust way

c) Improvement in SDoH outcomes (1.5)

• Was able to improve SDOH through partnership
• Allowed many Tier 1 organizations to participate in DSRIP, which allowed partners to grow and expand into other programming (innovation grants, and other partnerships)
• Allowed people to be at the table who were not initially there

d) Qualitative Measures

Table 16: Qualitative Measures

Measure	Rating	Anecdotal Evidence	Score (6)
Bridge the gap between patients and their clinicians using navigations project	★★★★☆	Still a struggle with primary care	6

e) Opportunities for Improvement

Table 17: Opportunities for Improvement

Measure	Rating	Scope for Improvement	Score (6)
How effective is the communication between navigationes and patients? This includes level of trust, education, personal support and decision-making support provided by navigationes to the patients.	★★★★★	• CCN has done so many trainings around motivational interviewing, health competencies, and other relevant areas in talking to patients who may/may not be vulnerable • CCN has provided funding to send partners to nationally recognized trainings	6

III. Member Feedback from Patient Panel Survey

Online survey was administered to the Care Compass Network (CCN) panel members from Group 1: Medicaid or Uninsured and Group 4: Community Residents from **March 26, 2020 to April 20, 2020.**

- 25 questions
- **118 surveys (14% completion rate).** Average completion time 4 minutes.
- **Community Residents had a** 61% [72 out of 118 for each] proportional response rate.
- **Medicaid or Uninsured had a** 39% [46 out of 118 for each] proportional response rate.

Figure 11: Connecting Members to Social Care Resources from Clinical Settings

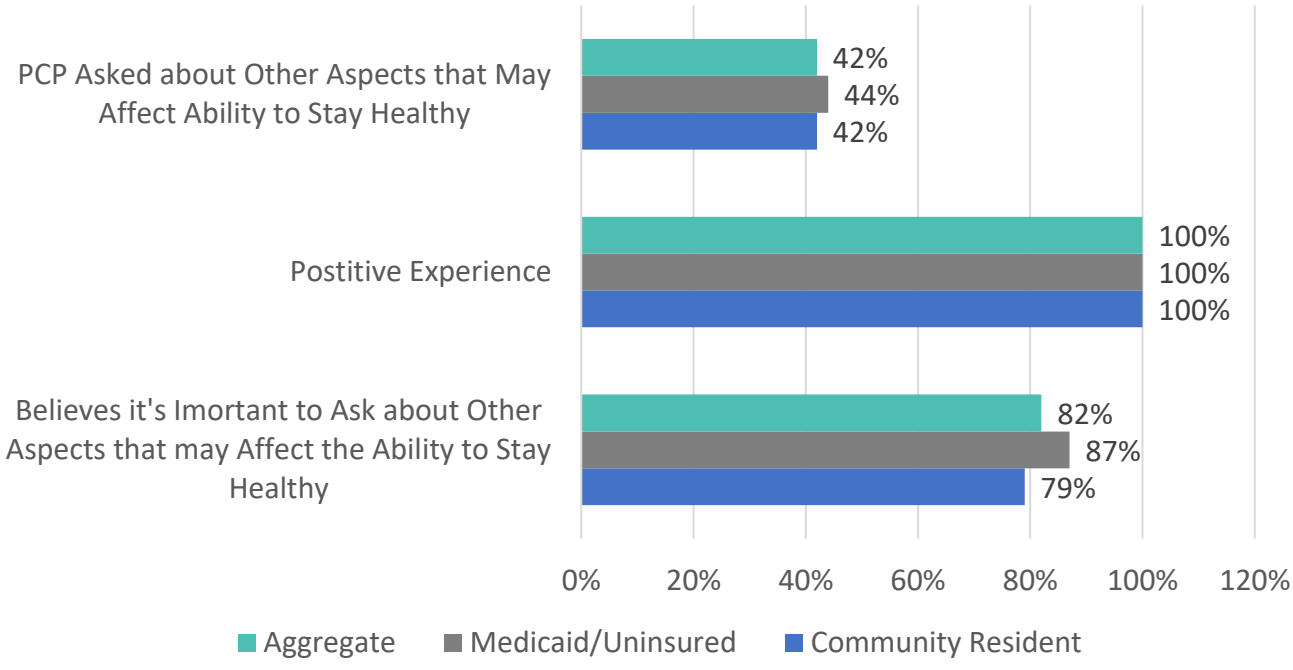


Figure 11:

- Of respondents 42% [50 out of 118] recall their primary care provider asking about other aspects of their life that may affect their ability to stay healthy, such as housing, transportation, personal safety, vocational support and access to healthy food in the past year.
    - 44% [20 out of 46] of **Medicaid and Uninsured respondents** and 42% [30 out of 72] of **Community Resident respondents** reported that their primary care provider **asked about other aspects of their life that may affect their ability to stay healthy, such as housing, transportation, personal safety, vocational support and access to healthy food in the past year**
- Of respondents who recall their primary care provider asking about other aspects of their life that may affect their ability to stay healthy, such as housing, transportation, personal safety, vocational support and access to healthy food in the past year 100% [50 out of 50] would describe this experience as **positive**.
    - 100% [20 out of 20] of **Medicaid and Uninsured respondents** and 100% [30 out of 30] of **Community Resident respondents** reported this was a **positive** experience**.**
- Of respondents 82% [97 out of 118] believe having their primary care provider ask if other aspects of their life such as housing, transportation, personal safety, vocational support and access to healthy food, impacts their ability to stay healthy is important.
    - 87% [40 out of 46] of **Medicaid and Uninsured respondents** and 79% [57 out of 72] of **Community Resident respondents** reported that they believe having their primary care provider ask if other aspects of their life such as housing, transportation, personal safety, vocational support and access to healthy food, impacts their ability to stay healthy is important.

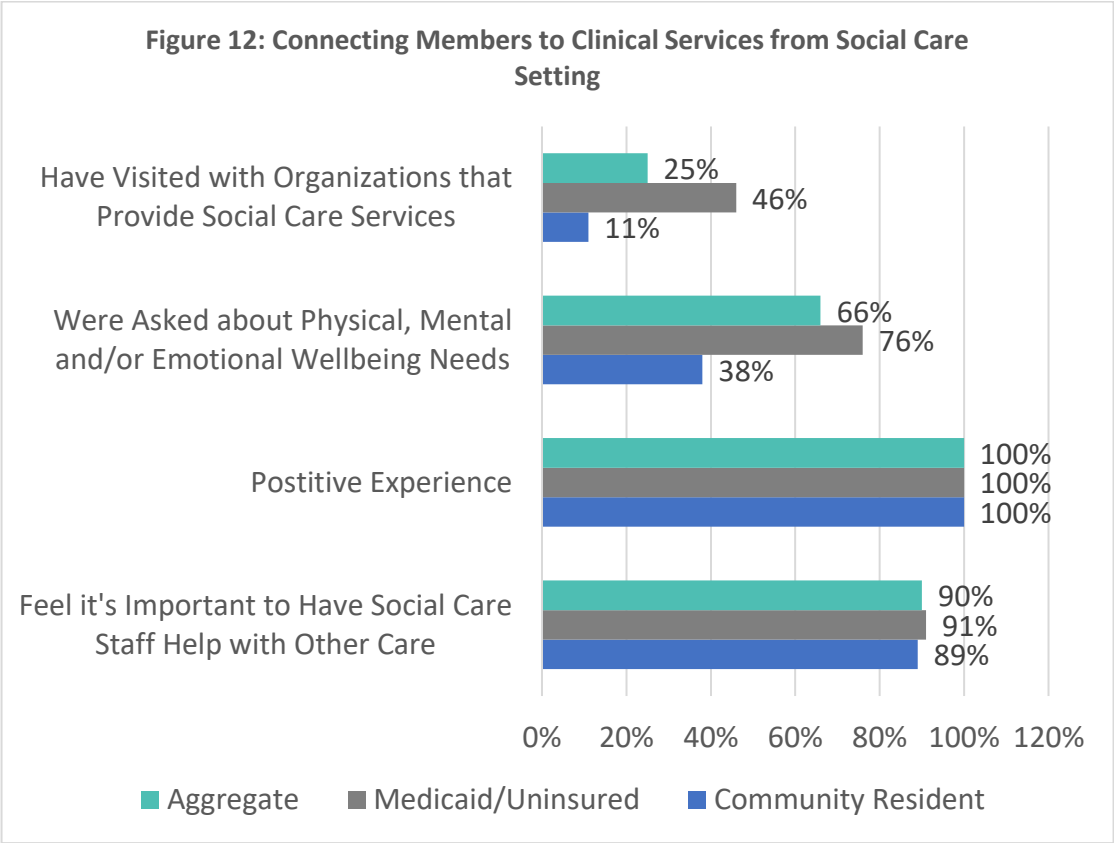


Figure 12:

- Of respondents 25% [29 out of 118] have <u>visited with organizations that provide social care services</u> such as housing, food, transportation, or employment guidance in the past year.
  - 46% [21 out of 46] of **Medicaid and Uninsured respondents** and 11% [8 out of 72] of **Community Resident respondents** reported they have **visited with organizations that provide social care services such as housing, food, transportation, or employment guidance in the past year**.
- Of respondents who have visited with organizations that provide social care services such as housing, food, transportation, or employment guidance in the past year, 66% [19 out of 29] recall the social care services organization staff asking them questions about their physical, mental and/or emotional wellbeing needs.
  - 76% [16 out of 21] of **Medicaid and Uninsured respondents** and 38% [3 out of 8] of **Community Resident respondents** reported that they **recall the social care services organization staff asking them questions about their physical, mental and/or emotional wellbeing needs.**
- Of respondents who recall the social care services organization staff asking them questions about their physical, mental and/or emotional wellbeing needs 100% [19 out of 19] would describe this experience as **<u>positive</u>**.
  - 100% [16 out of 16] of **Medicaid and Uninsured respondents** and 100% [3 out of 3] of **Community Resident respondents** reported this was a **<u>positive</u>** experience.

Scoring of Member Panel Survey

Table 18: Scoring of Member Panel Feedback

Questions	Percentage	Score (15)
Were asked about physical, mental and emotional well-being?	66%	1
Had a positive experience during visit?	100%	5
Believes that its important to have social care staff help with other care	90%	5
Total		11

IV. Regional Performing Unit Feedback

During the month of May we collected survey responses from all participants at RPU Meetings on two topics: Workforce development and System Transformation. The survey was rating based from 1 to 5 with 1 being "Minimal" and 5 being "Significant". We received 38 responses in total. The table below highlights the distribution of responses across the RPU's. Approximately 26.32% (10 responses out of 38) of the responses was for project 2ci.

Table 19: RPU Responses			
South	47.37%	18	8
North	34.21%	13	2
West	10.53%	4	0
East	7.89%	3	0
Total	100.00%	38	10

Table 20: Scoring of Workforce Development Questions

Questions	Rating	Score(5)
Ability to track/report services and outcomes		3
Quality of services provided		5
Standardization of services provided		3
Integrated comprehensive care planning		5
Ability to address urgency of services		5
Promotion of expanded care team		3
New job titles or roles		3
Average		**3.85**

Table 21: Workforce Development

Questions	Rating	Score(5)
a. This DSRIP project has helped your organization prepare in performance-based contracts with payers.		3
b. This DSRIP project has helped your organization promote or develop our services.		3
c. This DSRIP project provided funding for activities that were otherwise unfunded.		5
d. This DSRIP project provided funding to train and/or expand your personnel in ways you would have not done ourselves.		3

e. This DSRIP project supported your organization to undertake activities that we see value in.		5
f. This DSRIP project has given your organization a platform to share best practices.		3
Average		**3.66**

Table 22: System Transformation

To assess system transformation, we asked the partners number of questions and got a rating as highlighted in the table below. Rating of 1 is "Not at all" and rating of 5 is "Completely". The respondents could reply "Don't know".

Questions	Rating	Score(5)
a. Better integration of services across settings or organizations		3
b. Ability to share data in real time to improve patient or client care		3
c. Promotion of community-based services (over institutional care)		5
d. Promotion of team-based care (more coordinated care; cross-organizational teams)		5
e. More efficient services that reduce waste in the system		3
f. Shift in staff mindset in addressing patient needs		3
g. New billable service development		1
Average		**3.28**

Appendix

Detailed Scoring Matrix

Scoring Matrix		
Key Elements	**Description**	**Points**
Quantitative Analysis	**Data from Projects and Salient**	**25 points**
1. Regression Analysis	**Statistical Association between Key activities undertaken during specific projects and HEDIS measures**	**15 points**
a) Key HEDIS Measures	Statistical Association between 0 and 50%	8 points
b) Key HEDIS Measures	Statistical Association between 51% and 75%	12 points
c) Key HEDIS Measures	Statistical Association between 76% and 100%	15 points
d) Causal Effect	"Negative association of project activity with ER Visits (2 pts) Negative association of project activity with Hospitalizations (2 pts) Positive association between project activity and Primary Care (2pts)"	**6 Points**
e) Cost Effectiveness Analysis	Costs averted due to reduction in ED visits (1.3 pts) Costs averted due to reduction in Hospitalizations (1.3pts) Costs spent due to increase in PC Visits (1.3pts)	4 Points
Qualitative Analysis	**Assessments conducted with various stakeholders involved in Speed and Scale Projects**	**75 Points**
2. Project Specific Feedback from Partners	**Interviews conducted by RMS with select partners for speed and scale projects**	**25 points**
a) Patient Outcomes	Scale of 1 to 5 - 4 and above	**5 points**
	Scale of 1 to 5 - score of 3	3 points
	Scale of 1 to 5 - score of 2 or 1	1 point
b) Cost of Care	Scale of 1 to 5 - 4 and above	**5 points**
	Scale of 1 to 5 - score of 3	3 points
	Scale of 1 to 5 - score of 2 or 1	1 point
c) Lasting Partnerships	Scale of 1 to 5 - 4 and above	**5 points**
	Scale of 1 to 5 - score of 3	3 points
	Scale of 1 to 5 - score of 2 or 1	1 point
d) Workforce Development	Scale of 1 to 5 - 4 and above	**5 points**
	Scale of 1 to 5 - score of 3	3 points
	Scale of 1 to 5 - score of 2 or 1	1 point
e) System Transformation	Scale of 1 to 5 - 4 and above	**5 points**
	Scale of 1 to 5 - score of 3	3 points
	Scale of 1 to 5 - score of 2 or 1	1 point
3. Project Specific Feedback from Project Managers	**Interviews conducted by Population Health Team with project managers for speed and scale projects**	**25 points**
a) Milestones Ratings	Scale of 1 to 5 - 4 and above	**10 points**
	Scale of 1 to 5 - score of 3	7 points
	Scale of 1 to 5 - score of 2 or 1	2 point

b) Successes specific to Milestones	Qualitative statements	**1.5 points**
c) Gaps specific to Milestones	Qualitative statements	**None**
d) Overall DSRIP Gaps in care going forward	Qualitative statements	**None**
e) Importance in improving SDoH outcomes	Qualitative statements	**1.5 points**
f) Qualitative Questions	Scale of 1 to 5 - 4 and above	**6 points**
	Scale of 1 to 5 - score of 3	4 points
	Scale of 1 to 5 - score of 2 or 1	2 point
g) Opportunities for Improvement	Scale of 1 to 5 - 4 and above	**6 points**
	Scale of 1 to 5 - score of 3	4 points
	Scale of 1 to 5 - score of 2 or 1	2 point
4. Member Panel Feedback from Patients	**Survey conducted by RMS with Member Panel regarding Speed and Scale Project**	**15 points**
a) Were asked about their health during visit	> 90% responded yes	**5 points**
	Between 75 to 89%	3 points
	Between 60 to 74%	1 point
b) Positive Experience	> 90% responded yes	**5 points**
	Between 75 to 89%	3 points
	Between 60 to 74%	1 point
c) Patient believes services provided were crucial for their well-being	> 90% responded yes	**5 points**
	Between 75 to 89%	3 points
	Between 60 to 74%	1 point
5. Regional Performing Units Feedback overall DSRIP activities	**Survey conducted by Population Health Team during RPU Meetings in May**	**10 points**
a) Workforce Development	Scale of 1 to 5 - 4 and above	**5 points**
	Scale of 1 to 5 - score of 3	3 points
	Scale of 1 to 5 - score of 2 or 1	1 point
b) System Transformation	Scale of 1 to 5 - 4 and above	**5 points**
	Scale of 1 to 5 - score of 3	3 points
	Scale of 1 to 5 - score of 2 or 1	1 point

Definitions – Statistical Associations

Direct NT: Direct Near Term - Project has a specific component (paid activity specifically) that affects the numerator of the measure in the near term (immediate impact; activity is incentivized).

Direct LT: Direct Long Term - Project has a component which encourages activities which affect the numerator of the measure. Activities may not have an immediate impact, but could encourage different future choices by members.

Mixed Direct: Project has a component which encourages activities which affect the numerator of the measure in general. Activity may not be paid; thus, although the project supports those activities, they are not specifically incentivized.

Quantitative Findings – Model Used

Regression Analysis Basics:

- The regression equation describes the relationship between the dependent variable (y) and the independent variable (x).

$$y=bx+a$$

Example: Anti-Dep Rx Fill = b_1(3ai BH screen) +b_i(Control $vars_i$)+ a

- The intercept, or "a," is the value of y (dependent variable) if the value of x (independent variable) is zero, and is referred to as the 'constant.'
- The regression results report the coefficient b that represents how a unit increase in x affect the likelihood of y, holding all other factors constant
- P value is also reported in the regression results. It shows whether the coefficient has statistically significant impact on the dependent variable or not. If the p value is 0.05, we are 95% confident that the independent variable has some effect on the dependent variable.

Model Used

Logistic regression

- Assumption: dependent variable is dichotomous and binary; in other words, coded as 0 and +1.
- We use the logit model that displays the odds ratio obtained by running the regression.
- The odds ratio is a way of comparing whether the probability of a certain event is the same for two groups.
- An odds ratio of 1 implies that the event is equally likely in both groups. An odds ratio greater than one implies that the event is more likely in the first group. An odds ratio less than one implies that the event is less likely in the first group.